

Statement of Basis of the Federal Operating Permit

Enterprise Products Operating LLC

Site Name: Mont Belvieu Complex
Area Name: Propane Dehydrogenation Unit II
Physical Location: 10207 FM 1942 Rd
Nearest City: Mont Belvieu
County: Chambers

Permit Number: O4471
Project Type: Initial Issuance

The North American Industry Classification System (NAICS) Code: 211112
NAICS Name: Natural Gas Liquid Extraction

This Statement of Basis sets forth the legal and factual basis for the draft permit conditions in accordance with 30 TAC §122.201(a)(4). An application for initial permit issuance has been submitted in accordance with 30 TAC § 122.201. This document may include the following information:

- A description of the facility/area process description;
- A basis for applying permit shields;
- A list of the federal regulatory applicability determinations;
- A table listing the determination of applicable requirements;
- A list of the New Source Review Requirements;
- The rationale for periodic monitoring methods selected;
- The rationale for compliance assurance methods selected;
- A compliance status; and
- A list of available unit attribute forms.

Prepared on: February 09, 2024

Operating Permit Basis of Determination

Permit Area Process Description

The PDH II Unit converts propane feed into propylene product. The propane feed treating, and separation systems removes impurities and prepare the propane feed for the conversion process. The conversion process includes multiple reactors, a gas-fired heater for dehydrogenation of propane to propylene in the presence of a catalyst. The reactor effluent included propylene and other compounds.

The reactor effluent is separated and processed in downstream unit operations. An organic solvent mainly containing five-carbon compounds supports the downstream product processing operations. The fresh and spent "C5+" solvent is stored in pressurized vessels that will not generate emissions during routine operation and have pressure relief valves routed to an elevated flare. The spent solvent was pressure-loaded into trucks. Small emissions to the atmosphere occur when the dry-disconnect loading lines are disconnected from the trucks after each loading operation. The feed treating process generates a spent caustic solution that is sent to the spent caustic tanks. The following key product streams were generated from the downstream separation and processing systems:

- Propylene, the primary product, is sent to existing underground cavern storage or to customers via pipeline.
- A byproduct "C2" ethane mixture is sent to existing caverns for storage or to customers via pipeline.
- A byproduct "C4" butane mixture is sent to existing caverns for storage or to customers via pipeline.
- H₂ generated by the dehydrogenation process is used in other onsite processes or sent offsite via pipeline.
- Process fuel gas for the PDH II heaters are a blend of combustible gas streams, including a byproduct "C5+" pentane mixture, ethane product, net gas, and natural gas.

The dehydrogenation reactor system is supported by an enclosed circulating catalyst system, including a Continuous Catalytic Regeneration (CCR) process to regenerate the catalyst within the PDH II Unit. Coke (mainly carbon) deposits accumulate on the catalyst inside the reactor system and the deposits reduce catalyst effectiveness over time. Some catalyst flows continuously from the reactor system to the CCR process to regenerate the catalyst before returning it to the reactors. Catalyst regeneration generates a low-pressure process vent gas stream, treated in a caustic scrubber to reduce caustic-soluble pollutant concentrations before venting to the atmosphere. Spent scrubber caustic solution stored and then loaded into trucks for transport offsite. Fresh catalyst addition and spent catalyst removal occurred periodically with associated particulate matter emissions.

An elevated flare received VOC-containing routine process vent gas streams that are unsuitable for fuel gas, such as bleeds from nitrogen blanket gas in certain process vessels. The flare received gas from flare header purge gas injection, pressure safety valves, upset events, and MSS events. The flare will have a continuous pilot flame. Flare feed gas streams passed through a liquid knockout system to prevent liquids from reaching the flare. Recovered liquids from the flare knockout system stored and then loaded into trucks for transport offsite or sent to an existing onsite treatment facility.

The PDH II Unit includes one gas-fired hot oil heater that heated a circulating hot oil fluid to provide indirect heat to various equipment and streams within the PDH II Unit. The single exhaust stack for the hot oil heater fitted with a selective catalytic reduction (SCR) system for NO_x abatement. The PDH II Unit also includes utility and support systems that include feed water treatment, instrument air system, and purchased inorganic/aqueous chemical products. The unit used utility gases such as nitrogen and plant air. Three wet surface area coolers (WSACs) used to provide utility process cooling, and evaporating mist from the WSACs may contribute particulate matter emissions. WSAC units are circulating cooling water systems that are designed to prevent VOC leaks into the cooling water. One modular cooling tower is used to provide additional process cooling. Evaporating mist from the cooling tower may contribute to particulate matter emissions. The cooling water did not pass through any heat exchanger containing VOC, so there is no potential for VOC leaks into the cooling water. A wastewater storage tank stored PDH II process wastewater and first flush stormwater before it was loaded into trucks for offsite transport or sent to the existing onsite treatment facility.

FOPs at Site

The "application area" consists of the emission units and that portion of the site included in the application and this permit. Multiple FOPs may be issued to a site in accordance with 30 TAC § 122.201(e). When there is only one area for the site,

then the application information and permit will include all units at the site. Additional FOPs that exist at the site, if any, are listed below.

Additional FOPs: O1641, O3557, O4004, O4035, O4187

Major Source Pollutants

The table below specifies the pollutants for which the site is a major source:

Major Pollutants	VOC, PM, NOX, HAPS, CO
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Reading State of Texas’s Federal Operating Permit

The Title V Federal Operating Permit (FOP) lists all state and federal air emission regulations and New Source Review (NSR) authorizations (collectively known as “applicable requirements”) that apply at a particular site or permit area (in the event a site has multiple FOPs). **The FOP does not authorize new emissions or new construction activities.** The FOP begins with an introductory page which is common to all Title V permits. This page gives the details of the company, states the authority of the issuing agency, requires the company to operate in accordance with this permit and 30 Texas Administrative Code (TAC) Chapter 122, requires adherence with NSR requirements of 30 TAC Chapter 116, and finally indicates the permit number and the issuance date.

This is followed by the table of contents, which is generally composed of the following elements. Not all permits will have all of the elements.

- General Terms and Conditions
- Special Terms and Conditions
 - Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting
 - Additional Monitoring Requirements
 - New Source Review Authorization Requirements
 - Compliance Requirements
 - Protection of Stratosphere Ozone
 - Permit Location
 - Permit Shield (30 TAC § 122.148)
- Attachments
 - Applicable Requirements Summary
 - Unit Summary
 - Applicable Requirements Summary
 - Additional Monitoring Requirements
 - Permit Shield
 - New Source Review Authorization References
 - Compliance Plan
 - Alternative Requirements
- Appendix A
 - Acronym list
- Appendix B
 - Copies of major NSR authorizations

General Terms and Conditions

The General Terms and Conditions are the same and appear in all permits. The first paragraph lists the specific citations for 30 TAC Chapter 122 requirements that apply to all Title V permit holders. The second paragraph describes the requirements for record retention. The third paragraph provides details for voiding the permit, if applicable. The fourth paragraph states that the permit holder shall comply with the requirements of 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. The fifth paragraph provides details on submission of reports required by the permit.

Special Terms and Conditions

Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting. The TCEQ has designated certain applicable requirements as site-wide requirements. A site-wide requirement is a requirement that applies uniformly to all the units or activities at the site. Units with only site-wide requirements are addressed on Form OP-REQ1 and are not required to be listed separately on an OP-UA Form or Form OP-SUM. Form OP-SUM must list all units addressed in the application and provide identifying information, applicable OP-UA Forms, and preconstruction authorizations. The various OP-UA Forms provide the characteristics of each unit from which applicable requirements are established. Some exceptions exist as a few units may have both site-wide requirements and unit specific requirements.

Other conditions. The other entries under special terms and conditions are in general terms referring to compliance with the more detailed data listed in the attachments.

Attachments

Applicable Requirements Summary. The first attachment, the Applicable Requirements Summary, has two tables, addressing unit specific requirements. The first table, the Unit Summary, includes a list of units with applicable requirements, the unit type, the applicable regulation, and the requirement driver. The intent of the requirement driver is to inform the reader that a given unit may have several different operating scenarios and the differences between those operating scenarios.

The applicable requirements summary table provides the detailed citations of the rules that apply to the various units. For each unit and operating scenario, there is an added modifier called the "index number," detailed citations specifying monitoring and testing requirements, recordkeeping requirements, and reporting requirements. The data for this table is based on data supplied by the applicant on the OP-SUM and various OP-UA forms.

Additional Monitoring Requirement. The next attachment includes additional monitoring the applicant must perform to ensure compliance with the applicable standard. Compliance assurance monitoring (CAM) is often required to provide a reasonable assurance of compliance with applicable emission limitations/standards for large emission units that use control devices to achieve compliance with applicant requirements. When necessary, periodic monitoring (PM) requirements are specified for certain parameters (i.e. feed rates, flow rates, temperature, fuel type and consumption, etc.) to determine if a term and condition or emission unit is operating within specified limits to control emissions. These additional monitoring approaches may be required for two reasons. First, the applicable rules do not adequately specify monitoring requirements (exception- Maximum Achievable Control Technology Standards (MACTs) generally have sufficient monitoring), and second, monitoring may be required to fill gaps in the monitoring requirements of certain applicable requirements. In situations where the NSR permit is the applicable requirement requiring extra monitoring for a specific emission unit, the preferred solution is to have the monitoring requirements in the NSR permit updated so that all NSR requirements are consolidated in the NSR permit.

Permit Shield. A permit may or may not have a permit shield, depending on whether an applicant has applied for, and justified the granting of, a permit shield. A permit shield is a special condition included in the permit document stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirement(s) or specified applicable state-only requirement(s).

New Source Review Authorization References. All activities which are related to emissions in the state of Texas must have a NSR authorization prior to beginning construction. This section lists all units in the permit and the NSR authorization that allowed the unit to be constructed or modified. Units that do not have unit specific applicable requirements other than the NSR authorization do not need to be listed in this attachment. While NSR permits are not physically a part of the Title V permit, they are legally incorporated into the Title V permit by reference. Those NSR permits whose emissions exceed certain PSD/NA thresholds must also undergo a Federal review of federally regulated pollutants in addition to review for state regulated pollutants.

Compliance Plan. A permit may have a compliance schedule attachment for listing corrective actions plans for any emission unit that is out of compliance with an applicable requirement.

Alternative Requirements. This attachment will list any alternative monitoring plans or alternative means of compliance for applicable requirements that have been approved by the EPA Administrator and/or the TCEQ Executive Director.

Appendix A

Acronym list. This attachment lists the common acronyms used when discussing the FOPs.

Appendix B

Copies of major NSR authorizations applicable to the units covered by this permit have been included in this Appendix, to ensure that all interested persons can access those authorizations.

Stationary vents subject to 30 TAC Chapter 111, Subchapter A, § 111.111(a)(1)(B) addressed in the Special Terms and Conditions

The site contains stationary vents with a flowrate less than 100,000 actual cubic feet per minute (acfm) and constructed after January 31, 1972 which are limited, over a six-minute average, to 20% opacity as required by 30 TAC § 111.111(a)(1)(B). As a site may have a large number of stationary vents that fall into this category, they are not required to be listed individually in the permit's Applicable Requirements Summary. This is consistent with EPA's White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995, that states that requirements that apply identically to emission units at a site can be treated on a generic basis such as source-wide opacity limits.

Periodic monitoring is specified in Special Term and Condition 3 for stationary vents subject to 30 TAC § 111.111(a)(1)(B) to verify compliance with the 20% opacity limit. These vents are not expected to produce visible emissions during normal operation. The TCEQ evaluated the probability of these sources violating the opacity standards and determined that there is a very low potential that an opacity standard would be exceeded. It was determined that continuous monitoring for these sources is not warranted as there would be very limited environmental benefit in continuously monitoring sources that have a low potential to produce visible emissions. Therefore, the TCEQ set the visible observation monitoring frequency for these sources to once per calendar quarter.

The TCEQ has exempted vents that are not capable of producing visible emissions from periodic monitoring requirements. These vents include sources of colorless VOCs, non-fuming liquids, and other materials that cannot produce emissions that obstruct the transmission of light. Passive ventilation vents, such as plumbing vents, are also included in this category. Since this category of vents are not capable of producing opacity due to the physical or chemical characteristics of the emission source, periodic monitoring is not required as it would not yield any additional data to assure compliance with the 20% opacity standard of 30 TAC § 111.111(a)(1)(B).

In the event that visible emissions are detected, either through the quarterly observation or other credible evidence, such as observations from company personnel, the permit holder shall either report a deviation or perform a Test Method 9 observation to determine the opacity consistent with the 6-minute averaging time specified in 30 TAC § 111.111(a)(1)(B). An additional provision is included to monitor combustion sources more frequently than quarterly if alternate fuels are burned for periods greater than 24 consecutive hours. This will address possible emissions that may arise when switching fuel types.

Federal Regulatory Applicability Determinations

The following chart summarizes the applicability of the principal air pollution regulatory programs to the permit area:

Regulatory Program	Applicability (Yes/No)
Prevention of Significant Deterioration (PSD)	Yes
Nonattainment New Source Review (NNSR)	Yes
Minor NSR	Yes
40 CFR Part 60 - New Source Performance Standards	Yes
40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)	Yes
40 CFR Part 63 - NESHAPs for Source Categories	Yes
Title IV (Acid Rain) of the Clean Air Act (CAA)	No
Title V (Federal Operating Permits) of the CAA	Yes
Title VI (Stratospheric Ozone Protection) of the CAA	No
CSAPR (Cross-State Air Pollution Rule)	No
Federal Implementation Plan for Regional Haze (Texas SO ₂ Trading Program)	No

Basis for Applying Permit Shields

An operating permit applicant has the opportunity to specifically request a permit shield to document that specific applicable requirements do not apply to emission units in the permit. A permit shield is a special condition stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements. A permit shield has been requested in the application for specific emission units. For the permit shield requests that have been approved, the basis of determination for regulations that the owner/operator need not comply with are located in the "Permit Shield" attachment of the permit.

Insignificant Activities and Emission Units

In general, units not meeting the criteria for inclusion on either Form OP-SUM or Form OP-REQ1 are not required to be addressed in the operating permit application. Examples of these types of units include, but are not limited to, the following:

De Minimis Sources

1. Sources identified in the "De Minimis Facilities or Sources" list maintained by TCEQ. The list is available at https://www.tceq.texas.gov/permitting/air/newsourcereview/de_minimis.html.

Miscellaneous Sources

2. Office activities such as photocopying, blueprint copying, and photographic processes.
3. Outdoor barbecue pits, campfires, and fireplaces.
4. Storage and handling of sealed portable containers, cylinders, or sealed drums.
5. Vehicle exhaust from maintenance or repair shops.

6. Storage and use of non-VOC products or equipment for maintaining motor vehicles operated at the site (including but not limited to, antifreeze and fuel additives).
7. Air contaminant detectors and recorders, combustion controllers and shut-off devices, product analyzers, laboratory analyzers, continuous emissions monitors, other analyzers and monitors, and emissions associated with sampling activities. Exception to this category includes sampling activities that are deemed fugitive emissions and under a regulatory leak detection and repair program.
8. Steam vents, steam leaks, and steam safety relief valves, provided the steam (or boiler feedwater) has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
9. Storage of water that has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
10. Well cellars.
11. Fire or emergency response equipment and training, including but not limited to, use of fire control equipment including equipment testing and training, and open burning of materials or fuels associated with firefighting training.
12. Equipment used exclusively for the melting or application of wax.
13. Instrument systems utilizing air, natural gas, nitrogen, oxygen, carbon dioxide, helium, neon, argon, krypton, and xenon.
14. Battery recharging areas.

Sources Authorized by 30 TAC Chapter 106, Permits by Rule

15. Sources authorized by §106.102: Combustion units designed and used exclusively for comfort heating purposes employing liquid petroleum gas, natural gas, solid wood, or distillate fuel oil.
16. Sources authorized by §106.122: Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including but not limited to, assorted vacuum producing devices and laboratory fume hoods.
17. Sources authorized by §106.141: Batch mixers with rated capacity of 27 cubic feet or less for mixing cement, sand, aggregate, lime, gypsum, additives, and/or water to produce concrete, grout, stucco, mortar, or other similar products.
18. Sources authorized by §106.143: Wet sand and gravel production facilities that obtain material from subterranean and subaqueous beds where the deposits of sand and gravel are consolidated granular materials resulting from natural disintegration of rock and stone and have a production rate of 500 tons per hour or less.
19. Sources authorized by §106.148: Railcar or truck unloading of wet sand, gravel, aggregate, coal, lignite, and scrap iron or scrap steel (but not including metal ores, metal oxides, battery parts, or fine dry materials) into trucks or other railcars for transportation to other locations.
20. Sources authorized by §106.149: Sand and gravel production facilities that obtain material from deposits of sand and gravel consisting of natural disintegration of rock and stone, provided that crushing or breaking operations are not used and no blasting is conducted to obtain the material.
21. Sources authorized by §106.161: Animal feeding operations which confine animals in numbers specified and any associated on-site feed handling and/or feed millings operations, not including caged laying and caged pullet operations.
22. Sources authorized by §106.162: Livestock auction sales facilities.
23. Sources authorized by §106.163: All animal racing facilities, domestic animal shelters, zoos, and their associated confinement areas, stables, feeding areas, and waste collection and treatment facilities, other than incineration units.
24. Sources authorized by §106.229: Equipment used exclusively for the dyeing or stripping of textiles.
25. Sources authorized by §106.241: Any facility where animals or poultry are slaughtered and prepared for human consumption provided that waste products such as blood, offal, and feathers are stored in such a manner as to prevent the creation of a nuisance condition and these waste products are removed from the premises daily or stored under refrigeration.
26. Sources authorized by §106.242: Equipment used in eating establishments for the purpose of preparing food for human consumption.
27. Sources authorized by §106.243: Smokehouses in which the maximum horizontal inside cross-sectional area does not exceed 100 square feet.
28. Sources authorized by §106.244: Ovens, mixers, blenders, barbecue pits, and cookers if the products are edible and intended for human consumption.
29. Sources authorized by §106.266: Vacuum cleaning systems used exclusively for industrial, commercial, or residential housekeeping purposes.
30. Sources authorized by §106.301: Aqueous fertilizer storage tanks.

31. Sources authorized by §106.313: All closed tumblers used for the cleaning or deburring of metal products without abrasive blasting, and all open tumblers with a batch capacity of 1,000 lbs. or less.
32. Sources authorized by §106.316: Equipment used for inspection of metal products.
33. Sources authorized by §106.317: Equipment used exclusively for rolling, forging, pressing, drawing, spinning, or extruding either hot or cold metals by some mechanical means.
34. Sources authorized by §106.318: Die casting machines.
35. Sources authorized by §106.319: Foundry sand mold forming equipment to which no heat is applied.
36. Sources authorized by §106.331: Equipment used exclusively to package pharmaceuticals and cosmetics or to coat pharmaceutical tablets.
37. Sources authorized by §106.333: Equipment used exclusively for the mixing and blending of materials at ambient temperature to make water-based adhesives.
38. Sources authorized by §106.372: Any air separation or other industrial gas production, storage, or packaging facility. Industrial gases, for purposes of this list, include only oxygen, nitrogen, helium, neon, argon, krypton, and xenon.
39. Sources authorized by §106.391: Presses used for the curing of rubber products and plastic products.
40. Sources authorized by §106.394: Equipment used for compression molding and injection molding of plastics.
41. Sources authorized by §106.414: Equipment used exclusively for the packaging of lubricants or greases.
42. Sources authorized by §106.415: Laundry dryers, extractors, and tumblers used for fabrics cleaned with water solutions of bleach or detergents.
43. Sources authorized by §106.431: Equipment used exclusively to mill or grind coatings and molding compounds where all materials charged are in paste form.
44. Sources authorized by §106.432: Containers, reservoirs, or tanks used exclusively for dipping operations for coating objects with oils, waxes, or greases where no organic solvents, diluents, or thinners are used; or dipping operations for applying coatings of natural or synthetic resins which contain no organic solvents.
45. Sources authorized by §106.451: Blast cleaning equipment using a suspension of abrasives in water.
46. Sources authorized by §106.453: Equipment used for washing or drying products fabricated from metal or glass, provided no volatile organic materials are used in the process and no oil or solid fuel is burned.
47. Sources authorized by §106.471: Equipment used exclusively to store or hold dry natural gas.
48. Sources authorized by §106.531: Sewage treatment facilities, excluding combustion or incineration equipment, land farms, or grease trap waste handling or treatment facilities.

Determination of Applicable Requirements

The tables below include the applicability determinations for the emission units, the index number(s) where applicable, and all relevant unit attribute information used to form the basis of the applicability determination. The unit attribute information is a description of the physical properties of an emission unit which is used to determine the requirements to which the permit holder must comply. For more information about the descriptions of the unit attributes specific Unit Attribute Forms may be viewed at www.tceq.texas.gov/permitting/air/nav/air_all_ua_forms.html.

A list of unit attribute forms is included at the end of this document. Some examples of unit attributes include construction date; product stored in a tank; boiler fuel type; etc.. Generally, multiple attributes are needed to determine the requirements for a given emission unit and index number. The table below lists these attributes in the column entitled "Basis of Determination." Attributes that demonstrate that an applicable requirement applies will be the factual basis for the specific citations in an applicable requirement that apply to a unit for that index number. The TCEQ Air Permits Division has developed flowcharts for determining applicability of state and federal regulations based on the unit attribute information in a Decision Support System (DSS). These flowcharts can be accessed via the internet at www.tceq.texas.gov/permitting/air/nav/air_supportsys.html. The Air Permits Division staff may also be contacted for assistance at (512) 239-1250.

The attributes for each unit and corresponding index number provide the basis for determining the specific legal citations in an applicable requirement that apply, including emission limitations or standards, monitoring, recordkeeping, and reporting. The rules were found to apply or not apply by using the unit attributes as answers to decision questions found in the flowcharts of the DSS. Some additional attributes indicate which legal citations of a rule apply. The legal citations that apply to each emission unit may be found in the Applicable Requirements Summary table of the draft permit. There may be some entries or rows of units and rules not found in the permit, or if the permit contains a permit shield, repeated in the permit shield area. These are sets of attributes that describe negative applicability, or; in other words, the reason why a potentially applicable requirement does not apply.

If applicability determinations have been made which differ from the available flowcharts, an explanation of the decisions involved in the applicability determination is specified in the column "Changes and Exceptions to RRT." If there were no exceptions to the DSS, then this column has been removed.

The draft permit includes all emission limitations or standards, monitoring, recordkeeping and reporting required by each applicable requirement. If an applicable requirement does not require monitoring, recordkeeping, or reporting, the word "None" will appear in the Applicable Requirements Summary table. If additional periodic monitoring is required for an applicable requirement, it will be explained in detail in the portion of this document entitled "Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected."

When attributes demonstrate that a unit is not subject to an applicable requirement, the applicant may request a permit shield for those items. The portion of this document entitled "Basis for Applying Permit Shields" specifies which units, if any, have a permit shield.

Operational Flexibility

When an emission unit has multiple operating scenarios, it will have a different index number associated with each operating condition. This means that units are permitted to operate under multiple operating conditions. The applicable requirements for each operating condition are determined by a unique set of unit attributes. For example, a tank may store two different products at different points in time. The tank may, therefore, need to comply with two distinct sets of requirements, depending on the product that is stored. Both sets of requirements are included in the permit, so that the permit holder may store either product in the tank.

Determination of Applicable Requirements

Unit ID	Regulation	Index Number	Basis of Determination*
GEN-001	30 TAC Chapter 117, Subchapter B	R7300-1	Type of Service = New, modified, reconstructed or relocated diesel fuel-fired engine, placed into service on or after October 1, 2001, located in the Houston/Galveston/Brazoria ozone nonattainment area, operated less than 100 hours/year, on a rolling 12-month average
GEN-001	40 CFR Part 60, Subpart IIII	60IIII-1	<p>Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification after 07/11/2005.</p> <p>Exemptions = The CI ICE is not exempt due to national security, testing at an engine test cell/stand or as a temporary replacement.</p> <p>Service = CI ICE is an emergency engine.</p> <p>Commencing = CI ICE was newly constructed after 07/11/2005</p> <p>Manufacture Date = Date of manufacture was after 04/01/2006.</p> <p>Diesel = Diesel fuel is used.</p> <p>Displacement = Displacement is greater than or equal to 15 and less than 20 liters per cylinder.</p> <p>Model Year = CI ICE was manufactured in model year 2017 or later.</p> <p>Kilowatts = Power rating is greater than 368 KW and less than 600 KW.</p> <p>AECD = The CI ICE is not equipped with auxiliary emission control devices (AECDs) pursuant to the requirements of 40 CFR 1039.665</p> <p>Standard = The emergency CI ICE meets the Tier 1, 2, 3, or 4 standards applicable to non-emergency engines (for the same KW and model year)</p> <p>Compliance Option = The CI ICE and control device is installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions.</p>
GEN-001	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-1	<p>HAP Source = The site is a major source of hazardous air pollutants as defined in 40 CFR § 63.2</p> <p>Brake HP = Stationary RICE with a brake HP greater than 500 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006.</p> <p>Service Type = Emergency use where the RICE does not operate as specified in 40 CFR §63.6640(f)(2)(ii) and (iii) or does not operate as specified in 40 CFR §63.6640(f)(4)(ii).</p>
GEN-002	30 TAC Chapter 117, Subchapter B	R7300-1	Type of Service = New, modified, reconstructed or relocated diesel fuel-fired engine, placed into service on or after October 1, 2001, located in the Houston/Galveston/Brazoria ozone nonattainment area, operated less than 100 hours/year, on a rolling 12-month average
GEN-002	40 CFR Part 60, Subpart IIII	60IIII-2	<p>Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification after 07/11/2005.</p> <p>Exemptions = The CI ICE is not exempt due to national security, testing at an engine test cell/stand or as a temporary replacement.</p> <p>Service = CI ICE is an emergency engine.</p> <p>Commencing = CI ICE was newly constructed after 07/11/2005</p> <p>Manufacture Date = Date of manufacture was after 04/01/2006.</p> <p>Diesel = Diesel fuel is used.</p> <p>Displacement = Displacement is less than 10 liters per cylinder.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>Model Year = CI ICE was manufactured in model year 2017 or later.</p> <p>Kilowatts = Power rating greater than or equal to 130 KW and less than or equal to 368 KW.</p> <p>AECD = The CI ICE is not equipped with auxiliary emission control devices (AECDs) pursuant to the requirements of 40 CFR 1039.665</p> <p>Standard = The emergency CI ICE meets the Tier 1, 2, 3, or 4 standards applicable to non-emergency engines (for the same KW and model year)</p> <p>Compliance Option = The CI ICE and control device is installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions.</p>
GEN-002	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-2	<p>HAP Source = The site is a major source of hazardous air pollutants as defined in 40 CFR § 63.2</p> <p>Brake HP = Stationary RICE with a brake HP greater than or equal to 300 HP and less than or equal to 500 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006.</p> <p>Service Type = Emergency use where the RICE does not operate as specified in 40 CFR §63.6640(f)(2)(ii) and (iii) or does not operate as specified in 40 CFR §63.6640(f)(4)(ii).</p>
GEN-003	30 TAC Chapter 117, Subchapter B	R7300-1	<p>Type of Service = New, modified, reconstructed or relocated diesel fuel-fired engine, placed into service on or after October 1, 2001, located in the Houston/Galveston/Brazoria ozone nonattainment area, operated less than 100 hours/year, on a rolling 12-month average</p>
GEN-003	40 CFR Part 60, Subpart IIII	60IIII-2	<p>Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification after 07/11/2005.</p> <p>Exemptions = The CI ICE is not exempt due to national security, testing at an engine test cell/stand or as a temporary replacement.</p> <p>Service = CI ICE is an emergency engine.</p> <p>Commencing = CI ICE was newly constructed after 07/11/2005</p> <p>Manufacture Date = Date of manufacture was after 04/01/2006.</p> <p>Diesel = Diesel fuel is used.</p> <p>Displacement = Displacement is less than 10 liters per cylinder.</p> <p>Model Year = CI ICE was manufactured in model year 2017 or later.</p> <p>Kilowatts = Power rating greater than or equal to 130 KW and less than or equal to 368 KW.</p> <p>AECD = The CI ICE is not equipped with auxiliary emission control devices (AECDs) pursuant to the requirements of 40 CFR 1039.665</p> <p>Standard = The emergency CI ICE meets the Tier 1, 2, 3, or 4 standards applicable to non-emergency engines (for the same KW and model year)</p> <p>Compliance Option = The CI ICE and control device is installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions.</p>
GEN-003	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-2	<p>HAP Source = The site is a major source of hazardous air pollutants as defined in 40 CFR § 63.2</p> <p>Brake HP = Stationary RICE with a brake HP greater than or equal to 300 HP and less than or equal to 500 HP.</p> <p>Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006.</p> <p>Service Type = Emergency use where the RICE does not operate as specified in 40 CFR §63.6640(f)(2)(ii) and (iii) or does not operate as specified in 40 CFR §63.6640(f)(4)(ii).</p>

Unit ID	Regulation	Index Number	Basis of Determination*
SV19.863	30 TAC Chapter 115, Storage of VOCs	R5112-01	Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons Tank Description = Tank using a submerged fill pipe True Vapor Pressure = True vapor pressure is less than 1.0 psia
SV19.863	40 CFR Part 60, Subpart Kb	60KB-01	Product Stored = Volatile organic liquid Storage Capacity = Capacity is greater than or equal to 39,890 gallons (151,000 liters) WW Tank Control = The storage vessel is not using 40 CFR 63, subpart WW to comply with 40 CFR 60, subpart Kb Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia
SV19.864	30 TAC Chapter 115, Storage of VOCs	R5112-01	Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons Tank Description = Tank using a submerged fill pipe True Vapor Pressure = True vapor pressure is less than 1.0 psia
SV19.911	30 TAC Chapter 115, Storage of VOCs	R5112-01	Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons Tank Description = Tank using a submerged fill pipe True Vapor Pressure = True vapor pressure is less than 1.0 psia
LO-1	30 TAC Chapter 115, Loading and Unloading of VOC	R5211-01	Chapter 115 Facility Type = Facility type other than a gasoline terminal, gasoline bulk plant, motor vehicle fuel dispensing facility or marine terminal. Alternate Control Requirement (ACR) = No alternate control requirements are being utilized. Product Transferred = Volatile organic compounds other than liquefied petroleum gas and gasoline. Transfer Type = Only loading. True Vapor Pressure = True vapor pressure less than 0.5 psia.
LO-1	40 CFR Part 63, Subpart FFFF	63FFFF-01	Emission Standard = None of the above standards apply.
LO-2	30 TAC Chapter 115, Loading and Unloading of VOC	R5211-01	Chapter 115 Facility Type = Facility type other than a gasoline terminal, gasoline bulk plant, motor vehicle fuel dispensing facility or marine terminal. Alternate Control Requirement (ACR) = No alternate control requirements are being utilized. Product Transferred = Volatile organic compounds other than liquefied petroleum gas and gasoline.

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>Transfer Type = Only loading. True Vapor Pressure = True vapor pressure less than 0.5 psia.</p>
LO-2	40 CFR Part 63, Subpart FFFF	63FFFF-01	Emission Standard = None of the above standards apply.
HR15.101	30 TAC Chapter 117, Subchapter B	R7300-01	<p>Unit Type = Process heater Maximum Rated Capacity = MRC is greater than or equal to 200 MMBtu/hr Fuel Type #1 = Natural gas Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases Annual Heat Input = Annual heat input is greater than 2.2 (10¹¹) Btu/yr, based on a rolling 12-month average. NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8) Diluent CEMS = The process heater does not use a carbon dioxide CEMS to monitor diluent. NOx Emission Limit Basis = Complying with the applicable emission limit using a block one-hour average NOx Reduction = Post combustion control technique with ammonia injection NOx Monitoring System = Continuous emissions monitoring system Fuel Flow Monitoring = Fuel flow is monitored with a totalizing fuel flow meter per 30 TAC §§ 117.140(a), 117.340(a) or 117.440(a). CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option CO Monitoring System = Continuous emissions monitoring system NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2) NH3 Monitoring = Continuous emission monitoring system.</p>
HR15.101	40 CFR Part 63, Subpart DDDDD	63DDDDDD-01	<p>Commence = Source is new (commenced construction after June 4, 2010) Table Applicability = The unit is designed to burn Gas 1 fuel AND has no continuous oxygen trim AND has heat input equal to or greater than 10 MMBtu/hr</p>
HR15.102	30 TAC Chapter 117, Subchapter B	R7300-01	<p>Unit Type = Process heater Maximum Rated Capacity = MRC is greater than or equal to 200 MMBtu/hr Fuel Type #1 = Natural gas Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases Annual Heat Input = Annual heat input is greater than 2.2 (10¹¹) Btu/yr, based on a rolling 12-month average. NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8) Diluent CEMS = The process heater does not use a carbon dioxide CEMS to monitor diluent. NOx Emission Limit Basis = Complying with the applicable emission limit using a block one-hour average NOx Reduction = Post combustion control technique with ammonia injection NOx Monitoring System = Continuous emissions monitoring system Fuel Flow Monitoring = Fuel flow is monitored with a totalizing fuel flow meter per 30 TAC §§ 117.140(a), 117.340(a) or 117.440(a).</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option CO Monitoring System = Continuous emissions monitoring system NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2) NH3 Monitoring = Continuous emission monitoring system.</p>
HR15.102	40 CFR Part 63, Subpart DDDDD	63DDDDDD-01	<p>Commence = Source is new (commenced construction after June 4, 2010) Table Applicability = The unit is designed to burn Gas 1 fuel AND has no continuous oxygen trim AND has heat input equal to or greater than 10 MMBtu/hr</p>
HR15.601	30 TAC Chapter 117, Subchapter B	R7300-02	<p>Unit Type = Process heater Maximum Rated Capacity = MRC is greater than or equal to 100 MMBtu/hr but less than 200 MMBtu/hr Fuel Type #1 = Natural gas Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases Annual Heat Input = Annual heat input is greater than 2.2 (10¹¹) Btu/yr, based on a rolling 12-month average. NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8) Diluent CEMS = The process heater does not use a carbon dioxide CEMS to monitor diluent. NOx Emission Limit Basis = Complying with the applicable emission limit using a block one-hour average NOx Reduction = Post combustion control technique with ammonia injection NOx Monitoring System = Continuous emissions monitoring system Fuel Flow Monitoring = Fuel flow is monitored with a totalizing fuel flow meter per 30 TAC §§ 117.140(a), 117.340(a) or 117.440(a). CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option CO Monitoring System = Continuous emissions monitoring system NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2) NH3 Monitoring = Continuous emission monitoring system.</p>
HR15.601	40 CFR Part 63, Subpart DDDDD	63DDDDDD-01	<p>Commence = Source is new (commenced construction after June 4, 2010) Table Applicability = The unit is designed to burn Gas 1 fuel AND has no continuous oxygen trim AND has heat input equal to or greater than 10 MMBtu/hr</p>
HR15.601	40 CFR Part 60, Subpart Db	60DB-01	<p>Construction/Modification Date = Constructed or reconstructed after February 28, 2005. Heat Input Capacity = Heat input capacity is greater than 100 MMBtu/hr (29 MW) but less than or equal to 250 MMBtu/hr (73 MW). Subpart Da = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart Da. Changes to Existing Affected Facility = No change has been made to the existing steam generating unit, which was not previously subject to 40 CFR Part 60, Subpart Db, for the sole purpose of combusting gases containing totally reduced sulfur as defined under 40 CFR § 60.281. Subpart Ea, Eb or AAAA = The affected facility does not meet applicability requirements of and is subject to 40 CFR Part 60, Subpart Ea, Eb or AAAA.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>Subpart KKKK = The affected facility is not a heat recovery steam generator associated with combined cycle gas turbines and that meets applicability requirements of and is subject to 40 CFR Part 60, Subpart KKKK.</p> <p>Subpart Cb or BBBB = The affected facility is not covered by an EPA approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart Cb or BBBB emission guidelines.</p> <p>D-Series Fuel Type #1 = Natural gas.</p> <p>D-Series Fuel Type #2 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas.</p> <p>Subpart J = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart J.</p> <p>Subpart E = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart E.</p> <p>ACF Option - SO₂ = Other ACF or no ACF.</p> <p>ACF Option - PM = Other ACF or no ACF.</p> <p>ACF Option - NO_x = Other ACF or no ACF.</p> <p>60.42b(k)(2) Low Sulfur Exemption = The § 60.42b(k)(2) exemption applies.</p> <p>Electrical or Mechanical Output = 10% or less of the annual output is electrical or mechanical.</p> <p>60.49Da(n) Alternative = The facility is not using the § 60.49Da(n) alternative.</p> <p>60.49Da(m) Alternative = The facility is not using the § 60.49Da(m) alternative.</p> <p>PM Monitoring Type = No particulate monitoring.</p> <p>Opacity Monitoring Type = No particulate (opacity) monitoring.</p> <p>NO_x Monitoring Type = Continuous emission monitoring system.</p> <p>SO₂ Monitoring Type = Fuel certification (maintaining receipts per § 60.49b(r)(1)).</p> <p>Technology Type = No emerging or conventional technology is used to reduce or control SO₂ emissions</p> <p>Unit Type = OTHER UNIT TYPE</p> <p>Heat Release Rate = Natural gas with a heat release rate less than or equal to 70 MBtu/hr/ft³.</p> <p>Heat Input Gas/Oil = The facility does not combust natural gas or distillate oil in excess of 30 % of the heat input from the combustion of all fuels.</p>
SK25.801	30 TAC Chapter 111, Visible Emissions	R111-01	<p>Acid Gases Only = Flare is not used only as an acid gas flare as defined in 30 TAC § 101.1.</p> <p>Emergency/Upset Conditions Only = Flare is used under conditions other than emergency or upset conditions.</p>
SK25.801	30 TAC Chapter 115, HRVOC Vent Gas	R5720-01	<p>Out of Service = Flare was not permanently out of service by April 1, 2006.</p> <p>Total Gas Stream = Flare receives a total gas stream with greater than 100 ppmv HRVOC at some time.</p> <p>Gas Stream Concentration = Flare receives a gas stream containing 5% or greater HRVOC by weight at some time.</p> <p>Alternative Monitoring Approach = No alternative monitoring approaches as outlined in 115.725(m)(1) or 115.725(m)(2) are used.</p> <p>Modifications to Testing/Monitoring = No modifications to test methods or monitoring methods specified in this section.</p> <p>Flare Type = Flare is in multi-purpose service.</p> <p>Monitoring Requirements = Flare is complying with the continuous monitoring requirements of § 115.725(d).</p> <p>Tank Service = Flare is not in dedicated service for storage tanks with 95% or greater of an individual HRVOC.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
SK25.801	40 CFR Part 60, Subpart A	60A-01	Subject to 40 CFR § 60.18 = Flare is subject to 40 CFR § 60.18. Adhering to Heat Content Specifications = Adhering to the heat content specifications in 40 CFR § 60.18(c)(3)(ii) and the maximum tip velocity specifications in 40 CFR § 60.18(c)(4)(i)-(iii) or (c)(5). Flare Assist Type = Air-assisted
FUG-NGAS	30 TAC Chapter 115, HRVOC Fugitive Emissions	R5780-01	Title 30 TAC §115.780 Applicable = The fugitive unit contains a defined process and Highly Reactive VOC. Less Than 250 Components at Site = The fugitive unit is located at a site with at least 250 fugitive components in VOC service. Weight Percent HRVOC = All components contact only a process fluid that contains less than 5.0% HRVOC by weight on an annual average basis.
FUG-NGAS	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	R5352-01	Title 30 TAC § 115.352 Applicable = The site contains a petroleum refinery, a synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process as defined in 30 TAC § 115.10 Less Than 250 Components at Site = Fugitive unit not located at site with less than 250 fugitive components. Weight Percent VOC = All components only contact a process fluid that contains less than 10% VOC by weight.
FUG-NGAS	40 CFR Part 60, Subpart VVa	60VVA-01	Produces Chemicals = The facility produces, as an intermediate or final product, one or more of the chemicals listed in 40 CFR § 60.489a. Affected Facility = The facility is an affected facility as defined in 40 CFR § 60.480a(a)(2). Construction/Modification Date = After November 7, 2006. Compliance Option = Choosing to comply with the provisions of 40 CFR Part 60, Subpart VVa. Design Capacity = Site with a design capacity greater than or equal to 1,000 Mg/yr. Facility Type = The facility contains no equipment designed to operate in VOC service.
FUG-PDH2	30 TAC Chapter 115, HRVOC Fugitive Emissions	R5780-ALL	SOP Index No. = Owner/Operator assumes HRVOC fugitive control requirements for all components subject to 30 TAC Chapter 115, Subchapter H, Division 3 with no alternate control or control device.
FUG-PDH2	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	R5352-ALL	SOP/GOP Index No. = Owner/Operator assumes VOC fugitive control requirements for all components subject to 30 TAC Chapter 115, Subchapter D, Division 3 with no alternate control or control device.
FUG-PDH2	40 CFR Part 60, Subpart VVa	60VVA-ALL	SOP Index No. = Fugitive unit has all components with the exception of closed vent systems and control devices.
FUG-SCR	30 TAC Chapter 115, HRVOC Fugitive Emissions	R5780-01	Title 30 TAC §115.780 Applicable = The fugitive unit contains a defined process and Highly Reactive VOC. Less Than 250 Components at Site = The fugitive unit is located at a site with at least 250 fugitive components in VOC service. Weight Percent HRVOC = All components contact only a process fluid that contains less than 5.0% HRVOC by weight on an annual average basis.

Unit ID	Regulation	Index Number	Basis of Determination*
FUG-SCR	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	R5352-01	<p>Title 30 TAC § 115.352 Applicable = The site contains a petroleum refinery, a synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process as defined in 30 TAC § 115.10</p> <p>Less Than 250 Components at Site = Fugitive unit not located at site with less than 250 fugitive components.</p> <p>Weight Percent VOC = All components only contact a process fluid that contains less than 10% VOC by weight.</p>
FUG-SCR	40 CFR Part 60, Subpart VVa	60VVA-01	<p>Produces Chemicals = The facility produces, as an intermediate or final product, one or more of the chemicals listed in 40 CFR § 60.489a.</p> <p>Affected Facility = The facility is an affected facility as defined in 40 CFR § 60.480a(a)(2).</p> <p>Construction/Modification Date = After November 7, 2006.</p> <p>Compliance Option = Choosing to comply with the provisions of 40 CFR Part 60, Subpart VVa.</p> <p>Design Capacity = Site with a design capacity greater than or equal to 1,000 Mg/yr.</p> <p>Facility Type = The facility contains no equipment designed to operate in VOC service.</p>
DEETHNEREC	30 TAC Chapter 115, HRVOC Vent Gas	R5H1-01	<p>HRVOC Concentration = The vent gas stream has a HRVOC concentration of at least 100 ppmv at some times.</p> <p>Max Flow Rate = The vent gas stream has a maximum potential flow rate greater than 100 dry standard cubic feet per hour (ft³/hr).</p> <p>Vent Gas Stream Control = Vent gas stream is controlled by a flare.</p> <p>Alternative Monitoring = Not using alternative monitoring and testing methods.</p> <p>Minor Modification = Not using any minor modification to the monitoring and testing methods of the rule.</p> <p>Process Knowledge = Process knowledge and engineering calculations are used to determine HRVOC emissions during emission events and scheduled startup, shutdown, and maintenance activities.</p> <p>Waived Testing = The executive director has not waived testing for identical vents.</p> <p>Testing Requirements = Process knowledge to determine maximum potential HRVOC hourly emissions for analyzer vents, stream system vents, vent gas streams with no HRVOC except during emission event or degassing safety device in lieu of testing.</p>
DEETHNEREC	30 TAC Chapter 115, Vent Gas Controls	R5121-01	<p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Vent Type = Vent gas stream originates from a synthetic organic chemical manufacturing industry reactor process or distillation operation, as defined in 30 TAC § 115.10.</p> <p>Alternate Control Requirement = Alternate control is not used.</p> <p>Control Device Type = Smokeless flare</p> <p>Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit.</p> <p>Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv.</p> <p>40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			40 CFR 60 Subpart RRR Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices.
DEETHNEREC	40 CFR Part 63, Subpart FFFF	63FFFF-V01	<p>Emission Standard = The TRE index is not maintained above the threshold (5.0 for a new source and 1.9 for an existing source) and a flare is being used for control.</p> <p>Designated Grp1 = The emission stream is designated as Group 1.</p> <p>Designated Hal = The emission stream is not designated as halogenated.</p> <p>Determined Hal = The emission stream is determined to be non-halogenated.</p> <p>Prior Eval = The data from a prior evaluation or assessment is not used.</p> <p>Assessment Waiver = The Administrator has not granted a waiver of compliance assessment or a waiver has not been requested.</p> <p>Negative Pressure = The closed vent system is operated and maintained at or above atmospheric pressure.</p> <p>Bypass Line = No bypass lines.</p>
PV17.210	30 TAC Chapter 115, HRVOC Vent Gas	R5H1-02	<p>HRVOC Concentration = The vent gas stream has a HRVOC concentration of at least 100 ppmv at some times.</p> <p>Max Flow Rate = The vent gas stream has a maximum potential flow rate greater than 100 dry standard cubic feet per hour (ft³/hr).</p> <p>Vent Gas Stream Control = Vent gas stream is controlled by a flare.</p> <p>Alternative Monitoring = Not using alternative monitoring and testing methods.</p> <p>Minor Modification = Not using any minor modification to the monitoring and testing methods of the rule.</p> <p>Process Knowledge = Process knowledge and engineering calculations are used to determine HRVOC emissions during emission events and scheduled startup, shutdown, and maintenance activities.</p> <p>Waived Testing = The executive director has not waived testing for identical vents.</p> <p>Testing Requirements = Process knowledge to determine maximum potential HRVOC hourly emissions for analyzer vents, stream system vents, vent gas streams with no HRVOC except during emission event or degassing safety device in lieu of testing.</p>
PV17.210	30 TAC Chapter 115, Vent Gas Controls	R5121-02	<p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Vent Type = Vent gas stream originates from a synthetic organic chemical manufacturing industry reactor process or distillation operation, as defined in 30 TAC § 115.10.</p> <p>Alternate Control Requirement = Alternate control is not used.</p> <p>Control Device Type = Smokeless flare</p> <p>Total Design Capacity = Total design capacity is greater than or equal to 1,100 tons per year for all chemicals produced within that unit.</p> <p>Flow Rate or VOC Concentration = Flow rate is greater than or equal to 0.011 scm/min or the VOC concentration is greater than or equal to 500 ppmv.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>40 CFR 60 Subpart NNN Requirements = The distillation unit vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart NNN: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices.</p> <p>40 CFR 60 Subpart RRR Requirements = The reactor process vent gas stream satisfies neither of the following requirements of 40 CFR Part 60, Subpart RRR: TRE index value is greater than 8.0; or TRE index value is greater than 1.0 without the use of VOC emission control devices.</p>
PV17.210	40 CFR Part 63, Subpart FFFF	63FFFF-V02	<p>Emission Standard = The TRE index is not maintained above the threshold (5.0 for a new source and 1.9 for an existing source) and a flare is being used for control.</p> <p>Designated Grp1 = The emission stream is designated as Group 1.</p> <p>Designated Hal = The emission stream is not designated as halogenated.</p> <p>Determined Hal = The emission stream is determined to be non-halogenated.</p> <p>Prior Eval = The data from a prior evaluation or assessment is not used.</p> <p>Assessment Waiver = The Administrator has not granted a waiver of compliance assessment or a waiver has not been requested.</p> <p>Negative Pressure = The closed vent system is operated and maintained at or above atmospheric pressure.</p> <p>Bypass Line = No bypass lines.</p>
REACTORVNT	40 CFR Part 60, Subpart RRR	60RRR-01	<p>Chemicals Listed in 40 CFR § 60.707 = The affected facility is part of a process unit that produces chemicals listed in 40 CFR § 60.707 as a product, co-product, by product, or intermediate.</p> <p>Construction/Modification Date = After June 29, 1990.</p> <p>Affected Facility Type = Reactor process not discharging its vent stream into a recovery system.</p> <p>Subject to Title 40 CFR Part 60, Subpart DDD = The reactor process is not subject to the provisions of Title 40 CFR Part 60, Subpart DDD.</p> <p>Subject to Title 40 CFR Part 60, Subpart NNN = The vent stream is not routed to a distillation unit subject to Title 40 CFR Part 60, Subpart NNN or has other releases to the air than from a pressure relief valve.</p> <p>TRE Index Value = TRE index value is less than or equal to 8.0 or a TRE index value is not calculated or claimed for exemption 40 CFR § 60.700(c)(2).</p> <p>TRE for Halogenated Vent Stream = TRE index value is being calculated for a nonhalogenated vent stream.</p> <p>Total Design Capacity = Total design capacity is 1 gigagram per year (1,100 tons per year) or greater.</p> <p>Vent Stream Flow Rate = Vent stream flow rate is 0.011 scm/min or greater, or value is not measured.</p> <p>TOC Exemption = Concentration of TOC, less methane and ethane, in the vent stream is less than 150 ppmv as measured by Method 25A.</p>
PDHII-MCPU	40 CFR Part 63, Subpart FFFF	63FFFF-01	<p>Ammonium Sulfate = The MCPU does not include the manufacture of ammonium sulfate as a by-product, or the slurry entering the by-product manufacturing process contains 50 parts per million by weight (ppmw) HAP or less or 10 ppmw benzene or less.</p> <p>Other Operations = The MCPU includes operations other than those listed in § 63.2435(c).</p> <p>63.100 CMPU = The MCPU is not a CMPU defined in § 63.100.</p> <p>G2/<1000 lb/yr = The process does not include Group 2 batch process vents and/or uncontrolled hydrogen halide and halogen HAP emissions from the sum of all batch and continuous process vents less than 1,000 lb/yr.</p> <p>Startup 2003 = The affected source startup was on or after November 10, 2003.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>Shared Batch Vent = The MCPU does not include a batch process vent that also is part of a CMPU as defined in subparts F and G of this part 63.</p> <p>PUG = The MCPU is not part of a process unit group (PUG).</p> <p>Startup 2002 = The affected source initial startup was on or after April 4, 2002.</p> <p>>1000 lb/yr = The process has uncontrolled hydrogen halide and halogen HAP emissions from process vents of 1,000 lb/yr or more.</p> <p>Reduction = Reducing the halogen atom mass emission rate from the sum of all batch process vents and each individual continuous process vent to less than 0.45 kg/hr by venting through one or more closed-vent systems to a halogen reduction device.</p> <p>New Source = The MCPU is a new affected source as described in § 63.2440(c)(1) or (2).</p> <p>HAP Metals = Uncontrolled emissions from process vents are less than 150 lb/yr of HAP metals.</p> <p>Small Cd = A small control device (defined in § 63.2550) is being used.</p> <p>Design Eval = A design evaluation as specified in § 63.1257(a)(1) is being used.</p> <p>Batch Process Vents = The source does not include batch process vents.</p>

* - The "unit attributes" or operating conditions that determine what requirements apply

NSR Versus Title V FOP

The state of Texas has two Air permitting programs, New Source Review (NSR) and Title V Federal Operating Permits. The two programs are substantially different both in intent and permit content.

NSR is a preconstruction permitting program authorized by the Texas Clean Air Act and Title I of the Federal Clean Air Act (FCAA). The processing of these permits is governed by 30 Texas Administrative Code (TAC) Chapter 116.111. The Title V Federal Operating Program is a federal program authorized under Title V of the FCAA that has been delegated to the state of Texas to administer and is governed by 30 TAC Chapter 122. The major differences between the two permitting programs are listed in the table below:

NSR Permit	Federal Operating Permit (FOP)
Issued Prior to new Construction or modification of an existing facility	For initial permit with application shield, can be issued after operation commences; significant revisions require approval prior to operation.
Authorizes air emissions	Codifies existing applicable requirements, does not authorize new emissions
Ensures issued permits are protective of the environment and human health by conducting a health effects review and that requirement for best available control technology (BACT) is implemented.	Applicable requirements listed in permit are used by the inspectors to ensure proper operation of the site as authorized. Ensures that adequate monitoring is in place to allow compliance determination with the FOP.
Up to two Public notices may be required. Opportunity for public comment and contested case hearings for some authorizations.	One public notice required. Opportunity for public comments. No contested case hearings.
Applies to all point source emissions in the state.	Applies to all major sources and some non-major sources identified by the EPA.
Applies to facilities: a portion of site or individual emission sources	One or multiple FOPs cover the entire site (consists of multiple facilities)
Permits include terms and conditions under which the applicant must construct and operate its various equipment and processes on a facility basis.	Permits include terms and conditions that specify the general operational requirements of the site; and include codification of all applicable requirements for emission units at the site.
Opportunity for EPA review for Federal Prevention of Significant Deterioration (PSD) and Nonattainment (NA) permits for major sources.	Opportunity for EPA review, affected states review, and a Public petition period for every FOP.
Permits have a table listing maximum emission limits for pollutants	Permit has an applicable requirements table and Periodic Monitoring (PM) / Compliance Assurance Monitoring (CAM) tables which document applicable monitoring requirements.
Permits can be altered or amended upon application by company. Permits must be issued before construction or modification of facilities can begin.	Permits can be revised through several revision processes, which provide for different levels of public notice and opportunity to comment. Changes that would be significant revisions require that a revised permit be issued before those changes can be operated.
NSR permits are issued independent of FOP requirements.	FOPs are independent of NSR permits, but contain a list of all NSR permits incorporated by reference

New Source Review Requirements

Below is a list of the New Source Review (NSR) permits for the permitted area. These NSR permits are incorporated by reference into the operating permit and are enforceable under it. These permits can be found in the main TCEQ file room, located on the first floor of Building E, 12100 Park 35 Circle, Austin, Texas. In addition, many of the permits are accessible online through the link provided below. The Public Education Program may be contacted at 1-800-687-4040 or the Air Permits Division (APD) may be contacted at 1-512-239-1250 for help with any question.

Additionally, the site contains emission units that are permitted by rule under the requirements of 30 TAC Chapter 106, Permits by Rule. Permit by Rule (PBR) registrations submitted by permittees are also available online through the link provided below. The following table specifies the PBRs that apply to the site.

The status of air permits, applications, and PBR registrations may be found by performing the appropriate search of the databases located at the following website:

www.tceq.texas.gov/permitting/air/nav/air_status_permits.html

Details on how to search the databases are available in the **Obtaining Permit Documents** section below.

New Source Review Authorization References

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: GHGPSDTX193M1	Issuance Date: 06/08/2023
PSD Permit No.: PSDTX1558M1	Issuance Date: 06/08/2023
Nonattainment (NA) Permits	
NA Permit No.: N272M1	Issuance Date: 06/08/2023
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.: 156320	Issuance Date: 06/08/2023
Permits by Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.511	Version No./Date: 09/04/2000

Permits by Rule

The TCEQ has interpreted the emission limits prescribed in 30 TAC §106.4(a) as both emission thresholds and default emission limits. The emission limits in 30 TAC §106.4(a) are all considered applicable to each facility as a threshold matter to ensure that the owner/operator qualifies for the PBR authorization. Those same emission limits are also the default emission limits if the specific PBR does not further limit emissions or there is no lower, certified emission limit claimed by the owner/operator.

This interpretation is consistent with how TCEQ has historically determined compliance with the emission limits prior to the addition of the “as applicable” language. The “as applicable” language was added in 2014 as part of changes to the sentence structure in a rulemaking that made other changes to address greenhouse gases and was not intended as a substantive rule change. This interpretation also provides for effective and practical enforcement of 30 TAC §106.4(a), since for the TCEQ to effectively enforce the emission limits in 30 TAC §106.4(a) as emission thresholds, all emission limits must apply. As provided by 30 TAC §106.4(a)(2) and (3), an owner/operator shall not claim a PBR authorization if the facility is subject to major New Source Review. The practical and legal effect of the language in 30 TAC § 106.4 is that if a facility does not emit a pollutant, then the potential to emit for that particular pollutant is zero, and thus, the facility is not authorized to emit the pollutant pursuant to the PBR.

The permit holder is required to keep records for demonstrating compliance with PBRs in accordance with 30 TAC § 106.8 for the following categories:

- As stated in 30 TAC § 106.8(a), the permit holder is not required to keep records for de minimis sources as designated in 30 TAC § 116.119.
- As stated in 30 TAC § 106.8(b) for PBRs on the insignificant activities list, the permit holder is required to provide information that would demonstrate compliance with the general requirements of 30 TAC § 106.4.
- As stated in 30 TAC § 106.8(c) for all other PBRs, the permit holder must maintain sufficient records to demonstrate compliance with the general requirements specified in 30 TAC § 106.4 and to demonstrate compliance with the emission limits and any specific conditions of the PBR as applicable.

The application, or a previously submitted application, contains a PBR Supplemental Table. This table provides supplemental information for all PBR authorizations at the site or application area, including PBRs that are not listed on

the OP-REQ1 form. PBRs that are not listed on the OP-REQ1 form authorize emission units that the TCEQ has determined are insignificant sources of emissions (IEUs). PBRs are enforceable through permit condition number 10. The EPA gives States broad discretion in prescribing monitoring, recordkeeping, and reporting for generally applicable requirements that cover insignificant emission units. (see EPA *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*). Federal regulations specifically identify recordkeeping as an appropriate level of monitoring necessary to assure compliance with the requirements applicable to an emissions unit. Permitting authorities have the best sense of where it is appropriate to conclude that periodic monitoring is not necessary for IEUs, when state program rules already provide sufficient monitoring for these units.

In the case of IEUs in particular, the recordkeeping in 30 TAC §106.8 is sufficient because the units do not have the potential to violate emission limitations or other requirements under normal operating conditions. In particular, where the establishment of a regular program of monitoring would not significantly enhance the ability of the permit to assure compliance with the applicable requirement, the permitting authority can provide that the applicable requirement has monitoring sufficient to yield reliable data that is representative of the emission unit's compliance with the limitations. Therefore, for IEUs compliance with 30 TAC §106.8 is sufficient to meet federal monitoring requirements.

The PBR 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, or parametric monitoring. The PBR records also satisfy the federal operating permit periodic monitoring requirements of 30 TAC § 122.142(c) as they are representative of the emission unit's compliance with 30 TAC Chapter 106.

Emission Units and Emission Points

In air permitting terminology, any source capable of generating emissions (for example, an engine or a sandblasting area) is called an Emission Unit. For purposes of Title V, emission units are specifically listed in the operating permit when they have applicable requirements other than New Source Review (NSR), or when they are listed in the permit shield table.

The actual physical location where the emissions enter the atmosphere (for example, an engine stack or a sand-blasting yard) is called an emission point. For New Source Review preconstruction permitting purposes, every emission unit has an associated emission point. Emission limits are listed in an NSR permit, associated with an emission point. This list of emission points and emission limits per pollutant is commonly referred to as the "Maximum Allowable Emission Rate Table", or "MAERT" for short. Specifically, the MAERT lists the Emission Point Number (EPN) that identifies the emission point, followed immediately by the Source Name, identifying the emission unit that is the source of those emissions on this table.

Thus, by reference, an emission unit in a Title V operating permit is linked by reference number to an NSR authorization, and its related emission point.

Monitoring Sufficiency

Federal and state rules, 40 CFR § 70.6(a)(3)(i)(B) and 30 TAC § 122.142(c) respectively, require that each federal operating permit include additional monitoring for applicable requirements that lack periodic or instrumental monitoring (which may include recordkeeping that serves as monitoring) that yields reliable data from a relevant time period that are representative of the emission unit's compliance with the applicable emission limitation or standard. Furthermore, the federal operating permit must include compliance assurance monitoring (CAM) requirements for emission sources that meet the applicability criteria of 40 CFR Part 64 in accordance with 40 CFR § 70.6(a)(3)(i)(A) and 30 TAC § 122.604(b).

With the exception of any emission units listed in the Periodic Monitoring or CAM Summaries in the FOP, the TCEQ Executive Director has determined that the permit contains sufficient monitoring, testing, recordkeeping, and reporting requirements that assure compliance with the applicable requirements. If applicable, each emission unit that requires additional monitoring in the form of periodic monitoring or CAM is described in further detail under the Rationale for CAM/PM Methods Selected section following this paragraph.

Obtaining Permit Documents

The New Source Review Authorization References table in the FOP specifies all NSR authorizations that apply at the permit area covered by the FOP. Individual NSR permitting files are located in the TCEQ Central File Room (TCEQ Main Campus located at 12100 Park 35 Circle, Austin, Texas, 78753, Building E, Room 103). They can also be obtained electronically from TCEQ's Central File Room Online (<https://www.tceq.texas.gov/goto/cfr-online>). Guidance documents

that describe how to search electronic records, including Permits by Rule (PBRs) or NSR permits incorporated by reference into an FOP, archived in the Central File Room server are available at https://www.tceq.texas.gov/permitting/air/nav/air_status_permits.html

All current PBRs are contained in Chapter 106 and can be viewed at the following website:

https://www.tceq.texas.gov/permitting/air/permitbyrule/air_pbr_index.html

Previous versions of 30 TAC Chapter 106 PBRs may be viewed at the following website:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/old106list/index106.html

Historical Standard Exemption lists may be viewed at the following website:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/oldselist/se_index.html

Additional information concerning PBRs is available on the TCEQ website:

https://www.tceq.texas.gov/permitting/air/nav/air_pbr.html

Compliance Review

1. In accordance with 30 TAC Chapter 60, the compliance history was reviewed on September 14, 2023.

Site rating: 19.15 / Satisfactory Company rating: 4.19 / Satisfactory

(High < 0.10; Satisfactory ≥ 0.10 and ≤ 55; Unsatisfactory > 55)

2. Has the permit changed on the basis of the compliance history or site/company rating?No

Site/Permit Area Compliance Status Review

1. Were there any out-of-compliance units listed on Form OP-ACPS?No

2. Is a compliance plan and schedule included in the permit?No

Available Unit Attribute Forms

- OP-UA1 - Miscellaneous and Generic Unit Attributes
- OP-UA2 - Stationary Reciprocating Internal Combustion Engine Attributes
- OP-UA3 - Storage Tank/Vessel Attributes
- OP-UA4 - Loading/Unloading Operations Attributes
- OP-UA5 - Process Heater/Furnace Attributes
- OP-UA6 - Boiler/Steam Generator/Steam Generating Unit Attributes
- OP-UA7 - Flare Attributes
- OP-UA10 - Gas Sweetening/Sulfur Recovery Unit Attributes
- OP-UA11 - Stationary Turbine Attributes
- OP-UA12 - Fugitive Emission Unit Attributes
- OP-UA13 - Industrial Process Cooling Tower Attributes
- OP-UA14 - Water Separator Attributes
- OP-UA15 - Emission Point/Stationary Vent/Distillation Operation/Process Vent Attributes
- OP-UA16 - Solvent Degreasing Machine Attributes
- OP-UA17 - Distillation Unit Attributes
- OP-UA18 - Surface Coating Operations Attributes
- OP-UA19 - Wastewater Unit Attributes
- OP-UA20 - Asphalt Operations Attributes
- OP-UA21 - Grain Elevator Attributes
- OP-UA22 - Printing Attributes
- OP-UA24 - Wool Fiberglass Insulation Manufacturing Plant Attributes
- OP-UA25 - Synthetic Fiber Production Attributes
- OP-UA26 - Electroplating and Anodizing Unit Attributes
- OP-UA27 - Nitric Acid Manufacturing Attributes
- OP-UA28 - Polymer Manufacturing Attributes
- OP-UA29 - Glass Manufacturing Unit Attributes
- OP-UA30 - Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mill Attributes
- OP-UA31 - Lead Smelting Attributes

OP-UA32 - Copper and Zinc Smelting/Brass and Bronze Production Attributes
OP-UA33 - Mineral Processing Plant Attributes
OP-UA34 - Pharmaceutical Manufacturing
OP-UA35 - Incinerator Attributes
OP-UA36 - Steel Plant Unit Attributes
OP-UA37 - Basic Oxygen Process Furnace Unit Attributes
OP-UA38 - Lead-Acid Battery Manufacturing Plant Attributes
OP-UA39 - Sterilization Source Attributes
OP-UA40 - Ferroalloy Production Facility Attributes
OP-UA41 - Dry Cleaning Facility Attributes
OP-UA42 - Phosphate Fertilizer Manufacturing Attributes
OP-UA43 - Sulfuric Acid Production Attributes
OP-UA44 - Municipal Solid Waste Landfill/Waste Disposal Site Attributes
OP-UA45 - Surface Impoundment Attributes
OP-UA46 - Epoxy Resins and Non-Nylon Polyamides Production Attributes
OP-UA47 - Ship Building and Ship Repair Unit Attributes
OP-UA48 - Air Oxidation Unit Process Attributes
OP-UA49 - Vacuum-Producing System Attributes
OP-UA50 - Fluid Catalytic Cracking Unit Catalyst Regenerator/Fuel Gas Combustion Device/Claus Sulfur Recovery Plant Attributes
OP-UA51 - Dryer/Kiln/Oven Attributes
OP-UA52 - Closed Vent Systems and Control Devices
OP-UA53 - Beryllium Processing Attributes
OP-UA54 - Mercury Chlor-Alkali Cell Attributes
OP-UA55 - Transfer System Attributes
OP-UA56 - Vinyl Chloride Process Attributes
OP-UA57 - Cleaning/Depainting Operation Attributes
OP-UA58 - Treatment Process Attributes
OP-UA59 - Coke By-Product Recovery Plant Attributes
OP-UA60 - Chemical Manufacturing Process Unit Attributes
OP-UA61 - Pulp, Paper, or Paperboard Producing Process Attributes
OP-UA62 - Glycol Dehydration Unit Attributes
OP-UA63 - Vegetable Oil Production Attributes
OP-UA64 - Coal Preparation Plant Attributes