**STATEMENT OF BASIS**
**VERTEX REFINING ALABAMA, LLC**
**BLAKELEY ISLAND TERMINAL**
**MOBILE, MOBILE COUNTY, ALABAMA**
**FACILITY/PERMIT NO. 503-0009**

The proposed renewal to the Title V Major Source Operating Permit (MSOP) has been developed in accordance with the provisions of ADEM Admin. Code chap. 335-3-16. The above-named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Vertex Refining Alabama, LLC (Vertex) Blakeley Island Terminal was originally constructed/began operations in 1980. This is the fifth renewal of the MSOP. The current MSOP was issued on April 16, 2020, became effective on July 1, 2020, underwent a modification for a name change on April 18, 2022, and is scheduled to expire on June 30, 2025. Per ADEM Admin Code r. 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of the permit. Based on this rule, the application for renewal was due to the Department no later than December 30, 2024, but no earlier than December 30, 2023. An application for this permit renewal was received by the Department on November 21, 2024, and deemed complete on November 21, 2024.

The facility is located in Mobile County, which is currently listed as attainment/unclassifiable with all National Ambient Air Quality Standards (NAAQS).

There are no current or ongoing enforcement actions against Vertex necessitating additional requirements to achieve compliance with the proposed permit conditions. The enforcement and compliance history for the facility can be found at https://echo.epa.gov/ (Search using Facility ID AL0000000109700009).

## Facility Operations

Vertex Refining Alabama, LLC (Vertex) operates a bulk loading terminal for crude oil and associated refined petroleum products (SIC 5171) located in Mobile, Mobile County. The terminal is used for loading/unloading and storage of the following petroleum products: crude oil, naphtha/gasoline, heavy naphtha, jet fuel, and distillate (diesel). Crude oil and other petroleum products are unloaded from marine vessels and barges into external floating roof storage tanks for shipment via pipeline to the Vertex refinery off-site. Petroleum products from the refinery are sent via pipeline to the terminal and stored in external floating roof storage tanks for shipment via barge or marine vessel. Significant sources of air pollutants at this facility include:

**Emission Unit Nos. 001 – 004:** Four (4) 9,450,000 gallon External Floating Roof Tanks (Tank Nos. 901-904)

**Emission Unit No. 005:** One (1) 6,300,000 gallon External Floating Roof Tank (Tank No. 906)

**Emission Unit No. 006:** One (1) 4,200,000 gallon External Floating Roof Tank (Tank No. 907)

**Emission Unit No. 007:** Marine Loading Dock

**Emission Unit No. 008:** One (1) 220 hp John Deere/Clarke Diesel-fired Fire Pump Engine (90-20-0700 East Fire Pump)

**Emission Unit No. 009:** One (1) 550 hp Detroit Diesel Diesel-fired Fire Pump Engine (90-20-0300 Dock Fire Pump)

Insignificant emission sources at this facility include equipment used for hydraulic or hydrostatic testing; brazing, soldering, or welding equipment; vacuum truck use; intermittent road grading on plant property; three (3) 500 gallon tanks (2 jet kerosene, 1 diesel); and a demulsifier tank (2 chambers, 793 gallons each).

## Proposed Changes

Vertex is requesting to remove Emission Unit No. 006 (Tank No. 907) from the permit as the tank is no longer operational.

This MSOP renewal would incorporate Air Permit Nos. X025 and X026, that were each issued on November 27, 2023, for the following:

- Increase the Jet-A/Diesel facility-wide throughput limitation from 306,6000,000 gallons per year (gal/yr) to 600,000,000 gal/yr.
- Decrease the Naphtha/Gasoline facility-wide throughput limitation from 151,200,000 gal/yr to 150,000,000 gal/yr to offset the emissions increase from Jet-A/Diesel.

ADEM Admin. Code r. 335-3-16-.13(4) requires that Vertex submit an application for a significant modification to the Title V MSOP within 12 months of receipt of Air Permits to incorporate them into the MSOP. This Title V renewal application was submitted on November 21, 2024, which fulfilled this requirement.

## Permit History

***The following is a history of previously issued permits for this facility:***

| Issuance No./Permit No. | Limit(s) Established | Issuance Date | Effective Date | Expiration Date | Amendments/ Modifications | PSD SER Exceeded (Y/N) |
|---|---|---|---|---|---|---|
| AP X001 - X007 – (New Permits to Construct) | -- | July 16, 1980 | -- | -- | -- | N |
| AP Y001 - Y007 – (Temporary Permits to Operate) | -- | January 27, 1982 | -- | -- | -- | N |
| AP Z001-Z007 – (Permits to Operate) | -- | May 26, 1982 | -- | -- | -- | N |
| AP Z001-Z007 | Facility-wide throughput limitations established in all permits - began to load and store gasoline | December 21, 1984 | -- | -- | -- | N |

| | | | | | | |
|---|---|---|---|---|---|---|
| AP Z001-Z007 – Facility Name Change | -- | December 22, 1987 | -- | -- | -- | N |
| AP Z007 – Marine Loading Dock Re-issued | Lowered naphtha/gasoline facility-wide throughput limitation in order to add loading of heavy naphtha | May 19, 1989 | -- | -- | -- | N |
| AP Z001-Z006 (tanks) – Re-issued | PSD permits for 2 new tanks (X007-X008) and increase of facility-wide throughput limitations | January 5, 1990 | -- | -- | -- | Y |
| AP X007-X008 (new tanks), permits void-never constructed | PSD permits for 2 new tanks (X007-X008) and increase of facility-wide throughput limitations | January 5, 1990 | -- | -- | -- | Y |
| AP Z009 (Marine Loading Dock) – (AP Z007 re-issued as AP Z009) | PSD permits for 2 new tanks (X007-X008) and increase of facility-wide throughput limitations | January 5, 1990 | -- | -- | -- | Y |
| AP Z001-Z006 and Z009 – Re-issued | Re-issued to change from product specific permits to general VOC storage permits | May 16, 1994 | -- | -- | -- | N |
| AP Z001 - Z006 and Z009 – Facility Name Change | -- | August 30, 1996 | -- | -- | -- | -- |
| AP Z010 - Z016 | Facility-wide crude oil throughput limitation increase | May 14, 1998 | -- | -- | -- | N |
| AP Z017 - Z023 | Corrected facility-wide crude oil throughput limitation increase (originally permitted as AP Z010-Z016) | December 30, 1999 | -- | -- | -- | N |
| Initial Title V MSOP | -- | June 30, 2000 | June 30, 2000 | June 29, 2005 | Administrative Amendment - October 18, 2000 - Name Change | -- |
| 1st Title V MSOP Renewal | -- | May 20, 2005 | June 30, 2005 | June 29, 2010 | -- | -- |
| 2nd Title V MSOP Renewal | -- | June 4, 2010 | July 1, 2010 | June 30, 2015 | Permit term adjusted by one day to align with calendar year semiannual reporting periods | -- |

| | | | | | | |
|---|---|---|---|---|---|---|
| AP X024 – East Fire Pump Engine – (New) | -- | September 27, 2011 | -- | -- | -- | N |
| 3rd Title V MSOP Renewal | -- | August 25, 2015 | August 25, 2015 | June 30, 2020 | -- | -- |
| 4th Title V MSOP Renewal | -- | April 16, 2020 | July 1, 2020 | June 30, 2025 | Administrative Amendment - April 18, 2022 - Name Change | -- |
| AP X025 - X026 | Facility-wide Jet A/Diesel and Naphtha/Gasoline throughput limitations adjustment | November 27, 2023 | -- | -- | -- | N |

**Plant-Wide Potential to Emit (PTE)**

| Pollutant | PTE (TPY) |
|---|---|
| $PM/PM_{10}/PM_{2.5}$ | 0.31 |
| $NO_x$ | 4.59 |
| CO | 1.03 |
| $SO_2$ | 0.39 |
| VOC | 469.20 |
| Total HAP | 13.87 |
| $CO_2e$ | 220.47 |

## Applicability: Federal Regulations

### *Title V*

This facility is a major source under Title V regulations because the potential emissions for Volatile Organic Compounds (VOC) exceed the 100 TPY major source threshold. It is not a major source of Hazardous Air Pollutants (HAP) because individual HAP potential emissions do not exceed 10 TPY, and the total HAP potential emissions do not exceed 25 TPY.

### *Prevention of Significant Deterioration (PSD)*

This facility is located in an attainment area for all criteria pollutants, and the facility operations are one of the 28 major source categories (total petroleum storage capacity exceeds 300,000 barrels); therefore, the applicable major source threshold is 100 TPY. This facility is a major source under PSD regulations because the facility-wide potential emissions of VOC exceed the 100 TPY threshold. Vertex currently has product throughput limitations for the tanks and marine loading dock, a product vapor pressure limit for the tanks, and a requirement for 98% submerged fill for the marine loading dock. The origin and modifications of these limitations and requirements are chronicled below:

On December 21, 1984 Vertex (then Louisiana Land & Exploration, "LL&E") was issued Air Permits to store and load naphtha, gasoline, and Jet A fuel in addition to the existing approved products (crude oil and #2/#6 distillate oils). At that time, Mobile County was a nonattainment

area for the 1-hour NAAQS for ozone. Product specific throughput limitations were established for the tanks and marine loading dock to limit the facility's emissions below 100 TPY and in order to avoid becoming a major source under NSR.

On May 13, 1987, Mobile County was redesignated as attainment for the 1-hour NAAQS for ozone.

On May 19, 1989, Vertex (then LL&E Petroleum Marketing) was issued an Air Permit for its marine loading dock to load heavy naphtha. The marine loading dock product throughput limitations for naphtha and gasoline were lowered, and throughput limitations for heavy naphtha were established to limit the facility's emissions below 100 TPY in order to avoid becoming a major source under PSD.

On January 5, 1990, Vertex (then LL&E Petroleum Marketing) was issued PSD permits for the construction of two new tanks and an increase in the product throughput limitations for the tanks and marine loading dock because the change was considered a major modification under PSD. The increase in VOC emissions underwent PSD review as required. Best Available Control Technology (BACT) for the new tanks was determined to be external floating roofs with double seals (as required by 40 CFR Part 60, Subpart Ka). BACT for the increase in VOC emissions from the marine loading dock was determined to be 98% submerged fill for the loading lines of its marine loading dock. The proposed tanks were not constructed within the 24-month timeframe specified in their PSD permits; therefore, these two permits were voided. Then LL&E did not reapply for the construction of these two tanks.

On May 16, 1994, Vertex (then LL&E Petroleum Marketing) was issued Air Permits to convert their existing permits to general VOC storage for each tank. In order to offset the potential VOC emissions increase from this change, the throughput limitation for heavy naphtha was reduced and a product vapor pressure limit was established.

On August 30, 1996, Air Permits were issued for the name change from LL&E Petroleum Marketing to Shell Chemical Company.

On May 14, 1998, Vertex (then Shell Chemical Company) was issued Air Permits to increase the crude oil throughput limitation for its tanks and marine loading dock. It was determined that the increase was allowable without triggering a new PSD review because the higher limitations could have been approved if requested during the 1990 PSD review.

On December 30, 1999, Vertex (then Shell Chemical Company) was issued revised Air Permits to correct the crude oil throughput limitation that was established in the Air Permits issued on May 14, 1998. There was a discrepancy between the increase Shell requested in the cover letter and the increase indicated on the ADEM Form 108. Erroneously, the Air Permits were processed based on the amount submitted on the application form. When Shell personnel noticed the discrepancy in the Air Permits that they received, they requested the correction.

On April 18, 2022, the Major Source Operating Permit was re-issued for the name change from Shell Chemical to Vertex Refining Alabama, LLC.

On November 27, 2023, Vertex was issued Air Permit Nos. X025 and X026 for its tanks and marine loading dock to increase the Jet-A/Diesel facility-wide throughput limitation from 306,6000,000 gal/yr to 600,000,000 gal/yr and decrease the Naphtha/Gasoline facility-wide throughput limitation from 151,200,000 gal/yr to 150,000,000 gal/yr to offset the emissions increase from Jet-A/Diesel.

Below are the current throughput limitations per product during any consecutive 12-month period:

| | |
|---|---|
| Naphtha/Gasoline | 150,000,000 gallons |
| Heavy Naphtha | 80,000,000 gallons |
| Jet-A/Distillate | 600,000,000 gallons |
| Crude Oil | 1,533,000,000 gallons |

**New Source Performance Standards (NSPS)**

40 CFR Part 60, Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and prior to July 23, 1984 (Subpart Ka) [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(9)(a)]

Construction of Tank Nos. 901-904 and 906 (Emission Unit Nos. 001-005) commenced in 1980, after the May 18, 1978 and prior to July 23, 1984, applicability dates of Subpart Ka; therefore, they are each subject to this Subpart.

*Standards for VOC*

These tanks are external floating roof tanks. Each is equipped with a metallic shoe primary seal and rim-mounted secondary seal which complies with the applicable VOC emission standard in 40 CFR §60.112a(a) for tanks storing products with a true vapor pressure ≥ 1.5 psia, but ≤ 11.1 psia. 40 CFR §60.112a(a)(1) also prescribes the acceptable accumulated area of gaps in the seals and the acceptable width of any individual gap in the seals. The accumulated area of gaps between the tank wall and the metallic shoe primary seal shall not exceed 212 $cm^2$ per meter of tank diameter (10.0 $in^2$ per ft of tank diameter) and the width of any portion of any gap shall not exceed 3.81 cm (1 1⁄2 in). The accumulated area of gaps between the tank wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal shall not exceed 21.2 $cm^2$ per meter of tank diameter (1.0 $in^2$ per ft. of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm (1⁄2 in.).

*Testing Requirements*

These tanks are subject to the applicable testing and procedure requirements of 40 CFR §60.113a(a)(1), which include determining the gap areas and the maximum gap widths between the primary seal and the tank wall and between the secondary seal and the tank wall of each tank. As required by 40 CFR §60.113a(a)(1)(iv), Vertex must provide the Air Division 30 days prior notice of the gap measurement to afford the Air Division the opportunity to have an observer present. For primary seals, 40 CFR §60.113a(a)(1)(i)(A) requires gap measurements be performed within 60 days of the initial fill with petroleum liquid and at least once every five years thereafter. All primary seal inspections or gap measurements which require the removal or dislodging of the

secondary seal shall be accomplished as rapidly as possible and the secondary seal shall be replaced as soon as possible. For secondary seals, 40 CFR §60.113a(a)(1)(i)(B) requires gap measurements be performed within 60 days of the initial fill with petroleum liquid and at least once every year thereafter. If any storage vessel is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill for the purposes of 40 CFR §60.113a(a)(1)(i)(A) and 40 CFR §60.113a(a)(1)(i)(B).

*Recordkeeping and Reporting*

If either the seal gap calculated in accordance with 40 CFR §60.113a(a)(1)(iii) or the measured maximum seal gap exceeds the limitations specified by 40 CFR §60.112a, a report shall be furnished to the Air Division within 60 days of the date of measurements. The report shall identify the vessel and list each reason why the vessel did not meet the specifications of 40 CFR §60.112a. The report shall also describe the actions necessary to bring the storage vessel into compliance with the specifications of 40 CFR §60.112a. In accordance with 40 CFR §60.113a(a)(1)(i)(D), Vertex must keep records of each gap measurement at the plant for a period of at least 2 years following the date of measurement. Each record shall identify the vessel on which the measurement was performed and shall contain the date of the seal gap measurement, the raw data obtained in the measurement process required by 40 CFR §60.113a(a)(1)(ii) and the calculation required by 40 CFR §60.113a(a)(1)(iii). In accordance with 40 CFR §60.115a(a), Vertex must maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period, except as provided in 40 CFR §60.115a(d).

40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (Subpart IIII) [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(87)]

This Subpart applies to owners/operators of stationary CI ICE that commence construction after July 11, 2005, and are manufactured after July 1, 2006 [40 CFR §60.4200(a)(2)(ii)]. Since the 220 hp east fire pump engine (Emission Unit No. 008) was constructed/manufactured in 2011, it is subject to this Subpart.

*Emission Limitations*

In accordance with 40 CFR §60.4205(c) and Table 4 to this Subpart, the fire pump engine must meet a $NO_x$ + NMHC emission standard of 4.0 g/kW-hr (3.0 g/hp-hr), a CO emission standard of 3.5 g/kW-hr (2.6 g/hp-hr), and a PM emission standard of 0.20 g/kW-hr (0.15 g/hp-hr). This engine is certified by the manufacturer to meet the applicable emission standards. In accordance with 40 CFR §60.4206, Vertex must operate and maintain the engine in a manner that meets these emission standards over the entire life of the engine.

*Operational Limitations*

In accordance with 40 CFR §60.4211(f), Vertex must not operate the engine except as provided in 40 CFR §60.4211(f)(1) through (f)(3), which include but may not be limited to:

- Emergency situations;

- A total of 100 hours per year or less for the purposes allowed by 40 CFR §60.4211(f)(2)(i), which include maintenance checks and readiness testing; and
- A total of 50 hours per year or less for the non-emergency situations allowed by 40 CFR §60.4211(f)(3); however, those 50 hours are counted towards the 100 hours per year allowed for maintenance checks and readiness testing.

*Fuel Requirements*

In accordance with 40 CFR §60.4207(b), beginning October 1, 2010, owners and operators of stationary CI ICE subject to this Subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR §1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

Vertex must not purchase any diesel fuel for the engine that does not meet the following per-gallon standards of 40 CFR §1090.305:

- Sulfur content shall not exceed 15 parts per million (ppm); and
- Cetane index shall be a minimum of 40 or the aromatic content shall not exceed 35 percent by volume.

*Compliance and Recordkeeping Requirements*

To demonstrate compliance with the operational limitations, Vertex purchased an engine certified to meet the emission standards. Vertex must install and configure the engine according to the manufacturer's emission-related specifications. According to 40 CFR §60.4214(b), Vertex is required to maintain records of the date, time, duration, and purpose of operation each time the engine is operated. To demonstrate compliance with the fuel limitations of 40 CFR §1090.305, Vertex is required to maintain records of the sulfur content and either the Cetane index or aromatic content of the diesel fuel that is burned in the engine. All records shall be maintained in a form suitable for inspection and shall be retained for a period of two years from the date of generation.

*Other Requirements*

In accordance with 40 CFR §60.4209(a), Vertex must install a non-resettable hour meter on this engine.

*Testing Requirements*

There are no testing requirements applicable to this engine because it is certified by the manufacturer.

**National Emission Standards for Hazardous Air Pollutants (NESHAP/MACT)**

40 CFR Part 63, Subpart Y, National Emission Standards for Marine Tank Vessel Loading Operations (Subpart Y) [Adopted by reference in ADEM Admin. Code r. 335-3-11-.06(24)]

An affected source under Subpart Y is defined as a source with individual HAP emissions of 10 tons or total HAP emissions of 25 tons, a new source with HAP emissions less than 10 and 25 tons, a new major source offshore loading terminal, a source with throughput of 10 Million (M) barrels

of gasoline or 200 M barrels of crude oil, or the Valdez Marine Terminal (VMT) source, that is subject to the emissions standards in 40 CFR §63.562. Because Vertex is considered an existing source, is not a major source of HAP, and has not loaded gasoline or crude oil in excess of 10 M or 200 M barrels, respectively, the marine loading dock does not meet the definition of an affected source. Therefore, the marine loading dock is not subject to Subpart Y, or the General Provisions (40 CFR Part 63, Subpart A).

40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ)

The stationary reciprocating internal combustion engines (RICE) at the facility are affected sources under this Subpart. Under this Subpart, the 220 hp east fire pump engine (Emission Unit No. 008) is classified as a new emergency compression ignition (CI), diesel fuel injected RICE located at an area source. In accordance with 40 CFR §63.6590(c), a new stationary RICE located at an area source of HAP emissions must meet the requirements of the RICE MACT by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply to this fire pump engine under Subpart ZZZZ.

The 550 hp dock fire pump engine (Emission Unit No. 009) is classified as an existing emergency CI, diesel fuel injected RICE located at an area source. In accordance with 40 CFR §63.6595(a)(1), Vertex is subject to the requirements of 40 CFR Part 63, Subpart ZZZZ and Subpart A for this RICE.

*Compliance Requirements*

This engine is being operated as an emergency unit; therefore, in accordance with 40 CFR §63.6640(f), to retain the emergency classification, this engine must be limited to operating during:

- Emergency situations;
- Maintenance checks and readiness testing, not to exceed 100 hours per year; and
- Non-emergency situations, not to exceed 50 hours per year (those 50 hours are counted towards the 100 hours per year provided for maintenance and testing)

According to 40 CFR §63.6603, any existing stationary RICE located at an area source of HAP emissions must comply with applicable emission limitations and other requirements in Table 2d of Subpart ZZZZ.

According to Table 2d, Item 4, existing emergency CI RICE are subject to the following work practice requirements:

- Change oil and filter every 500 hours of operation or within one year plus 30 days of previous change, whichever comes first; or participate in the oil analysis program as allowed by 40 CFR §63.6625(i);
- Inspect air cleaner every 1,000 hours of operation or within one year plus 30 days of previous inspection, whichever comes first, and replace as necessary; and
- Inspect all hoses and belts every 500 hours of operation or within one year plus 30 days of previous inspection, whichever comes first, and replace as necessary.

40 CFR §63.6625(e)(3) and Table 6, Item 9, requires this unit be operated and maintained according to the manufacturer's emission related operation and maintenance instructions or develop and follow a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practices for minimizing emissions. 40 CFR §63.6625(f) requires the installation of a non-resettable hour meter if one is not already installed.

*Testing Requirements*

According to Tables 4 and 5 of the Subpart, no initial or subsequent performance testing is required for this emergency engine.

*Notification, Reports, and Records*

According to 40 CFR §63.6655(e)(2), Vertex must keep records of the maintenance conducted on the existing emergency stationary RICE in order to demonstrate the engine is operated and maintained according to their own maintenance plan. 40 CFR §63.6655(f)(2), requires Vertex to maintain records of the hours of operation of the engine that is recorded through the non-resettable hour meter. Vertex must document how many hours are spent for emergency operation, including what classified the operation as emergency, and how many hours are spent for non-emergency operation.

**Applicability: State Regulations**

ADEM Admin. Code r. 335-3-4-.01, "Control of Particulate Emissions: Visible Emissions"

The units at this facility are each subject to the State visible emissions standards of ADEM Admin. Code r. 335-3-4-.01(1), which states that no air emission source may emit particulate of an opacity greater than 20% (as measured by a six-minute average) more than once during any 60 minute period and at no time shall emit particulate of an opacity greater than 40% (as measured by a six-minute average).

ADEM Admin. Code r. 335-3-4-.02, "Fugitive Dust and Fugitive Emissions"

This rule is applicable. However, all plant roads are paved or graveled. There are no raw materials, storage piles, products, etc. capable of generating fugitive dust at this facility. Therefore, additional specific requirements for fugitive dust are not necessary for this facility.

ADEM Admin. Code r. 335-3-4-.03, "Control of Particulate Emissions: Fuel Burning Equipment"

Although the engines are fuel combustion sources, they are not subject to any particulate matter (as TSP) emission limitation of ADEM Admin. Code Chap. 335-3-4 because they do not meet the definition of fuel burning equipment and nor is this facility considered one of the process industries, general or specific.

ADEM Admin. Code r. 335-3-5-.01, "Control of Sulfur Compound Emissions: Fuel Combustion"

Although the engines are fuel combustion sources, they are not subject to any sulfur dioxide ($SO_2$) emission limitation of ADEM Admin. Code Chap. 335-3-5 because they do not meet the definition of fuel burning equipment nor is this facility considered one of the process industries, general or

specific.

ADEM Admin. Code r. 335-3-6-.03, "Loading and Storage of VOC"

All of the tanks meet the applicability criteria of this rule. However, the State emission standard is superseded by the emission standard of 40 CFR Part 60, Subpart Ka, in accordance with ADEM Admin. Code r. 335-3-10-.01(2) because the federal standard is more stringent. The marine loading dock is not subject to this rule because this regulation only applies to loading VOC products into tank trucks and trailers.

ADEM Admin. Code r. 335-3-6-.23, "Petroleum Liquid Storage in External Floating Roof Tanks"

All of the tanks meet the applicability criteria of this rule. However, the State emission standard is superseded by the emission standard of 40 CFR Part 60, Subpart Ka, in accordance with ADEM Admin. Code r. 335-3-10-.01(2) because the federal standard is more stringent.

**Emission Testing and Periodic Monitoring**

*Tank Nos. 901-904 and 906 (Emission Unit Nos. 001-005)*

As specified in 40 CFR §60.113a, an annual seal gap test is required for the secondary seal and a quinquennial[1] seal gap test is required for the primary seal. Vertex is also required to notify the Air Division at least 30 days prior to conducting the required seal gap tests.

Vertex has proposed to demonstrate compliance with the product throughput limitations for the tanks by determining the cumulative throughput for each product within 10 days of the end of each calendar month for the preceding 12-month period. In addition, Vertex would be required to certify on a semiannual basis that no product that exceeded the vapor pressure limit was stored during the respective reporting period.

*Marine Loading Dock (Emission Unit No. 007)*

Vertex has proposed to demonstrate compliance with the product throughput limitations for the marine loading dock by determining the cumulative throughput for each product within 10 days of the end of each calendar month for the preceding 12-month period. In addition, Vertex is required to certify on a semiannual basis that 98% submerged fill was achieved while loading all products during the respective reporting period.

**Recordkeeping and Reporting**

*Tank Nos. 901-904 and 906 and Marine Loading Dock (Emission Unit Nos. 001-005 and 007)*

40 CFR Part 60, Subpart Ka, §60.115a requires that Vertex maintain a record of the type of petroleum liquid stored, the period of storage, and maximum true vapor pressure of that liquid during the respective storage period. 40 CFR Part 60, Subpart Ka, §60.113a also requires that records of seal gap measurements be maintained on site from the date of each measurement. In accordance with ADEM Admin. Code r. 335-3-16-.05(c)2.(ii) and General Proviso No. 20(b), Vertex is required to maintain all of these records on site for a period of five years from the date of generation rather than the two year timeframe specified in Subpart Ka.

[1] Once every five years

In addition, Vertex is required to maintain records of product throughputs for the tanks and marine loading dock on a monthly and 12-month rolling total basis in a permanent form suitable for inspection. These records shall also be maintained for a period of five years from the date of generation of each record and be made available upon request.

40 CFR §60.113a requires that Vertex submit a report to the Air Division within 60 days of the date of a measurement if a seal gap measurement exceeds a specification set forth in 40 CFR §60.112a. The report must identify the vessel and list each reason why the vessel did not meet the specifications of 40 CFR §60.112a. The report must also describe the actions necessary to bring the storage vessel into compliance with the specifications of 40 CFR §60.112a. Vertex is also required to report any exceedance of the product throughput limitations within two working days of determining that an exceedance occurred.

*Engines*

*220 hp East Fire Pump Engine (Emission Unit No. 008)*

40 CFR Part 60, Subpart IIII requires Vertex to maintain records of the date, time, duration, and purpose of operation each time the engine is operated. To demonstrate compliance with the fuel limitations of 40 CFR §1090.305, Vertex is required to maintain records of the sulfur content and either the Cetane index or aromatic content of the diesel fuel that is burned in the engine.

*550 hp Dock Fire Pump Engine (Emission Unit No. 009)*

40 CFR Part 63, Subpart ZZZZ §63.6655(e)(2), requires Vertex to keep records of the maintenance conducted on the engine in order to demonstrate that they operated and maintained the stationary RICE and after-treatment control device (if any) according to their own maintenance plan. 40 CFR §63.6655(f)(2), requires Vertex to maintain records of the hours of operation of the engine that is recorded through the non-resettable hour meter. Vertex must document how many hours are spent for emergency operation, including what classified the operation as emergency, and how many hours are spent for non-emergency operation.

In accordance with ADEM Admin. Code r. 335-3-16-.05(c)2(ii), all required records must be maintained in a permanent form suitable for inspection for a period of five years from the date of generation of each record and be made available upon request.

**Compliance Assurance Monitoring (CAM)**

Compliance Assurance Monitoring (CAM), 40 CFR Part 64, applies to any pollutant-specific emission unit at a major source that is required to obtain an operating permit, in accordance with 40 CFR §64.5, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant.
- It uses a control device to achieve compliance with the applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY of a criteria pollutant, 10 TPY of an individual HAP, or 25 TPY of total HAP.

The Marine Loading Dock (Emission Unit No. 007) is the only emission unit at the facility that potentially emits greater than 100 TPY of any criteria pollutant; however, this unit does not employ an active control device as defined in the CAM regulations. As such, the facility is not required to submit a CAM plan for this renewal.

**Environmental Justice Screen**

The Draft Permit contains emission limits based on state and federal regulations that are protective of human health and the environment. In addition, the Department has robust public engagement that utilizes a number of tools, such as EPA's EJ Screen: Environmental Justice Screening and Mapping Tool, to ensure that local residents and stakeholders are provided a meaningful opportunity to participate in the permitting process.
(http://www.adem.alabama.gov/Moreinfo/pubs/ADEMCommunityEngagement.pdf).

**Public Participation**

The renewal of this Title V MSOP would require a 30-day public comment period and a 45-day EPA review period.

**Recommendation**

Based on the above analysis, I recommend that Vertex Refining Alabama, LLC's Title V MSOP (503-0009) be renewed with the requirements noted above, pending the resolution of any comments received during the 30-day public comment period and the EPA 45-day review.

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