



TECHNICAL EVALUATION & PRELIMINARY DETERMINATION

APPLICANT

Belvedere Terminals Company, LLC
874 Hull Avenue
Ormond Beach, FL 32174

Ormond Beach Terminal
Facility ID No. 1270233

PROJECT

Project No. 1270233-001-AC
Application for Minor Source Air Construction Permit
Construction of Ormond Beach Terminal

COUNTY

Volusia County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Permit Review Section
2600 Blair Stone Road, MS#5505
Tallahassee, Florida 32399-2400

June 20, 2023

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1. GENERAL PROJECT INFORMATION

1.1. Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Chapters 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations in Rule 62-204.800, F.A.C.

1.2. Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

1.3. Facility Description and Location

The Ormond Beach Terminal will be a new petroleum bulk station and terminal, which is categorized under Standard Industrial Classification Code No. 5171. The new Ormond Beach Terminal will be located in Volusia County at a greenfield site located at 874 Hull Avenue in Ormond Beach, Florida. The UTM coordinates of the new facility are Zone 17, 488.84 kilometers (km) East, and 3,243.45 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to Ambient Air Quality Standards (AAQS). **Figure 1** shows the location of Volusia County. **Figure 2** shows the proposed location of the facility. **Figure 3** shows a satellite image of the proposed location of the facility.

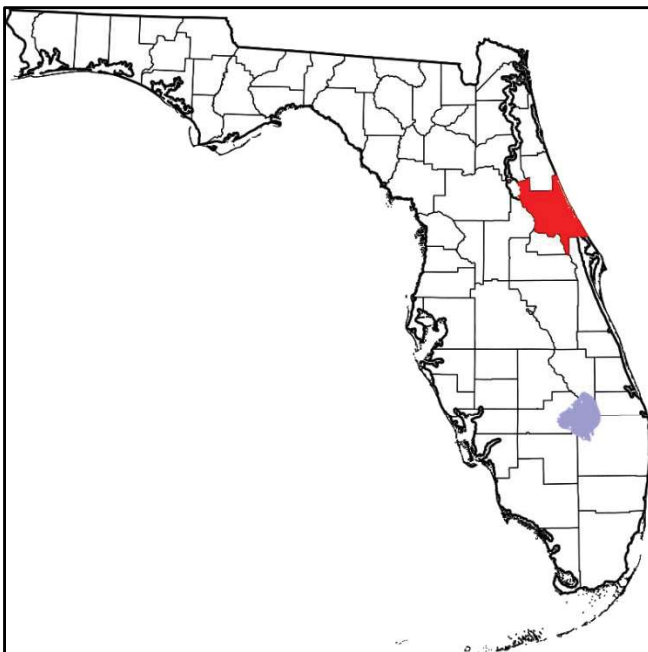


Figure 1. Location of Volusia County.

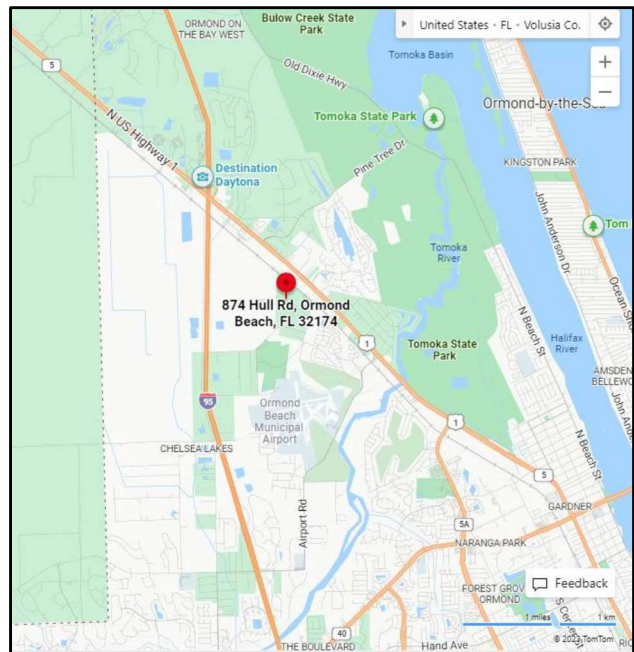


Figure 2. Location of the Ormond Beach Terminal.

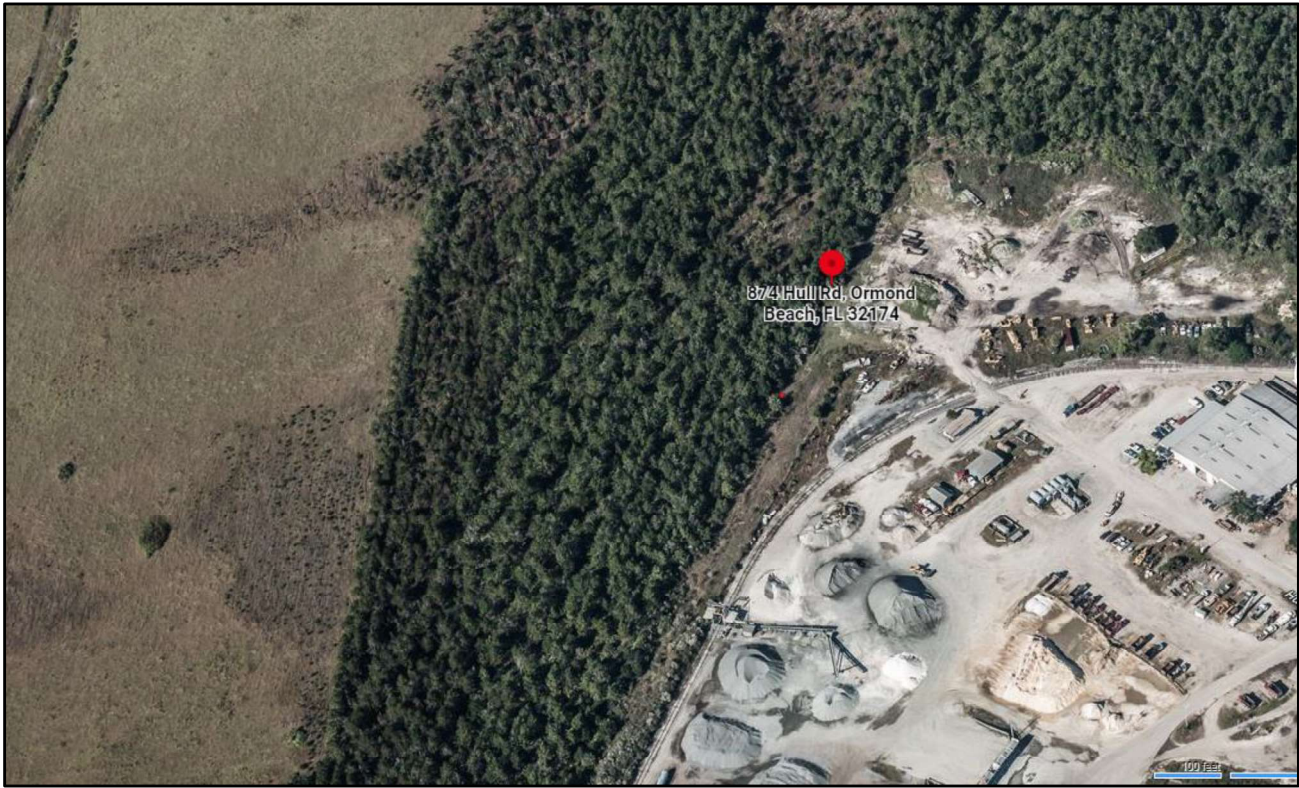


Figure 3. Satellite Image of Ormond Beach Terminal Site.

The Ormond Beach Terminal will primarily consist of multiple truck loading bays, an aboveground tank farm, and a fire protection system which includes an engine-driven emergency generator and engine-driven emergency fire water pump. The Ormond Beach Terminal will load gasoline, diesel, ethanol, and biodiesel into trucks via the loading rack. The propane will be loaded at a separate area from the main truck loading rack in a closed system. The truck bottom loading rack will have 6 bays under the canopy (i.e., Bay Nos. 1-6). These bays will consist of 5 loading bays and 1 offload/load bay. The majority of refined products will be received via railcar, but additives will be delivered via truck and will be offloaded at Bay No. 1. The loading rack will be equipped with a vapor recovery unit (VRU) and a vapor combustion unit (VCU) to control VOC emissions. The tank farm will contain a total of 16 storage tanks consisting of 4 floating roof storage tanks that will typically store blend-stock for gas 87, gas 91, and neat ethanol; 8 fixed roof storage tanks that will typically store ultra-low sulfur diesel (ULSD), biodiesel, and gasoline additives; and 4 pressurized storage tanks that will typically store propane.

1.4. Facility Regulatory Categories

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is not a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility operates units subject to the New Source Performance Standards (NSPS) of Title 40 Part 60 of the Code of Federal Regulations (40 CFR 60).
- The facility operates units subject to the National Emissions Standards of Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

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1.5. Project Description

This permit authorizes the construction of the Ormond Beach Terminal, as described in Section 1.3. The facility will be designed to achieve maximum truck loading throughputs of 357,588,000 gallons per year (gal/yr.) of gasoline, 108,360,000 gal/yr. of diesel, 36,120,168 gal/yr. of ethanol, 5,418,000 gal/yr. of biodiesel, and 5,610,000 gal/yr. of propane. **Figure 4** shows the locations of proposed tanks and loading racks and rail switchyard of the new facility.

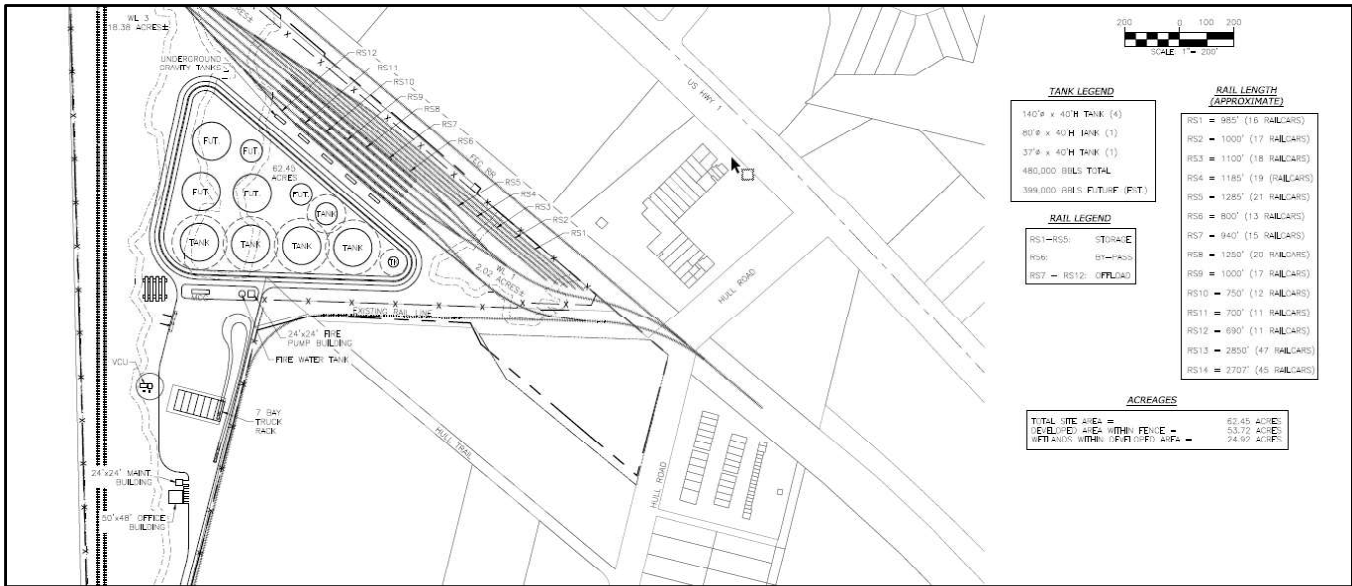


Figure 4. Diagram of Ormond Beach Terminal

Specific information about the proposed tank farm is provided in the following in **TABLE 1**.

TABLE 1 – LIST OF TANKS AT PROPOSED FACILITY.

Tank ID No.	Tank Type	Capacity (gallons)	Product Stored	Diameter (ft)	Height (ft)
IFR-1	Internal Floating Roof Vertical Tank	4,607,400	Gasoline	140	40
IFR-2		4,607,400	Gasoline	140	40
IFR-3		1,503,600	Gasoline	80	40
IFR-4		4,607,400	Ethanol	140	40
FR-1	Vertical Fixed-Roof Tank	4,607,400	ULSD	140	40
FR-2		315,000	Biodiesel	37	40
FR-3		5,000	Additive	8	13.6
FR-4		5,000	Additive	8	13.6
FR-5		5,000	Additive	8	13.6
FR-6		5,000	Additive	8	13.6
FR-7		5,000	Additive	8	13.6
FR-8		5,000	Additive	8	13.6
FR-9	Pressurized Vertical Fixed Roof Tank	40,000	Propane	26	
FR-10		40,000	Propane	26	
FR-11		40,000	Propane	26	
FR-12		40,000	Propane	26	

The loading rack VCU (backup flair) which fires natural gas at a design rate of 150 million British thermal units per hour (MMBtu/hr) and is proposed to operate for typically 150 hours per year (hr/yr.) with a design maximum of 100 hr/yr. of VCU downtime. The combination of the VRU and VCU will each be designed to achieve a gasoline loading emissions limit of 1 milligram of total organic compounds (TOC) per liter of gasoline loaded.

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The emergency generator will be driven by a diesel engine with a rating of approximately 2,000 horsepower (HP). The emergency fire water pump will be driven by a diesel engine with a rating of approximately 500 HP.

The following new nonexempt emissions units will be added by this project.

EU No.	Description
001	Four Floating Roof Tanks
002	Truck Loading Operations with VRU and Backup VCU

1.6. Processing Schedule

March 2, 2023, Department received the application for an air pollution construction permit.

April 14, 2023, Department received application fee.

June 20, 2023, Department issued draft AC permit for publication.

2. PSD APPLICABILITY

2.1. General PSD Applicability

For areas currently in attainment with the AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_x); sulfur dioxide (SO₂); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM₁₀); PM_{2.5}; volatile organic compounds (VOC); lead (Pb); fluorides (F); sulfuric acid mist (SAM); hydrogen sulfide (H₂S); total reduced sulfur (TRS), including H₂S; reduced sulfur compounds, including H₂S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO₂ and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 micro grams per cubic meter (µg/m³), 24-hour average.

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If the potential emission equals or exceeds the defined significant emissions rate of a PSD pollutant, the project is considered “significant” for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several “significant” regulated pollutants.

2.2. PSD Applicability for Project

As provided in the application, **TABLE 2** summarizes potential to emit (PTE) of different PSD pollutant and hazardous air pollutants (HAP)s for the project.

TABLE 2 – POTENTIAL TO EMIT IN TONS PER YEAR (TPY) FOR DIFFERENT PROCESS AT THE PROPOSED FACILITY.

Pollutant	Truck Loading tpy	Combustion Sources tpy	Roof Storage Tanks tpy	Roof Storage Tanks tpy	Fugitive Emissions tpy	Tanks (Exempt) tpy	Potential Emissions Total ^a tpy
PM _{total}	0.07	0.04	-	-	-	-	0.11
PM _{total10}	0.07	0.04	-	-	-	-	0.11
PM _{total2.5}	0.07	0.04	-	-	-	-	0.11
NO _x	2.47	1.22	-	-	-	-	3.69
VOC	4.54	1.22	22.23	2.67	1.08	0.56	31.22
SO ₂	5.29E-03	0.05	-	-	-	-	0.06
CO	0.74	0.74	-	-	-	-	1.48
Maximum Individual HAP (Toluene)	0.04	2.68E-04	0.18	0.02	0.01	5.17E-04	0.25
Total HAP	0.16	1.89E-03	0.71	0.08	0.03	6.50E-04	0.99

Fugitive VOC emissions are not considered in determining whether a source is Title V per Rule 62-210.200(155), F.A.C. HAPs from fugitive emissions are included in the facility-wide total.

TABLE 3 compares the PTE of the various pollutants to the PSD Threshold

TABLE 3 – PTE OF POLLUTANTS COMPARED TO THE PSD THRESHOLD.

Pollutant	Potential-to-Emit (PTE), Tons per Year (TPY)							PSD Threshold	Subject to PSD?
	Truck Loading Error! Reference source not found.	Combustion Sources Error! Reference source not found.	Fixed Roof Tanks Error! Reference source not found.	Floating Roof Tanks Error! Reference source not found.	Fugitive Emissions Error! Reference source not found.	Propane Tanks Error! Reference source not found.	Total Error! Reference source not found.		
CO	0.74	0.05	N/A				1.48	250	No
NO _x	2.47	1.22					3.69	250	No
PM	0.07	0.04					0.11	250	No
PM ₁₀	0.07	0.04					0.11	250	No
PM _{2.5}	0.07	0.04					0.11	250	No
SO ₂	0.00529	0.05					0.06	250	No
VOC	4.54	1.22	2.67	22.23	1.08	0.56	31.22	250	No

As shown in **TABLE 3**, total project emissions will not cause the facility to be classified as a PSD major stationary source; therefore, the project is not subject to PSD preconstruction review.

3. DEPARTMENT REVIEW

3.1. Brief Discussion of Emissions

Fugitive VOCs are primarily emitted by petroleum terminals during storage (i.e., leakage or working loss from tanks) and transfer (i.e., leakage from pipes and equipment and during loading and unloading operations). Because ethanol, propane, gasoline, and diesel have higher vapor pressures than air, these chemicals readily volatilize when exposed to the atmosphere. VOC vapors are slowly emitted from the surface of standing organic liquids (standing loss). For fixed roof tanks, when the tank is drained, residual organic liquid on the tank walls is exposed to the atmosphere, thereby increasing VOC emissions (breathing loss). Floating roof tanks have a roof that moves with the level of organic liquid minimize breathing loss. When a floating roof lowers, the tank walls retain a film of gasoline which would be vented to the atmosphere. VOC emissions also occur as organic liquid is transported through piping and equipment where it volatilizes and may escape via leakage.

PSD pollutants emitted through combustion (e.g., NO_x, CO, PM, and SO₂) are minimal compared to VOC due to the small annual amount of diesel and natural gas combusted by the VCU and emergency generators. Additional combustion byproducts are formed by vehicle engines when vehicles are onsite unloading and loading products. HAPs are also emitted via combustion, and organic HAPs are emitted in a manner similar to the VOC emissions from petroleum terminal operations. The highest PTE for any single HAP is 0.25 TPY (for toluene) and 0.990 TPY for total HAPs.

3.2. State Requirements

Because EU No. 001 is subject to regulations in 40 CFR 60, Subparts A and Kb:

- Rule 62-204.800(8)(c), F.A.C., which adopts and incorporates 40 CFR 60, Subpart A by reference;
- Rule 62-204.800(8)(b)18., F.A.C., which adopts and incorporates 40 CFR 60, Subpart Kb by reference;

The emergency diesel engines meet the exemption criteria in Rule 62-210.300(3)(a)35., F.A.C. The fixed roof tanks, including propane tanks, meet the exemption criteria in Rule 62-210.300(3)(b), F.A.C. according to the applicant.

3.3. Federal NSPS Provisions

EU No. 001 is subject to regulations in 40 CFR 60, Subpart A – General Provisions and Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

3.4. EU No. 002 consists of gasoline loading operations, including the loading racks. The gasoline loading racks are voluntarily subject by the permittee to 40 CFR 60, Subpart XX – Standards of Performance for Bulk Gasoline Terminals.

The emergency diesel engines are subject to applicable regulations in 40 CFR 60, Subpart A and Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Because the proposed facility is a minor source of air pollution, emergency engine regulations are not addressed in the permit but must be complied with by the permittee.

3.5. Federal NESHAP Provisions

EU No. 001, the gasoline storage tanks and EU No. 002, the gasoline loading racks, are subject to regulations in 40 CFR 63, Subpart A and Subpart BBBBBB – NESHAP for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. The applicant must meet the applicable requirements in Subpart BBBBBB. Because Subpart BBBBBB is not adopted and incorporated by reference in Rule 62-204.800, F.A.C., the EPA is the Administrator and Compliance Authority for this subpart. The permittee and EPA would be responsible for ensuring compliance with NESHAP Subpart BBBBBB.

The emergency diesel engines are subject to applicable regulations in 40 CFR 63, Subpart A and Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines. Pursuant to 40 CFR 63.6590(c)(1), these engines meet the requirements of 40 CFR 63, Subpart ZZZZ by complying with the requirements of 40 CFR 60,

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Subpart III. Because the proposed facility is a minor source of air pollution, regulations applicable to exempt emissions units (i.e., emergency engines) are not addressed in the permit but must be complied with by the permittee.

3.6. Other Draft Permit Requirements

This facility will become subject to NSPS Subpart XXa when finalized by EPA and will already be designed to meet the proposed emission limit for total organic compounds of 1 mg/liter of gasoline loaded. Once this emission standard is mandatory, this facility will have federally enforceable limits associated with this applicable rule. At that point, the permittee should request a permit revision to incorporate the NSPS requirements.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Martin Costello is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Permit Review Section at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 at 850-717-9040 or by email martin.costello@dep.state.fl.us.