NEIGHBORHOODS DEPARTMENT

TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

BP Products North America, Inc.
BP Jacksonville Terminals A & B
Facility ID No.: 0310179
Duval County

PROJECT

Air Construction Permit
Draft Permit No.: 0310179-017-AC
Butane Blending Project

PERMITTING & COMPLIANCE AUTHORITY:

Neighborhoods Department
Environmental Quality Division
Ed Ball Building, 214 North Hogan Street, 7th Floor
Jacksonville, FL 32202
Telephone: (904) 255-7100
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1. GENERAL PROJECT INFORMATION

On May 10, 2012, BP Products North America, Inc. applied to the Permitting Authority for a permit to allow the installation of new butane blending equipment at the BP Jacksonville Terminals A & B to provide the ability to blend butane with gasoline products. This will provide the terminal with greater flexibility to adjust the gasoline product Reid vapor pressure (RVP).

Facility Description and Location

BP Jacksonville Terminals A & B are existing bulk petroleum products storage and distribution terminals, which are categorized under Standard Industrial Classification Code No. 5171. The facility is located in Duval County at 2101 Zoo Parkway, Jacksonville, FL 32226. The UTM coordinates of the existing are Zone 17, 441.800 km East and 3364.630 km North; Latitude: 30° 24' 50" North and Longitude: 81° 36' 21" West. The facility is located in an area designated as unclassifiable for the air pollutants particulate matter less than or equal to ten (10) micrometers, sulfur dioxide, and lead; and in an air quality maintenance area for ozone, and in the area of influence of an air quality maintenance area for particulate matter pursuant to Chapter 62-204, Florida Administrative Code (FAC), and Rule 2.201, Jacksonville Environmental Protection Board (JEPB).

Facility Regulatory Categories

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 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.

Project Description

This project includes the installation of new butane blending equipment at BP Jacksonville Terminals A & B to provide the ability to blend butane with gasoline products. This will provide the terminal with greater flexibility to adjust the gasoline product Reid vapor pressure (RVP). There will be two sampling and analysis systems installed at the Jacksonville Terminal, one located at each loading rack. Each sampling and analysis train will consist of pumps, analyzers, one 225 gallon denatured ethanol day tank and one 225 gallon sample return tank. Additionally, one 90,000 gallon pressurized butane vessel will be installed at the facility.

The sampling and analysis equipment will draw a small sample of gasoline from an existing terminal gasoline tank, and will then blend denatured ethanol from the new day tank to create a 90% gasoline and 10% denatured ethanol blend (to simulate the mixture that is loaded onto trucks at the loading racks). This sample will be analyzed to determine the percentage of butane that can be blended. Once analyzed, the gasoline/denatured ethanol sample will be routed into the sample return tank, and later introduced back into the process at the terminal.

Additionally, specific operation changes will be completed to both the Terminal A Tank Truck Loading System and Terminal B Tank Truck Loading Rack, such as installation of additional piping and components, to enable transfer of butane blended gasoline products into trucks via the loading racks.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Permitting and Compliance Authority 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 Permitting Authority must first determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, then a PSD preconstruction review must be conducted. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. 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.

PSD Applicability for Project

The existing facility is not a major stationary source of air pollution for Prevention of Significant Deterioration (PSD) purposes because the potential emissions of PSD air pollutants are less than 250 tons per year pursuant to Rule 62-210.200(189), FAC, and Rule 2.301, Jacksonville Environmental Protection Board (JEPB). This project is not subject to PSD preconstruction review requirements since the proposed project itself has potential emissions of PSD air pollutants that are less than 250 tons per year pursuant to Rule 62-210.200(189), FAC, and Rule 2.301, JEPB. The facility after completion of this project will not be a major stationary source of air pollution for PSD purposes because the potential emissions of PSD air pollutants will be less than 250 tons per year pursuant to Rule 62-210.200(189), FAC, and Rule 2.301, Jacksonville Environmental Protection Board (JEPB).

3. APPLICATION REVIEW

The changes to the Terminal A, Tank Truck Loading System (EU016) and Terminal B, Tank Truck Loading Rack (EU024) are considered a modification, since an increase in actual emissions of VOC will occur. Actual emissions are expected to increase as a result of loading higher vapor pressure material (i.e., gasoline/butane blends, which increases the RVP of the product loaded). As part of the proposed operation changes, fugitive VOC emissions (EU030) will increase due to the addition of piping components. Fugitive emissions from uncaptured vapors generated during the loading process (gasoline loading losses) may also increase as a result of the butane's impact on the vapor pressure of the material being loaded. Fugitive emissions will also increase from the process of delivering butane into the new pressurized butane storage vessel. The pressurized butane vessel itself will not be a source of air emissions.

BP Jacksonville Terminals A & B will not store gasoline/butane blended fuel product in any of the existing product storage tanks, nor will 100% butane be loaded directly into trucks at the terminal loading racks. The blended fuel product will be created during the truck loading operation.

The current terminal wide throughput rate of 450 million gallons per year will remain the same for the loading of gasoline, aviation gasoline, gasoline/denatured ethanol/butane blends, and/or gasoline/denatured ethanol blends or lower vapor pressure VOL products.

State Requirements

BP Jacksonville Terminals A & B are subject to Rule 62-296.320, FAC, *General Pollutant Emission Limiting Standards*, Reasonably Available Control Technology (RACT) – Volatile Organic Compounds (VOC) Rule 62-296.508, FAC, *Petroleum Liquid Storage* and Rule 62-296.510, FAC, *Bulk Gasoline Terminals.*

Federal NSPS Provisions

The facility's Terminal B, Tank Truck Loading Rack (EU024) is subject to ***40 CFR 60, Subpart XX***, *Standards of Performance for Bulk Gasoline Terminals*. However, because the hourly potential emissions rate will not increase due to this project, Terminal A, Tank Truck Loading System (EU016) will continue not to be subject to this standard.

The storage vessels proposed for this project are not subject to ***40 CFR 60, 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.* The denatured ethanol day tanks and the sample return tanks are not subject to this standard because the storage capacity is less than 75 m^3 (19, 813 gallons). The pressurized butane storage vessel is exempt from this standard according to 60.110b(d)(2), which exempts *pressure vessels designed to operate in excess of 204.9kPa* (29.7 psi) *of pressure on the tank and without emissions to the atmosphere.*

Federal NESHAP Provisions

BP Jacksonville Terminals A & B are subject to ***40 CFR 63, Subpart BBBBBB***, *National Emission Standards for Hazardous Air Pollutants for Source Categories: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities*; *and Gasoline Dispensing Facilities* and 40 CFR 63, Subpart A. This includes the proposed changes to Terminal A, Tank Truck Loading System (EU016), Terminal B, Tank Truck Loading Rack (EU024), and piping components (EU030).

The new denatured ethanol day tanks will not be subject to ***40 CFR 63, Subpart BBBBBB*** since the denatured ethanol has a Reid vapor pressure of less than 27.6 kPa (4.0 psi), thereby not meeting the subpart's definition of gasoline *(any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines).*

The new sample return tanks associated with this project will not be subject to ***40 CFR 63, Subpart BBBBBB***, since 40 CFR 63.11100(3) of this subpart, excludes *butane blending sample recovery tanks used to collect drained material such that can be pumped to storage or back into a process* from the definition of gasoline storage tank or vessel.

The facility is a synthetic minor source of HAP emissions, and therefore not subject to ***40 CFR 63, Subpart R***, *National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations).*

4. PRELIMINARY DETERMINATION

The Permitting Authority 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.

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