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<i>ENGINEERING AND COMPLIANCE DIVISION Refinery & Waste Management Permitting</i>	A/N 553662 & 665	Date 7/12/13
EXXONMOBIL OIL CORPORATION VERNON TERMINAL	Processed by TL03	Checked by CAT

EVALUATION FOR A
PERMIT TO CONSTRUCT/OPERATE
FOR A MODIFICATION TO A
TANK TRUCK LOADING RACK

COMPANY NAME AND LOCATION ADDRESS

ExxonMobil Oil Corporation (Vernon Terminal)
2709 E. 37th Street
Vernon, CA 90058

Facility ID# 800171

APPLICATIONS & DESCRIPTION

A/N 553662

Modification to Tank Truck Loading Bay No. 5 to Include Ethanol Unloading

(See draft permit for detailed equipment description/modifications)

A/N 553664

Title V Revision Application

BACKGROUND

ExxonMobil Oil Corporation (EMOC) operates a petroleum product storage and distribution facility in Vernon, CA (aka Vernon Terminal or VT). The VT is a Title V facility which operates, under AQMD permits, fifteen petroleum product storage tanks (one underground), five tank truck loading bays, one ethanol unloading rack (railcar), two boilers, a waste water separator, a waste water treatment system, and two VOC air pollution control systems (a thermal oxidizer and a carbon adsorption system). The two air pollution control systems reduce emissions of VOC that are displaced as vapors during the tank truck loading operations at the five permitted tank truck loading bays. Either air pollution control system can be used when loading



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rates are less than 2,500,000 gallons per day, but when loading rate approaches or exceeds this rate, both control systems are required to be employed.

EMOC currently has both a railcar and tank truck unloading rack used to unload corn-based ethanol. EMOC has submitted A/N 553662 to expand its ethanol truck unloading operation, where Tank Truck Loading Bay No. 5 (A/N 527782) will be modified to unload sugar-cane based ethanol. All of the ethanol (both corn-based and cane-based) unloaded and stored at the facility is used as an oxygenate and is blended with gasoline in order to comply with the requirements of CARB's Phase III Reformulated Gasoline (RFG) program. The addition of cane-based ethanol will also assist EMOC in complying with low carbon fuel standards (LCFS). The modification will involve the installation of a new pump and unloading arms and associated piping and fugitive components (valves, flanges, connectors, etc.).

NOV/NC HISTORY

One Notice to Comply (NC) and one Notice of Violation (NOV) has been issued to ExxonMobil's Vernon Terminal in the last two years. The NC was a request for the company to provide records of calibration of instruments of their CMS system for Rule 462. The NOV was for failure to prevent a vapor leak on one of their loading rack hoses. Both the NC and the NOV issues have been remedied and satisfied. The facility was last inspected on 5/18/~~2012~~²⁰¹³ and found to be in full compliance.

PROCESS DESCRIPTION

Denatured cane-based ethanol will arrive by tank truck and will be unloaded at Bulk Loading Bay No. 5 and placed in storage tanks. The denaturant is gasoline at a concentration of five percent. The denatured ethanol will then be blended with gasoline at the five bulk loading bays and loaded into tank trucks. The blended product consists of 90% gasoline and 10% ethanol (E-10). The organic vapors (VOC) displaced from the tank trucks as a result of loading the biodiesel will be collected and routed to an existing permitted thermal oxidizer (Permit to Construct No. 525928) where the vapors will be destroyed. Since this modification deals with the unloading aspect only, the resulting emissions are solely from fugitive losses from pumps, valves, flanges, etc.



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EQUIPMENT MODIFICATIONS & ASSOCIATED EMISSIONS

Tank Truck Loading Bay No. 5

The Vernon Terminal currently operates five existing tank truck loading bays. The modification will convert Bay No. 5 to both a loading and unloading bay. In doing so, a new ethanol unloading pump will be installed as well as unloading hoses and associated piping and fugitive components. AQMD's fugitive emission correlation factor equation will be used to determine the emissions and the new components and associated emissions are summarized in the table below:

Component Type	Number Added In This Modification	Emission Factor (lbs/yr @ 500 ppm)	Total Emissions (lbs/yr)
Valves (Light Liquid)	130	4.55	590.95
Pumps (Single Seal)	1	46.83	46.83
Flanges	120	6.99	838.82
Connectors	36	2.86	103.01
PRVs	24	-	-
Others	24	9.09	218.15
Total			1797.76

$$1797.76 \text{ lbs/yr} \times \text{yr}/365 \text{ days} = 4.93 \text{ lbs/d} \times \text{d}/24\text{hrs} = .21 \text{ lbs/hr} = \text{R1} = \text{R2}.$$

Maximum Emissions > 1 lb/day, BACT required (bellow sealed valves where feasible).

$$1797.76 \text{ lbs/yr} \times \text{yr}/12 \text{ mo} \times \text{mo}/30\text{d} = 4.99 \text{ lbs/d} \text{ (30-day average)}.$$

Since modification is to assist in complying with CARB's Reformulated Gasoline program requirements, it is exempt from offsets pursuant to 1304(b)(4) – Regulatory Compliance.



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Toxic Emissions

As a worst case, the cane ethanol is denatured with 5% gasoline. Based on this speciation and cane ethanol being 5% gasoline, a Tier 2 HRA for fugitive emission sources (450 sq. ft & residential/commercial receptors at distances of 1500 meters and 150 meters respectively) were performed (see copies in this file). No thresholds were exceeded for either MICR or Hazard Indices.

RULES EVALUATION

Rule 212

The increase in MICR is less than 1 in one million, there is no school within 1000 feet; and the emission thresholds in subdivision (g) are not exceeded. Therefore, no public notice is required.

Rule 401

Visible emissions are not expected under proper operation of this equipment.

Rule 402

No nuisance complaints are expected with proper operation of the equipment.

Rule 462

This rule does not apply to unloading operations.

Rule 466/466.1

Facility is required to comply with these rules as the rules are currently listed as applicable Section K the Title V permit for this facility. Continued compliance is expected.



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Rule 1173

This rule not applicable to this facility but portions of it may apply in so much as they are included in other conditions that are imposed and tagged as BACT, as well as a facility wide condition on the permit.

Reg. XIII

BACT

Maximum daily emission increases of VOC for fugitive components are 4.93 pounds per day. BACT is required and will be imposed as a condition requiring the use of bellow sealed valves where feasible and an explanation as to justify instances where bellow sealed valves are not to be employed (company has not projected as yet the approximate number of bellow sealed type valves that may be installed).

Offsets

Total daily VOC emission increase (30-day average) from project are 4.99 pounds per day. However, since the modification is to comply with CARB's Phase III RFG requirements, offsets are exempt under Rule 1304(b)(4) – Regulatory Compliance.

Modeling

No modeling for VOCs is required.

Major Polluting Facility

This project constitutes a greater than one pound increase at a Major Polluting Facility and is thus subject to the requirements of 1303(b)(5). Per the Form 400-CEQA, it is accepted that the project is not subject to CEQA and thus also satisfies that no alternative analysis is required. ExxonMobil has certified Statewide Compliance (see letter in file). Protection of Visibility is not applicable since the project does not emit particulate matter.

General

The facility is currently in compliance with all applicable rules and regulations of the District and thus meets the requirements of 1303(b)(4).



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Rule 1401

The increases in toxic emissions from the modification result in an MICR of less than one in one million and Hazard Indices less than 1.0. Compliance is demonstrated.

Regulation XX

This facility is not a RECLAIM facility.

Regulation XXX

This facility is a Title V facility and the project has an emission increase of 4.93 pound per day of VOC emissions, therefore it will be sent to EPA for 45-day review as a de minimus significant permit revision.

CEQA

The CEQA Applicability Form (400-CEQA) indicates that the project does not have any impacts which trigger the preparation of a CEQA document.

40CFR 63 Subpart R (Gasoline Distribution MACT)

This facility is not a major source of HAPs and is thus only subject to the minor source requirements (recordkeeping) of this Subpart as stated in the facility-wide condition in Section D with supporting conditions in Section J of Title V permit. Continued compliance is expected.

40CFR 63 Subpart BBBB (Gasoline Distribution GACT)

As a minor source under Subpart R, this facility is required to comply with this Subpart as required by a facility-wide condition in Section D with supporting conditions in Section J of Title V permit. Continued compliance is expected.



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40CFR 63 Subpart EEEE (Organic Liquids Distribution MACT)

This facility is not a major source of HAPs and is not subject to this NESHAP.

RECOMMENDATIONS

Propose this modification to EPA for 45-day review (expedited) as a de minimus significant permit revision (see sample permit) prior to issuing a PC-PO in Section D of Title V Facility Permit.