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PERMIT TO CONSTRUCT/OPERATE

APPLICANT	ConocoPhillips LA Terminal-East
MAILING ADDRESS	3900 Kilroy Airport Way Long Beach, CA 90806
EQUIPMENT LOCATION	13500 S. Broadway St. Los Angeles, CA 90061

EQUIPMENT DESCRIPTION:

A/N 452180

CANCEL THIS APPLICATION – SUPERSEDED BY APPLICATION 455327

A/N 455327

STORAGE TANK, CARBOB, ETHANOL, DIESEL, 85'-0" DIA. X 48'-0" H., PONTON TYPE, INTERNAL FLOATING ROOF, 40,000 BARREL CAPACITY, WELDED SHELL, WITH A MECHANICAL SHOE PRIMARY SEAL AND A RIM MOUNTED WIPER TYPE SECONDARY SEAL.

Conditions:

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]

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- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]

- 3) THIS TANK SHALL NOT BE USED FOR STORING ORGANIC LIQUID HAVING A REID VAPOR PRESSURE OF GREATER THAN 12 PSIA.
[RULE 1303(b)(2)-OFFSETS]

- 4) THE THROUGHPUT OF ORGANIC LIQUID TO THIS TANK SHALL NOT EXCEED 1,183,333 BARRELS IN ANY ONE CALENDAR MONTH.
[RULE 1303(b)(2)-OFFSETS]

- 5) THE OPERATOR SHALL MONITOR THE HYDROCARBON CONCENTRATION OF THE VAPOR SPACE USING AN EXPLOSIMETER OR EQUIVALENT DEVICE EVERY SIX MONTHS.
[RULE 463]

- 6) THE HYDROCARBON CONCENTRATION IN THE VAPOR SPACE ABOVE THE INTERNAL FLOATING ROOF SHALL NOT EXCEED 30% OF THE VAPOR LOWER EXPLOSIVE UNIT.
[RULE 463, RULE 1178]

- 7) THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

TYPE OF LIQUID STORED
THROUGHPUT
TURNOVERS
RANGES OF TRUE VAPOR PRESSURE OF SUCH LIQUIDS
[RULE 463]

- 8) THE OPERATOR SHALL KEEP RECORDS IN A MANNER APPROVED BY THE DISTRICT, TO SHOW COMPLIANCE WITH ALL CONDITIONS. SUCH RECORDS SHALL BE MAINTAINED AND KEPT ON FILE AND SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS AUTHORIZED REPRESENTATIVE UPON REQUEST.
[RULE 463, 40CFR 60 SUBPART Kb]

PERIODIC MONITORING: NONE

EMISSIONS AND REQUIREMENTS:

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9. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

- VOC: RULE 463
- VOC: RULE 1149
- VOC: RULE 1178
- VOC: 40 CFR 60, SUBPART Kb

A/N 501941

TITLE V REVISION APPLICATION

A/N 502579

VAULT TANK, RECOVERED GASOLINE AND WATER, UL-2085, FIXED ROOF, 2800 GALLON CAPACITY, 6'-11" W. X 11'-10" L. X 4'-7" H.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS TANK SHALL NOT BE USED FOR STORING ORGANIC LIQUID HAVING A REID VAPOR PRESSURE OF GREATER THAN 6 PSIA.
[RULE 1303(b)(2)-OFFSETS]
4. THIS TANK SHALL BE EQUIPPED WITH A PRESSURE-VACUUM VALVE WHICH IS SET TO WITHIN 10 PER CENT OF THE MAXIMUM ALLOWABLE WORKING PRESSURE OF THE CONTAINER.
[RULE 463(d)(1)]

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5. A FLOWMETER OR LEVEL INDICATOR SHALL BE INSTALLED TO DEMONSTRATE COMPLIANCE WITH CONDITION NO. 6.
[RULE 1303(a)-BACT, RULE 1303(b)(2)-OFFSETS]
6. THE THROUGHPUT OF ORGANIC LIQUID TO THIS TANK SHALL NOT EXCEED 89 GALLONS PER DAY.
[RULE 1303(a)-BACT, RULE 1303(b)(2)-OFFSETS]
7. THE OPERATOR SHALL KEEP RECORDS IN A MANNER APPROVED BY THE DISTRICT, TO SHOW COMPLIANCE WITH ALL CONDITIONS. SUCH RECORDS SHALL BE MAINTAINED AND KEPT ON FILE AND SHALL BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS AUTHORIZED REPRESENTATIVE UPON REQUEST.
[RULE 463, 40CFR 60 SUBPART Kb]

PERIODIC MONITORING: NONE

EMISSIONS AND REQUIREMENTS:

8. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

VOC: RULE 463

VOC: RULE 1149

BACKGROUND

ConocoPhillips operates a gasoline and diesel bulk terminal at the Los Angeles Terminal-East (Facility ID no. 800365). The facility receives gasoline via pipeline and ethanol by rail. A new storage tank will be installed in order to store ethanol and ethanol mix reformulated gasoline. Four applications are being addressed by this report. Application 452180 was initially submitted for two new storage tanks in 2006. Application 452180 will be cancelled and application 455327 will take its place but only one tank will be installed. Application 501941 will be used as the Title V revision application folder. Application 502579 is for a small tank used to store recovered gasoline from remediation well skimmer pumps. On February 9, 2011 the Los Angeles County Department of Regional Planning approved the installation of the new ethanol storage tank with a Negative Declaration determination.

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EQUIPMENT DESCRIPTION

APPLICATION 455327

This is a new 40,000 barrel internal floating roof tank with a mechanical shoe primary seal and a rim-mounted wiper type secondary seal. In addition, the column well will be controlled with flex fabric seal. This tank will store ethanol, blend stock for oxygenate blenders called CARBOB- a California Reformulated Gasoline, and also may store diesel fuel in the tank. Please refer to the ConocoPhillips report dated 7-31-2009 that is included in application folder 455327 for more operational details of this storage tank. The report includes two calculations. The EPA TANKS4.0.9d program was used to calculate the yearly average emissions as well as CARBOB monthly gasoline formulations. The month with the highest monthly emissions (February) was used to calculate the required ERCs.

APPLICATION 502579

This is a small gasoline and water rectangular horizontal recovery tank. The site has a soil vapor remediation system onsite with various wells. This tank is used to store gasoline that is collected from groundwater wells. Skimmer pumps collect a small amount of gasoline on the surface of the groundwater in the wells intermittently. The applicant initially submitted calculations with emissions greater than one pound per day. The company subsequently proposed a throughput of 32,000 gallons/year, and agreed to be conditioned under one pound per day in order not to trigger the BACT requirement.

CALCULATIONS

APPLICATION 455327

The MSDS sheet for CARBOB lists its vapor pressure from 350 mm to 760 mm Hg. The ethanol MSDS sheet for ethanol lists its vapor pressure at 45 mm Hg. The vapor pressure for diesel is even lower. Consequently, the calculations are based on the highest monthly CARBOB gasoline formulation. This happens to be February with an RVP of 12. The emissions for this month are 237.4 pounds. The proposed throughput is 596,400,000 gallons (14,200,000 barrels per year). Please note that the District engineer ran the TANKS program in-house and got the same results submitted by the applicant.

	VOC (lb/month)	VOC (lb/day) (30 day avg)	VOC (lb/hr)max
Tank 3405 (1,183,333 bbl/month)	237.43	7.91	0.3296

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OFFSETS – 7.91 lb/day (1.2) = 9.5 lb/day → 10 lb/day ERCs

Toxic emissions are calculated based on the weight percent of toxic compounds present in the VOC vapor. These values are generated by the tanks program as listed below. An RVP of 12 was used to calculate a very conservative annual toxic emissions.

TOXIC COMPOUND	LB/YEAR	LB/HR
Benzene (including benzene from gasoline)	32.46	0.00371
Toluene (methyl benzene)	103.16	0.01178
Ethyl benzene	19.38	0.00221
Xylenes (isomers and mixtures)	96.39	0.01100
Hexane (n-)	20.89	0.00238

A tier two toxic screening calculation was done by the applicant but the commercial receptor used was 50 meters, and 150 meters residential receptor. The risk calculations were redone with the actual measurements of 160 meters residential and 70.1 meters commercial receptor. Please refer to the attached Excel spreadsheet by the District engineer for the updated calculations. The resulting MICR is estimated as follows.

	Values
Residential MICR	9.37E-07
Commercial MICR	5.40E-07

APPLICATION 502579

The applicant initially submitted calculations based on the District's Supplemental Instructions for Liquid Organic Storage Tanks. Calculations using the TANKS 4.09d program were requested because this is a more accurate method. An equivalent diameter was used to model the rectangular tank as a horizontal cylindrical tank. This vault tank has a volume of 2000 gallons and the proposed throughput is 32000 gallons per year.

Current throughput – 32000 gallons/yr /12 mo/yr 30 day/mo = 88.89 gal/day

	VOC (lb/yr)	VOC (lb/day) max	VOC (lb/hr)max
Vault tank (89 gal/day)	355.04	0.9862	0.0411

OFFSETS – 0.986 lb/day (1.2) = 1.18 lb/day → 1 lb/day ERCs

BACT _ 355.04 lb/yr /365 days/yr = 0.973 lb/day

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Toxic emissions are calculated based on the weight percent of toxic compounds present in the VOC vapor. These values are generated by the tanks program as listed below:

TOXIC COMPOUND	(lb/yr)	(lb/hr)
Benzene (including benzene from gasoline)	3.58	4.09E-4
Ethyl benzene	0.27	3.08E-5
Toluene (methyl benzene)	4.04	4.61E-4
Xylenes (isomers and mixtures)	1.14	1.30E-4
MTBE	64.63	7.38E-3
Hexane	3.22	3.68E-4

A tier two toxic screening calculation was done. No control efficiency was applied since the tank has no air pollution control equipment. A 5 foot stack height was used. Please refer to the attached Excel spreadsheet for the risk calculation details. The resulting MICR is estimated as follows:

Residential MICR	2.06E-07
Commercial MICR	4.01E-07

EVALUATION

Rule 212 A public notice is not required since no schools are located within 1000 feet of the site, the MICR risk from each tank is less than 1 in a million, and the R212 (g) thresholds are not exceeded.

Rule 401 Each tank is not expected to emit visible emissions which would exceed the limits of this Rule. Therefore, compliance is expected.

Rule 402 Each tank is not expected to emit odorous emissions which would cause a public nuisance. Therefore, compliance is expected.

Rule 463 The new tank (A/N 455327) will comply with this rule because the internal floating roof tank will operate with the primary and secondary seals described in the equipment description. The Vault tank (A/N 502579) will be conditioned to meet this rule's pressure relief requirements under 463(d)(1).

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Rule1149 During degassing and cleaning, each tank is subject to Rule 1149, and the operation is expected to comply with the applicable provision of the rule.

Rule1178 The internal floating roof tank (A/N 455327) is expected to comply with this rule by testing the LEL and because of all of its fittings. This rule is not applicable to the vault tank because its capacity is under 19,815 gallons..

Reg. IX Standards of Performance for New Stationary Sources – 40CFR60 Subpart Kb 40

The internal floating roof tank is expected to comply with this rule. This rule does not apply to the vault tank since it is very small (under 19812 gallons).

Reg. X National emission Standards for Hazardous Air Pollutants

40CFR63 Subpart R - The facility is not considered a major source because it does not emit or have the potential emit ≥ 10 tons/yr of a single hazardous air pollutant, or ≥ 25 tons/yr of any combination of hazardous air pollutants. Minor source R is applicable, and is included in the facility wide conditions on the Title V permit, as is 40CFR63 Subpart BBBB.

Reg. XIII 1303(a) – The vault tank emissions are kept under 1 lb/day by a daily throughput permit condition and thus BACT is not required. The floating roof tank complies with BACT via category A primary and secondary seals.

1303(b)(1) - The emissions are below table A-1 limits, hence modeling is not required.

1303(b)(2) - The 30 day average month daily emissions will require 11 pounds of ERC offsets. ConocoPhillips has ERC AQ007116 in the amount of 10 lbs/day for the large storage tank, and ERC AQ010907 in the amount of 1 lb/day for the small vault tank. Therefore, the proposed operation complies with NSR under Reg. XIII.

1303(b)(4) – This facility complies with all applicable rules and regulations of the District.

1303(b)(5) – Major Polluting Facilities

(A) Alternative Analysis: ConocoPhillips complies with this requirement through 1303(b)(5)(D)(i)

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(B) Statewide Compliance: ConocoPhillips complies with this requirement by certification. The company certifies that they are in compliance(see 3-25-11 letter).

(C) Protection of Visibility: This requirement does not apply since there is no increase in PM or NOx emissions.

(D) Compliance Through California Environmental Quality Act: The CEQA Applicability Form (400-CEQA) submitted by ConocoPhillips indicates that the project does require a CEQA document. A Negative Declaration determination has been approved and certified by the Los Angeles County Dept. of Regional Planning.

RULE 1401 The attached Excel spreadsheet shows that the cancer burden is less than 0.5 and the tier II calculation shows a risk under 1 in a million for each of the tanks. All chronic and acute hazard indices are below 1.0 for all organ receptors. Therefore, the proposed operation complies with Rule 1401.

Reg. XXX This is a Title V facility under the unitized ID 800365. A Title V revision application has been submitted for this change. This is a Significant Permit Revision because NSPS applies. 40CFR60 Subpart Kb applies for the new internal floating roof tank. In addition, section K of the Title V Permit will be updated to include this subpart.

RECOMMENDATION

THE FOLLOWING DISPOSITION IS RECOMMENDED:

Approve A/N 455327, and A/N 502579 for a Permit to Construct/Operate and issue a Revised T V facility permit under A/N 501941 subject to a 45 day EPA Review and 30 day public notice period of the draft Title V Facility Permit Revision. Cancel application 452180 after permits are issued.