



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING & COMPLIANCE DIVISION

APPLICATION PROCESSING AND CALCULATIONS

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APPL. NO.
472048

DATE
07/15/08

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Angelita Alfonso

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PERMIT TO CONSTRUCT

-New Construction-

COMPANY NAME: CONOCOPHILLIPS COMPANY
ID No. 800362

MAILING ADDRESS: 1520 E. Sepulveda Blvd.
Carson, CA 90745

EQUIPMENT LOCATION: 1520 E. Sepulveda Blvd.
Carson, CA 90745

CONTACT PERSON: Kristin Wisdom
(310) 952-6120

EQUIPMENT DESCRIPTION

Additions to the Facility Permit are noted in underlines and deletions are noted in ~~strikeouts~~.

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 10: STORAGE TANKS					P13.2
System 7: DOMED EXTERNAL FLOATING ROOF TANKS					S13.7
<u>STORAGE TANK, DOMED</u> <u>EXTERNAL FLOATING ROOF,</u> <u>NO. 2526, GAS OIL, 180,000 BBL;</u> <u>HEIGHT: 48 FT;</u> <u>DIAMETER: 165 FT</u> <u>A/N 472048</u> <u>Permit to Construct Issued:</u> <u>DOME COVER, GEODESIC</u> <u>FLOATING ROOF, PONTOON,</u> <u>WELDED SHELL</u> <u>PRIMARY SEAL, CATEGORY A,</u>	<u>D958</u>				<u>B22.7</u> <u>C1.28</u> <u>H23.33</u> I30.1 <u>K67.8</u>



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<u>METALLIC SHOE</u>					
<u>SECONDARY SEAL, CATEGORY A WIPER TYPE</u>					
<u>GUIDEPOLE, GASKETED SLIDING COVER, WITH WIPER, UNSLOTTED</u>					

CONDITIONS

P13.2 All devices under this process are subject to the applicable requirements of the following rules or regulations:

<u>Contaminant</u>	<u>Rule</u>	<u>Rule/Subpart</u>
Benzene	40CFR61, SUBPART	FF

[40CFR61 Subpart FF, 12-4-2003]

[Processes subject to this condition: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

~~S13.7 All devices under this system are subject to the applicable requirements of the following rules or regulations:~~

<u>Contaminant</u>	<u>Rule</u>	<u>Rule/Subpart</u>
VOC	District Rule	463
VOC	District Rule	1149
VOC	District Rule	1178

~~For Rule 463 applicability, only subdivision (d) in the March 11, 1994 amendment, or equivalent requirements in the future amendments, shall apply to domed external floating roof tanks. This does not preclude any requirements in Rule 1178.~~

~~[RULE 463, 3-11-1994; Rule 1149, 7-14-1995; Rule 1178, 12-21-2001;]~~

~~[Devices subject to this condition: Process 10, System 7]~~

Note: This system condition for domed external floating roof tanks is deleted and is replaced with device condition H23.34, because there will be some domed



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external floating roof tanks under this system that will not be subject to all the rules specified in this system condition.

B22.7 The operator shall not use this equipment with materials having a(n) true vapor pressure greater than 0.1 psia under actual operating conditions.

For the purposes of this condition, organic liquid materials that are stored at ambient temperatures with a flash point of 100°F or more as determined by ASTM Method D-93, shall be deemed to have a true vapor pressure of less than or equal to 0.1 psia under actual storage conditions.

The flash point of the material stored shall be determined every time there is a change of the material stored in the tank.

[Rule 1178, 4-7-2006; Rule 1303(b)(2)-Offset, 5-10-1996, Rule 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: D958]

Note: Since the MSDS for the commodity stored provided by the facility indicates that the maximum vapor pressure is 1.94 psia, the facility is required to determine flash point using the method specified in Rule 1178(i)(2) to determine compliance with the vapor pressure limit of 0.1 psia.

C1.28 The operator shall limit the throughput to no more than 1,705,000 barrel(s) in any calendar month.

The operator shall comply with the following throughput measurement practices.

The operator shall calculate the throughput, in barrels, by the following equation: $0.14 \times d \times d \times l$, where d is the diameter of the tank in feet based on the tank strapping chart and l is the total vertical one-way roof travel in feet per month.

The operator shall install and maintain an automatic tank level gauge (ATLG) and recorder to continuously record the vertical movement of the roof. For the purpose of this condition, continuous recording is defined as once per hour.

The operator shall calculate the total one-way roof movement, in feet, on a daily and monthly basis.



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The ATLG installed shall be verified once per quarter by comparing against a manual tank level measurement. If the ATLG differs from the manual tank level measurement by more than 1.0 inch or 0.8 %, whichever is greater, the ATLG shall be repaired and put back into service within 10 days. While the ATLG is being repaired, the throughput shall be determined by the hourly tank level data averaged from the previous 30 days prior to the discovery of the discrepancy.

In the event of a failure or routine maintenance of the ATLG, the ATLG shall be repaired (if necessary) and put back into service within 10 days of the time that the ATLG failed or was removed from service for maintenance. While the ATLG is being repaired or maintained, the throughput shall be determined by the hourly tank level data averaged from the previous 30 days prior to time that the ATLG went out of service.

The operator shall keep adequate records to show compliance with the limitations specified in this permit. Such records shall be maintained and kept on file for at least five years and shall be made available to the Executive Officer or his authorized representative upon request.

[Rule 1303(b)(2)-Offset, 5-10-1996, Rule 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition: Dxxx]

H23.33

This equipment is subject to the applicable requirements of the following rules or regulations:

<u>Contaminant</u>	<u>Rule</u>	<u>Rule/Subpart</u>
<u>VOC</u>	<u>District Rule</u>	<u>463</u>
<u>VOC</u>	<u>District Rule</u>	<u>1149</u>

For Rule 463 applicability, only subdivision (d) in the May 6, 2005 amendment, or equivalent requirements in the future amendments, shall apply to domed external floating roof tanks.

[Rule 463, 5-6-2005; Rule 1149, 7-14-1995]

[Devices subject to this condition: D958]

Note: Rule 1178 does not apply to this domed tank because the permitted vapor

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pressure of the stored commodity is less than 0.1 psia.

I30.1 In accordance with Rule 3002(a)(3), the permit for this equipment is being issued as a non-Title V permit.

The facility permit holder shall file an application for a Title V permit revision for this equipment within 90 days of the issuance of the facility's initial Title V permit.

[Rule 3002, 11-14-1997]

[Devices subject to this condition: D45, D48, D51, D52, Dxxx]

K67.8 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Tank throughput in barrels.

True vapor pressure, in psia at actual temperature or the flash point data determined per Condition B22.7.

Commodity stored.

[Rule 1303(b)(2)-Offset, 5-10-1996, Rule 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition:958]

BACKGROUND

The ConocoPhillips Los Angeles Refinery (ConocoPhillips) operates a petroleum refinery at two different sites in the South Coast Air Basin. One of the sites is located in the City of Carson (Carson Plant), and the other site is in the City of Los Angeles Wilmington district (Wilmington Plant). ConocoPhillips is proposing a ***Tank Replacement Project*** to replace seven existing petroleum storage tanks both at the Carson and Wilmington Plants. The proposed project, as summarized below, will replace five existing riveted storage tanks with four floating roof tanks of welded construction at the Carson Plant and replace two existing riveted storage tanks with two new floating roof tanks of welded construction at the Wilmington Plant over a period of approximately two to four years.

Carson Plant (ID 800362)

1. Storage Tank 2625

This is the subject of this permit evaluation. This new domed external floating roof tank will replace existing Tanks 16 & 18. Tanks 16 & 18 are due for scheduled inspection and



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maintenance. ConocoPhillips proposes to replace these two tanks with a single, new tank instead of repairing the existing ones. The new tank has a capacity of 180,000 barrels.

2. Storage Tank 2

Tank 2 is an external floating roof tank with a shell of riveted construction. It has a capacity of about 80,000 barrels. ConocoPhillips anticipates replacing the tank with an all-new, external floating roof tank of welded construction with the same capacity and in the same location.

3. Storage Tank 21

Tank 21 is an external floating roof tank with a shell of riveted construction. It has a capacity of about 82,700 barrels. ConocoPhillips anticipates replacing the tank with an all-new, external floating roof tank of welded construction with the same capacity and in the same location.

4. Storage Tank 280

Tank 280 is an external floating roof tank with a shell of riveted construction. It has a capacity of about 80,000 barrels. ConocoPhillips anticipates replacing the tank with an all-new, external floating roof tank of welded construction with the same capacity and in the same location.

Wilmington Plant (ID 800363)

1. Storage Tank 68

Tank 2 is an external floating roof tank with a shell of riveted construction. It has a capacity of about 84,000 barrels. ConocoPhillips anticipates replacing the tank with an all-new, external floating roof tank of welded construction with the same capacity and in the same location.

2. Storage Tank 78

Tank 78 is an external floating roof tank with a shell of riveted construction. It has a capacity of about 18,000 barrels. ConocoPhillips anticipates replacing the tank with an all-new, external floating roof tank of welded construction with the same capacity and in the same location.

The proposed **Tank Replacement Project** constitutes a “project” as defined by the California Environmental Quality Act (CEQA). CEQA requires that the environmental impacts of proposed “projects” be evaluated and feasible methods to reduce, avoid or eliminate significant adverse impacts of these project be identified and implemented. Due to construction activities such as tanks demolition, tanks construction, excavation, grading and laying of new concrete foundation,



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preparation of a CEQA document is required. The replacement projects at each site are independent projects. However, since they will occur within the same time frame they are being considered in one CEQA document. In accordance with CEQA, the SCAQMD is the Lead Agency and has prepared and certified a Negative Declaration in July, 2008 concluding that the proposed project does not have the potential to adversely affect the environment.

ConocoPhillips submitted this application for the construction of the first of the four new tanks at the Carson Plant, Storage Tank 2625. ConocoPhillips submitted supplemental information from August 29, 2007 to June 19, 2008. Table 1 lists the applications submitted along with the permit processing fees and equipment information.

Table 1: PERMIT ADMINISTRATION & APPLICATION TRACKING INFORMATION

<i>Application No.</i>	472048	472049
Equipment Description	Domed External Floating Roof Tank	Facility Permit Amendment
Date Received	7/20/07	7/03/07
Deemed Complete Date	8/20/07	N/A
Application Type	10	80
Application Status	20	21
Previous Application No.	N/A	N/A
B-CAT No.	248919	555010
C-CAT No.	00	00
Fee Schedule	C	NA
Processing Fee	\$ 2,949.92	\$ 767.09
Fee Submitted	\$ 2,949.92	\$ 767.09

COMPLIANCE RECORD REVIEW

A review of the AQMD Compliance Database showed 27 Notices of Violation (NOV) and Notices to Comply (NC) issued to ConocoPhillips in the past five years (01/01/03 – 07/15/08).



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All notices are either closed or in compliance status. The notices that are not marked closed in the database are now in compliance status according to District Inspector Paul Caballero. A summary of the NOV and NC is provided in Attachment 1.

PROJECT DISCUSSION

ConocoPhillips is proposing to replace five existing petroleum storage tanks of riveted construction with four new external floating roof storage tanks of welded construction over approximately a four year period at the Carson Plant. Three of the existing riveted tanks will be replaced with all-new, welded tanks of the same size and capacity in the same locations. The other two existing riveted tanks, used to store hydrotreated gas oil, will be demolished and replaced with a single, larger welded tank. This is the subject of this engineering evaluation. According to ConocoPhillips, the Carson Plant has historically stored hydrotreated gas oil with vapor pressure less than 0.1 psia in three fixed roof storage tanks: Tank 16 (Dev D 352), Tank 17 (Dev D 353), & Tank 18 (Dev D 354). Tank 16 has been idle since about 2006. Tank 18 has been idle since about 2003. The objective of this project is to permanently demolish Tanks 16 & 18, and replace them with a single, all-new, domed, external floating roof tank, designated as Tank 2625. Tank 17 will remain in service. Tanks 16, 17 and 18 are not part of the facility's Rule 1178 Plan.

ConocoPhillips proposed the following tank specifications and operating data for this new storage tank:

Tank Characteristics

Basic type	Domed External Floating Roof Tank
Diameter	165 ft
Volume	180,000 bbl
Throughput	1,705,000 bbl/mo

Tank Content

Commodity	Hydrodesulfurized Gas Oils
Vapor Pressure	0.1 psia max

Roof Characteristics

Type	Double Deck
------	-------------

Tank Construction and Rim-Seal System

Construction	Welded
Primary Seal	Mechanical Shoe
Secondary Seal	Rim-mounted



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<u>Deck Fitting</u>	<u>Quantity</u>
Access Hatch (24-in Diam/Bolted Cover, Gasketed)	2
Gauge-Hatch/Sample Well (8-in Diam)/Weighted Mech, Actuation, Gas	1
Roof Drain (3-in Diam)/90% Closed	1
Roof Leg (3-in Diam)/Adjustable, Pontoon Area, Sock	57
Roof Leg (3-in Diam)/Adjustable, Center area, Sock	53
Slotted Guide-Pole/Sample Well/Gask. Sliding Cover, w Float, Wiper	1
Vacuum Breaker (10-in Diam)/Weighted Mech. Actuation, Gask.	1

It is noted here that there will be no change in fugitive components because the new tank replaces an existing one that already has piping connected to it. The physical routing of a apportion of the piping will change because the replacement tank is in a slightly different location, but the number of existing valves and flanges will stay the same.

EMISSIONS CALCULATION

Based on all the information submitted by the facility, the VOC emissions from the new storage tank are 4.1 lbs/day. The emissions are calculated using EPA Tanks 4.0 (version 4.09D) program that estimates VOC and hazardous air pollutant (HAP) emissions from organic liquid storage tanks.

Table 2 summarizes the emissions data. Attachment 2 includes the Tanks 4.0 Emissions Report submitted by the facility and verified by the District.

Table 2: MAX. POTENTIAL TO EMIT VOC EMISSIONS FOR TANK TK 2625

<i>Tank 2625, A/N 472048</i>		<i>Proposed</i>
Tank Configuration		Domed External Floating Roof Tank
Commodity		Gas Oil
Throughput, barrels/month		1,705,000
Vapor Pressure, psi		0.10
VOC Emissions	lbs/yr	1,458.92
	lbs/day (30-day ave)	4.05
	lbs/hr	0.17

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RULES EVALUATION

PART 1: SCAQMD REGULATIONS

Rule 212 Standards for Approving and Issuing Public Notice (Amended Nov. 14, 1997)

- 212 (a) The applicant is required to show that the equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, is so designed, controlled, or equipped with such air pollution control equipment that it may be expected to operate without emitting air contaminants in violation of provisions of Division 26 of the State Health and Safety Code of these rules. The operation of the new storage tank is expected to comply with this requirement.
- 212(c)(1) Public notification is required if any new or modified permit unit, source under Regulation XX, or equipment under Regulation XXX may emit air contaminants located within 1000 feet from the outer boundary of a school. The source is not within 1000 feet of a school, public notification is therefore not required.
- 212(c)(2) Public notification is required if any new or modified facility has on-site increases exceeding any of the daily maximums specified in subdivision (g) of this rule. The increase in emissions with the operation of the proposed project is calculated to be approximately 22.2 lbs/day of VOC. Since the emissions increase does not exceed any of the daily maximums specified, public notification is therefore not required.
- 212(c)(3) Public notification is required if the maximum individual cancer risk (MICR), based on Rule 1401, exceeds one in a million (1×10^{-6}), due to a project's new construction or proposed modification. This new construction does not result in MICR exceeding one in a million, public notification is therefore not required.
- 212(g) This subdivision sets forth the process for federal public notification and distribution and specifies the daily maximum emissions increase as follows:



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Air Contaminant

Daily Maximum in lbs/day

Volatile Organic Compounds	30
Nitrogen Oxides	40
PM10	30
Sulfur Dioxide	60
Carbon Monoxide	220
Lead	3

Since the increase in emissions does not exceed the daily maximum specified, federal public notification is not required.

Rule 401 Visible Emissions (Amended November 9, 2001)

Operation of the new storage tank is not expected to result in visible emissions. Therefore, compliance with this rule is expected.

Rule 402 Nuisance (Adopted May 7, 1976)

Operation of the new storage tank is not expected to result in a public nuisance. Therefore, compliance with this rule is expected.

Rule 463 Organic Liquid Storage (Amended May 6, 2005)

This rule applies to any above-ground tank with a capacity of 19,815 gallons or greater for storing organic liquids.

463(d) Other Performance Requirements

463(d)(1) A person shall not place, store or hold gasoline in any tank, with a capacity of between 950 liters (251 gallons) and 75,000 liters (19,815 gallons) unless such tank is equipped with a pressure-vacuum valve which is set to within 10 percent of the maximum allowable working pressure of the container, or is equipped with a vapor loss control device which complies with the requirements set forth in subdivision (c). This paragraph is not applicable since the capacity of the storage tank is not between 251 gallons and 19,815 gallons.

463(d)(2) The roof of any internal or external floating roof tank shall float on the organic liquid at all times except when the tank is being completely emptied for cleaning or repair. The process of emptying or refilling, when the roof is resting on leg supports shall be



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continuous. The facility will comply with this requirement.

463(d)(3) If a tank has been gas-freed and is to be refilled with gasoline, the roof shall be refloated with water or by an equivalent procedure approved by the Executive Officer. This paragraph is not applicable since the only permitted commodity to be stored in this tank is gas oil.

463(d)(4) The tanks will not store organic liquids having a true vapor pressure of 11 psia (569 mm Hg) or greater under actual storage conditions. The subject storage tank will not store organic liquids having a true vapor pressure of 11 psia or greater under actual storage conditions.

463(d)(5) Replacement seals on the tanks will only be chosen from the current list of seals approved by the District. The facility will comply with this requirement.

463(d)(6) Organic liquids on the addendum to this rule shall be deemed to be in compliance with the appropriate vapor limits for the tank in which it is stored provided the actual storage temperature does not exceed the corresponding maximum temperature listed. Since the actual storage temperature of the gas oil will not exceed the maximum temperature listed on the addendum,

Compliance with Rule 463 is expected with proper recordkeeping and inspections.

Reg IX

Standards of Performance for New Stationary Sources (NSPS)

40 CFR 60, Subpart Kb: Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction or Modification Commenced after July 23, 1984

60.110b Applicability and designation of affected facility
October 15, 2003

60.110b(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m³ (39,894 gallons) storing a liquid with a maximum true vapor pressure less than 3.5 kPa (0.5 psi) or with a capacity greater than or equal to 75 m³ (19,815 gallons) but less than 151 m³ (39,894 gallons) storing a liquid with a maximum true vapor



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pressure less than 15.0 kPa (2.17 psi).

The proposed storage tank is permitted to store gas oil with a maximum vapor pressure of 0.1 psi, therefore this subpart does not apply.

Reg X

National Emission Standards for Hazardous Air Pollutants (NESHAP)

40 CFR 61 Subpart FF: National Emission Standard for Benzene Waste Operations

ConocoPhillips is subject to Benzene Waste NESHAP. By existing permit condition P13.2, the facility is expected to continue to comply.

Reg XI

Source Specific Standards

Rule 1149: Storage Tank Cleaning and Degassing (Amended July 14, 1995)

This storage tank has a capacity greater than 39,630 gallons, and as such, is subject to the cleaning and degassing requirements of Rule 1149 when cleaning and degassing. Compliance with this rule is expected.

Rule 1178: Further Reductions of VOC Emissions from Storage Tanks at Petroleum Refineries (Amended April 7, 2006)

The rule applies to all aboveground storage tanks that have a capacity equal to or greater than 19,815 gallons, are used to store organic liquids with a true vapor pressure greater than 0.1 psi absolute under actual storage conditions and are located at any petroleum facility that emits more than 20 tons per year of VOC. This rule is not applicable to this new storage tank because the true vapor pressure at actual storage conditions will not exceed 0.1 psi. Permit Condition B22.7 limits the vapor pressure to 0.1 psi, therefore this rule does not apply to this storage tank.

Reg XIII

New Source Review (NSR)

Rule 1303: Requirements (Amended Dec. 6, 2002)

1303(a) Best Available Control Technology (BACT)

BACT means the most stringent emission limitation or control technique which: (1) has been achieved in practice; or (2) is contained in any State Implementation Plan approved by the US EPA; or (3) is any other emission limitation or control technique approved by the Executive Officer and cost effective as compared to measures listed in the Air Quality Management Plan.



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BACT for external floating roof tanks is dome. Since this application is for a construction of a new domed external floating roof tank, BACT is satisfied.

It is noted here that there will be no change in fugitive components because the new tank replaces an existing one that already has piping connected to it. The physical routing of a portion of the piping will change because the replacement tank is in a slightly different location, but the number of existing valves and flanges will stay the same.

According to rule interpretation from Kurt Wiese on August 1, 2006 (Attachment X), BACT applies only to the equipment being modified. BACT will thus not be evaluated for the fugitive components associated with the replacement of the storage tank.

1303(b) This subdivision lists the following requirements for a Permit to Construct for any new or modified source which results in a net emission increase of any nonattainment air contaminant at a facility.

1303(b)(1) Modeling
According to Rule 1303 Appendix A, modeling for VOC is not required.

1303(b)(2) Emission Offsets
4.05 lbs of VOC emissions increase is required to be offset with 1.2 offset factor. ConocoPhillips will provide Emission Reduction Credit in the amount of 5 lbs/day to offset the VOC emissions increase (ERC Certificate Nos. AQ007873).

1303(b)(3) Sensitive Zone Requirements
The facility is located in Zone 1. Therefore, emission reduction credits will be obtained from the same Zone 1. Compliance with this requirement is expected.

1303(b)(4) Facility Compliance
ConocoPhillips is in compliance with all applicable rules and regulations of the AQMD.



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1303(b)(5) Major Polluting Facilities

- (A) Alternative Analysis: ConocoPhillips complies with this requirement through 1303(b)(5)(D)(i).
- (B) Statewide Compliance: ConocoPhillips complies with this requirement by certification. The certification letter is in Attachment 3.
- (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 not have any impacts which trigger the preparation of a CEQA document; therefore a CEQA analysis is not required.

Rule 1304: Exemptions (Amended June 14, 1996)

1304(a) Modeling and Offset Exemptions

1304(a)(1) Replacements

This section allows exemption from the modeling and offset requirement for a source that is replacing a functionally identical source or is a functionally identical modification to a source. Since the new domed external floating roof storage tank is replacing two fixed roof tanks, which are not functionally identical, it is not eligible for this exemption.

1304(c) Offset Exemptions

1304(c)(2) Concurrent Facility Modification

This section allows exemption from the offset requirement for a source that is a part of a concurrent facility modification with emission reductions replacing a functionally identical source. Since there will be no emissions reduction with replacing the two tanks

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that are pre-NSR and have not been in operation for a couple of years, this exemption does not apply.

Reg XIV Toxics and Other Non-Criteria Pollutants

Rule 1401: New Source Review of Toxic Air Contaminants (Amended March 4, 2005)

This rule specifies limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard index (HI) from new permit units, relocations or modifications to existing permit units which emit toxic air contaminants listed in Table 1 of this rule.

ConocoPhillips performed a Rule 1401 Tier 2 Risk Assessment using the following information:

1. Toxic chemical weight fractions are obtained from the speciations of the process streams that ConocoPhillips uses for the Annual Emissions Reports submitted to the District.
2. MICR Factors, Chronic Factors, Acute Factors, MET, X/Q for Chronic, X/Q for Acute & LEA are obtained from Attachment L of AQMD Risk Assessment Procedures for Rules 1401 and 212.

Based on the calculations, the cumulative increase in maximum individual cancer risk (MICR) does not exceed one in a million. For target organ systems, neither the cumulative increase in total chronic hazard index (HIC) nor the total acute hazard index (HIA) exceeds 1.0 for any target organ system. Table 3 tabulates the results of the Tier 2 Risk Assessment for MICR/Chronic Hazard Index and Acute Hazard Index respectively. Attachment 4 includes the detailed Risk Calculations submitted by the facility and verified by the District.

Table 3: Summary of Tier 2 Risk Assessment Analysis

	<i>Receptor Risk (Offsite Worker)</i>	<i>Receptor Risk (Residential)</i>
MICR	1.18E-07	9.48E-09
HI Chronic	4.56E-04	7.52E-06
HI Acute	1.46E-04	2.97E-06



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- 1401(d)(1) MICR and Cancer Burden
The cumulative increase in MICR shall not result in an increased MICR greater than one in one million, if the permit is constructed without T-BACT and greater than ten in one million if the permit unit is constructed with T-BACT. The calculated MICR is less than a million, therefore the facility complies with this requirement.
- 1401(d)(2) Chronic Hazard Index
The cumulative increase in total chronic HI for any target organ system shall not exceed 1.0 at any receptor location. Since the calculated chronic hazard index is less than 1.0, the facility complies with this requirement.
- 1401(d)(3) Acute Hazard Index
The cumulative increase in total acute HI for any target organ system due to total emissions from the new, relocated or modified permit unit will not exceed 1.0 at any receptor location. Since the calculated chronic hazard index is less than 1.0, the facility complies with this requirement.
- 1401(d)(4) Risk Per Year
The risk per year shall not exceed 1/70 of the maximum allowable risk specified in (d)(1)(A) or (d)(1)(B). Since the MICR is less than 1 in a million, the facility complies with this requirement.
- 1401(d)(5) Operating conditions imposed pursuant to Rule 1401, which prohibit or limit the use or emission of toxic air contaminants, shall apply only to those toxic air contaminants listed in the version of Rule 1401 applicable at the time the permit conditions were imposed. There is no permit conditions prohibiting or limiting the use of toxic air contaminants for this facility.
- 1401(d)(6) Federal New Source Review for Toxics
This section requires construction with Best Available Control Technology for Toxics (T-BACT) and compliance with 40 CFR 63.40 through 63.44. The requirements do not need to be met if the source is subject to an existing National Emission Standard for Hazardous Air Pollutants (NESHAP). Since the project is subject to 40CFR63 Subpart CC, this section does not apply.

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Reg XX Regional Clean Air Incentives Market (RECLAIM)
Rule 2005: New Source Review for RECLAIM
ConocoPhillips is a NO_x and SO_x RECLAIM facility. It is therefore subject to Reg XX.

2005(c) Requirements for Existing RECLAIM facilities
This subdivision requires BACT, modeling and proof of sufficient RECLAIM Trading Credits (RTC) for an application for a Facility Permit amendment that results in any increase in NO_x and SO_x emissions. These applications will not increase NO_x or SO_x emissions, therefore this subdivision does not apply.

2005(g) Additional Federal Requirements for Major Stationary Sources
This subdivision lists additional requirements for application for a Facility Permit or an Amendment to a Facility Permit for a new, relocated or modified major stationary source, as defined in the Clean Air Act, 42, U.S.C. Section 7511a(e). Section 7511a(e)(2) defines modification as any change at a major stationary source which results in any increase in emissions. These applications will not increase NO_x or SO_x emissions, therefore this subdivision does not apply.

Reg XXX Title V Permits

Rule 3001(a): Applicability (Amended November 14, 1997)

The Title V Permit system is the air pollution control permit system required to implement the federal Operating Permit Program as required by Title V of the federal Clean Air Act as amended in 1990. ConocoPhillips has been designated as a Phase One Title V facility and has submitted A/N 337522 for their initial Title V permit on February 5, 1998. The final initial Title V permit has not yet been issued.

Rule 3002(a): Requirement for Title V Permit (Amended November 14, 1997)

Pursuant to this rule, the District may issue a non-Title V permit to existing Phase One or Phase Two facilities that apply for a non-Title V permit prior to the issuance of their initial Title V permit. This permit will be issued as such with condition I30.1 which states that the facility permit holder shall file an application for a Title V permit revision for this equipment within 90 days of the issuance of facility's initial Title V permit.



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PART 2: STATE REGULATIONS

CEQA California Environmental Quality Act

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. ConocoPhillips is proposing replacement of seven existing petroleum storage tanks at the Carson & Wilmington Plants. Due to construction activities such as tanks demolition, tanks construction, excavation, grading and laying of new concrete foundation, preparation of a CEQA document is required. The replacement projects at each site are independent projects. However, since they will occur within the same time frame they are being considered in one CEQA document. In accordance with CEQA, the SCAQMD is the Lead Agency and has prepared and certified a Negative Declaration in July, 2008 concluding that the proposed project does not have the potential to adversely affect the environment. Attachment 5 includes a copy of the Draft Negative Declaration.

PART 3: FEDERAL REGULATIONS

40 CFR 63 Subpart CC: National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries

§63.640 Applicability and designation of affected source (Amended May 25, 2001)

The refining process units and equipment located at the ConocoPhillips Carson are subject to the requirements of this subpart addressing:

- miscellaneous process vents
- storage vessels
- wastewater streams, and
- equipment leaks

The new equipment as proposed in this project is subject to storage vessels standards.

§63.646 Storage vessel provisions (Amended February 21, 1997)

Group 1 storage vessels are subject to the requirements of these provisions. Group 1 storage vessel is defined as a storage vessel at an existing or new source that has all the following:



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	Existing Source	New Source
Design capacity	≥177m ³ (46,764 gal)	≥151m ³ (39,894gal)
Vapor Pressure	≥8.3 kPa (1.2 psia)	≥3.4 kPa (0.49 psia)
HAPs	>4 % wt	>2 % wt

Since the vapor pressure of the stored commodity will be less than 0.1 psia, the subject tank is not considered a Group 1 storage vessel. Therefore, the requirements in these provisions do not apply. It is noted here that this storage tank is classified as a Group 2 storage vessel which is defined as a storage vessel that does not meet the definition of a Group 1 storage vessel. The only requirement for operators of Group 2 storage tanks is to report these tanks in the Notification of Compliance Status Report as discussed below.

§63.654 Reporting and Recordkeeping Requirements (Amended August 18, 1998)

- §63.654 (f) The operator of a source subject to this subpart shall submit a Notification of Compliance Status Report which includes identification of each storage vessel subject to this subpart. The subject storage tank should be included and identified in this Compliance Status Report as a Group 2 storage vessel (defined in §63.654 as a storage vessel that does not meet the definition of a Group 1 storage vessel). The facility is expected to comply with this requirement by including this subject tank as a Group 2 vessel in this report after its construction.

CONCLUSION AND RECOMMENDATION

The new domed external floating roof tank is expected to comply with all applicable District, State and Federal Rules and Regulations. Therefore, a Permit to Construct is recommended.