



PERMIT TO OPERATE

SUMMARY

The objective of this project is to update the existing permit to operate for Tank 1646 (D400) to include a change of condition to allow this tank to function as a backup wastewater storage tank when Tank 1647 (D041) is out of service for a turnaround.

COMPANY INFORMATION

Company Name: Phillips 66 Company, Facility ID No. 171109
 Mailing Address: 1520 E. Sepulveda Blvd., Carson, CA 90745
 Equipment Location: 1520 E. Sepulveda Blvd., Carson, CA 90745
 Contact Person: John Matthews, (310) 952-6213

EQUIPMENT DESCRIPTION

Table 1 shows the proposed Section D permit description for the modified storage tank. Additions to the descriptions are noted in underlines and deletions are noted in ~~strikeouts~~.

Table 1. Permit Equipment Description
SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

Equipment	ID No.	Conn To	RECLAIM Source Type/ Monitoring Unit	Emissions * And Requirements	Conditions
Process 10 : STORAGE TANKS					P13.2
System 2 : EXTERNAL FLOATING ROOF TANKS					S13.3
STORAGE TANK, EXTERNAL FLOATING ROOF, NO. 1646, _170000 BBL; DIAMETER: 160 FT; HEIGHT: 51 FT WITH A/N: <u>535292 547913</u> FLOATING ROOF, DOUBLE DECK, WELDED SHELL PRIMARY SEAL, CATEGORY A, METALLIC SHOE SECONDARY SEAL, CATEGORY B OR BETTER PER RULE 219(C)(4), WIPER TYPE	D400			HAP: (10) [40CFR 63 Subpart CC, #2, 6-23-2003]	C1.16, <u>E193.x</u> , <u>H23.13</u> , H23.16, <u>K67.3</u>

COMPLIANCE RECORD REVIEW

A query of the AQMD Compliance Database for the past two years (4/1/11 to 4/8/13) identified 3 Notice of Violations (NOVs) that were issued to the Phillips 66 Los Angeles Refinery Carson Plant (Facility ID

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171109). The compliance database indicates that the facility is currently in compliance with applicable rules and regulations.

FEE EVALUATION

The BCAT for tank D400 is 231904 (Storage Tank w/ Ext Floating Roof Crude), Schedule C. The Schedule C change of condition fee is \$1864.68. The facility also paid fees (50% additional) for expedited permitting per 301(u)(1). No additional fees are required for this permit application.

BACKGROUND/HISTORY

The objective of this permit evaluation is issue a permit to operate that includes a change of condition for Tank 1646 (D400) to allow this tank to be used as a backup for existing wastewater storage tank 1647 (D401) when it is out of service for a turnaround.

EMISSIONS

Tank 1646 (D400) was originally permitted as a crude storage tank, with a maximum vapor pressure of 11 psig. The throughput is limited by Condition C1.16 to no more than 4.745e+06 barrel(s) in any one year

The vapor pressure of the wastewater currently stored in Tank 1647 (the wastewater storage tank) is limited to 3 psi. This is significantly lower than the maximum allowed for Tank 1646. Temporarily changing commodity from crude oil to wastewater will result in a temporary net decrease in emissions from this tank.

Tank 1646 does not currently have a commodity listed, and is subject to NSPS Subpart Ka. The facility submitted this application to tag this tank with 40CFR60, Subpart QQQ: Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems when the tank is in wastewater service.

When the tank was originally permitted, emissions were calculated showing a max PTE of 11 lb/day, with actual emissions estimated at 4 lb/day. This tank has not been modified since it was constructed; permit actions associated with this tank have been exclusively for change of ownerships (from Shell to Unocal; Unocal to Tosco/ConocoPhillips; and ConocoPhillips to Phillips 66). An NSR update will be done to specify the 11 lb/day PTE for this tank.

RULES EVALUATION

PART 1: SCAQMD REGULATIONS

Rule 212 Standards for Approving and Issuing Public Notice (Amended 11/14/97)

Rule 212 requires public notice for any new or modified permit unit, RECLAIM source or Title V equipment that increases emissions of toxic air contaminants and increases health risk as specified in 212(c)(1) - (c)(3). This change of condition application does not include any physical changes to the permit unit. The existing equipment is not located within 1000 feet of a school, so public notice is not required per 212(c)(1). The proposed change of condition will not cause or



allow any emission increases, so public notice is not required per 212(c)(2). The proposed project with no emission increase will also not cause or allow any increase in health risk or expose persons to any substances that pose a potential risk of nuisance; thus, public notice is not required per Rule 212(c)(3). No public notice is required for this project. The facility is currently in compliance with this rule and is expected to continue to operate in compliance with this rule.

Rule 401 Visible Emissions (Amended 11/09/01)

Operation of this permit unit is not expected to result in visible emissions. The facility is currently in compliance with this rule and is expected to continue to operate in compliance with this rule.

Rule 402 Nuisance (Adopted 05/07/76)

Operation of this permit unit is not expected to result in a public nuisance. The facility is currently in compliance with this rule and is expected to continue to operate in compliance with this rule.

Rule 463 Organic Liquid Storage (Amended 11/04/11)

The tank in the proposed project is subject to Rule 463 requirements because it stores volumes of greater than 19,815 gallons and it stores organic liquids with true vapor pressures greater than 0.5 psia. Since the tank is an external floating roof tank, it is subject to the requirements in Rule 463(c)(1). Tank 1646 (D400) is equipped with a double deck-type external floating roof with two seals; a metallic shoe primary seal and a wiper type secondary seal. Rule 463 (c)(1)(A) lists the requirements for metallic shoe-type primary seals, and Rule 463 (c)(1)(C) lists primary and secondary seal requirements for inspections. Additional requirements are identified in Rule 463(d). All floating roof tanks subject to Rule 463 are required to be inspected twice each year at 4 to 8 month intervals, as well as each time the tank is emptied and degassed.

Rule 463(d)(4) limits the maximum vapor pressure of liquids stored in a floating roof tank such as Tank 1646 (D400) to no more than 11 psia. The permit will include condition E193.x that limits the true vapor pressure of stored commodities for this tank to less than 11 psia; less than 3 psia if the tank is not storing crude oil. The facility is currently in compliance with applicable requirements of this rule and is expected to continue to comply with this rule.

Rule 464 Wastewater Separators (Amended 12/07/90)

Rule 464 requirements apply to the wastewater separators used to separate petroleum-derived compounds from wastewater. Tank 1646 (D400) is a storage tank and is not used for wastewater separation. Thus, no requirements of this rule apply.

Rule 467 Pressure Relief Devices (Amended 03/05/82)

No new pressure relief devices are proposed or allowed as part of the proposed change of condition. The facility is currently in compliance with applicable requirements of this rule and is expected to continue to comply with this rule.

Rule 1149 Storage Tank and Pipeline Cleaning and Degassing (Amended 05/02/08)

This tank is subject to the requirements of Rule 1149 per Condition H23.16. Rule 1149 requires that this tank shall not be opened to the atmosphere unless the emissions are controlled such that the gaseous VOC concentration within the tank is reduced to less than 5,000 ppmv for at least one hour after degassing operations have ceased. The rule also requires prior notification at least 2

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hours before the start of tank degassing as well as follow-up notification within 3 business days after the degassing activity. The facility is currently in compliance with applicable requirements of this rule and is expected to continue to comply with this rule.

Rule 1173 Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants (Amended 06/01/07)

The miscellaneous fugitive components of this tank and all tanks in Process 10, System 2 are subject to Rule 1173 per Condition H23.1 (see miscellaneous fugitive emissions device D871 for Process 10, System 2). The facility has an approved Inspection and Maintenance (I&M) program for monitoring and repairing fugitive components. All new and existing fugitive components are tagged with Rule 1173 and are monitored according to the Phillips 66 Rule 1173 leak detection and repair plan. The facility is currently in compliance with applicable requirements of this rule and is expected to continue to comply with this rule.

Rule 1178 Further Reductions of VOC Emissions From Storage Tanks at Petroleum Facilities (Amended 04/07/06)

Rule 1178 requires facilities to install domed roofs on all external floating roof tanks that contain organic liquids with true vapor pressures greater than or equal to 3 psia [1178 (d)(2)(A)] unless they are permitted to contain more than 97% by volume crude oil; these crude oil tanks are exempt from doming requirements per 1178(j)(7). Tank 1646 (D400) is a storage tank that has historically been used for storing crude oil, but has more recently been used in low vapor pressure gas oil service. As part of this permit action, Condition E193.x is being imposed that will impose a vapor pressure limit of 3.0 psia unless the tank is in crude oil service.

Rule 1178 also imposes monitoring, maintenance and recordkeeping/reporting requirements, specified in 1178(f), (g), and (h).

The facility is currently in compliance with applicable requirements of this rule and is expected to continue to comply with this rule.

Reg XIII New Source Review (Amended 12/06/02)

Rule 1303 Requirements (Amended 12/6/02)

New Source Review requirements apply to new, modified or relocated sources. According to Table 1 of Rule 2001(j), RECLAIM facilities are exempt from the requirements of Regulation XIII with regard to NO_x and SO_x emissions (they are instead subject to the requirements of Rule 2005 (New Source Review for RECLAIM) for NO_x and SO_x emissions). RECLAIM facilities are subject to Reg XIII requirements for other (non-RECLAIM pollutants).

New Source Review generally requires that new sources or modified sources which result in an emission increase do the following: make use of BACT [1303(a)], conduct modeling [1303(b)(1)], and provide Emission Offsets [1303(b)(2)]. In addition, the facility must comply with all applicable rules and regulations of the District before a new permit can be issued [1303(b)(4)], as well as demonstrate statewide compliance [1303(b)(5)(B)].

The proposed permit action to an existing source is not a modification which will result in an emission increase. Thus, the requirements of this rule do not apply.

Rule 1325 Federal PM_{2.5} New Source Review Program (Adopted 06/03/11)

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Rule 1325 defines a major modification as a physical change that would result in a significant emission increase and a significant net emissions increase of a regulated NSR pollutant from a major polluting facility [Rule 1325(4)(A)]. A significant increase is defined in 1325(b)(13) as an increase equal to or greater than 40 tons/yr nitrogen oxides; 40 tons/yr sulfur dioxide, or 10 tons/yr PM_{2.5}. The change of condition for this storage tank will not result in a significant emission increase, or a significant net emissions increase. Thus, this permit action is not a major modification, and the requirements of Rule 1325 do not apply [Rule 1325(a)].

Reg XIV Toxics and Other Non-Criteria Pollutants

Rule 1401: New Source Review of Toxic Air Contaminants (Amended 03/04/05)

Rule 1401 applies to new, modified or relocated permit units that emit Toxic Air Contaminants (TAC). The change of condition for this existing storage tank will not cause or allow any increase in emissions of TACs. No requirements of this rule apply.

Reg XVII Prevention of Significant Deterioration

Rule 1701: General (Amended 08/13/99)

Prevention of Significant Deterioration (PSD) requirements apply to new sources with an increase in PTE of 100 or 250 tons/yr of attainment air contaminants, or existing sources with a significant emission increase, or any net emission increase at a source located within 10 km of a Class I area. The proposed project is for an existing source and will not increase PTE greater than 100 tons/yr. The facility is not located within 10 km of a Class I area. Thus, the requirements of this rule do not apply to this proposed permit action.

Rule 1714: Prevention of Significant Deterioration for Greenhouse Gases (Adopted 11/05/10)

The requirements of Rule 1714 apply to preconstruction reviews for greenhouse gases. This rule incorporates by reference several section of 40CFR Part 52.21. This rule requires that a PSD permit be obtained prior to beginning construction of a new stationary source or a major modification to an existing major source. An emission increase of greenhouse gas (GHG), as defined in §52.21(b)(49)(v), is both a significant emissions increase and a significant net emissions increase. Since the change of condition for this tank will not result in a significant emissions increase, this project is not subject to PSD requirements for GHG.

Reg XXX Title V Permits

Rule 3002 Requirements (Amended 11/14/97)

This application is classified as a minor permit revision as defined in 3000(b)(15). Minor permit revisions are exempt from public participation per 3006(b) but are required to be submitted to the EPA for review per 3003(j)(1)(A).

PART II: STATE REGULATIONS

CEQA California Environmental Quality Act (Amended 01/01/05)

This project has no emission increase and no significant impact which may trigger CEQA. No additional CEQA actions are required.

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PART III: FEDERAL REGULATIONS

40CFR60 Subpart QQQ Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems (Amended 10/17/00)

Oil-water separators are subject to the requirements of Subpart QQQ. The subpart QQQ definition of oil-water separators includes storage vessels that store oily wastewater.

*“Oil-water separator means wastewater treatment equipment used to separate oil from water consisting of a separation tank, which also includes the forebay and other separator basins, skimmers, weirs, grit chambers, and sludge hoppers. Slop oil facilities, including tanks, are included in this term along with **storage vessels** and auxiliary equipment located between individual drain systems and the oil-water separator. This term does not include storage vessels or auxiliary equipment which do not come in contact with or store oily wastewater.” [§ 60.691]*

However, §60.692-3(a) allows for exceptions, and § 60.692-3(d) states that:

“(d) Storage vessels, including slop oil tanks and other auxiliary tanks that are subject to the standards in §§60.112, 60.112a, and 60.112b and associated requirements, 40 CFR part 60, subparts K, Ka, or Kb are not subject to the requirements of this section.” [§ 60.692-3(d)]

Tank 1646 (D400) is subject to the requirements of 40CFR60 Subpart Ka, and thus is not subject to the requirements of § 60.692-3 per § 60.692-3(d). However, the storage vessel is subject to general requirements of Subpart QQQ. The facility is currently in compliance with this regulation and is expected to continue to operate in compliance with this regulation.

40CFR61 Subpart FF National Emission Standard for Benzene Waste Operations (Amended 12/4/03)

This facility is required to identify benzene-containing streams and limit the amount of uncontrolled benzene emitted. The Consent Decree (Section H, Paragraph 212) requires that the facility sample End-of-Line streams and other streams with significant contributions to total annual benzene (TAB) in accordance with the “Benzene Waste Operations Revised Sampling Plan (6BQ Compliance Option)” dated 2/26/09. Benzene emissions are included in the facility’s total annual benzene (TAB). The facility has chosen to comply with the 6 Megagrams per year (Mg/yr) limit for uncontrolled benzene streams.

The Benzene NESHAP Annual Report – 2012, dated April 5, 2013, indicates that the 2012 TAB (both controlled and uncontrolled) was estimated at 18.49 Mg/yr. The 2012 total uncontrolled benzene quantity was estimated at 1.74 Mg/yr, below the facility’s 6 Mg/yr limit for uncontrolled benzene. The facility is currently in compliance with this regulation and is expected to continue to operate in compliance with this regulation.

40CFR63 Subpart CC National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries (Amended 10/28/09)

Subpart CC includes requirements for miscellaneous process vents, storage vessels, wastewater streams, and equipment leaks. The Subpart CC provisions for storage vessels are detailed in §63.646. Tanks 1646 (D400) is tagged with 40CFR63 Subpart CC requirements, detailed in Section J of the facility permit [40CFR63 Subpart CC, #2 6-23-2003]. Subpart CC requires that



records be maintained for this tank, and that the tank not be reclassified a Group 1 tank without first obtaining a valid AQMD permit. The facility is currently in compliance with this rule and is expected to continue to operate in compliance with this rule.

Subpart CC wastewater provisions [§63.647] apply to all wastewater streams and treatment operations associated with refining process units that are a major source of HAPs and emit or contact HAPs. Tank 1646, which may be used to store wastewater, is not considered a treatment operation, thus the wastewater provisions do not apply.

RECOMMENDATIONS

Based on the above evaluation, it is recommended that the permit to construct be converted to a permit to operate. It is recommended that a Permit to Operate be issued with the following conditions.

CONDITIONS

PROCESS CONDITIONS

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

Contaminant	Rule	Rule/Subpart
Benzene	40CFR61, SUBPART	FF

[40CFR 61 Subpart FF, 12-4-2003]

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

SYSTEM CONDITIONS

S13.3 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	463
VOC	District Rule	1178

[**RULE 1178, 4-7-2006; RULE 463, 5-6-2005 11-04-2011**]

[Systems subject to this condition : Process 10, System 2, 5]

DEVICE CONDITIONS

C1.16 The operator shall limit the throughput to no more than 4.745e+06 barrel(s) in any one year.

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

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[Devices subject to this condition : D400]

E193.x The operator shall install this equipment according to the following specifications:

The operator shall not use this equipment with materials having a true vapor pressure of 3 psia or greater measured at 70 degrees F, unless the tank is in crude oil service.

If this equipment is in crude oil service, the operator shall not use this equipment with materials having a true vapor pressure of 11 psia or greater measured at 70 degrees F.

Whenever there is a change in the product type, the operator shall determine the true vapor pressure of the organic material stored using the methods specified in Rule 1178. The test shall be conducted within ten days of changing product types.

The operator shall keep records of the date when there is a change in material stored, along with the test results at the facility for a period of 5 years. These records shall be made available to the Executive Officer upon request.

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

[Devices subject to this condition : D400]

H23.13 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	40CFR60, SUBPART	QQQ

[40CFR 60 Subpart QQQ, 10-17-2000]

[Devices subject to this condition : D336, D337, D338, D339, D349, D382, **D400**, D401, D408, D411, D412, D414, D415, D773, D887, D949, D950, D951]

Device D400 is subject to the applicable requirements of QQQ only when storing waste water.

H23.16 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1149
VOC	40CFR60, SUBPART	Ka

[RULE 1149, 7-14-1995; RULE 1149, 5-2-2008; 40CFR 60 Subpart Ka, 12-14-2000]

[Devices subject to this condition : D400, D402, D420]

K67.3 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Throughput and vapor pressure of stored liquid.



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[RULE 1178, 4-7-2006; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 463, ~~5-6-2005~~ 11-04-2011]

[Devices subject to this condition : D362, D363, D365, D366, D367, D369, D373, D374, D376, D377, D379, D380, D381, D382, D384, D388, **D400**, D404, D407, D408, D409, D410, D411, D412, D413, D414, D415, D416, D419]