



California Environmental Protection Agency
Department of Toxic Substance Control

DRAFT

HAZARDOUS WASTE POST CLOSURE FACILITY
PERMIT

Permit Number: 07-GLN-xx

Facility Name:

CONOCOPHILLIPS
LOS ANGELES REFINERY CARSON PLANT
1520 East Sepulveda Boulevard
CARSON, CALIFORNIA 90745

Facility EPA ID Number:
CAD980881676

Effective Date:

Owner Name:

CONOCOPHILLIPS COMPANY
600 North Dairy Ashford Drive
Houston, TX 77079

Expiration Date:

Operator Name:

CONOCOPHILLIPS COMPANY
600 North Dairy Ashford Drive
Houston, TX 77079

Pursuant to California Health and Safety Code section 25200, this Resource Conservation and Recovery Act (RCRA)-equivalent Hazardous Waste Facility Permit is hereby issued to: CONOCOPHILLIPS

The Issuance of this Permit is subject to the terms and conditions set forth in Attachment A and the Approved Revised Post Closure Application dated April 2007. The Attachment A consists of 14 pages of text and 3 figures.

Raymond Leclerc, P.E., Leader
Permitting Renewal Team
Department of Toxic Substances Control

Date: _____

**CONOCOPHILLIPS LOS ANGELES REFINERY CARSON PLANT
1520 EAST SEPULVEDA BOULEVARD, CARSON, CALIFORNIA 90745
EPA ID NUMBER CAD980881676**

HAZARDOUS WASTE POST CLOSURE FACILITY PERMIT

ATTACHMENT "A"

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PART I. DEFINITIONS

All terms used in this Permit shall have the same meaning as those terms have in the California Health and Safety Code, division 20, chapter 6.5 and California Code of Regulations, title 22, division 4.5, unless expressly provided otherwise by this Permit.

1. **“DTSC”** as used in this Permit means the California Department of Toxic Substances Control.
2. **“Facility”** as used in this Permit means all contiguous land and structures, other appurtenances, and improvements on the land used for the treatment, transfer, storage resource recovery, disposal or recycling of hazardous waste. A hazardous waste facility may consist of one or more treatment, transfer, storage, resource recovery, disposal or recycling operational units or combinations of these units.

For the purpose of implementing corrective action under California Code of Regulations, title 22, division 4.5, a hazardous waste facility includes all contiguous property under the control of the owner or operator required to implement corrective action.

3. **“Permittee”** as used in this Permit means the Owner and Operator.
4. **“RCRA”** as used in this Permit means the Resource Conservation and Recovery Act (42 U.S.C. §6901 et seq.).

PART II. DESCRIPTION OF THE FACILITY AND OWNERSHIP

1. **Owner of Facility**
CONOCOPHILLIPS COMPANY
600 North Dairy Ashford Drive
Houston, TX 77079

2. **Owner of Real Property**
CONOCOPHILLIPS COMPANY
600 North Dairy Ashford Drive
Houston, TX 77079

3. **Operator of Facility**
CONOCOPHILLIPS COMPANY
600 North Dairy Ashford Drive
Houston, TX 77079

4. **Location**
The ConocoPhillips Refinery Carson Plant (Facility) is located at 1520 East Sepulveda Boulevard, Carson, Los Angeles County, California 90745, latitude 33° 48' 016", longitude 118° 14' 06". The refinery's property is defined by the Los Angeles County Assessor's parcel numbers 7315-1-20, 7315-1-21 and 7315-2-1. Figure 1 and 2 shows the location and the site map of the refinery. The surveyor's legal description of the property is presented in Appendix A of the Post Closure Permit Application.

The refinery consists of a 245-acre of relatively flat land within the former floodplain of the Los Angeles River on which refinery operations have been conducted since 1923. The refinery property is roughly rectangular in shape and is located on the south side of East Sepulveda Boulevard in a heavily industrialized area. The northern portion of the refinery borders the BP Refinery, a light industrial complex consisting of warehouses, East Sepulveda Boulevard, BOC Gases facility and Shippers Express Truck yard. The eastern part of the Facility borders the Alameda corridor (property owned by various railroad companies). The southern portion of the refinery borders the Lomita Rail Terminal and associated tracks and ethanol unloading terminal. The western part of the refinery borders the Shell Pipeline Lomita Manifold and property, the Lomita Rail Terminal and the BP Carson Crude Terminal.

The Process Water Pond (PWP) was formerly located in the east-central portion of the refinery. The PWP was roughly rectangular in shape with maximum surface dimensions of approximately 246 feet long by 97 feet wide and a depth at the deepest point of 15 feet.

5. **Description of Facility Operations**

The Facility is a crude oil refining, processing and storage facility which receives crude oil by pipelines, rail and ship for conversion to fuel products. Intermediate feed stocks are produced and transported by pipeline to the ConocoPhillips Los Angeles Refinery Wilmington Plant for processing into finished fuel products.

The Facility performs crude oil fractionation and heavy-end refining. The Facility consists of a central processing and refining area, a coke processing area, and aboveground tank farms.

The former Process Water Pond, which was an integral part of the oil recovery/process water handling system, was used to temporarily store effluent overflow or off-specification wastewater from the Facility's oil recovery system.

6. Facility History

The ConocoPhillips Los Angeles Refinery consists of two plants that are connected by pipelines and together provide complete refinery facilities. The locations of the two plants are shown on Figure 1. The Wilmington Plant is located at 1660 West Anaheim Street in Wilmington, California. The Carson plant is located at 1520 East Sepulveda Boulevard in Carson.

ConocoPhillips Company became the owner and operator of the Facility when Conoco and Phillips Petroleum Corporations merged in October 2002. Phillips had acquired the Facility when it acquired the Tosco Corporation in September 2001. Tosco had purchased the Facility from Unocal (formerly Union Oil Company of California) in April 1997. Unocal had owned and operated the Wilmington Plant since 1919. The Carson Plant was purchased by Unocal from Shell Oil Company in 1991.

Groundwater monitoring of the Facility is conducted pursuant to Cleanup and Abatement Order (CAO) 94-139 issued by the Regional Water Quality Control Board (RWQCB), Los Angeles Region, to Unocal on December 22, 1994.

The Facility was granted interim status authority on March 30, 1981 and a state hazardous waste facility permit on June 28, 1986 for hazardous waste storage. On March 13, 1992, Unocal, as the new owner/operator of the Facility, submitted a hazardous waste permit application to DTSC in which a surface impoundment identified as "process water pond" was included in the application as a regulated unit.

This impoundment was drawn into the regulation due to the TCLP rule enacted by the United States Environmental Protection Agency (USEPA) in 1990. On October 29, 1993, Unocal submitted an Amended Part B Application for the Process Water Pond which stated that the PWP would be replaced with a 174,000 barrel tank (Tank 1647) by March 29, 1994.

On January 27, 1994, DTSC issued a Hazardous Waste Facility Permit to Unocal Carson Plant for the onsite storage of oil-bearing waste in three above-ground

storage tanks with a maximum allowable onsite waste inventory of 104,832 gallons. The oil-bearing permitted storage tanks were excluded from the definition of “waste” (because the units process excluded recyclable material) when the United States Environmental Protection Agency (EPA) amended the RCRA regulations in August 1998.

A Closure Plan dated April 1995, with revisions dated September and November 1995, was submitted and approved by DTSC on April 11, 1996. The PWP was subsequently filled with clean clay soil and capped with asphalt. A Closure Certification Report was submitted November 8, 1996 and approved by DTSC on April 26, 1999. DTSC Received the Post-Closure Permit Application dated July 1999 for the Process Water Pond. A Revised Post Closure Permit Application dated May 2006 and additional revisions dated February, April and June 2007 were received by DTSC.

7. Facility Size and Type for Fee Purposes

The Facility is categorized as a large post-closure facility pursuant to Health and Safety Code section 25205.7(d)(5). For the purpose of Health and Safety Code section 25205.4, the post-closure period for the Facility shall be deemed to have started from the effective date of this Post Closure Permit. DTSC may extend the post-closure monitoring period beyond the 30 year to protect human health and the environment.

PART III. GENERAL CONDITIONS

1. PERMIT APPLICATION DOCUMENTS

The DTSC-approved Revised Application dated April 2007 (Approved Application) is hereby made a part of this Permit by reference. The Part "A" Application dated April 27, 2007 and the Revised Post Closure Permit Application dated April 2007 (Original application dated July 1999, with additional revisions dated May 2006, February, April and June 2007) are hereby made a part of this Permit by reference as FINAL APPROVED APPLICATION WITH ALL EXHIBITS OR VOLUMES INCLUDING ANY AMENDMENTS.

2. EFFECT OF PERMIT

- (a) The Permittee shall comply with the terms and conditions of this Permit and the provisions of the Health and Safety Code and California Code of Regulations (Cal. Code Regs.), title 22, division 4.5. The issuance of this Permit by DTSC does not release the Permittee from any liability or duty imposed by federal or state statutes or regulations or local ordinances, except the obligation to obtain this Permit. The Permittee shall obtain the permits required by other governmental agencies, including but not limited to, those required by the applicable land use planning, zoning, hazardous waste, air quality, water quality, and solid waste management laws for the construction and/or operation of the Facility.
- (b) The Permittee is permitted to operate, monitor and maintain this Facility for post closure activities in accordance with the terms and conditions of this Permit and the Approved Application. Any management of hazardous wastes not specifically authorized in this Permit is strictly prohibited.
- (c) Compliance with the terms and conditions of this Permit does not constitute a defense to any action brought under any other law governing protection of public health or the environment, including, but not limited to, one brought for any imminent and substantial endangerment to human health or the environment.
- (d) DTSC's issuance of this Permit does not prevent DTSC from adopting or amending regulations that impose additional or more stringent requirements than those in existence at the time this Permit is issued and does not prevent the enforcement of these requirements against the Permittee.

- (e) Failure to comply with any term or condition set forth in the Permit in the time or manner specified herein will subject the Permittee to possible enforcement action including but not limited to penalties pursuant to Health and Safety Code section 25187.
- (f) Failure to submit any information required in connection with the Permit, or falsification and/or misrepresentation of any submitted information, is grounds for revocation of this Permit (Cal. Code Regs., tit. 22, §66270.43).
- (g) In case of conflicts between the Approved Application and the Permit, the Permit conditions take precedence.
- (h) This Permit includes and incorporates by reference any conditions of waste discharge requirements issued to the Facility by the State Water Resources Control Board or any of the California Regional Water Quality Control Boards and any conditions imposed pursuant to section 13227 of the Water Code.

3. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

A Notice of Exemption has been prepared in accordance with the requirements of Public Resources Code, section 21000 et seq. and the California Environmental Quality Act Guidelines, which are codified in title 14, California Code of Regulations, section 15070 et seq.

4. ENVIRONMENTAL MONITORING

The Permittee shall comply with the applicable environmental monitoring and response program requirements of California Code of Regulations, title 22, division 4.5, chapter 14, articles 6 and 17.

- (a) For the purpose of title 22, California Code of Regulations, section 66264.91(b), the elements of the Groundwater Monitoring and Response Program (GWMRP) for the Facility are those described in Section V and Appendix F (Water Quality Sampling and Analysis Plan (SAP)) of the Approved Application.
- (b) For the purpose of title 22, California Code of Regulations, section 66264.92, the Water Quality Protection Standard for the Facility is described in Section V(E) and in Section 2 of Appendix F of the approved Post Closure Application.
- (c) For the purpose of title 22, California Code of Regulations, section 66264.93, the Constituents of Concern (COC) for the Facility are described in Section V(E) and in Section 2 of Appendix F of the approved Post Closure Application. During future sampling events, if the Facility finds Appendix IX constituents in

the groundwater that are not already identified in the GWMRP as COCs, the Facility shall add them to the list of COCs.

- (d) For the purpose of title 22, California Code of Regulations, section 66264.94, the Concentration Limits for the Facility are described in Section V of the approved Post Closure Application. For constituents where California Maximum Contaminant Levels (MCLs) for drinking water are not available, Facility shall use the water quality objectives within the applicable RWQCB Basin Plan. MCLs and water quality Basin Plan objectives shall be used as the Concentration Limits until such time that the RWQCB establishes site-wide cleanup standards for the Facility.
- (e) For the purpose of title 22, California Code of Regulations, section 66264.95, the Monitoring Points and Points of Compliance for each regulated unit at the Facility are described in Section V(E) and in Section 2 of Appendix F of the approved Post Closure Application.
- (f) For the purpose of title 22, California Code of Regulations, section 66264.96 the Compliance Period for each regulated unit at the Facility shall be 30 years beginning with the date of the issuance of the post closure permit. DTSC may extend the post-closure monitoring period beyond the 30 year to protect human health and the environment.
- (g) For the purpose of title 22, California Code of Regulations, section 66270.31, the monitoring, recording, and reporting program for the Facility is described in Section V and Appendix F of the approved Post Closure Application. Permittee shall collect groundwater surface level measurements and monitoring data as required in the approved Application and Clean up and Abatement Order 94-139. Data for every detected monitoring parameter or constituent of concern shall be shown on a separate graph with the data from as many wells as can be legibly displayed. All graphs for a given constituents should be plotted at the same scale to facilitate visual comparison of monitoring data.
- (h) The Facility shall comply with the requirements of the Regional Water Quality Control Board pursuant to Cleanup and Abatement Order 94-139 issued in 1994 and any other future requirements by the Regional Water Quality Control Board. A copy of all the reports shall also be submitted to DTSC.

5. ANNUAL HAZARDOUS WASTE REDUCTION AND MINIMIZATION CERTIFICATION

The Permittee shall certify annually that it has a hazardous waste reduction and minimization program and method in place and shall keep the annual certification as part of its Operating Record in accordance with Health and Safety Code section

25202.9 and California Code of Regulations, title 22, section 66264.73(b)(9)

6. ACCESS AND SAMPLING

(a) ACCESS

- (1) DTSC, its contractors, employees, agents, and/or any United State Environmental Protection Agency representatives are authorized to enter and freely move about the Facility for the purposes of interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts relating to the Facility; reviewing progress of the Permittee in carrying out the terms of Part VI of the Permit; conducting such testing, sampling, or monitoring as DTSC deems necessary; using a camera, sound recording, or other documentary-type equipment; verifying the reports and data submitted to DTSC by the Permittee; or confirming any other aspect of compliance with this Permit, Health and Safety Code, division 20, chapter 6.5, and California Code of Regulations, title 22, division 4.5. The Permittee shall provide DTSC and its representatives access at all reasonable times to the Facility and any other property to which access is required for implementation of any provision of this Permit, Health and Safety Code, division 20, chapter 6.5, and California Code of Regulations, title 22, division 4.5, and shall allow such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to the entire Permit or undertake any other activity necessary to determine compliance with applicable requirements.
- (2) Nothing in this Permit shall limit or otherwise affect DTSC's right to access and entry pursuant to any applicable State or federal laws and regulations.

(b) SAMPLING

- (1) The Permittee shall provide confirmatory samples to DTSC within the time requested by DTSC to determine if there is a threat to human health and/or the environment. The sampling shall be done in accordance with guidance that DTSC supplies to the Permittee.
- (2) The Permittee shall notify DTSC in writing at least fourteen (14) days prior to beginning any confirmatory sampling requested by DTSC. If the Permittee believes it must commence emergency confirmatory sampling without delay, the Permittee may seek emergency telephone authorization from DTSC or, if unavailable, his/her designee to

commence such activities immediately. At the request of DTSC, the Permittee shall provide or allow DTSC or its authorized representative to take split or duplicate samples of all samples collected by the Permittee pursuant to this Part of this Permit.

- (3) The Permittee shall submit to DTSC upon request the results of all sampling and/or tests or other data generated by its employees, divisions, agents, consultants or contractors pursuant to this Permit.
- (4) Notwithstanding any other provisions of this Permit, DTSC retains all information gathering and inspection authority rights including enforcement actions related thereto, under Health and Safety Code and any other applicable state or federal statutes or regulations.

PART IV. POST CLOSURE PERMITTED UNITS AND ACTIVITIES

This Permit authorizes the operation, monitoring and maintenance only of the facility units and activities listed below. The Permittee shall not treat, store or otherwise manage hazardous waste in any unit other than those specified in this Part IV. Any modifications to a unit or activity authorized by this Permit require the written approval of DTSC in accordance with the permit modification procedures set forth in California Code of Regulations, title 22, division 4.5.

For the purpose of California Code of Regulations, title 22, section 66270.1(c) and other similar, unit-specific regulatory requirements, this Facility has one post closure Hazardous Waste Management Unit. This unit is described in detail in the Approved Post Closure Permit Application and is as follows:

UNIT NAME:

Former Process Water Pond (PWP)

LOCATION:

The former PWP was located in the east-central portion of the refinery in an area designated as Unit DR. Figure 3 shows the location of the PWP.

ACTIVITY TYPE:

The PWP is a closed unit. After receipt of final wastes, the PWP was cleaned in Third Quarter of 1996 and closed. The closure activities included: 1) removing all wastes from the PWP, 2) filling the PWP with clean clay soil, and 3) capping the PWP with an asphalt cover. Because the constituents of concern in the waste streams of the PWP could not be distinguished from other sources of contamination at the site (e.g., free-phase and dissolved-phase hydrocarbons in the uppermost aquifer underlying the refinery) the post closure and groundwater monitoring is required.

The groundwater shall be monitored in accordance with RWQCB Cleanup and Abatement Order No. 94-139 and in accordance with Section V and Appendix F (Water Quality Sampling and Analysis Plan) of the Post-Closure Permit Application. All the monitoring parameters included in the RWQCB Cleanup and Abatement Order are incorporated into the DTSC monitoring parameters.

ACTIVITY DESCRIPTION:

The activity includes groundwater monitoring, site inspections of the site surface conditions and repair and maintenance of the cover. The Facility on which the PWP is located has an extensive groundwater monitoring and remediation system. This groundwater monitoring and remediation system is ongoing in accordance with RWQCB Cleanup and Abatement Order (CAO) No. 94-139. Since the entire Facility is covered by the corrective action specified in the CAO, the compliance monitoring conducted for the shallow aquifer, as related to the closed RCRA PWP, is considered as a "Corrective Action Monitoring Program". Upgradient well 2 and downgradient wells 17, 38 and 59 have been designated as the Point of Compliance (POC) wells for Appendix IX monitoring. The groundwater shall be monitored in accordance with RWQCB Cleanup and Abatement Order No. 94-139 and in accordance with Section V and Appendix F (Water Quality Sampling and Analysis Plan) of the Post-Closure Permit Application and for analyses for Appendix IX constituents for the designated RCRA compliance wells at Carson Plant.

PHYSICAL DESCRIPTION:

The PWP has been closed. The closure activities included: 1) permanently removing all wastes from the PWP, 2) filling the PWP with clean clay soil, and 3) capping the PWP with an asphalt cover. The pond was roughly rectangular in shape with maximum surface dimensions of approximately 246 feet long by 97 feet wide and a depth at the deepest point of 15 feet.

The former PWP foundation liner system was single concrete liner is 3 to 4 inches thick, and had an unconfined compressive strength of 3,000 psi. The concrete liner underlined the entire footprint of the impoundment, and prevented the native soils from contacting the wastewater formerly stored in the PWP.

MAXIMUM CAPACITY:

The unit is closed. It had a capacity of 1,344,000 gallons.

WASTE SOURCES:

The closed unit does not receive any waste. The former Process Water Pond, which was an integral part of the oil recovery/process water handling system, was used to temporarily store effluent overflow or off-specification wastewater from the ConocoPhillips Carson Plant oil recovery system. The water from the PWP was transferred back to the API Separator for additional oil recovery prior to the discharge to the Los Angeles County Sanitation District (LACSD) sewers. The PWP previously stored both process water and oil/water sludge. The sludge was first sent to a sludge thickener and then recycled to the coker for recovery.

WASTE TYPES:

The closed unit does not receive any waste. Previous RCRA regulated wastes contained in the PWP's water and sludge included both listed and characteristic waste. The PWP water contained benzene, a RCRA characteristic waste (D018), in concentrations above the toxicity characteristic limit of 0.5 mg/l. The sludge, defined as primary oil/water/solids separation sludge, was a RCRA listed waste (F037). The sludge was considered hazardous due to physical properties and chemical characteristics. The hazardous characteristics exhibited by the sludge included toxicity due to leachable benzene content (D018), ignitability (D001) and reactivity due to sulfide content (D003).

The following table identifies the Federal Waste Codes, the RCRA Characteristic Waste Numbers and the California Waste Codes applicable for the waste previously stored in the PWP.

HAZARDOUS WASTES FORMERLY HANDLED AT THE PROCESS WATER POND

Waste Description	Federal Waste Code	Character Waste Number	California Waste Code
Wastewater in Process Water Pond		D018	222
Process Water Pond Sludge	F 037	D001, D003& D018	222

UNIT-SPECIFIC SPECIAL CONDITIONS:

The Permittee shall conduct Quarterly inspections of the asphalt cover of the former Process Water Pond and conduct repair and maintenance of the cover if needed.

The groundwater shall be monitored in accordance with RWQCB Cleanup and Abatement

Order No. 94-139 and/or any subsequent order and in accordance with Section V and Appendix F (Water Quality Sampling and Analysis Plan) of the Post-Closure Permit Application.

PART V. SPECIAL CONDITIONS

(a) The Permittee shall comply with the California Code of Regulations, title 22, section 66264.75 requirements and include the monitoring and response program data in each year's Annual Report to be submitted each March 1.

(b) Land Use Covenant

Pursuant to Civil Code section 1471(c), DTSC has determined that a covenant of land use is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on land of hazardous materials as defined in Health and Safety Code section 25260. The Permittee and DTSC shall sign and record in a deed a covenant to restrict use of property within six months of authorization of this permit.

PART VI. CORRECTIVE ACTION

A. SUMMARY OF THE CORRECTIVE ACTION AND GROUNDWATER REMEDIATION

All known solid waste management units at the Facility have been identified pursuant to the cleanup and Abatement Order 94-139 (CAO 94-139). Pursuant to CAO 94-139, a Master Work Plan (TRC; updated June 2005) was prepared and approved by the RWQCB which details the descriptions, characterizations, and cleanup timelines for all the known solid waste management units at ConocoPhillips' Los Angeles Refinery in Carson, and includes the PWP.

Recovery of Light Non-Aqueous Phase Liquids (LNAPL) at the Carson Plant began in 1986 with four recovery wells. Design and installation of the current 72-well recovery system was completed in 1991. The system consists of 20 interior recovery wells, 24 primary boundary control wells, 24 backup boundary control wells, and the four older recovery wells. A three-dimensional groundwater model was commissioned by the LAR in 1994 to help manage the operation of the recovery system, and to select recovery wells for optimum system operation. The goal of system operation is to optimize containment and recovery of LNAPL while preventing pumping-induced migration of contaminants from offsite sources onto the site. Based on the model simulations, 22 to 25 wells of the 72-well system were selected for initial operation. Thirty-one recovery wells are currently operating. Of the 31 operating wells, 15 recover both LNAPL and groundwater, and 16 recover only LNAPL through skimming. ConocoPhillips submits LNAPL recovery summaries to the RWQCB on a monthly basis.

B. CONDITIONS

The Permittee shall conduct corrective action at the Facility pursuant to Health and Safety Code, section 25200.10. Corrective action shall be carried out under the oversight of the Regional Water Quality Control Board (RWQCB) pursuant to Cleanup and Abatement Order 94-139 issued in 1994 and any other future requirements by RWQCB and USEPA.