

# Chevron Richmond Refinery

841 Chevron Way, Richmond, CA  
EPA ID CAD 009 114 919



## Draft Hazardous Waste Facility Post-Closure Permit

*DTSC is one of six Boards and Departments within the California Environmental Protection Agency. The Department's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.*

State of California



California  
Environmental  
Protection Agency



## INTRODUCTION

The Department of Toxic Substances Control (DTSC) prepared this fact sheet to inform the public about the Draft Post-Closure Permit for Chevron Richmond Refinery Landfarm Units 1 through 5, located at 841 Chevron Way in Richmond, California. DTSC invites public comments and provides opportunities for public participation during the 45-day public comment period.

A post-closure permit specifies the manner in which a closed hazardous waste land treatment facility, with waste or waste residues left in place, will be maintained. This post-closure permit is being issued by DTSC. It requires Chevron to conduct maintenance of the vegetative cover and monitoring of the ground water.

This fact sheet provides information on the following subjects:

- Public Participation opportunities
- Project Location and Description
- Post-Closure Process and Permit
- CEQA - Process

**(see items in bold in glossary insert)**

## Public Comment Period

**Starts: December 13, 2002**  
**Ends: January 27, 2003**

DTSC invites public comments on the Draft Post-Closure Permit for Chevron Richmond Refinery Landfarms 1 through 5. Please send all comments to:

DTSC - Berkeley Office  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710  
Attn: Cherry Padilla  
(510) 540-3967  
[cpadilla@dtsc.ca.gov](mailto:cpadilla@dtsc.ca.gov)

A public hearing will be held if there is a significant public interest. Please submit all requests for a public hearing in writing, including the issues to be raised, to the address listed above, by January 27, 2003.

All comments received will be considered before a final decision is made and commentors will be mailed a written response.

## Project location and description

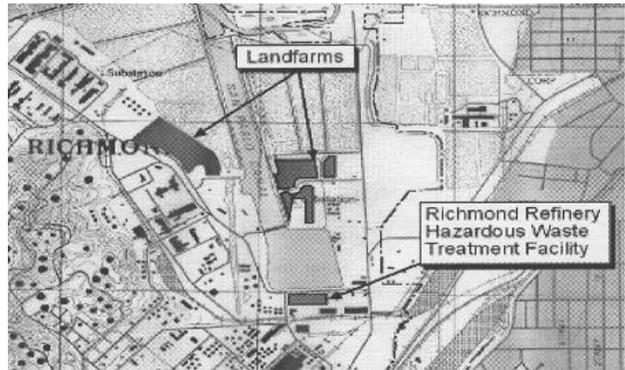
Chevron Richmond Refinery Landfarms 1 through 5 are located within the eastern section of the refinery property boundary in the western Contra Costa County, City of Richmond (see Location Map insert). Sensitive receptors within a one mile radius northeast and southeast of landfarms 1 through 5 are residential communities with an elementary school and playground; to the south and west are an industrial area and Chevron manufacturing facility; to the north are the Wild Cat Creek and Castro Creek. Landfarms 1 through 5 cover 29 acres of the 2, 900 acre refinery property.

Chevron operated Landfarms 1 through 5 between the mid-1970's and 1987. Landfarming was conducted at that time to promote biodegradation of oily wastes (liquid and solid) generated from on-site petroleum processing. Landfarms 1 through 4 were built over existing ponds and Landfarm 5 was built on top of a fill. Historical landfills underlie portions of Landfarms 1 through 5. Prior to start of landfarming operations, 7 to 20 feet of fill were placed at each of the Landfarms. The fill material originated from adjacent pond, channel dredging and from soil generated by the San Pablo Tank Farm construction activities. During landfarming, wastes were applied to the surface of the Landfarms and tilled into the top 6 to 12 inches of fill. The principal wastes applied were oil/water separator sludge, leaded

and non-leaded tank bottoms, and oil/water mixtures.

The RCRA Facilities Investigation (RFI) Report dated November 1992 indicated that soils beneath Landfarms 1 through 5 and the shallow zone or "A" Zone groundwater in its vicinity are impacted by volatile organic compounds (VOCs) like benzene, ethylbenzene, toluene, xylenes, semi-volatile organic compounds, (SVOCs) like fluorene, phenanthrene, 1-methyl naphthalene, 2-methyl naphthalene), total volatile hydrocarbon as gasoline (TVH-gasoline), total extracted

### Parcels 1 through 5



### Chevron Landfarms Hazardous Waste Treatment Facility

hydrocarbon as diesel (TEH-diesel), and metals like, **chromium, lead, nickel, and vanadium.**

Monitoring activities indicated that free-phase hydrocarbons are present in the shallow zone or "A" Zone groundwater in the vicinity of Landfarms 1 - 5. These monitoring activities indicated that the deeper zone or "C" Zone groundwater has not been impacted.

The Regional Water Quality Control Board has issued orders addressing groundwater monitoring and corrective action for the entire refinery site including Landfarms 1 through 5. U.S. EPA and DTSC issued orders addressing the closure and post-closure of the Landfarms.

Chevron ceased the landfarming operations in 1987 and officially closed them in September 2000, under applicable federal and state hazardous waste land treatment closure requirements. The closure activities included the construction of vegetative cover over the waste left in the Landfarm units and installation of groundwater monitoring wells.

The Landfarms have been regraded into low mounds to facilitate surface drainage and improve the appearance of the sites. The Landfarm soils were lightly compacted and/or recompact with light truck equipment to support the construction of the final cover while allowing for easy vegetation root penetration. The final grades are designed to divert rainfall runoff away from the Landfarm sites. Infiltration of water into the Landfarm

soils is reduced by the improved surface grading and surface vegetation. The top 12 inches of a vegetative soil layer consists of 6-inch thick clean fill layer overlain by a 6-inch thick relatively loose, nutrient-rich topsoil layer. This prevents runoff from coming into direct contact with the wastes and also prevents wind erosion.

Chevron also developed and constructed a Groundwater Protection system (GPS) for the Refinery in response to the Regional Water Quality Control Board Waste Discharge Requirements (WDR) Order No. 89-175. As part of an overall Refinery-wide GPS, groundwater extraction trenches were installed along the downgradient perimeter of the Landfarms. The Landfarms' GPS also serves as corrective action for the Landfills that underlie portions of the Landfarms. The purpose of the GPS is to establish and maintain a physical or hydraulic barrier to prevent the off-site movement of potentially contaminated shallow zone or "A" Zone groundwater. The post-closure permit includes a post-closure care period of 30 years and requires financial assurance for the operation and maintenance cost.

### **Compliance With California Environmental Quality Act (CEQA)**

DTSC has prepared a Notice of Exemption for the project under the provisions of CEQA Guideline section 15061(b)(3). The project is exempt from CEQA because it can be said with certainty that the activities involved in the issuance of

post-closure permit will not have a significant impact on the environment. The issuance of Post-Closure Permit will enforce the conditions of the approved Post-

Closure Plan. No new impacts will result from the post-closure monitoring and maintenance activities at the Landfarms.

## **Glossary- Chevron Landfarms 1-5**

### **Volatile organic compound (VOC)**

VOCs include solvents that readily evaporate at temperatures normally found at ground surface and at shallow depths.

### **Benzene [C<sub>6</sub>H<sub>6</sub>]**

A petroleum derivative and a widely used solvent in the chemical industry. Uses of benzene include synthesis of rubber, nylon, polystyrene, pesticides and unleaded gasoline. Benzene is a highly volatile chemical and is readily absorbed by breathing, ingestion or contact with the skin. Short-term exposures to high concentrations of benzene may result in death following depression of the central nervous system or fatal disturbances of heart rhythm. Long-term, low-level exposures to benzene can result in blood disorders such as aplastic anemia and leukemia. Benzene is listed as a cancer-causing chemical under Proposition 65.

### **Hydrocarbons**

Any of the numerous organic compounds that contain hydrogen and carbon. TCE is a hydrocarbon. Some hydrocarbons are suspected of causing cancer, some are known to cause cancer.

### **Lead [Pb]**

A heavy metal of a dull grayish color that is present in small amounts everywhere in the human environment. Lead can get into the body from drinking contaminated

water, eating vegetables grown in contaminated soil, or breathing or ingesting dust when children play or adults work in lead-contaminated areas. Lead can cause damage to the nervous system or blood cells if present in the body. Children are at highest risk from exposure to lead contamination because their bodies are still developing. Lead is listed as a reproductive toxic substance for women and men under Proposition 65.

### **Vanadium [V]**

A metal and a by-product of petroleum refining. Compounds of vanadium are used in the steel industry, as a catalyst in the chemical industry, in photography and in insect killing chemicals. It is toxic.

### **Nickel [Ni]**

A metal used in alloys to provide corrosion and heat resistance for products in the iron, steel and aerospace industries. Nickel is used as a catalyst in the chemical industry. It is toxic and, in some forms, is listed as a cancer-causing agent under Proposition 65.

### **Chromium [Cr]**

A hard, brittle, semi-gray heavy metal used in tanning, paint formulation, plating metal and plastic substances against corrosion. Known to be toxic at certain levels. In its hexavalent (verses trivalent) form, chromium is listed as a cancer-causing agent under Proposition 65.

**Anuncio**

Si prefiere hablar con alguien en español acerca de ésta información, favor de llamar a Jesus Cruz, Departamento de Control de Sustancias Tóxicas. El número de teléfono es (510) 540-3933.

**For More Information**

If you would like more information regarding the Post Closure Permit, please call Project Manager Cherry Padilla at (510) 540-3967, or DTSC Public Participation Specialist Jesus Cruz at (510) 540-3933. For media questions, please call Angela Blanchette at (510) 540-3732.

**Information Repositories**

This Draft Post Closure Permit and the Notice of Exemption, which are part of the Administrative Record for the site, as well as other related documents, are available for public review at the following locations:

DTSC File Room  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710-2721  
Phone (510) 540-3800 (Call for an appointment)

Richmond Public Library  
325 Civic Center Plaza  
Richmond, California 94804-1659  
(510) 620-6561

**Notice to Hearing Impaired Individuals**

TDD users can obtain additional information about the Site by using the California State Relay Service (1-888-877-5378) to reach Jesus Cruz at (510) 540-3933.

Jesus Cruz- Chevron Richmond  
Department of Toxic Substances Control  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710-2721