



California Environmental Protection Agency
Department of Toxic Substances Control

**HAZARDOUS WASTE FACILITY
POST-CLOSURE PERMIT**

Facility Name:

Chevron USA Inc. Richmond Refinery
841 Chevron Way
Richmond, California 94801-0627

Owner Name:

Chevron USA Inc.
6001 Bollinger Canyon Road
San Ramon, CA 94583-2324

Operator Name:

Chevron USA Inc.
841 Chevron Way
Richmond, California 94801-0627

Facility EPA ID Number:

CAD009114919

Effective Date:

Expiration Date:

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: Chevron USA Inc. Richmond Refinery

The Issuance of this Permit is subject to all terms and conditions set forth in the Approved Application, dated October 16, 2015. The Permit consists of 25 pages and Appendices A and B.

[Name of Chief]

Chief, Office of Permitting
Department of Toxic Substances Control
Date: **[DATE]**

**CHEVRON USA, INC. RICHMOND REFINERY
841 CHEVRON WAY
RICHMOND, CALIFORNIA 94901-0627**

HAZARDOUS WASTE POST-CLOSURE FACILITY PERMIT

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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

Chevron USA Inc.
6001 Bollinger Canyon Road
San Ramon, California 94583-2324

2. Owner of Real Property

Chevron USA Inc.
6001 Bollinger Canyon Road
San Ramon, California 94583-2324

3. Operator of Facility

Chevron USA Inc.
841 Chevron Way
Richmond, California 94801-0627

4. Location

Post-Closure Units Landfarms 1 through 5 (Landfarms 1-5, or collectively "Landfarms") are situated within the Chevron USA Inc. Richmond Refinery (Chevron), located at 841 Chevron Way, Richmond, in Contra Costa County, California. A site location map is provided as Figure 1 Location Map. A detailed map of Landfarm 1 is provided in Figure 2 Site Detail Map. And a detailed map of Landfarms 2 through 5 is provided in Figure 3 Site Detail Map. The Landfarms are zoned for general industrial use and cover approximately 29 acres of the 2,900-acre refinery property. They are situated more than 1,900 feet from the nearest property boundary to the east. The refinery is bordered to the south by the Interstate 580 freeway, to the east by the Richmond Parkway, and to the west and north by San Pablo Bay. Access to Landfarms 1-5 is through secured Gates 31 and 91.

Landfarm 1 is within County Assessor's Parcel Number (APN) 561-100-013.

Landfarm 2 is within APN 561-100-037 and APN 561-100-038.

Landfarm 3 is within APN 561-100-037.

Landfarms 4 and 5 are within APN 561-100-038.

5. Description of Facility Operations

Permittee has two permits for this location – a Hazardous Waste Facility Permit (issued September 6, 2006) for Treatment and Storage Units and a Hazardous Waste Facility Post-Closure Permit (issued March 4, 2003) for Land Treatment Units. This permit pertains only to the Hazardous Waste Facility Post-Closure

Permit.

Permittee monitors five onsite Landfarms that were in operation for the biological treatment of oily wastes generated from petroleum processing from the mid-1970s to 1987. The Landfarms went through corrective action, closure and permit application from 1987 to 2003. The 2003 Post-Closure Permit allowed Permittee to continue the post-closure care activities that include vegetative cap monitoring and maintenance, surface settlement monitoring, soil cover inspection and maintenance, surface water drainage system inspection, and groundwater monitoring/free-phase hydrocarbon monitoring. Permittee conducts these post-closure activities in semi-annual and annual frequency, and documents the observation and the resulting effectiveness in its Semi-Annual Landfarms Status Reports to Regional Water Quality Control Board (RWQCB) and DTSC.

6. Facility History

Permittee operated Landfarms 1-5 from the mid-1970s to 1987. Landfarming was conducted to promote biodegradation of oily wastes generated from on-site petroleum processing. Landfarms 1-4 were built over existing landfarming sites and Landfarm 5 was built over fill. Historical landfills underlie portions of Landfarms 1-3. Prior to the start of landfarming operations, 10 to 25 feet of clean fill was placed at each of the Landfarms. The fill material came from adjacent pond and channel dredging and from soil generated by the San Pablo Tank Farm construction activities. During landfarming, wastes (primarily oil/water separator sludge, leaded and non-leaded tank bottoms, and oil/water mixtures) were placed on the surface of the Landfarms and tilled into the top 6 to 12 inches of fill.

After submitting a hazardous waste permit application to the United States Environmental Protection Agency (U.S. EPA), Permittee was notified on February 10, 1987, that the Landfarms did not meet the requirements for a permit and in January 1988, U.S. EPA issued to the Permittee a Consent Agreement and Final Order (No. RCRA 09-88-005) to ensure that the Landfarms were closed in accordance with applicable U.S. EPA regulations. DTSC followed by issuing a Stipulation and Order (HWCA 87/99-019) to ensure that the Landfarms were closed in accordance with the applicable California regulations. The Landfarms have not received waste since 1987.

On March 31, 1988, Permittee submitted the first Closure/Post-Closure Plan for the Richmond Refinery Landfarms to the U.S. EPA and DTSC. A "*RCRA Facilities Investigation (RFI) Report*" dated November 1992 stated that soils beneath Landfarms 1-5 and the "A" Zone groundwater in its vicinity were impacted by volatile organic compounds (benzene, ethyl benzene, toluene, xylene), semi-volatile organic compounds (fluorene, phenanthrene, 1-methyl naphthalene, 2- methyl naphthalene), total volatile hydrocarbon as gasoline

(TVH-gasoline), total extractable hydrocarbon as diesel (TEH-diesel), and metals (chromium, lead, nickel, vanadium). The monitoring activities in the report indicated that free-phase hydrocarbons are present in "A" Zone groundwater in the vicinity of Landfarms 1-5 and that "C" Zone groundwater was not impacted.

On February 27, 1996, Permittee presented the revised conceptual plan for closing the Landfarms. The closure plan, first submitted and subsequently revised on May 28, 1997, was approved by DTSC on March 19, 1998. A complete copy of the May 28, 1997 "*Revised Landfarm Closure Plan*" is included as Appendix G in the Approved Application. Closure activities and construction of the vegetative cover over the Landfarms began in May 1998. The Landfarms have since been regraded into low mounds to facilitate surface drainage by diverting rainfall runoff away from the Landfarm sites and to improve the overall appearance. The Landfarm soils were compacted to support the construction of the final cover and to promote vegetation root penetration. The top 12 inches of a vegetative soil layer consists of 6-inch thick clean fill layer overlain by a 6-inch thick, nutrient-rich topsoil layer. This helps prevent wind and run-off from coming into direct contact with the wastes. The Landfarms were closed in January 1998. DTSC approved the closure certification for the Landfarms on September 19, 2000.

DTSC issued a Post-Closure Permit, included as the Appendix A in the Approved Application, to Permittee for the Landfarms 1-5, effective on March 7, 2003, with an expiration date of March 7, 2013.

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 on September 30, 1999, which is the date the facility transmitted to DTSC the March 27, 2000 "*Revised Landfarms Closure Construction Completion Certification Report*", included as the Appendix J in the Approved Application. Closure certification was accepted by DTSC on September 19, 2000.

PART III. GENERAL CONDITIONS

1. PERMIT APPLICATION DOCUMENTS

The DTSC-approved Application – The Part A Application and the Part B Application dated October 16, 2015, both signed by Permittee on October 19, 2015, are hereby made a part of this Permit by reference.

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 maintain and monitor 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., title 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 Disposal Requirements (WDR) Order R2-2011-0036 and the Site Cleanup Requirements (SCR) Order R2-2012-0015 (as Appendix L in the Approved Application), including the attached Statistical Evaluation Plan for the Revised Self-Monitoring and Reporting Program (SMP) dated May 28, 2015 (as Appendix O in the Approved Application), and any subsequent approved modifications, 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 CEQA Guidelines of California Code of Regulations, title 14, section 15061(b)(3) 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 7.

- (a) For the purpose of California Code of Regulations, title 22, §66264.91(b), the specific elements of the Groundwater Monitoring and Response Program for the Facility are those described in Appendix K (in Section 2.5 Groundwater Protection System) of the Approved Application.
- (b) For the purpose of California Code of Regulations, title 22, §66264.92, the Water Quality Protection Standard for the Facility is described in Appendix L (on pages 17-18 of the second part, titled "Updated Waste Discharge Requirements and Rescission of Order No. 00-043") of the Approved Application.
- (c) For the purpose of California Code of Regulations, title 22, §66264.93, the Constituents of Concern (COCs) for the Facility are described in Appendix K (in Section 3.9 Groundwater Quality Monitoring Program),

and Appendix L (in Tables 2 and 4 of the first part, titled "Revised Self-Monitoring and Reporting Program", and on page 17 of the second part, titled "Updated Waste Discharge Requirements and Rescission of Order No. 00-043") of the Approved Application.

- (d) For the purpose of California Code of Regulations, title 22, §66264.94, the Concentration Limits for the Facility are in Appendix K (in Section 3.9 Groundwater Quality Monitoring Program) and Appendix L (in Tables 2 and 4 of the first part, titled "Revised Self-Monitoring and Reporting Program", and on pages 17-18 of second part, titled "Updated Waste Discharge Requirements and Rescission of Order No. 00-043") of the Approved Application.
- (e) For the purpose of California Code of Regulations, title 22, §66264.95, the Monitoring Points and Points of Compliance for each authorized unit at the Facility are described in Appendix L (in Tables 1 and 3 of first part, titled "Revised Self-Monitoring and Reporting Program", and on page 18 of the second part, titled "Updated Waste Discharge Requirements and Rescission of Order No. 00-043") of the Approved Application.
- (f) For the purpose of California Code of Regulations, title 22, §66264.90(c) and §66264.117 the Post Closure Care Period for the authorized unit at the Facility is 30 years. DTSC may extend the Post Closure monitoring period beyond 30 years to protect human health and the environment. The requirement for this financial responsibility is shown in Appendix Q of the Approved Application.
- (g) For the purpose of California Code of Regulations, title 22, §66264.97, the general water quality monitoring and system requirements are described in Appendix L of the Approved Application.
- (h) For the purpose of California Code of Regulations, title 22, §66270.31, the monitoring, recording, and reporting program for the Facility is described in Appendixes K and L of the Approved Application.

5. ACCESS

- (a) DTSC, its contractors, employees, agents, and/or any United States 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.

- (b) 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.

PART IV. 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.

This Facility has five (5) Hazardous Waste Management Units. These units are described in detail in the Approved Application, and are as follows:

UNIT NAME:

Landfarm 1

LOCATION:

Landfarm 1 is adjacent to and north of Channel Street, south of No.1 Oxidation Pond and east of the 250-foot Channel located within Chevron USA Inc. Richmond Refinery (See Figures 1, 2 and 4).

ACTIVITY TYPE:

Post-Closure Care

ACTIVITY DESCRIPTION:

Maintain the vegetation and vegetative cover on the Landfarm, maintain and protect the Groundwater Protection System (GPS), and monitor the concentration of the constituents of concern in the Landfarm's groundwater.

PHYSICAL DESCRIPTION:

Landfarm 1 consists of 13.5 acres and is the largest of the five Landfarms. Prior to landfarming operation, clean imported fill ranging from 10 to 25 feet thick, was placed at the site. Wastes in this Landfarm extend from 3 to 7 feet below ground surface. The Landfarm was designed to reduce surface water infiltration through the surface of the Landfarm fill and soil and to prevent lateral off-site migration. The vegetative cap (consisting of a minimum of 12 inches of vegetated fill) has been maintained and the poplar trees have become well-established. No substantial modifications have been made to the cap since the submittal of the Revised Post-Closure Permit Application on January 7, 2002.

MAXIMUM CAPACITY:

Landfarm 1 consists of 13.5 acres. The waste in place is undergoing biodegradation and no additional waste will be placed in or onto the unit.

WASTE SOURCES:

Oily wastes generated from on-site petroleum manufacturing.

WASTE TYPES:

Oily wastes generated from on-site manufacturing of petroleum, including non-lead tank bottoms, oil/water separator sludge and spent catalyst beads.

RCRA HAZARDOUS WASTE CODES:

K049, K051, K169

UNIT NAME:

Landfarm 2

LOCATION:

Landfarm 2 is adjacent to Landfarm 3, 4, and 5. It is south of the Water Enhancement Wetlands Project and east of the 250-foot Channel located within Chevron USA Inc. Richmond Refinery (See Figures 1, 3 and 5).

ACTIVITY TYPE:

Post-Closure Care

ACTIVITY DESCRIPTION:

Maintain the vegetation and vegetative cover on the Landfarm, maintain and protect the GPS, and monitor the concentration of the constituents of concern in the Landfarm's groundwater.

PHYSICAL DESCRIPTION:

Landfarm 2 consists of 8 acres. Prior to landfarming operation, clean imported fill ranging from 10 to 25 feet thick, was placed at the site. Wastes in this Landfarms extend from 3 to 5.5 feet below ground surface. The Landfarm was designed to reduce surface water infiltration through the surface of the Landfarm fill and soil and to prevent lateral off-site migration. The vegetative cap (consisting of a minimum of 12 inches of vegetated fill) has been maintained and the poplar trees have become well-established. No substantial modifications have been made to the cap since the submittal of the Revised Post-Closure Permit Application on January 7, 2002.

MAXIMUM CAPACITY:

Landfarm 2 consists of 8 acres. The waste in place is undergoing biodegradation and no additional waste will be placed in or onto the unit.

WASTE SOURCES:

Oily wastes generated from on-site petroleum manufacturing.

WASTE TYPES:

Oily wastes generated from on-site manufacturing of petroleum, including oil/water separator sludge and phthalic anhydride bottoms.

RCRA HAZARDOUS WASTE CODES:

K049, K051, K169

DRAFT

UNIT NAME:

Landfarm 3

LOCATION:

Landfarm 3 is located south of the Water Enhancement Wetlands Project and east of Landfarm 2 located within Chevron USA Inc. Richmond Refinery (See Figures 1, 3 and 5).

ACTIVITY TYPE:

Post-Closure Care

ACTIVITY DESCRIPTION:

Maintain the vegetation and vegetative cover on the Landfarm, maintain and protect the GPS, and monitor the concentration of the constituents of concern in the Landfarm's groundwater.

PHYSICAL DESCRIPTION:

Landfarm 3 consists of 3.5 acres. Prior to landfarming operation, clean imported fill ranging from 10 to 25 feet thick, was placed at the site. Wastes in this Landfarms extend from 1 to 5 feet below ground surface. The Landfarm was designed to reduce surface water infiltration through the surface of the Landfarm fill and soil and to prevent lateral off-site migration. The vegetative cap (consisting of a minimum of 12 inches of vegetated fill) has been maintained and the poplar trees have become well-established. No substantial modifications have been made to the cap since the submittal of the Revised Post-Closure Permit Application on January 7, 2002.

MAXIMUM CAPACITY:

Landfarm 3 consists of 3.5 acres. The waste in place is undergoing biodegradation and no additional waste will be placed in or onto the unit.

WASTE SOURCES:

Oily wastes generated from on-site petroleum manufacturing.

WASTE TYPES:

Oily wastes generated from on-site manufacturing of petroleum, including non-lead tank bottoms and oil/water separator sludge.

RCRA HAZARDOUS WASTE CODES:

K049, K051, K169

DRAFT

UNIT NAME:

Landfarm 4

LOCATION:

Landfarm 4 is located south of Landfarm 2 within Chevron USA Inc. Richmond Refinery (See Figures 1, 3 and 5).

ACTIVITY TYPE:

Post-Closure Care

ACTIVITY DESCRIPTION:

Maintain the vegetation and vegetative cover on the Landfarm, maintain and protect the GPS, and monitor the concentration of the constituents of concern in the Landfarm's groundwater.

PHYSICAL DESCRIPTION:

Landfarm 4 consists of 3 acres. Prior to landfarming operation, clean imported fill ranging from 10 to 25 feet thick, was placed at the site. Wastes in this Landfarm extend from 3.5 to 5 feet below ground surface. The Landfarm was designed to reduce surface water infiltration through the surface of the Landfarm fill and soil and to prevent lateral off-site migration. The vegetative cap (consisting of a minimum of 12 inches of vegetated fill) has been maintained and the poplar trees have become well-established. No substantial modifications have been made to the cap since the submittal of the Revised Post-Closure Permit Application on January 7, 2002.

MAXIMUM CAPACITY:

Landfarm 4 consists of 3 acres. The waste in place is undergoing biodegradation and no additional waste will be placed in or onto the unit.

WASTE SOURCES:

Oily wastes generated from on-site petroleum manufacturing.

WASTE TYPES:

Oily wastes generated from on-site manufacturing of petroleum, including non-lead tank bottoms and oil/water separator sludge.

RCRA HAZARDOUS WASTE CODES:

K049, K051, K169

DRAFT

UNIT NAME:

Landfarm 5

LOCATION:

Landfarm 5 is located south of Landfarm 2 and east of the 250-foot Channel located within Chevron USA Inc. Richmond Refinery (See Figures 1, 3 and 5).

ACTIVITY TYPE:

Post-Closure Care

ACTIVITY DESCRIPTION:

Maintain the vegetation and vegetative cover on the Landfarm, maintain and protect the GPS, and monitor the concentration of the constituents of concern in the Landfarm's groundwater.

PHYSICAL DESCRIPTION:

Landfarm 5 consists of 1 acre, the smallest of the five Landfarms. Prior to landfarming operation, clean imported fill ranging from 10 to 25 feet thick, was placed at the site. Wastes in this Landfarms extend from 2 to 4 feet below ground surface. The Landfarm was designed to reduce surface water infiltration through the surface of the Landfarm fill and soil and to prevent lateral off-site migration. The vegetative cap (consisting of a minimum of 12 inches of vegetated fill) has been maintained and the poplar trees have become well-established. No substantial modifications have been made to the cap since the submittal of the Revised Post-Closure Permit Application on January 7, 2002.

MAXIMUM CAPACITY:

Landfarm 5 consists of 1 acre. The waste in place is undergoing biodegradation and no additional waste will be placed in or onto the unit.

WASTE SOURCES:

Oily wastes generated from on-site petroleum manufacturing.

WASTE TYPES:

Oily wastes generated from on-site manufacturing of petroleum, including oil/water separator sludge.

RCRA HAZARDOUS WASTE CODES:

K049, K051, K169

DRAFT

PART V. SPECIAL CONDITIONS

As required by the approved "*Revised Landfarms Post-Closure Monitoring Plan*" revised April 2, 2015, the Permittee shall perform following post-closure care activities:

1. Waste Discharge Requirements

The Permittee shall comply with Waste Discharge Requirements (WDR) and Site Cleanup Requirements (SCR), which were adopted since 1990 by the Regional Water Quality Control Board (RWQCB). The two RWQCB Orders (WDR Order R2-2011-0036 and SCR Order R2-2012-0015) currently in effect for the facility require monitoring in the vicinity of Landfarms 1-5. Future changes or amendments to the WDR or SCR that apply to the documents referenced in the Approved Application may require a modification to this Permit in accordance with California Code of Regulations, title 22, chapter 20, article 4.

2. Vegetation Monitoring and Maintenance (from Sections 3.3 and 3.4 of the "*Revised Landfarms Post-Closure Monitoring Plan*")

The Permittee shall inspect annually prior to start of the rainy season to assess the condition of the vegetation and any maintenance needs. Mowing is performed once per year following the end of the rainy season. Pruning of tree branches or other vegetation management activities shall be performed as needed. Vegetation maintenance shall be performed in accordance with the goal of maintaining the integrity of the final vegetated cover, as described in the Section 2.0 Closure Unit Description of the Appendix K of the Approved Application. The observation and the results shall be documented in the Semi-Annual Landfarms Status Report.

3. Surface Settlement Monitoring (from Section 3.5)

The final cover shall be monitored for signs of differential settlement, which may cause ponding. The Landfarm surfaces shall be inspected and settlement markers surveyed on an annual basis for evidence of differential settlement. If differential settlement has occurred and the grades of the final cover will no longer prevent ponding in that area, the surface will be regraded to maintain positive drainage. The results of the inspections shall be documented in the Semi-Annual Landfarms Status Report.

4. Soil Cover Inspection and Maintenance Program (from Section 3.6)

An annual inspection of the cover shall be performed by an independent qualified engineer registered in California prior to onset of the rainy season. The engineer identifies and recommends appropriate repairs for areas where

the soil cover may have become eroded, affected by rodent burrows, or otherwise damaged, or where the paved areas have become damaged. Repairs shall be performed prior to the rainy season. Records of all inspections and repairs shall be maintained by the Permittee.

The cover shall also be inspected after major rainfall events where ponding or erosion may have occurred. Areas where ponding or erosion has occurred shall be repaired to maintain positive drainage. The results of the inspections and any necessary repair shall be documented in the Semi-Annual Landfarms Status Report.

5. Surface Drainage System (from Section 3.7)

The drainage swales and culverts shall be inspected annually before the beginning of the rainy season for cracking, clogging, erosion, and operating performance. The drainage control system shall be monitored annually before the beginning of the rainy season to ensure the surface drainage facilities are intact and clear of debris. The pumps shall be inspected and tested annually. After major rainfall, additional inspections shall be made to monitor their performance. If deficiencies are found, they shall be corrected as soon as practicable. The results of the inspections and any necessary repair shall be documented in the Semi-Annual Landfarms Status Report.

6. Free-Phase Hydrocarbon Monitoring and Containment (from Section 3.8)

The thickness of free-phase hydrocarbon, also referred to as light non-aqueous phase liquids (LNAPLs) in the existing monitoring wells is measured and reported as part of the Refinery-Wide Groundwater Monitoring Program (RGMP). The GPS recovers primarily groundwater, but also provides effective long-term containment for the migration of LNAPLs. However, if the GPS were to be out-of-service for a period exceeding several days and temporary pumps could not be used to maintain drawdown in the extraction trenches, supplemental LNAPL recovery would be performed with vacuum trucks from the extraction sumps and monitoring wells whenever the measured thickness of LNAPL exceeded six inches. Recovery of LNAPLs shall be performed in accordance with the procedures described in the Free-Phase Liquid Petroleum Hydrocarbon Recovery Evaluation Plan, Chevron Richmond Refinery (URS, 2000).

7. In the event of determining statistically significant evidence of a release from the regulated unit for any monitoring parameter or constituent of concern at any monitoring point, the permittee shall notify DTSC by certified mail within 7 days of such determination.

8. In the event determining statistically significant evidence of a release from a

source other than the regulated unit, or that the evidence resulted from error in sampling, analysis or evaluation or from natural variation in groundwater, the permittee shall notify DTSC by certified mail within 7 days and submit a report to DTSC within 90 days of such determination.

9. In the event of any violation of a permit condition as discovered by facility personnel during routine operations of the Facility, the permittee shall verbally report the discovery to DTSC immediately, and follow by writing within 24 hours.
10. In the event of any earthquake of Magnitude 5 or greater at the Landfarms, the Permittee shall inspect and evaluate the impact of the earthquake and repair any damage following the approved "*Revised Landfarms Post-Earthquake Inspection and Corrective Action Plan*", dated June 2, 2015. The Permittee shall inspect the Landfarms and verbally report the results of the inspection to DTSC within 24 hours following a qualifying earthquake. A written report which includes the information listed in the approved "*Revised Landfarms Post-Earthquake Inspection and Corrective Action Plan*" shall be submitted to DTSC within 15 days of the incident.

PART VI. CORRECTIVE ACTION

On February 10, 1987, Permittee was notified by U.S. EPA that the Landfarms did not meet the requirements for a permit. On January 20, 1988, U.S. EPA issued to the Permittee a Consent Agreement and Final Order (No. RCRA 09-88-005) to ensure that the Landfarms were closed in accordance with applicable U.S. EPA regulations. DTSC followed by issuing a Stipulation and Order (HWCA 87/99-019) to ensure that the Landfarms were closed in accordance with the applicable California regulations. The Permittee carried out the corrective action at the Facility pursuant to Health and Safety Code sections 25187 and 25200.10, and under the oversight of the U.S. EPA pursuant to the Consent Agreement and Final Order, RCRA 09-88-005.

Pursuant to SB 1082, the RWQCB has been designated as the lead agency for purposes of RCRA groundwater monitoring and corrective action. Several SCR and WDR Orders, which have been included as Appendix L of the Approved Application, have been issued since 1990 that required corrective action at the Facility. The Landfarms are currently under the detection monitoring mode for the corrective action.

During the past Corrective Action, as discussed in Section 5.1 of the Approved Application, the Landfarms were closed in a manner that prevents exposure to the waste materials and minimizes the potential for mobilization of waste constituents. The detailed activities in the Closure Plan are included in the Approved Application, Appendix G.

Currently, there are two RWQCB Orders in effect, that require the Facility to self-monitor and to report how effective the previous corrective action in the vicinity of Landfarms 1-5 has been. The two RWQCB Orders are *Waste Discharge Requirements Order R2-2011-0036* and *Site Cleanup Requirements Order R2-2012-0015*. These two Orders share the same "*Revised Self-Monitoring and Reporting Program (SMRP)*". Copies of these Orders and SMRP are included as Appendix L of the Approved Application.

Results of groundwater monitoring performed per the SMRP are submitted semi-annually to the RWQCB and DTSC. The most recent monitoring report submitted to the agencies was the February 27, 2015 report, titled "*2014 Annual Monitoring Report, Refinery-Wide Groundwater Monitoring Program and Landfarms Post-Closure Monitoring Program (Leidos, 2015)*". The report confirmed no releases from the closed Landfarms have been detected over the 16 years of post-closure monitoring.

In the event the Permittee identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous constituents, or discovers new Solid Waste Management Units (SWMUs) not previously identified, the Permittee shall notify DTSC orally within 24 hours of discovery and notify DTSC in writing within 10 days of such discovery summarizing the findings including the immediacy and magnitude of any potential threat to human health and/or the environment.

DTSC may require the Permittee to investigate, mitigate and/or take other applicable action to address any immediate or potential threats to human health and/or the environment and newly identified SWMUs or releases of hazardous waste and/or hazardous constituents. If and when corrective action is required at the Facility, the Permittee shall conduct corrective action under either a Corrective Action Consent Agreement or an Enforcement Order for Corrective Action issued by DTSC pursuant to Health and Safety Code sections 25187 and 25200.10.

To the extent that work being performed pursuant to Part VI of the Permit must be done on property not owned or controlled by the Permittee, the Permittee shall use its best efforts to obtain access agreements necessary to complete work required by this Part of the Permit from the present owner(s) of such property within 30 days of approval of any workplan for which access is required. "Best efforts" as used in this paragraph shall include, at a minimum, a certified letter from the Permittee to the present owner(s) of such property requesting access agreement(s) to allow the Permittee and DTSC and its authorized representatives access to such property and the payment of reasonable sums of money in consideration of granting access. The Permittee shall provide DTSC with a copy of any access agreement(s). In the event that agreements for the access are not obtained within 30 days of approval of any workplan for which access is required, or of the date that the need for access becomes known to the Permittee, the Permittee shall notify DTSC in writing within 14 days thereafter regarding both efforts undertaken to obtain access and its failure to obtain such agreements. In the event DTSC obtains access, the Permittee shall undertake approved work on such property. If there is any conflict between this permit condition on access and the access requirements in any agreement entered into between DTSC and the Permittee, this permit condition on access shall govern.

Nothing in Part VI of the Permit shall be construed to limit or otherwise affect the Permittee's liability and obligation to perform corrective action including corrective action beyond the Facility boundary, notwithstanding the lack of access. DTSC may determine that additional on-site measures must be taken to address releases beyond the Facility boundary if access to off-site areas cannot be obtained.

APPENDIX A
SITE LOCATION MAP

DRAFT

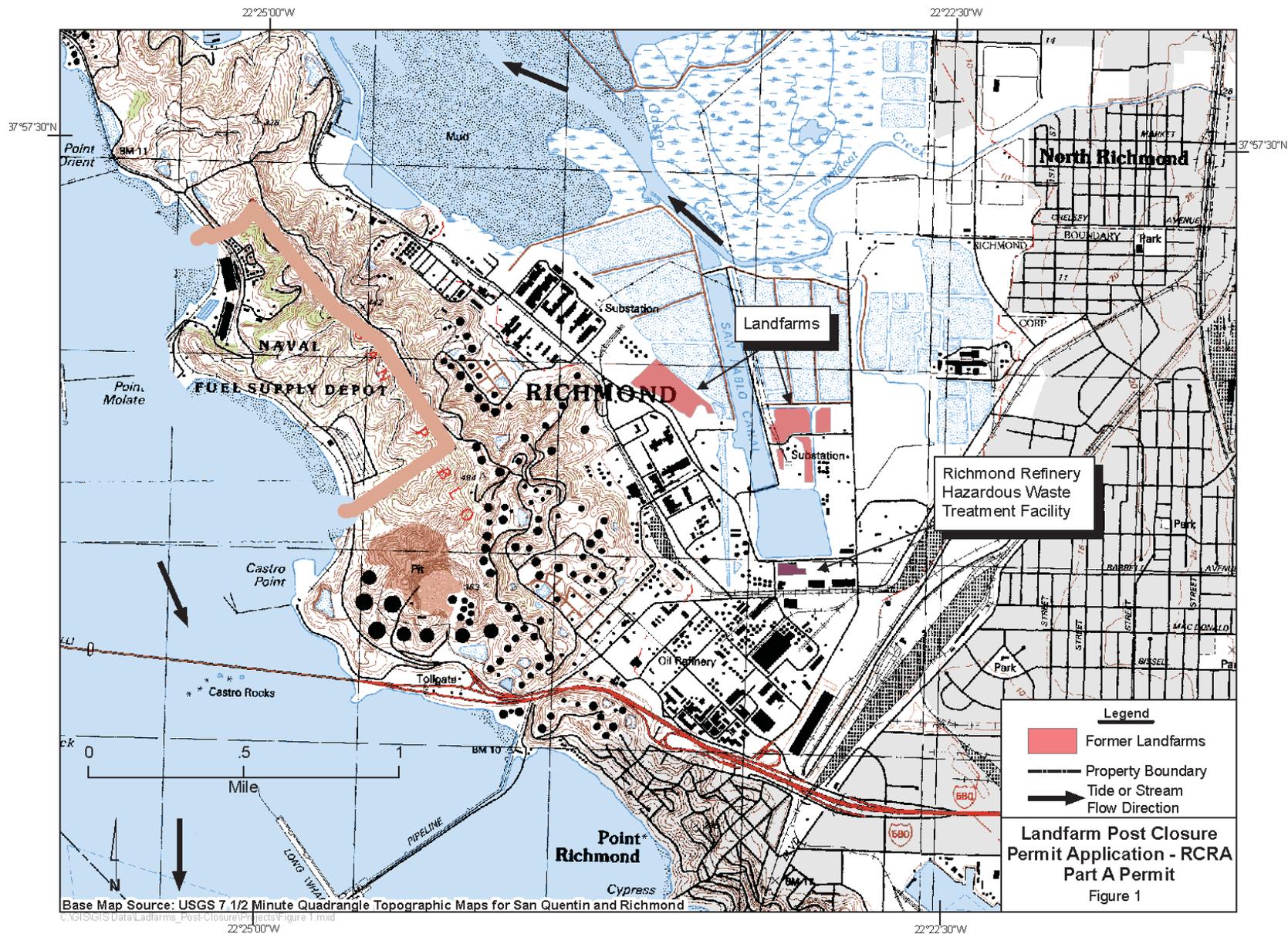


Figure 1 Location Map, Chevron USA Inc. Richmond Refinery Landfarms 1 through 5, Richmond, California

APPENDIX B
FACILITY LAYOUT

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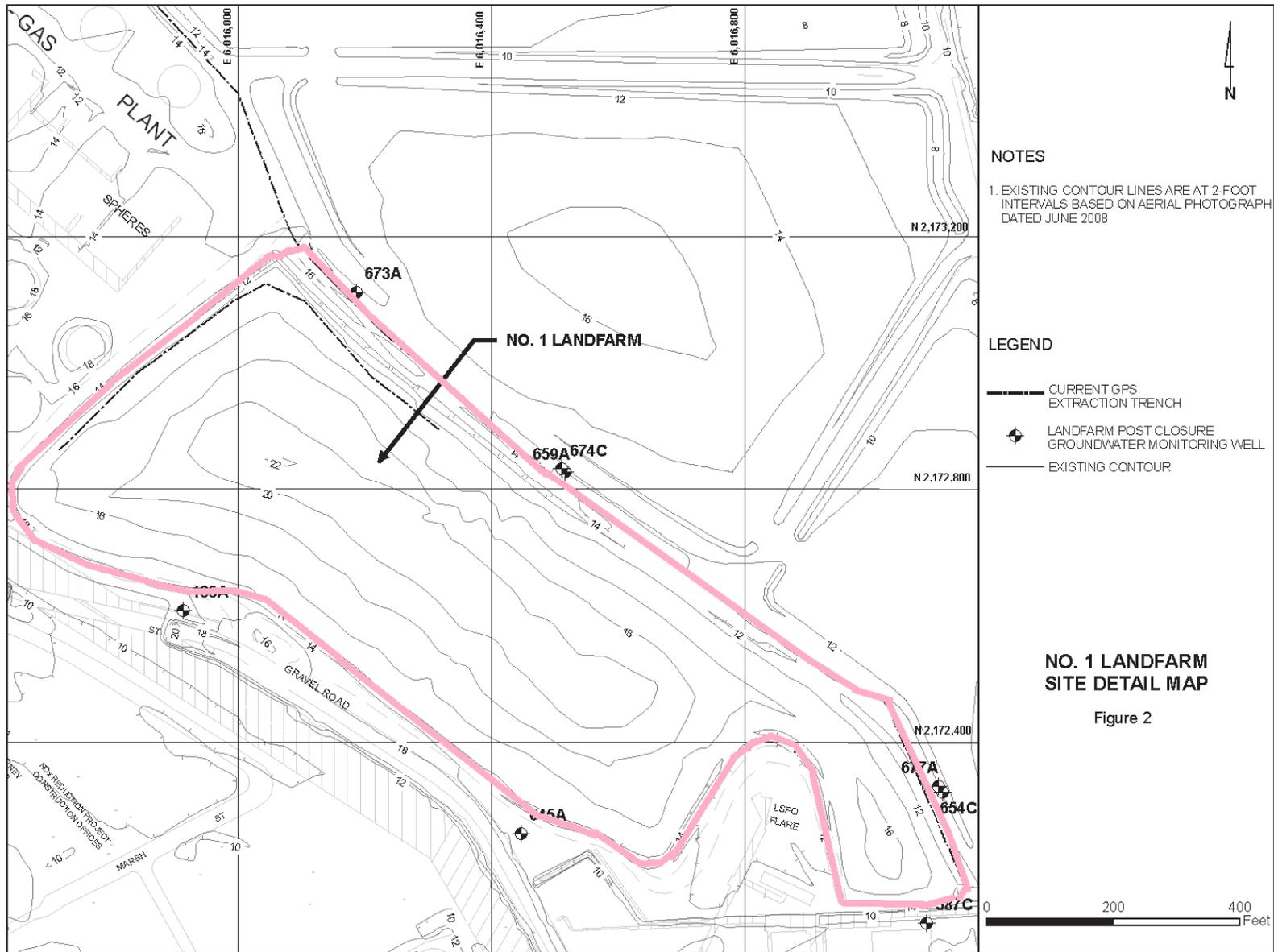


Figure 2 Site Detail Map, Chevron USA Inc. Richmond Refinery Landfarm 1

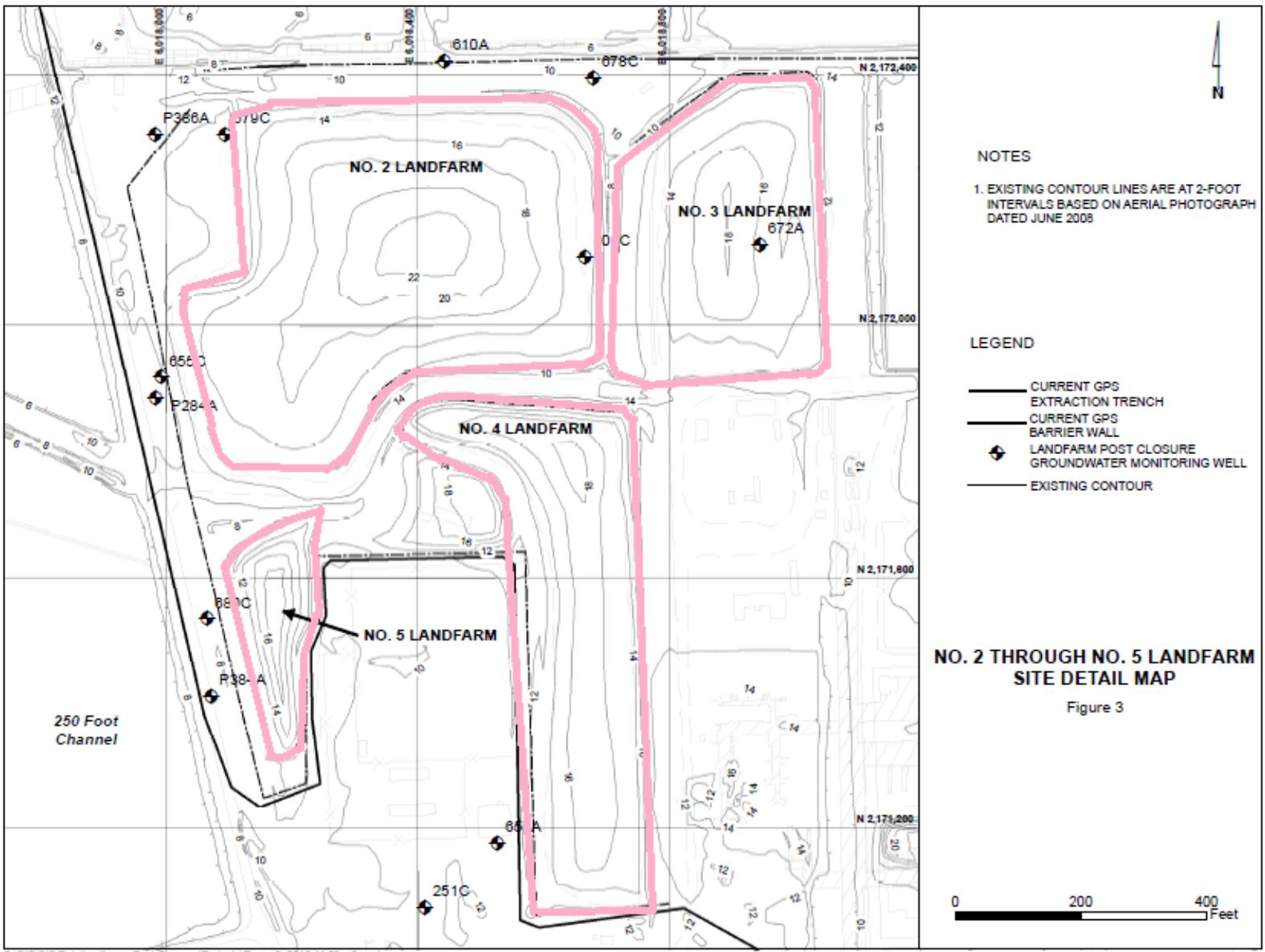


Figure 3 Site Detail Map, Chevron USA Inc. Richmond Refinery Landfarms 2 through 5



Figure 4 Oblique Aerial View, Chevron USA Inc. Richmond Refinery Landfarm 1



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Figure 5 Oblique Aerial View, Chevron USA Inc. Richmond Refinery Landfarms 2 through 5