



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

**MEMORANDUM**

**DATE:** SEP 8 - 2003

**SUBJECT:** Request for a Time-Critical Removal Action at the Dico Waste Oil Site,  
1845 E. Willow St., Signal Hill, Los Angeles County, California

**FROM:** Craig Benson, On-Scene Coordinator  
Emergency Response Section (SFD-9-2)

**TO:** Daniel Meer, Chief  
Response, Planning & Assessment Branch (SFD-9)

**THROUGH:** Peter Guria, Chief  
Emergency Response Section (SFD-9-2)

**I. PURPOSE**

The purpose of this Action Memorandum is to obtain approval to spend up to \$480,048 to mitigate threats to human health and the environment posed by the presence of polychlorinated biphenyls ("PCBs"), heavy metals, and hydrocarbon contaminated soils and structures located at the Dico Waste Oil ("Site"), 1845 E. Willow St., in Signal Hill, Los Angeles County, California [90806]. The proposed removal of hazardous substances would be taken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(a)(1), and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415.

**II. SITE CONDITIONS AND BACKGROUND**

Site Status: Non-NPL  
Category of Removal: Time-Critical  
CERCLIS ID: CAD980737076  
SITE ID: KP

## **A. Site Description**

### **1. Physical Location**

The Site is located at 1845 East Willow Street in Signal Hill, Los Angeles County, California. The Site also includes property identified as 2700 Rose Avenue and 2623 Gardenia Avenue. The coordinates of the Site are N 33° 48' 21.7", W 118° 10'07.1", as interpolated from the Long Beach USGS 7.5-minute quadrangle, 1981.

### **2. Site characteristics**

The property appears to be first developed in 1952, and Dico Oil Corporation ("Dico") used the property to operate an oil and recycling facility from 1960 to 1995. While in operation, Dico blended oils with varying amounts of water and sediment levels to create a marketable fuel. Asphalt emulsions, crude oil, diesel fuels, jet fuel, kerosene and stoddard solvents, waste oils, and light to heavy fuel oils contaminated with water and solids were accepted from various sources and placed into six steel above-ground storage tanks ("ASTs") for processing and blending. The "recycled oil" was then sold through brokers primarily to the bunker oil market as ship fuel. Dico reportedly purchased, processed and re-sold between 2-3 million gallons of oil per annum.

The approximate 19,000 square foot operations area of the Site consists of a tank farm, a truck pad, a laboratory, and a few tool sheds. The tank farm has three remaining large steel ASTs in a partially bermed containment. The berm has been removed, along with several cubic yards of soil, from the south side of the tank farm. The truck pad is a concrete drive with a concrete secondary containment depression at the loading point. A small receiving laboratory structure and a tool shed contain several drums, which are either empty or partially empty. The facility is not in operation and is heavily overgrown with vegetation.

The Site is located in a largely commercial zone, with adjacent land use including retail outlets, office buildings, light industry, oil production, and residences. The Site is bounded to the north by a prefabricated industrial/office park. The Site is bounded to the east by two residences. The Site is bounded to the south by a retail business and associated parking lot. The Site is bounded to the west by an undeveloped lot used primarily for oil production by Signal Hill Petroleum. The main streets that border the Site are 27<sup>th</sup> Street to the north, E. Willow Street to the south, Rose Street to the west, and Cherry Avenue to the east.

The larger parcel that includes the Site operations area is fenced with gated access on 27<sup>th</sup> Street. The gate generally remains open for access by two businesses that rent vehicle parking space on the parcel. The Site operations area is unmanned, is not separately fenced, or enclosed, and access appears unrestricted.

### **3. Removal Site evaluation**

On June 9, 2003, the California Department of Toxic Substances Control (“DTSC”) submitted a formal Request for Federal Action to the United States Environmental Protection Agency (U.S. EPA) to address the environmental issues posed by the Site (copy included in the Administrative Record for this Site). In April and May, 2003, the Superfund Technical Assessment and Response Team (“START”) contractor completed a records review, comprised primarily of the Site file available from DTSC.

On June 6, 2003, the START and On-Scene Coordinator (OSC) C. Benson conducted a visual survey of the Site. On June 19, 2003, OSC Benson, U.S. EPA Investigator J. Jaros and START personnel toured the Site with the current property owner and his consultant. Observations made during this assessment included:

- The number of tanks and configuration of the tank farm was different than as depicted in the most recent Site diagram available from the DTSC Site file (1994).
- The tanks were observed to have severe external deterioration due to corrosion, cracks, rust spots, blisters and leaking valves. The tank farm has no secondary containment capable of containing any spills or leaks from the tanks.
- Areas within and surrounding the tank farm that were previously identified as contaminated with PCBs, heavy metals and hydrocarbons remained on-site.
- The loading/offloading piping system is located aboveground and underground with manual control valves. The exposed portions of the piping system appeared aged with evidence of leakage at couplings.
- The Site operations area is heavily overgrown with vegetation, is unsecured and directly abuts two residential backyards containing grass, plants and animals.

Formal Site access was obtained from the property owner and OSC Benson and START returned to the Site on June 20, 2003 to conduct a sampling event. The main objective of this event was to obtain an analytical data set meeting U.S. EPA Quality System guidelines that is representative of current Site conditions and that could be compared to the historical record. A total of fourteen samples were collected and submitted for U.S. EPA approved analysis of PCBs, heavy metals, and total petroleum hydrocarbons. The Appendix 1 (“Figure 4: Sample Locations Dico Removal Assessment”) illustrates the current configuration of the Site operations area, sample locations, and summary analytical findings for the key analytes of concern.

### **4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant**

Site soils are documented to contain percentage range total petroleum hydrocarbons (“TPH”) contaminated with PCBs up to 160 milligrams per kilogram (mg/kg) and lead and chromium up to 1,000 mg/kg and 76 mg/kg, respectively. A sludge sample from Tank “T2” contained lead and chromium concentrations of 1,640

mg/kg and 484 mg/kg, respectively. Applicable California hazardous waste determining Total Threshold Limit Concentrations (“TTLC”), Region IX U.S. EPA Residential Preliminary Remediation Goals (“PRGs”), and Los Angeles Regional Water Quality Control Board (“LARWQCB”) Site Assessment and Cleanup Levels for TPH are presented in Table 1 below:

Table 1  
Federal and State Cleanup Goals

Analyte	TTLC mg/kg	PRGs mg/kg	LARWQCB ppm
PCBs	50.0	0.22	-
Lead	1,000.0	150.0 (CA modified)	-
Chrome	2,500.0	210.0	-
TPH diesel	-	-	1,000.0
TPH oil	-	-	10,000.0

The current removal assessment data set is consistent with historical data (see Appendix 2, “Table 1: Historical Data for the Dico Oil Co. Site”). Lead, chromium, and PCBs are hazardous substances as defined by Section 101(14) of CERCLA. Other hazardous substances or pollutants and contaminants not discovered to date or not specifically identified herein may exist at the Site. These substances may also pose a threat to human health and the environment.

Contaminated soils and wastes on-site are accessible to nearby residents and workers. A continual threat of release to the surrounding environment exists due to the poor condition of the tanks and piping systems containing an unknown volume of hazardous wastes and lack of secondary containment at the facility. A significant confined space entry hazard exists due to open hatches and breaches in the on-site tanks.

**5. National Priorities List (“NPL”) status**

The Site is not currently on or proposed for inclusion on the NPL. A CERCLA Preliminary Assessment (1986) and Screening Site Inspection (1990) have been conducted.

**B. Other Actions to Date**

Dico submitted a Part A application to DTSC (formerly the Department of Health Services) on April 17, 1986. The facility was issued an Interim Status Document (ISD) under the Resource Conservation and Recovery Act (“RCRA”) on March 29, 1989. Prior to issuance of the ISD, Dico operated as an unpermitted facility. An application

for a Hazardous Waste Facility Permit (Part B permit application) was submitted to DTSC in 1992. The DTSC denied the Hazardous Waste Facility Permit on July 28, 1995, which also terminated Dico's ability to operate under the ISD.

Throughout the period 1986 to 1994, DTSC cited Dico on numerous occasions and issued several Violation Notices and Enforcement Orders for failure to comply with financial responsibility requirements and other noncompliance items associated with the ISD operating permit and state Hazardous Waste Control Laws and Regulations.

### **C. State and Local Authorities' Roles**

#### **1. State and local actions to date**

DTSC has represented that no RCRA closure funds exist for Dico and neither local nor State authorities have the resources to conduct required response actions at this Site. On June 9, 2003, DTSC submitted a formal Request for Federal Action to U.S. EPA. U.S. EPA is coordinating with the business owner and current property owner concerning whether either party will initiate the required response actions.

Representatives from State and local response organizations may be requested to assist and coordinate with the OSC in various tasks including planning and community relations.

### **III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

Conditions at the Site represent a release, and potential threat of release, of a CERCLA hazardous substance threatening to public health, or welfare, or the environment based on the factors set forth in the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR § 300.415(b)(2). These factors include:

#### **1. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations or the food chain**

This factor is present at the Site due to the presence of PCBs, chromium and lead in soils and process tanks that greatly exceed the Region 9 Residential PRGs and, in some cases, State hazardous waste determining levels. The potential exists for soil contamination to impact humans and animals either by direct contact on-site or through wind-blown migration and particulate migration/inhalation.

Lead is a heavy metal that bio-accumulates in human tissues. Short-term exposure to large amounts of lead can cause harmful effects on the nervous system, gastrointestinal system, kidneys, and circulatory system. Long-term exposure to low levels, such as those that occur in the work place, can cause damage to the central nervous system, kidneys, blood, gastrointestinal tract, and gingival tissues.

Chromium is an ecotoxic heavy metal that is an inhalation, ingestion, and dermal exposure risk. Chromium bioaccumulates and targets the liver, kidneys, reproductive organs, circulatory system, and gastrointestinal system. Acute exposure to chromium can cause harmful effects to the gastrointestinal system. Chronic exposure can cause harmful effects to the skin, lungs, mucous membranes, and possibly cancer.

PCBs are chlorinated oils that are extremely persistent in the environment and are resistant to chemical and biological degradation. PCBs bioaccumulate in fatty tissues and are known to increase in concentration up the food chain. Acute exposure of large amounts of PCBs can cause harmful effects to the eyes, liver, and reproductive system. Chronic exposure can cause harmful effects to the skin, eyes, liver, and reproductive system; PCBs are carcinogens and have been shown to cause tumors of the pituitary gland and liver, as well as leukemia.

**2. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.**

There are four tanks on-Site with the following dimensions:

Table 2  
Site Tank Specifications

Tank I.D.	Capacity (gal.)	Diameter (ft.)	Height (ft.)
T2	21,149	15	16
T3	28,071	14.1	24
T5	8,663	9.6	16
TB	21,149	15	16

All of the tanks are severely deteriorated, with evidence of leakage at pipe fittings, cracks and valves. The side hatch opening in Tank T2 is large enough to allow an adult entry. The current volume estimate of Tank T2 is approximately 10 cubic yards of hazardous sludge documented to contain lead and chromium concentrations of 1,640 mg/kg and 484 mg/kg, respectively. The volume of material remaining in other tanks, if any, has not been determined, although a pourable sample was collected from a hose connection to Tank TB and found to have a TPH content of over 680,000 mg/kg. The tank farm has no secondary containment capable of containing any spills or leaks from the tanks.

**3. High levels of hazardous substances or pollutants or contaminants in soils at or near the surface, that may migrate**

This factor is present at the facility due to the documented presence of high concentrations of PCBs, TPH, lead and chromium contamination in several distinct areas of the Site (see Appendix 2, "Table 1: Historical Data for the Dico Oil Co. Site").

Trench within tank farm

Initially created to facilitate runoff and oil spillage flow within the tank farm, the piping system is exposed within this trench. This trench is approximately four feet deep and is heavily stained and overgrown with vegetation. Site records indicate past sampling results for PCBs in this trench as high as 4,400 mg/kg.

Berm partially surrounding tank farm

In 1988, two underground storage tanks were removed from the north end of the tank farm (approximate location of Tank TB today). PCB contaminated soils removed from this excavation area were used to build-up this berm in 1989.

Truck loading/unloading area

The concrete truck loading and unloading area contains a sump and approximately six inches of berm located along both sides of the pad in a north-south direction. The date of construction and the condition of the underlying soils is unknown at this time.

Piping system

The piping system was used to transfer oil among tank trucks and the storage tanks. The piping is located aboveground and underground with manual control valves. The entire system appears aged, with evidence of leakage at couplings.

Surface contaminant migration to the adjacent residential properties, retail outlets, and office buildings may occur by wind dispersion, vehicular traffic, storm water run-off and directly by individuals entering the unrestricted operational area.

The nearest storm water drains are located approximately 60 yards to the north and downgradient of the Site, which drain to the Los Cerritos Channel and eventually into the Pacific Ocean.

**4. Actual or potential contamination of drinking water supplies or sensitive ecosystems**

The groundwater from the underlying aquifer is used for drinking water. The nearest production well is located about one mile east of the Site and is operated by the City of Long Beach. This well produces water from depths of about 300 to 900 feet. Although groundwater beneath the facility is estimated to be present below depths of 150 to 200 feet, local perched groundwater could be present at much shallower depths, particularly after the heavier than normal rainfall events. There is currently insufficient data available to fully evaluate conditions at the Site and the extent of subsurface contamination resulting from Dico's activities which may further threaten groundwater.

**5. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released**

Given the poor condition of the storage tanks, structural failure and contaminant release would be expected in the event of a seismic event.

**6. Availability of other appropriate Federal or State response mechanisms to respond to the release**

This factor supports the actions proposed in this Memorandum because the DTSC asserts that it does not have resources to conduct the removal at the Site. On April 14, 2002, DTSC submitted a formal Request for Federal Action to U.S. EPA. No other appropriate local or State public funding source has been identified.

**IV. ENDANGERMENT DETERMINATION**

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

**V. PROPOSED ACTIONS AND ESTIMATED COSTS**

**A. Proposed Actions**

**1. Proposed action description**

The objective of this removal action is to mitigate the threats to human health and the environment posed by the PCB, heavy metal and hydrocarbon contaminated soils and structures at the Site. At present, PCBs are considered the main constituent of concern that will dictate the extent of necessary soil excavation and removal.



On receipt of the delivery order and prior to mobilization the contractor will develop a Site Health and Safety Plan (HASP). This plan should be clear and concise and state the precautions and procedure to be followed throughout the course of this removal action. The HASP will be in conformance with OSHA 1910.120. Additionally, and also prior to mobilization the contractor will begin procurement efforts to initiate site operations, including: support zone services (trailers, power, water, sanitary) and necessary security services.

On mobilization, the contractor will establish the support zone and contamination reduction zone ("CRZ"). The CRZ will employ cost effective techniques for minimizing contamination to vehicles as well effective decontamination measures.

#### Tank farm decommissioning

U.S. EPA proposes to removal all surface and subsurface structures associated with the existing tank farm area, including the berm, tanks and contents, vats, piping and related components. Tanks and non-bulk containers containing hazardous substances in other areas of the operations area will also be removed in this phase.

#### Lateral and vertical extent of contamination study

A Quality Assurance Sampling and Analysis Plan will be developed to characterize the extent of contamination requiring excavation and off-site disposal. The Plan will consider, as guidance, the self-implementing cleanup provisions for PCB Remediation Waste as described at 40 CFR § 761.61.

#### Excavation and off-site disposal

Contaminated soils are proposed to be excavated to the "high occupancy area" PCB cleanup level of 1 mg/kg as defined by the PCB Rule. At this time, there is insufficient data to accurately determine the soil excavation volume. For initial planning purposes, the excavation area is estimated at 190 x 60 x 4 feet.

#### Cleanup verification and restoration

Cleanup verification sampling techniques as provided by the PCB Rule will be employed. Site restoration will include the backfilling of the excavation area with clean fill.

All wastes will be properly characterized, packaged and transported for treatment or disposal at facilities in compliance with Section V.4. Additional cleanup or removal actions will be taken as appropriate and necessary.

## **2. Contribution to remedial performance**

Long term remedial action at this Site is not anticipated. This removal action should complete all Site work.

### The long-term cleanup plan for the Site:

It is expected that this removal action will eliminate any threat of direct or indirect contact of hazardous substances at the Site. There is no known groundwater contamination at the Site. U.S. EPA considers it unlikely that significant groundwater contamination exists from the Site. Consequently, U.S. EPA considers this a final action for the Site.

### Threats that will require attention prior to the start of a long-term cleanup:

There is no long-term cleanup planned for this Site.

### The extent to which the removal will ensure that threats are adequately abated:

The removal of abandoned, above ground hazardous substances and contaminated soils is expected to abate the threats from the Site.

### Consistency with the long-term remedy:

As described above, U.S. EPA considers this action to be a final action for the Site.

## **3. Description of alternative technologies**

Alternative technologies are not considered for the proposed response action.

## **4. Applicable or relevant and appropriate requirements (ARARs)**

Section 300.415(j) of the NCP provides that removal actions must attain ARARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines applicable requirements as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Section 300.5 of the NCP defines relevant and appropriate requirements as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, or

contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with administrative bodies, issuance of permits, documentation, reporting, record keeping, and enforcement are not ARARs for the CERCLA sections confined to the site.

The following ARARs have been identified for the proposed response action. All can be attained.

Federal ARARs: Potential Federal ARARs are the TSCA PCB Rule, 40 CFR Part 761; RCRA Land Disposal Restrictions, 40 CFR § 268.40 Subpart D; the CERCLA Off-Site Disposal Rule OSWER Directive 9347.3-8FS; and the U.S. Department of Transportation of Hazardous Materials Regulations 49 CFR Part 171, 172 and 173.

State ARARs: Potential State ARARs are Characteristics of Hazardous Waste implemented through the California Health and Safety Code, Title 22, § 66261.20, § 66261.21, § 66261.22, § 66261.23, § 66261.24.

**5. Project schedule**

Removal activities will require approximately 180 on-site days to complete.

**B. Estimated Costs**

Regional Removal Allowance Costs

Cleanup Contractor	\$ 370,040
--------------------	------------

Extramural Costs Not Funded from the Regional Allowance

START Contractor	\$ 30,000
------------------	-----------

Extramural Subtotal	\$ 400,040
---------------------	------------

Extramural Contingency (20%)	<u>\$ 80,008</u>
------------------------------	------------------

TOTAL, Removal Action Project Ceiling	\$ 480,048
---------------------------------------	------------

**VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Given the Site conditions, the nature of the hazardous substances documented on Site, and the potential exposure pathways to nearby populations described in Sections III and IV above, actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

**VII. OUTSTANDING POLICY ISSUES**

There are no outstanding policy issues with the Site identified at this time.

**VIII. ENFORCEMENT**

Please see the attached Confidential Enforcement Addendum for a discussion regarding potentially responsible parties. In addition to the extramural costs estimated for the proposed action, a cost recovery enforcement action also may recover the following intramural costs:

Intramural Costs<sup>1</sup>

U.S. EPA Direct Costs	\$ 9,000
U.S. EPA Indirect Costs (35.28%)	<u>3,175</u>
TOTAL Intramural Costs	\$12,175

The total U.S. EPA extramural and intramural costs for this removal action, based on full-cost accounting practices, that will be eligible for cost recovery are estimated to be \$493,223.


---

1 . Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgement interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

**IX. RECOMMENDATION**

This decision document represents the selected removal action for the Dico Waste Oil Site, 1845 E. Willow St., in Signal Hill, Los Angeles County, California [90806], as developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

Because conditions at the Site meet the NCP criteria for a time-critical removal, I recommend that you concur on the removal action proposed in this Action Memorandum. The total project ceiling if approved will be \$ 493,223, of which an estimated \$ 480,048 comes from the Regional removal allowance. You may indicate your decision by signing below.

Approve:  3 September 2003  
Daniel Meer, Chief Date  
Response, Planning and Assessment Branch

Disapprove: \_\_\_\_\_ Date \_\_\_\_\_  
Daniel Meer, Chief  
Response, Planning and Assessment Branch

Enforcement Addendum

Attachments:

- 1. Index to the Administrative Record

Appendices

- 1. Figure 4: Sample Locations Dico Removal Assessment
- 2. Table 1: Historical Data for the Dico Oil Co. Site

cc: Lisa Boyton, USEPA, OERR, HQ  
Director, California Department of Toxic Substances Control  
Department of the Interior

bcc: Site File  
Craig Benson, SFD-9-2  
Elizabeth Cox, ORC-3  
Andrew Helmlinger, ORC-3  
Celeste Temple, SFD-9-2

## Attachment 1 Administrative Record Index

- Ball, 1988. Geotechnical Report, Subsurface Tank Site at 2623 Gardenia Avenue, Signal Hill. Alexander R. Ball, Canoga Park, California, 6/22/88.
- E & E, 1988. Reassessment of the Dico Oil Company; Ecology & Environment, Inc. Los Angeles, California, 9/28/88.
- DOHS, 1989. Hazard Appraisal and Recognition Plan Daily Site Visit Document, Dico Oil Company; State Of California, Department of Health Services, 1989.
- DOHS, 1989. Hazard Appraisal and Recognition Plan Daily Site Visit Document, Dico Oil Company; State Of California, Department of Health Services, 1989.
- Pilko, et al., 1990. Environmental Risk Assessment of Dico Oil Company, Signal Hill, California; Pilko and Associates, Inc., May 1990.
- JRJ Associates, 1990. Workplan for Delineation of PCB Contamination in Soils at Dico Oil Company; JRJ Associates, San Pedro, CA. 10/11/90
- DTSC, 1993. Inspection Report: Dico Oil Company; State of California, Department of Toxic Substances Control; September 24, 1993.
- DTSC 1994a. RCRA Visual Site Inspection and Facility Sampling Plan; State of California Environmental Protection Agency Department of Toxic Substances Control; 1994.
- DTSC 1994b. RCRA Facility Assessment Report; State of California Environmental Protection Agency Department of Toxic Substances Control; June 1994.
- Geological Research, 1994. Environmental Site Assessment and Soil Analyses Report; Geological Research, Newport Beach, CA., September 30, 1994.
- DTSC, 1995a. Letter to Dico Re: Tank Assessment; State of California Environmental Protection Agency Department of Toxic Substances Control; February 10, 1995.
- DTSC 1995b. Statement of Basis Intent to Deny a Permit To Operate Under California Hazardous Waste Control Laws, DTSC, Glendale, CA. 1995
- DTSC 1995c. Final Permit Decision, DTSC, Glendale, CA. 6/19/95
- Superfund Technical Assessment and Response Team Analytical Data Package for Samples collected on June 20, 2003

## Appendix 1

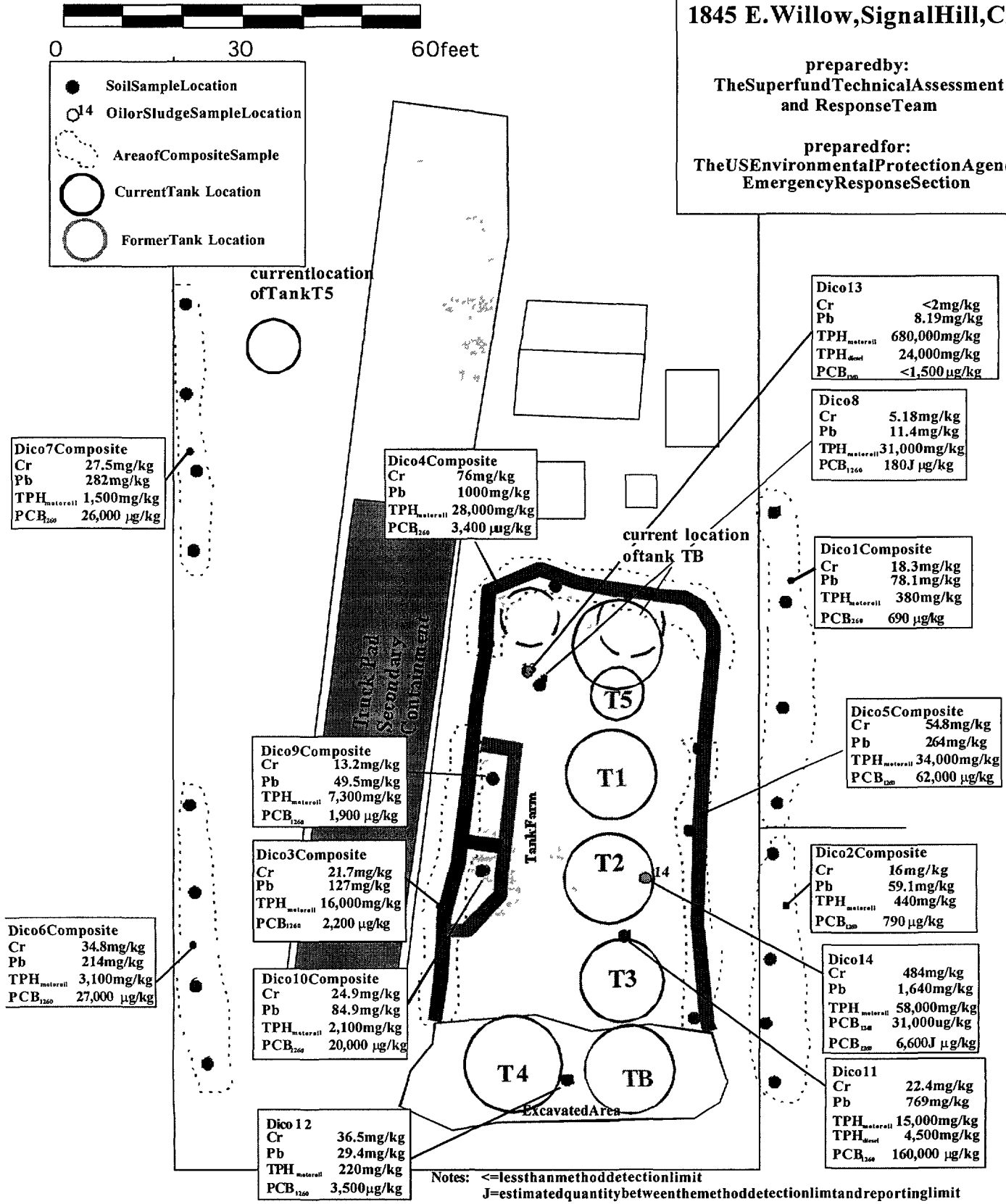
### Figure 4: Sample Locations Dico Removal Assessment



**Figure 4: Sample Locations  
Dico Removal Assessment  
1845 E. Willow, Signal Hill, CA**

prepared by:  
The Superfund Technical Assessment  
and Response Team

prepared for:  
The US Environmental Protection Agency  
Emergency Response Section



## Appendix 2

Table 1: Historical Data for the Dico Oil Co. Site

**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
<b>Ball, 1988. Geotechnical Report, Subsurface Tank Site at 2623 Gardenia Ave</b>					
1-14.5'		418.1 TPH	22.5 mg/kg		14.5
2-12.5'		418.1 TPH	27.1 mg/kg		12.5
3-10.0'		418.1 TPH	945.3 mg/kg		10
4-15.5'		418.1 TPH	19.7 mg/kg		15.5
<b>E&amp;E, 1990 quoting Bryant and Associates, 1989</b>					
unknown		418.1 TPH	44,000 mg/kg		0
unknown	VOCs	VOCs	ND		0
unknown	metals	Pb	340 mg/kg		0
unknown	metals	Cr	37 mg/kg		0
<b>DOHS, 1989. Hazard Appraisal and Recognition Plan Daily Site Visit Docume</b>					
<b>California, Department of Health Services, 1989.</b>					
1		8082 PCB 1260	1.4 mg/kg		0
2		8082 PCB 1260	160 mg/kg		0
3		8082 PCB 1260	180 mg/kg		0
<b>DTSC 1994a. RCRA Visual Site Inspection and Facility Sampling Plan; State</b>					
<b>Agency Department of Toxic Substances Control; 1994.</b>					
unknown		8082 PCB 1260	4400 mg/kg		0
unknown		8082 PCB 1260	3600 mg/kg		0
<b>DTSC 1994a. RCRA Facility Assessment Report; State of California Environ</b>					
<b>Toxic Substances Control; 1994.</b>					
YMDO-1	VOCs	VOCs	nd	ug/kg	0
YMDO-1	metals	metals	nd	mg/kg	0
YMDO-1	PCBs	PCB 1260	nd	mg/kg	0
YMDO-1	TPH	TPH	nd	mg/kg	0
YMDO-1	SVOCs	SVOCs	nd	mg/kg	0
YMDO-2	VOCs	toluene	3.1	ug/kg	0
YMDO-2	VOCs	ethylbenzene	3.3	ug/kg	0
YMDO-2	VOCs	m&p xylenes	23	ug/kg	0
YMDO-2	VOCs	o xylene	13	ug/kg	0
YMDO-2	VOCs	isopropylbenzene	1.8	ug/kg	0
YMDO-2	VOCs	propylbenzene	3	ug/kg	0
YMDO-2	VOCs	1,2,4 trimethylbenzene	34	ug/kg	0
YMDO-2	VOCs	sec-butylbenzene	4.6	ug/kg	0
YMDO-2	VOCs	isopropyltoluene	6.5	ug/kg	0
YMDO-2	VOCs	1,2 Dichlorobenzene	1.4	ug/kg	0
YMDO-2	VOCs	1,2,4 Trichlorobenzene	2.7	ug/kg	0
YMDO-2	VOCs	Naphthalene	24	ug/kg	0
YMDO-2	metals	lead	2300	mg/kg	0
YMDO-2	PCBs	PCB 1260	7.5	mg/kg	0
YMDO-2	SVOCs	Naphthalene	41	mg/kg	0
YMDO-2	SVOCs	Fluorene	17	mg/kg	0
YMDO-2	SVOCs	phenanthrene	45	mg/kg	0
YMDO-2	SVOCs	fluoranthene	10	mg/kg	0
YMDO-2	SVOCs	pyrene	19	mg/kg	0
YMDO-2	SVOCs	Benzo(a)anthracene	11	mg/kg	0
YMDO-2	SVOCs	chrysene	17	mg/kg	0

**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
YMDO-2	SVOCs	Benzo(b)fluoranthene	8	mg/kg	0
YMDO-2	SVOCs	Benzo(a)pyrene	9.6	mg/kg	0
YMDO-2	SVOCs	2 methyl naphthalene	130	mg/kg	0
YMDO-3	VOCs	VOCs	nd	ug/kg	0
YMDO-3	metals	metals	nd	mg/kg	0
YMDO-3	PCBs	PCB 1260	nd	mg/kg	0
YMDO-3	TPH	TPH	nd	mg/kg	0
YMDO-3	SVOCs	SVOCs	nd	mg/kg	0
YMDO-4	VOCs	m&p xylenes	1.4	ug/kg	0
YMDO-4	VOCs	1,2,4 trimethylbenzene	1.5	ug/kg	0
YMDO-4	VOCs	1,2,4 Trichlorobenzene	6.7	ug/kg	0
YMDO-4	metals	metals	nd	mg/kg	0
YMDO-4	PCBs	PCB 1260	16	mg/kg	0
YMDO-4	TPH	TPH	17,000	mg/kg	0
YMDO-4	SVOCs	1,2,4 Trichlorobenzene	7	mg/kg	0
YMDO-4	SVOCs	pyrene	2	mg/kg	0
YMDO-5	VOCs	toluene	160	ug/kg	0
YMDO-5	VOCs	benzene	8.7	ug/kg	0
YMDO-5	VOCs	methylene chloride	11	ug/kg	0
YMDO-5	VOCs	tetrachloroethene	15	ug/kg	0
YMDO-5	VOCs	ethylbenzene	27	ug/kg	0
YMDO-5	VOCs	m&p xylenes	99	ug/kg	0
YMDO-5	VOCs	o xylene	43	ug/kg	0
YMDO-5	VOCs	1,3,5 trimethylbenzene	15	ug/kg	0
YMDO-5	VOCs	1,2,4 trimethylbenzene	38	ug/kg	0
YMDO-5	VOCs	1,2,4 Trichlorobenzene	114	ug/kg	0
YMDO-5	metals	metals	nd	mg/kg	0
YMDO-5	PCBs	PCB 1260	360	mg/kg	0
YMDO-5	TPH	TPH	4,300	mg/kg	0
YMDO-5	SVOCs	SVOCs	nd	mg/kg	0
YMDO-6	VOCs	m&p xylenes	1.2	ug/kg	0
YMDO-6	VOCs	1,2,4 trimethylbenzene	2.2	ug/kg	0
YMDO-6	metals	metals	nd	mg/kg	0
YMDO-6	PCBs	PCB 1260	24	mg/kg	0
YMDO-6	TPH	TPH	29,000	mg/kg	0
YMDO-6	SVOCs	pyrene	5.4	mg/kg	0
YMDO-6	SVOCs	chrysene	6.3	mg/kg	0
YMDO-7	VOCs	toluene	2.4	ug/kg	0
YMDO-7	VOCs	tetrachloroethene	2	ug/kg	0
YMDO-7	VOCs	m&p xylenes	5.7	ug/kg	0
YMDO-7	VOCs	o xylene	5.2	ug/kg	0
YMDO-7	VOCs	1,3,5 trimethylbenzene	4.2	ug/kg	0
YMDO-7	VOCs	1,2,4 trimethylbenzene	6.6	ug/kg	0
YMDO-7	VOCs	Naphthalene	2	ug/kg	0
YMDO-7	metals	metals	nd	mg/kg	0
YMDO-7	PCBs	PCB 1260	nd	mg/kg	0
YMDO-7	TPH	TPH	23,000	mg/kg	0

**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
YMDO-7	SVOCs	Naphthalene	2	ug/kg	0
YMDO-7	SVOCs	methyl naphthalene	6.1	ug/kg	0
YMDO-8	VOCs	toluene	22	ug/kg	0
YMDO-8	VOCs	m&p xylenes	19	ug/kg	0
YMDO-8	VOCs	1,2,4 trimethylbenzene	10	ug/kg	0
YMDO-8	VOCs	1,2,4 Trichlorobenzene	17	ug/kg	0
YMDO-8	metals	metals	nd	mg/kg	0
YMDO-8	PCBs	PCB 1260	nd	mg/kg	0
YMDO-8	TPH	TPH	690	mg/kg	0
YMDO-8	SVOCs	SVOCs	nd	mg/kg	0
YMDO-9	VOCs	ethylbenzene	9.9	ug/kg	0
YMDO-9	VOCs	m&p xylenes	38	ug/kg	0
YMDO-9	VOCs	toluene	79	ug/kg	0
YMDO-9	VOCs	o xylene	15	ug/kg	0
YMDO-9	VOCs	1,2,4 trimethylbenzene	11	ug/kg	0
YMDO-9	metals	metals	nd	mg/kg	0
YMDO-9	PCBs	PCB 1260	1.1	ug/kg	0
YMDO-9	TPH	TPH	1,700	mg/kg	0
YMDO-9	SVOCs	SVOCs	nd	mg/kg	0

**Geological Research, 1994. Environmental Site Assessment and Soil Analyses  
September, 1994**

HA-1	TPH	TPH	nd	mg/kg	3
HA-1	metals	chromium	nd	mg/kg	3
HA-1	metals	lead	nd	mg/kg	3
HA-1	PCBs	PCB 1260	nd	ug/kg	3
HA-1	VOCs	acetone	nd	ug/kg	3
HA-1	VOCs	benzene	33	ug/kg	3
HA-1	VOCs	2-butanone	nd	ug/kg	3
HA-1	VOCs	ethylbenzene	nd	ug/kg	3
HA-1	VOCs	tetrachloroethene	nd	ug/kg	3
HA-1	VOCs	1,1,1 trichloroethane	nd	ug/kg	3
HA-1	VOCs	toluene	230	ug/kg	3
HA-1	VOCs	xylenes	7,500	ug/kg	3
HA-1	TPH	TPH	12	mg/kg	6
HA-1	metals	chromium	nd	mg/kg	6
HA-1	metals	lead	5.7	mg/kg	6
HA-1	PCBs	PCB 1260	51	ug/kg	6
HA-1	VOCs	acetone	nd	ug/kg	6
HA-1	VOCs	benzene	nd	ug/kg	6
HA-1	VOCs	2-butanone	nd	ug/kg	6
HA-1	VOCs	ethylbenzene	nd	ug/kg	6
HA-1	VOCs	tetrachloroethene	nd	ug/kg	6
HA-1	VOCs	1,1,1 trichloroethane	nd	ug/kg	6
HA-1	VOCs	toluene	11	ug/kg	6
HA-1	VOCs	xylenes	33	ug/kg	6
HA-1	TPH	TPH	nd	mg/kg	9
HA-1	metals	chromium	nd	mg/kg	9

**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
HA-1	metals	lead	nd	mg/kg	9
HA-1	PCBs	PCB 1260	66	ug/kg	9
HA-1	VOCs	acetone	nd	ug/kg	9
HA-1	VOCs	benzene	nd	ug/kg	9
HA-1	VOCs	2-butanone	nd	ug/kg	9
HA-1	VOCs	ethylbenzene	nd	ug/kg	9
HA-1	VOCs	tetrachloroethene	nd	ug/kg	9
HA-1	VOCs	1,1,1 trichloroethane	nd	ug/kg	9
HA-1	VOCs	toluene	24	ug/kg	9
HA-1	VOCs	xylenes	100	ug/kg	9
HA-2	TPH	TPH	160	mg/kg	3
HA-2	metals	chromium	nd	mg/kg	3
HA-2	metals	lead	nd	mg/kg	3
HA-2	PCBs	PCB 1260	250	ug/kg	3
HA-2	VOCs	acetone	nd	ug/kg	3
HA-2	VOCs	benzene	nd	ug/kg	3
HA-2	VOCs	2-butanone	nd	ug/kg	3
HA-2	VOCs	ethylbenzene	nd	ug/kg	3
HA-2	VOCs	tetrachloroethene	nd	ug/kg	3
HA-2	VOCs	1,1,1 trichloroethane	nd	ug/kg	3
HA-2	VOCs	toluene	nd	ug/kg	3
HA-2	VOCs	xylenes	nd	ug/kg	3
HA-2	TPH	TPH	nd	mg/kg	6
HA-2	metals	chromium	nd	mg/kg	6
HA-2	metals	lead	nd	mg/kg	6
HA-2	PCBs	PCB 1260	89	ug/kg	6
HA-2	VOCs	acetone	18	ug/kg	6
HA-2	VOCs	benzene	nd	ug/kg	6
HA-2	VOCs	2-butanone	nd	ug/kg	6
HA-2	VOCs	ethylbenzene	nd	ug/kg	6
HA-2	VOCs	tetrachloroethene	5	ug/kg	6
HA-2	VOCs	1,1,1 trichloroethane	nd	ug/kg	6
HA-2	VOCs	toluene	6	ug/kg	6
HA-2	VOCs	xylenes	17	ug/kg	6
HA-2	TPH	TPH	nd	mg/kg	9
HA-2	metals	chromium	8.9	mg/kg	9
HA-2	metals	lead	nd	mg/kg	9
HA-2	PCBs	PCB 1260	nd	ug/kg	9
HA-2	VOCs	acetone	nd	ug/kg	9
HA-2	VOCs	benzene	nd	ug/kg	9
HA-2	VOCs	2-butanone	nd	ug/kg	9
HA-2	VOCs	ethylbenzene	nd	ug/kg	9
HA-2	VOCs	tetrachloroethene	nd	ug/kg	9
HA-2	VOCs	1,1,1 trichloroethane	nd	ug/kg	9
HA-2	VOCs	toluene	nd	ug/kg	9
HA-2	VOCs	xylenes	nd	ug/kg	9
HA-3	TPH	TPH	100	mg/kg	3

**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
HA-3	metals	chromium	nd	mg/kg	3
HA-3	metals	lead	nd	mg/kg	3
HA-3	PCBs	PCB 1260	44	ug/kg	3
HA-3	VOCs	acetone	nd	ug/kg	3
HA-3	VOCs	benzene	nd	ug/kg	3
HA-3	VOCs	2-butanone	nd	ug/kg	3
HA-3	VOCs	ethylbenzene	nd	ug/kg	3
HA-3	VOCs	tetrachloroethene	nd	ug/kg	3
HA-3	VOCs	1,1,1 trichloroethane	nd	ug/kg	3
HA-3	VOCs	toluene	nd	ug/kg	3
HA-3	VOCs	xylenes	nd	ug/kg	3
HA-3	TPH	TPH	nd	mg/kg	6
HA-3	metals	chromium	nd	mg/kg	6
HA-3	metals	lead	nd	mg/kg	6
HA-3	PCBs	PCB 1260	nd	ug/kg	6
HA-3	VOCs	acetone	nd	ug/kg	6
HA-3	VOCs	benzene	nd	ug/kg	6
HA-3	VOCs	2-butanone	nd	ug/kg	6
HA-3	VOCs	ethylbenzene	nd	ug/kg	6
HA-3	VOCs	tetrachloroethene	nd	ug/kg	6
HA-3	VOCs	1,1,1 trichloroethane	nd	ug/kg	6
HA-3	VOCs	toluene	nd	ug/kg	6
HA-3	VOCs	xylenes	nd	ug/kg	6
HA-3	TPH	TPH	nd	mg/kg	9
HA-3	metals	chromium	nd	mg/kg	9
HA-3	metals	lead	nd	mg/kg	9
HA-3	PCBs	PCB 1260	nd	ug/kg	9
HA-3	VOCs	acetone	nd	ug/kg	9
HA-3	VOCs	benzene	nd	ug/kg	9
HA-3	VOCs	2-butanone	nd	ug/kg	9
HA-3	VOCs	ethylbenzene	nd	ug/kg	9
HA-3	VOCs	tetrachloroethene	nd	ug/kg	9
HA-3	VOCs	1,1,1 trichloroethane	nd	ug/kg	9
HA-3	VOCs	toluene	nd	ug/kg	9
HA-3	VOCs	xylenes	nd	ug/kg	9
HA-4	TPH	TPH	1100	mg/kg	3
HA-4	metals	chromium	nd	mg/kg	3
HA-4	metals	lead	nd	mg/kg	3
HA-4	PCBs	PCB 1260	nd	ug/kg	3
HA-4	VOCs	acetone	98	ug/kg	3
HA-4	VOCs	benzene	nd	ug/kg	3
HA-4	VOCs	2-butanone	51	ug/kg	3
HA-4	VOCs	ethylbenzene	570	ug/kg	3
HA-4	VOCs	tetrachloroethene	110	ug/kg	3
HA-4	VOCs	1,1,1 trichloroethane	52	ug/kg	3
HA-4	VOCs	toluene	1400	ug/kg	3
HA-4	VOCs	xylenes	2,900	ug/kg	3

**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
HA-4	TPH	TPH	11	mg/kg	6
HA-4	metals	chromium	nd	mg/kg	6
HA-4	metals	lead	nd	mg/kg	6
HA-4	PCBs	PCB 1260	nd	ug/kg	6
HA-4	VOCs	acetone	nd	ug/kg	6
HA-4	VOCs	benzene	nd	ug/kg	6
HA-4	VOCs	2-butanone	nd	ug/kg	6
HA-4	VOCs	ethylbenzene	33	ug/kg	6
HA-4	VOCs	tetrachloroethene	8	ug/kg	6
HA-4	VOCs	1,1,1 trichloroethane	nd	ug/kg	6
HA-4	VOCs	toluene	69	ug/kg	6
HA-4	VOCs	xylenes	250	ug/kg	6
HA-4	TPH	TPH	nd	mg/kg	9
HA-4	metals	chromium	nd	mg/kg	9
HA-4	metals	lead	nd	mg/kg	9
HA-4	PCBs	PCB 1260	nd	ug/kg	9
HA-4	VOCs	acetone	nd	ug/kg	9
HA-4	VOCs	benzene	nd	ug/kg	9
HA-4	VOCs	2-butanone	nd	ug/kg	9
HA-4	VOCs	ethylbenzene	nd	ug/kg	9
HA-4	VOCs	tetrachloroethene	nd	ug/kg	9
HA-4	VOCs	1,1,1 trichloroethane	nd	ug/kg	9
HA-4	VOCs	toluene	nd	ug/kg	9
HA-4	VOCs	xylenes	nd	ug/kg	9
HA-5	TPH	TPH	10,000	mg/kg	3
HA-5	metals	chromium	nd	mg/kg	3
HA-5	metals	lead	nd	mg/kg	3
HA-5	PCBs	PCB 1260	1,500	ug/kg	3
HA-5	VOCs	acetone	220	ug/kg	3
HA-5	VOCs	benzene	48	ug/kg	3
HA-5	VOCs	2-butanone	nd	ug/kg	3
HA-5	VOCs	ethylbenzene	nd	ug/kg	3
HA-5	VOCs	tetrachloroethene	nd	ug/kg	3
HA-5	VOCs	1,1,1 trichloroethane	nd	ug/kg	3
HA-5	VOCs	toluene	nd	ug/kg	3
HA-5	VOCs	xylenes	nd	ug/kg	3
HA-5	TPH	TPH	1,300	mg/kg	6
HA-5	metals	chromium	nd	mg/kg	6
HA-5	metals	lead	nd	mg/kg	6
HA-5	PCBs	PCB 1260	200	ug/kg	6
HA-5	VOCs	acetone	nd	ug/kg	6
HA-5	VOCs	benzene	nd	ug/kg	6
HA-5	VOCs	2-butanone	nd	ug/kg	6
HA-5	VOCs	ethylbenzene	nd	ug/kg	6
HA-5	VOCs	tetrachloroethene	nd	ug/kg	6
HA-5	VOCs	1,1,1 trichloroethane	nd	ug/kg	6
HA-5	VOCs	toluene	56	ug/kg	6



**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
HA-5	VOCs	xylene	350	ug/kg	6
HA-5	TPH	TPH	790	mg/kg	9
HA-5	metals	chromium	5.2	mg/kg	9
HA-5	metals	lead	nd	mg/kg	9
HA-5	PCBs	PCB 1260	nd	ug/kg	9
HA-5	VOCs	acetone	98	ug/kg	9
HA-5	VOCs	benzene	nd	ug/kg	9
HA-5	VOCs	2-butanone	nd	ug/kg	9
HA-5	VOCs	ethylbenzene	nd	ug/kg	9
HA-5	VOCs	tetrachloroethene	nd	ug/kg	9
HA-5	VOCs	1,1,1 trichloroethane	nd	ug/kg	9
HA-5	VOCs	toluene	nd	ug/kg	9
HA-5	VOCs	xylene	nd	ug/kg	9
HA-6	TPH	TPH	nd	mg/kg	3
HA-6	metals	chromium	nd	mg/kg	3
HA-6	metals	lead	nd	mg/kg	3
HA-6	PCBs	PCB 1260	nd	mg/kg	3
HA-6	VOCs	acetone	nd	ug/kg	3
HA-6	VOCs	benzene	nd	ug/kg	3
HA-6	VOCs	2-butanone	nd	ug/kg	3
HA-6	VOCs	ethylbenzene	nd	ug/kg	3
HA-6	VOCs	tetrachloroethene	nd	ug/kg	3
HA-6	VOCs	1,1,1 trichloroethane	nd	ug/kg	3
HA-6	VOCs	toluene	nd	ug/kg	3
HA-6	VOCs	xylene	nd	ug/kg	3
HA-6	TPH	TPH	nd	mg/kg	6
HA-6	metals	chromium	nd	mg/kg	6
HA-6	metals	lead	nd	mg/kg	6
HA-6	PCBs	PCB 1260	nd	mg/kg	6
HA-6	VOCs	acetone	nd	ug/kg	6
HA-6	VOCs	benzene	nd	ug/kg	6
HA-6	VOCs	2-butanone	nd	ug/kg	6
HA-6	VOCs	ethylbenzene	nd	ug/kg	6
HA-6	VOCs	tetrachloroethene	nd	ug/kg	6
HA-6	VOCs	1,1,1 trichloroethane	nd	ug/kg	6
HA-6	VOCs	toluene	nd	ug/kg	6
HA-6	VOCs	xylene	nd	ug/kg	6
HA-6	TPH	TPH	nd	mg/kg	9
HA-6	metals	chromium	nd	mg/kg	9
HA-6	metals	lead	nd	mg/kg	9
HA-6	PCBs	PCB 1260	nd	mg/kg	9
HA-6	VOCs	acetone	nd	ug/kg	9
HA-6	VOCs	benzene	nd	ug/kg	9
HA-6	VOCs	2-butanone	nd	ug/kg	9
HA-6	VOCs	ethylbenzene	nd	ug/kg	9
HA-6	VOCs	tetrachloroethene	nd	ug/kg	9
HA-6	VOCs	1,1,1 trichloroethane	nd	ug/kg	9

**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
HA-6	VOCs	toluene	nd	ug/kg	9
HA-6	VOCs	xylenes	nd	ug/kg	9
HA-7	TPH	TPH	nd	mg/kg	3
HA-7	metals	chromium	7.5	mg/kg	3
HA-7	metals	lead	nd	mg/kg	3
HA-7	PCBs	PCB 1260	nd	mg/kg	3
HA-7	VOCs	acetone	nd	ug/kg	3
HA-7	VOCs	benzene	nd	ug/kg	3
HA-7	VOCs	2-butanone	nd	ug/kg	3
HA-7	VOCs	ethylbenzene	nd	ug/kg	3
HA-7	VOCs	tetrachloroethene	nd	ug/kg	3
HA-7	VOCs	1,1,1 trichloroethane	nd	ug/kg	3
HA-7	VOCs	toluene	nd	ug/kg	3
HA-7	VOCs	xylenes	nd	ug/kg	3
HA-7	TPH	TPH	nd	mg/kg	6
HA-7	metals	chromium	nd	mg/kg	6
HA-7	metals	lead	nd	mg/kg	6
HA-7	PCBs	PCB 1260	nd	mg/kg	6
HA-7	VOCs	acetone	nd	ug/kg	6
HA-7	VOCs	benzene	nd	ug/kg	6
HA-7	VOCs	2-butanone	nd	ug/kg	6
HA-7	VOCs	ethylbenzene	nd	ug/kg	6
HA-7	VOCs	tetrachloroethene	nd	ug/kg	6
HA-7	VOCs	1,1,1 trichloroethane	nd	ug/kg	6
HA-7	VOCs	toluene	nd	ug/kg	6
HA-7	VOCs	xylenes	nd	ug/kg	6
HA-7	TPH	TPH	nd	mg/kg	9
HA-7	metals	chromium	nd	mg/kg	9
HA-7	metals	lead	nd	mg/kg	9
HA-7	PCBs	PCB 1260	nd	mg/kg	9
HA-7	VOCs	acetone	nd	ug/kg	9
HA-7	VOCs	benzene	nd	ug/kg	9
HA-7	VOCs	2-butanone	nd	ug/kg	9
HA-7	VOCs	ethylbenzene	nd	ug/kg	9
HA-7	VOCs	tetrachloroethene	nd	ug/kg	9
HA-7	VOCs	1,1,1 trichloroethane	nd	ug/kg	9
HA-7	VOCs	toluene	nd	ug/kg	9
HA-7	VOCs	xylenes	nd	ug/kg	9
HA-8	TPH	TPH	nd	mg/kg	3
HA-8	metals	chromium	nd	mg/kg	3
HA-8	metals	lead	nd	mg/kg	3
HA-8	PCBs	PCB 1260	4,500	ug/kg	3
HA-8	VOCs	acetone	nd	ug/kg	3
HA-8	VOCs	benzene	nd	ug/kg	3
HA-8	VOCs	2-butanone	nd	ug/kg	3
HA-8	VOCs	ethylbenzene	nd	ug/kg	3
HA-8	VOCs	tetrachloroethene	190	ug/kg	3

**Table 1: Historical Data for the Dico Oil Company Site, 1845 E. Willow St., Sig**

Sample	Method	Analyte	Result	units	depth
HA-8	VOCs	1,1,1 trichloroethane	nd	ug/kg	3
HA-8	VOCs	toluene	230	ug/kg	3
HA-8	VOCs	xylenes	1,100	ug/kg	3
HA-8	TPH	TPH	1,800	mg/kg	6
HA-8	metals	chromium	nd	mg/kg	6
HA-8	metals	lead	nd	mg/kg	6
HA-8	PCBs	PCB 1260	410	ug/kg	6
HA-8	VOCs	acetone	nd	ug/kg	6
HA-8	VOCs	benzene	nd	ug/kg	6
HA-8	VOCs	2-butanone	nd	ug/kg	6
HA-8	VOCs	ethylbenzene	nd	ug/kg	6
HA-8	VOCs	tetrachloroethene	nd	ug/kg	6
HA-8	VOCs	1,1,1 trichloroethane	nd	ug/kg	6
HA-8	VOCs	toluene	nd	ug/kg	6
HA-8	VOCs	xylenes	150	ug/kg	6
HA-8	TPH	TPH	nd	mg/kg	9
HA-8	metals	chromium	nd	mg/kg	9
HA-8	metals	lead	nd	mg/kg	9
HA-8	PCBs	PCB 1260	2,600	ug/kg	9
HA-8	VOCs	acetone	95	ug/kg	9
HA-8	VOCs	benzene	nd	ug/kg	9
HA-8	VOCs	2-butanone	nd	ug/kg	9
HA-8	VOCs	ethylbenzene	nd	ug/kg	9
HA-8	VOCs	tetrachloroethene	nd	ug/kg	9
HA-8	VOCs	1,1,1 trichloroethane	nd	ug/kg	9
HA-8	VOCs	toluene	nd	ug/kg	9
HA-8	VOCs	xylenes	67	ug/kg	9

nal Hill, CA

location

e, Signal Hill

---

trench excavation, south wall east side

---

trench excavation, east wall

---

trench excavation, west wall

---

trench excavation, south wall west side

---

soil from trench excavation

---

soil from trench excavation

---

soil from trench excavation

---

soil from trench excavation

---

t, Dico Oil Company; State Of

---

Soil from trench excavation, fence line

---

Soil from trench excavation, fence line

---

Soil from trench excavation, fence line

---

f California Environmental Protection

---

Soil from trench in berm area

---

Soil from trench in berm area

---

ental Protection Agency Department of

---

soil from berm area

soil from berm area

soil from berm area

soil from berm area

---

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

nal Hill, CA

location

soil from berm area

soil from berm area

soil from berm area

---

soil from berm area

soil from berm area

soil from berm area

soil from berm area

*soil from berm area*

---

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

---

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

---

soil from berm area

*soil from berm area*

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

---

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

soil from berm area

**nal Hill, CA**

**location**

soil from berm area  
soil from berm area  

---

soil from berm area  
soil from berm area  
soil from berm area  
soil from berm area  
soil from berm area  
soil from berm area  
soil from berm area  
soil from berm area

---

background  
background  
background  
background  
background  
background  
background  
background  
background  
background

---

**eport; Geological Research, Inc.,**

---

Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area

---

Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area  
Soil boring in berm area

---

Soil boring in berm area  
Soil boring in berm area









**nal Hill, CA**

**location**

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

nal Hill, CA

location

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

**nal Hill, CA**

**location**

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

Soil boring in berm area

---

Soil boring in berm area