ENTRIX, Inc., "Hazards Evaluation of the Newhall Ranch Habitat Management Plan and Spineflower Conservation Plan Project" (September 2008)

Hazards Evaluation of the Newhall Ranch Habitat Management Plan and Spineflower Conservation Plan Project

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T A B L E S

A T T A C H M E N T S

1.1 PROJECT OVERVIEW

The proposed project is comprised of the Newhall Ranch Resource Management and Development Plan (RMDP) and the Newhall Land Spineflower Conservation Plan (SCP). The proposed RMDP consists of those improvements, facilities and activities associated with the implementation of the Newhall Ranch Specific Plan (NRSP). The NRSP allows for residential, mixed-use and non-residential planned development consisting of 21,308 homes, open space, recreational uses, public facilities, and construction of a water reclamation plant. The RMDP also has been prepared to implement various mitigation measures required for implementing the NRSP, including drainage facilities, bridges, building pads, roads, trails, and facilities associated with the approved Newhall Ranch water reclamation plant.

The proposed SCP consists of a conservation and management framework to facilitate the permanent protection and management of designated San Fernando Valley spineflower preserve areas. The proposed SCP encompasses the NRSP area and portions of the Valencia Commerce Center and Entrada, in order to conduct comprehensive conservation planning for all Newhall land properties within Los Angeles County that contain known spineflower populations.

This report focuses on potential hazards, hazardous materials, and public safety issues that have the potential to affect the two components of the proposed Project. The potential hazards included in this analysis are as follows:

- Oil and natural gas production that has occurred on and adjacent to the NRSP and SCP planning areas,
- High voltage electrical transmission lines,
- High pressure gas lines located on the NRSP planning area,
- Chiquita Canyon Landfill,
- Castaic/Forebay Reservoir and dam, and
- Wildland fires.

The report first describes the environmental setting for each of these issues, followed by a discussion of the regulatory framework governing them.

1.2 OIL FIELD OPERATIONS AND REMEDIATION

Newhall Ranch is located in the Santa Barbara-Ventura Basin. There are three oil and natural gas fields on the Newhall Ranch site: the Newhall-Potrero Field, the Del Valle Field, and the Castaic Junction Field. The Newhall Ranch is one of Southern California's fastest growing communities, and as such there is conversion of oil field properties to industrial, commercial, residential, and open space land uses.

1.2.1 History of Oil Production in Project Area

Oil has been historically utilized in the Southern California area by Native American populations for thousands of years, and since 1850 at least 155 oil and gas fields have been discovered in the greater Santa Barbara-Ventura basin. The first salable petroleum in California was the oil found in 1850 at Pico Canyon near Newhall. In 1866, Thomas R. Bard drilled several wells on the Rancho Ojai, near Ventura. The most successful of these was "Ojai", which produced from 15 to 20 barrels of oil per day from a depth of 550 feet. This well was the best to date and would be considered the first California oil well commercially productive. Drilling activity declined by 1867, and many California wells capable of producing oil were idled because of over-production in Pennsylvania. The Pennsylvania oil was brought to San Francisco at a price lower than California operators could meet. The oil boom began in the 1890s, when Edward L. Doheny discovered oil at 2nd Street and Glendale Boulevard in downtown Los Angeles. His find set off a "second black gold rush" that lasted several years. Los Angeles became a center of world oil production in the early 20th Century (AAPG, 1973).

Drilling activity significantly increased in the 1920s with major finds in Whittier, Montebello, Compton, Torrance, and Inglewood. The largest strikes were in Huntington Beach in 1920, and Santa Fe Springs and Signal Hill in 1921. These three huge fields upset national oil prices and glutted existing storage facilities. By the turn of the century almost 1,500 oil wells operated throughout Los Angeles. Oil production continues throughout the Santa Barbara-Ventura and Los Angeles Basin; between 1952 and 1988 some 1,000 wells pumped 375 million barrels of oil.

1.2.2 Santa Barbara-Ventura Basin

The Santa Barbara-Ventura Basin is structurally bound by the Santa Ynez fault on the north, the Santa Rosa Island-Santa Cruz Island-Santa Monica fault systems on the south, and the San Gabriel fault on the east. The basin is a major hydro-carbon province with estimated reserves of 20 to 30 billion barrels (bbl) (Link, 1988). Within the Santa Barbara-Ventura Basin, the following formations are noted as maintaining oil or gas reserves:

- Non-marine Eocene to early Miocene Sespe Formation;
- Shallow marine Vaqueros Formation;
- Eocene Matilija, Coldwater Sandstone, and Llajas Formations;
- Paleocene clastic rocks;
- Pliocene and Pleistocene Pico Formation;
- Miocene and lower Pliocene Rincon, Monterey, Modelo, Sisquoc, and Santa Margarita Formations

The primary components of the rock strata that comprise these oil or gas reservoirs consist of various fractured sandstones and fine-grained silicious rocks.

Northwest of the Castaic Junction and Newhall-Potrero oil fields is the trough of the Santa Barbara-Ventura Basin where organic-rich shale of the Modelo Formation (upper Monterey Formation equivalent) provides mature source for oil in the basin (Davis and Namson, 2004). The Castaic Junction and Newhall-Potrero oil fields are effectively trapped by late Pliocene and

Quaternary anticlines along the southwest margin of the eastern Santa Barbara-Ventura Basin (Figure A-1, Attachment A).

1.2.3 Overview of Urban Development in Oil Fields and Regulatory Oversight

After oil production operations are completed, the oil fields are remediated (cleaned up) and made available for development or open space areas. Oil field properties offer open areas available for development in Los Angeles County. The timing of development is an interplay between the price of oil and land value for other uses. Frequently, oil production can continue on a reduced footprint, allowing for multiple land uses in a process known as "islandising" of the oil production. In many cases, however, the entire oil field leases are remediated and sold. Since southern California is one of the largest oil-producing provinces in the world, many communities are placed on former oil fields.

In response to land use conflicts and hazards to public health and safety from improperly abandoned oil field facilities, the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) developed a Construction-Site Plan Review Program in 1983. The program is an integral part of building and safety procedures for urban development of oil field properties and helps to ensure that construction does not take place over improperly abandoned wells or other oil field infrastructure. Under DOGGR authority, and before issuing permits, local permitting agencies review and implement DOGGR's pre-construction, oil-well recommendations and requirements. This process alleviates land use conflicts and allows for safe and responsible urban development of oil field properties.

The Public Resources Code, Division 3, Chapters 1 through 4, governs the regulatory functions of DOGGR. The code charges the Division with the responsibility of supervising oil, gas, and geothermal well drilling, operation, maintenance, and abandonment operations to prevent damage to life, health, property, and natural resources. More specifically, DOGGR must encourage the wise development of oil, gas, and geothermal resources through good conservation and engineering practices, and prevent the following:

- Damage to underground oil, gas, and geothermal deposits;
- Damage to underground and surface waters suitable for irrigation or domestic use;
- Other surface environmental damage, including subsidence; and
- Conditions that may be hazardous to life or health.

DOGGR is also charged with implementing Section 3208.1(a) of the Public Resources Code, which states, in part, that:

> To prevent, as far as possible, damage to life, health, and property, the supervisor or district deputy may order reabandonment of any previously abandoned … because the owner of the property on which the well is located proposes construction on the property that would prevent or impede access to the well for purposes of remedying a currently perceived future problem.

After the statute was enacted in 1983, DOGGR developed the "Construction-Site Review Program," which assists local permitting agencies that regulate land-use development by identifying and reviewing the status of oil wells near or beneath proposed structures.

DOGGR considers 10 feet to be the minimum distance needed to maintain access to a well for potential future remedial work. Before any construction can begin, wells within 10 feet of the proposed construction must be plugged and abandoned to current standards and tested for gas or fluid leakage. Wells 10 feet or more from a proposed structure do not need to be plugged and abandoned to current standards unless future well access will be limited by topography, loss of entry or workspace, or grading alteration. Wells in this category must also be tested for gas or fluid leakage. Wells beneath a proposed structure must be plugged and abandoned to current standards and tested for gas or fluid leakage. For wells never found even after intensive surveying and excavation efforts by DOGGR and developers, DOGGR typically recommends surface control for gas that may leak into proposed structures near a well's historic location. Such controls may include the installation of gas leak detection sensors located in basements or low-lying areas where gas may accumulate. These measures help to ensure the continued protection of health and safety for urban development in proximity to oil fields.

1.2.4 Oil Fields Operations and Conditions

The following potential sources of contamination are typically found at oil exploration and production sites:

- Improperly abandoned wells;
- Sumps and pits;
- Oil and gas gathering and distribution pipelines;
- Tank bottom sludge;
- Gas condensate;
- Ash generated from generators;
- Mercury spills from gas meters; and
- PCBs from compressors or transformers.

Petroleum contamination has historically been the primary criterion for environmental management at exploration and production sites (McMillen et al., 2001). Crude oil is a complex mixture of hydrocarbons, and the compositions depend on the oil field from which it is produced. Most crude oils produced in California are termed "heavy", and have an API gravity of less than 12. Light crudes, with an API gravity of greater than 20, occur less commonly. Oil is very viscous, and tends to migrate less than 50 feet from the source area (McMillen et al., 2001). When mixed with less viscous gas condensate or fuels, migration can be more extensive and groundwater may be adversely impacted.

Tank bottom sludges and other sources can also contain elevated levels of metals. It is unusual to find volatile organic compounds or semi-volatile organic compounds that exceed regulatory standards.

1.2.5 Oil Field Abandonment

In 1976, the Resource Conservation and Recovery Act (RCRA) was enacted to regulate solid waste for all but a few exempt wastes. Wastes associated oil and gas with exploration and production are exempt from RCRA, which states that oil and gas wastes should not be regulated as hazardous waste, if they are being managed under existing regulatory programs in a way that adequately mitigates or prevents harm to the environment. Therefore, it is up to the state regulatory agencies to determine adequate management requirements. California has a network of regulatory agencies with responsibility to monitor and enforce conditions on existing and historic oil fields.

Under current law, an oil field operator who abandoned a well under archaic standards cannot be required to reabandon that well unless it is leaking or presents an imminent threat or hazard. However, through the building permit process, local governments can, if recommended by DOGGR, require that a well be reabandoned to the current State standards before any permanent structure is placed over or near it.

In addition to proper well abandonment, oil sump abandonment is also of concern. An oil sump is a holding area or depressions in the ground historically used to contain water, drilling mud, and oily soil, during the drilling process. Assembly Bill 2209 became effective January 1, 1979, and required regular sump inspection, maintenance, and correction. Within five years, most of the sumps and pits containing oil from production operations had been eliminated or screened. Eliminating the hazardous oil field sumps also helped to alleviate the problem of oil spills.

As discussed in Section 1.2.3, Overview of Urban Development, as land value exceeds the value of oil productions, fields are abandoned to make way for other development. In most cases, oil field operations are “islandised” to allow development as field operations are curtailed. Lands that are held in lease or fee-lease terms typically require restoration. In both cases, future land use is dependent on remediating the oil field to support the proposed alternate land use. There are multiple agencies with jurisdictional over lease abandonment and site restoration activities in California, including the Regional Water Quality Control Board (RWQCB), the Department of Toxic Substance Control (DTSC), and local authorities. However, the lead agency for oil production activities is DOGGR and any other agency with jurisdictional authority is required to work under the auspices of DOGGR to ensure the protection of the public and environment.

Concerns related to methane gas and oil seepage, contaminated solids, leaking wells, and wells not plugged and abandoned to current standards are all issues associated with urban development of oil field properties. Earlier wells were abandoned to specifications established for oil fields located in rural areas. The possibility that any form of urban development would occur in an oil field was considered highly unlikely. In addition, many wells in the older fields, drilled prior to 1915, were not regulated by State law. As a result, records of exact well location or mechanical condition may be unavailable or inaccurate. However, wells drilled since 1915 are maintained by DOGGR, including those in the Project area. As such, DOGGR should provide sufficient information to evaluate the current condition of any well that may be in an area proposed for surface development.

Current DOGGR abandonment standards require that all oil, gas, and injection wells are plugged and abandoned in accordance with DOGGR regulations, including measures to prevent

contamination of fresh water and other natural resources, to protect the integrity of resources, and to protect life, health, the environment and property. The final well plugging and site restoration are witnessed and approved by DOGGR inspectors. Upon completion of well plugging operations, excavations are backfilled with clean material and compacted and the site is restored to as natural state as practicable.

1.2.6 Oil Fields in Specific Plan Area

As described in Section 1.2.2, Santa Barbara-Ventura Basin, there are three oil and natural gas fields on the Newhall Ranch site: the Newhall-Potrero Field discovered in 1937, the Del Valle Field discovered in 1979, and the Castaic Junction Field discovered in 1950. The Newhall-Potrero Field is currently operated by Vintage Production California LLC (Vintage), a subsidiary of Occidental Petroleum Corp.), and the Castaic Junction Field, which has already been abandoned and remediated, was previously operated by Exxon Company, USA. The Del Valle field is also within the project site with portions of the field being operated by: LBTH, and Vintage.

The Newhall-Potrero Oil Field is an active field located within the central portion of the Newhall Ranch site. It lies within Potrero Canyon and produces oil and natural gas from an asymmetrical, northwesterly-plunging, faulted anticline that is approximately four miles long and one mile wide. The oil field comprises 1,370 acres and two leases: the Rancho San Francisco (RSF) lease of 1,270 acres and the Ferguson lease of 100 acres, both of which are operated by Vintage.

The production facility includes well sites, six production satellite stations, a shipping tank area, a shop area, a warehouse area, tank batteries, water tanks, pipelines, and other production facilities. Of the 163 well sites, 39 are active, 80 are idle, and 44 have been abandoned.

The Newhall-Potrero Oil Field is currently being operated by Vintage, while the historical sump locations and discontinued facilities are being actively remediated by Kerr-McGee, a subsidiary of the Anadarko Petroleum Corporation.

The Castaic Junction oil field comprises 4,350 acres and is located within the northeastern portion of the Newhall Ranch project site. The production facility had included water tanks; office facilities; a water disposal system; tank batteries; condensate tanks; oil, injection, and gas wells; sumps; a flare station; a gas compressor plant area with a compressor unit, engine house, gas plant building, cooling towers, tanks for methanol, fuel, glycol, heater units, and miscellaneous other tanks; a chemical storage facility; heater treaters; drill pads; electrical panels with and without overhead transformers; and pumps, trenches, panels, and piping associated with the facilities. The entire field was abandoned in December 1995 with all oil, gas, and injection wells plugged and abandoned in accordance with DOGGR regulations. The final well plugging and site restoration were witnessed and approved by DOGGR inspectors. Upon completion of the well plugging operations, the excavations were back filled with clean material and compacted.

The two smaller oil and natural gas fields listed above are located north of the Santa Clara River. The LBTH Field is 40 acres in size and is located approximately one-quarter of a mile north of State Route (SR) 126 along the western side of Chiquito Canyon Road. The Blackhawk Field is

174 acres in size and is located north of SR-126, at the northwestern end of San Martinez Grande. Both of these fields are active and have producing wells that will remain in operation until operations are no longer economically viable. The mineral leases for these fields require that the lands be fully remediated in conjunction with the future abandonment of oil and natural gas production operations.

All of the oil field operations in the Newhall-Potrero, Castaic Junction, LBTH, and Blackhawk oil fields are regulated by DOGGR. Specifically, DOGGR supervises the drilling, operation, maintenance, and plugging and abandonment of all oil and gas wells. The DOGGR's programs include: well permitting and testing; safety inspections; oversight of production and injection projects; environmental lease inspections; idle-well testing; inspecting oil field tanks, pipelines, and sumps; hazardous and orphan well plugging and abandonment contracts; and subsidence monitoring. As urban development increases and open space decreases, this oversight serves to protect the public's health and safety while improving compatibility between existing oil operations and existing and proposed urban development.

1.2.7 Potential Oil Field Contaminants

Contaminants commonly associated with oil and natural gas fields include total petroleum hydrocarbons (TPH); volatile organic compounds (VOCs), including Benzene, toluene, ethylbenzene, and xylenes, referred together as BTEX; semi volatile compounds (SVOCs), including polynuclear aromatic hydrocarbons (PAHs); polychlorinated biphenyls (PCBs); hydrogen sulfide; and metals, including arsenic, lead, mercury, vanadium, barium, and hexavalent chromium. Methane gas is also associated with abandoned wells.

Section 2.0, Review of Site Investigations and Remediation, summarizes the available documentation regarding potential contamination and remediation performed at the subject area. Specifically, Section 2.0, Review of Site Investigations and Remediation, summarizes technical reports and supporting documentation provided by Newhall for the Rancho San Francisco and Castaic Junction Oil Field and specific plan development areas, including Entrada, Mission Village, Landmark Village, and Homestead North and South as shown in Figure A-2 (Attachment A).

Site investigations were also performed for the Magic Mountain area adjacent to Feedmill Road at The Old Road. These site investigations were performed to assess the oil well related issues and included locating each well with geophysical, magnetometer, and other methods for DOGGR to perform leak testing. During this investigation no wells were noted by DOGGR as leaking. Each located well was identified and re-covered with soil.

There is the potential for the occurrence of methane gas in areas of oil production. The presence of methane gas can either be remediated (source removal) or mitigated (venting of gas and interruption of pathways). Some source removal has already occurred at the project site as part of the abandonment and remediation of the Castaic Junction Oil Field and the Rancho San Francisco Oil Field in accordance with DOGGR requirements to abate methane hazards. Active fields or deferred sites will be addressed prior to site development, in accordance with existing regulatory requirements.

SECTION 2: REVIEW OF SITE INVESTIGATIONS AND REMEDIATION

2.1 NEWHALL SPECIFIC PLAN DEVELOPMENT AREAS

The following section summarizes technical reports and supporting documentation provided by Newhall for assessment of the specific plan development areas, including Entrada, Mission Village, Landmark Village, and Homestead North and South as shown in Figure A-2 (Attachment A). The reports also include specific investigations of oil field-related hazards and their remediation at the Rancho San Francisco Oil Field and Castaic Junction Oil Field.

The Specific Plan areas have been evaluated for potential hazards related to oil field activity, and for other potential environmental hazards. In this chapter, the reports prepared for the oil fields are described first, followed by a summary of the investigation and remediation work conducted for each Specific Plan area. This summary of work includes both oil field and non-oil field studies.

2.2 SUMMARY OIL FIELD ASSESSMENT AND REMEDIATION IN SPECIFIC PLAN AREA

This section summarizes technical reports and supporting documentation provided by Newhall for the Rancho San Francisco and Castaic Junction Oil Fields. The work has been conducted in compliance with the regulatory framework described in Section 4.1, Regulatory Framework.

2.2.1 Castaic Junction Oil Field

The following reports have been prepared describing assessment and remediation on the Castaic Junction Oil Field:

- Castaic Junction Site Abandonment Phase 1 – Final Report prepared by Downtown Production Organization Operations Integrity-Compliance dated October 1995.
- Castaic Junction Phase II prepared by Downtown Production Organization Operations Integrity-Compliance dated May 16, 1996.
- In March 1996, MSE Environmental, Inc. prepared a report summarizing their Phase II investigation at the Castaic Oil Field.
- Closure Report Castaic Junction Oil Field prepared by Exxon Company dated July 1996.
- Final Closure Report Castaic Junction Oil Field prepared by Exxon Company, USA dated February 1997.
- Phase I Environmental Site Assessment – Proposed The Mesas East prepared by BA Environmental dated February 7, 2005.

The Castaic Junction Oil Field is located in the northeast portion of the Newhall Ranch Specific Plan area. It is primarily within the Mission Village project area, but includes portions of the

Entrada and Landmark project areas as shown in Figure A-3 (Attachment A). The oil field was operated between the late 1940s and 2002 (BA Environmental, 2005). Site decommissioning activities commenced in 1988 with a significant portion occurring between 1995 and 1997.

A description of the environmental activities that were conducted within each of the Newhall project areas is provided in the following sections. Based on available information, no environmental activities associated with the Castaic Oil Field were conducted within the Landmark project area. These areas will be addressed prior to development in Landmark project area.

2.2.2 Rancho San Francisco Oil Field

The following sections describe the environmental activities associated with the Rancho San Francisco Oil and Gas Lease area based on information provided in the following documents:

- Evaluation of Existing Site Characterization Data
  Newhall Land and Development Co.
  Newhall, California
  Volume 1 and 2
  Waterstone Environmental, Inc.
  February 28, 2000

- Brown and Caldwell Site Closure Certifications 2004, 2005, 2006

The Rancho San Francisco Oil and Gas Lease area is located in the central portion of the Newhall Ranch Specific Plan area within the Homestead South and Potrero Valley project areas as shown in Figure A-6 (Attachment A). The oil and gas development commenced in 1935 (RSF Lease Amendment 2003) and current operations at the field are governed pursuant to a negotiated settlement agreement reached in 2003 between Newhall and the oil and gas operators on the property. Specifically, the oilfield impacts to the Rancho San Francisco Oil and Gas Lease area are currently being remediated, and will ultimately be fully remediated, under detailed environmental cleanup protocols. These protocols specify a cleanup standard for total petroleum hydrocarbons (TPH) of 100 mg/kg and require excavation, removal and proper off-site disposal and/or treatment of any soils impacted with TPH concentrations in excess of this standard. For sites that have already been remediated, this TPH standard has been reached. This standard is significantly more stringent and thus more protective of human health and the environment than the cleanup standards normally imposed by the governmental agencies that routinely oversee the cleanup of contaminated sites, including the CRWQCB-LA, the DTSC and DOGGR, who typically accept TPH remediation to contaminant levels ranging between 1,000 mg/kg and 10,000 mg/kg, depending on the development use of the affected property. The settlement agreement requires that any other oil field contaminants identified on the Rancho San Francisco Oil and Gas Lease be remediated to state-determined contaminant levels suitable for residential development, thus ensuring appropriate standards for the proposed development of the area.

Remediation of the Rancho San Francisco Oil and Gas area began shortly after the settlement agreement was executed in 2003 and is currently on-going. The most significantly impacted

areas on the Rancho San Francisco Oil and Gas Lease resulted from historic crude-storage practices that were utilized primarily in the 1940s and 1950s. Remediation of these areas was prioritized to generally affect the cleanup of the most impacted areas first. Remediation is conducted under the oversight of an independent, environmental consultant (i.e. Brown and Caldwell) that witnesses the process of the confirmation sampling required to demonstrate compliance with the cleanup protocols, separately reviews the laboratory data resulting from that sampling, has the right to require further cleanup and confirmation sampling as necessary to ensure compliance with the cleanup protocols, and who ultimately issues certification that remediation has been completed in accordance with the more stringent cleanup standards required by the settlement agreement.

As a result of the settlement agreement, these same cleanup requirements were made applicable to ongoing and future oil and gas operations on the Rancho San Francisco Oil and Gas Lease area, to ensure that these more stringent cleanup standards will apply to all of the oil and gas operations on the property. As a result of the settlement agreement and related 2003 Amendment to the Rancho San Francisco Oil and Gas Lease, Newhall acquired the right to buy-out the entirety of the oil and gas lease or any active well-site at any time during the remainder of the oil and gas lease to permit the orderly development of the surface consistent with the specific plan for the area. If not earlier terminated by Newhall, the Rancho San Francisco Oil and Gas Lease will automatically end in the year 2020. Upon termination of the lease, whenever that may occur, any remaining environmental impacts from oil and gas operations will be remediated in accordance with the more stringent cleanup standards established by the settlement agreement.

A description of the environmental activities associated with the Rancho San Francisco Oil and Gas Lease that were conducted within the Homestead South and Potrero Valley project areas is provided in the following sections. The description is based on data provided in Waterstone (2000) and site closure certifications issued by Brown and Caldwell.

2.3 MISSION VILLAGE

2.3.1 Oil Field Investigation/Remediation Activities

The Mission Village area is located primarily within the Castaic Junction Oil Field Figure A-3 (Attachment A). The decommissioning activities included general site restoration and site-specific remediation and restoration. General site restoration activities included plugging and abandoning all oil, gas, and injection wells in accordance with DOGGR regulations, backfilling the excavations associated with each well with clean, compacted material, and ripping the surface area surrounding the well sites to promote natural revegetation.

The remediation activities included cleanup of areas based on the Level B cleanup levels from the CRWQCB-LA Interim Guidance for Remediation of Petroleum Impacted Sites, Soil Screening Levels dated November 1994. The general remediation plan consisted of excavating areas of visually impacted soil and, following excavation, ripping the areas to promote natural revegetation. The areas within the Mission Village project area that were remediated under the general remediation plan consist of Tank Battery 2 and associated gully and bank, the drainage

area near Tank Battery 5, Tank Battery 6/7, the Condensate Tank area, and the Round House area. These areas are shown in Figure A-4 (Attachment A).

The areas within the Mission Village project area for which documented investigation and remediation activities occurred are as follows:

- Tank Battery 2
- Tank Battery 3
- Tank Battery 4
- Tank Battery 6/7 including the Flare Stack Sump
- Gas Plant Area including Gas Plan Sump 17 and the Cooling Tower Sump
- Condensate Tank
- Round House
- Drill Pad 63
- Drill Pit Site Investigation at Wells 4, 11, 15, and 49
- Trash Pit Area Southwest of Well No. 11

The location of these areas is provided in Figure A-4 (Attachment A). A summary of the activities conducted in each of these areas is provided in the following sections and a compilation of the analytical results is provided in Tables B-1a through B-1c (Attachment B).

Tank Battery 2 (TB-2)

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of seven trenches and the collection of 23 soil samples for chemical analysis (DPO, 1995). Based on the results of the investigation, DPO recommended the removal of asphaltic material in selected areas including the drainage area south of the road and facility and additional investigation in selected areas.

In January 1996, MSE Environmental, Inc. installed five soil borings and collected 37 soil samples for chemical analysis. The soil borings were installed adjacent to and outside of an existing excavation to define the lateral and vertical extent of petroleum hydrocarbon impacts. The soil boring depths ranged from 40.5 feet below ground surface (bgs) to 100 feet bgs and soil samples were collected every five feet. Groundwater was encountered at 96 feet bgs. DPO (1996) indicated that previous excavation activities in the area removed the bulk of the impacted soil and recommended continuing the excavation either until clean sidewall material is encountered or to the perimeter defined by the soil borings.

Exxon (1996) reported that activities conducted in the TB-2 area consisted of excavating and removing impacted soil in the vicinity of the former tanks, at a sump located northwest of the tank battery, and an area located southwest of the sump. Confirmation samples were collected from the western wall and the base of the excavation associated with the area located southwest of the sump. Adequate cleanup of the excavation near the former tanks was determined based on the analytical results from the soil borings installed around the excavation in January 1996. For

the sump located northwest of the tank battery, impacted soil was removed to visible cleanliness. The report indicated that the analytical results from the soil samples collected in the TB-2 area were all below the CRWQCB-LA Level B cleanup criteria and therefore no further work was required.

Tank Battery 3 (TB-3)

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of 11 trenches and the collection of 17 soil samples for chemical analysis (DPO 1995). Based on the results of the investigation, DPO recommended the removal of asphaltic material in selected areas and additional investigation in selected areas, including the drainage area north and south of the road culvert and the manifold area.

In January 1996, MSE Environmental, Inc. installed one soil boring to determine depth-to-groundwater in the area. No soil samples were collected and groundwater was not encountered to the total boring depth of 110 feet bgs.

Exxon (1996) reported that activities conducted in the TB-3 area consisted of removing two to three feet of soil across the tank battery area and other areas with visible petroleum hydrocarbon impacts, removing soil from two sump areas, and excavating and removing impacted soil from the TB-3 culvert area. One of the sumps was excavated to a depth of 10 feet bgs and composite confirmation samples were collected from the sidewalls and base of the excavation. The other sump was excavated to 16 feet bgs and one sample was collected from the base of the excavation. In the culvert area, the excavation area was approximately 110 feet by 20 feet by 35 feet deep and approximately 1,835 cubic yards of soil was removed. A composite confirmation sample was collected from the base of the excavation. In addition to the aforementioned samples, twelve other samples were collected across the site and the report indicated that the analytical results from the soil samples collected in the TB-3 area were all below the CRWQCB-LA Level B cleanup criteria.

Tank Battery 4 (TB-4)

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of three trenches and the collection of seven soil samples for chemical analysis (DPO 1995). Based on the results of the investigation, DPO recommended the removal of asphaltic material in selected areas and additional investigation in selected areas including the former tank battery area and the former pump area.

Exxon (1996) reported that activities conducted in the TB-4 area consisted of removing petroleum hydrocarbon impacted soil from a sump located northeast of the former tank battery area. The extent of excavation was determined using visual observations of impacts and the collection of two composite confirmation samples. The report indicated that the analytical results from the soil samples were all below the CRWQCB-LA Level B cleanup criteria.

Tank Battery 6/7 (TB-6/7) and Gas Plant Area

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of 12 trenches and collection of 19 soil samples for chemical analysis

(DPO 1995). Based on the results of the investigation, DPO recommended the removal of the upper one to two feet of soil in selected areas, the removal of the tar mat near the flare stack area, backfilling of methanol tank trench and the former "sump-like" features in the northwest corner, excavation of the diesel tank area until visually clean, and additional investigation in the heater unit and glycol tank area.

In January 1996, MSE Environmental, Inc. installed four soil borings and collected 22 soil samples in the vicinity of the former tank battery and flare stack area and .installed three soil borings and collected 18 soil samples in the Gas Plant Sump 17 area. The soil borings in the former tank battery and flare stack area were installed to depths ranging between 20.5 feet bgs to 88 feet bgs. The soil borings in the Gas Plant Sump 17 area were installed to depths ranging between 24 feet bgs to 84.5 feet bgs. Groundwater was not encountered in either of these areas.

Exxon (1996) reported that activities conducted in the TB-6/7 and Gas Plant area consisted of removing petroleum hydrocarbon impacted soil from two small sumps located north of the former flare stack in the Tank Battery 6/7 area, the Gas Plant Sump 17 area, and the cooling tower sump located in the Gas Plant area. In regards to the two small sumps, one was excavated to 24 feet bgs and two confirmation samples were collected from the excavation. The other sump was excavated to approximately 33 feet bgs and approximately 1,764 cubic yards of impacted soil was removed. Following completion of the excavation, a soil boring was installed to 60 feet bgs in this area and eight soil samples were collected for chemical analysis. The report indicated that the analytical results for these samples were non-detect for TPH and BTEX.

The activities conducted in the Gas Plant Sump 17 area consisted of excavating to approximately 55 feet bgs and removing approximately 4,000 cubic yards of impacted soil. Eight soil samples were collected from the excavation and the report indicated that the analytical results for the final closure samples collected in June 1996 were non-detect for BTEX and TPH.

In regards to the cooling tower sump in the Gas Plant area, excavation activities were conducted in May and June 1996, but were temporarily suspended until a plan could be developed to complete the excavation in the most cost effective and environmentally sound manner. Accordingly, a plan was developed and was implemented between October and December 1996. The remediation activities involved removing 100,000 cubic yards of clean overburden material; thermally treating on site approximately 20,000 tons of petroleum hydrocarbon impacted soil; and transporting off site for disposal approximately 4,000 tons of impacted soil. Following completion of the excavation in December 1996, nine confirmation soil samples were collected from the sidewalls and base of the excavation. Of the nine samples, only two contained detectable concentrations of TPH and those were below the CRWQCB-LA Level B criteria. The excavation area was restored by backfilling a portion with clean soil, benching steep cut slopes, and diverting surface water runoff away from the area.

Condensate Tank

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of four trenches and the collection of one soil sample for chemical analysis (DPO 1995). Based on the results of the investigation, DPO recommended the removal of a subsurface asphaltic layer and indicated that the volume requiring removal was minimal.

Exxon (1996) reported that this area was remediated using the general remediation plan that consisted of excavating areas of visually impacted soil and, following excavation, ripping the areas to promote natural revegetation.

Round House Area

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of one hole and one trench and the collection of 11 soil samples for chemical analysis (DPO 1995). Based on the results of the investigation, DPO recommended conducting additional soil sampling near Well 15 and the equipment storage area.

Exxon (1996) reported that this area was remediated using the general remediation plan that consisted of excavating areas of visually impacted soil and, following excavation, ripping the areas to promote natural revegetation.

Drill Pad 63

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of 10 trenches and visually inspecting soil conditions (DPO 1995). No detectable odor or discoloration was observed, so no samples were collected for chemical analysis. No further work was recommended for this area and no additional work is documented for this area.

Drill Site Investigation

As part of the remediation activities conducted by Exxon in 1996, an investigation was performed on six former drill pits associated with well numbers 4, 11, 15, and 49. The objective of the investigation was to determine potential impacts resulting from crude oil production, produced water, or drilling fluid deposition during drilling activities. The scope involved excavating trenches ranging from 25 to 50 feet long by five feet deep. Of the six pits that were investigated, only two (one pit at well number 4 and one at well number 15) showed shallow petroleum hydrocarbon impacts to two feet bgs. Soil samples were collected from the trenches and were analyzed for TPH, BTEX, and CAM metals. The report indicated that the analytical results from the soil samples were all below the CRWQCB-LA Level B criteria.

Based on the results of this investigation, the report indicated that no concerns exist with respect to former drill pits and that no other investigations or remediation activities are planned for these areas.

Trash Pit Area Southwest of Well No. 11

Between October and December 1996, Exxon conducted cleanup activities in the trash pit area situated southwest of well number 11. The activities in the trash pit area involved the removal and offsite disposal of approximately 2.5 tons of metal debris as well as household debris including wood, paper, and glass. No soil samples or analytical data was provided for these activities

2.3.2 Non-Oil Field Investigation/Remediation Activities

The following section describes the environmental activities associated with the Mission Village area based on information provided in the following documents:

- Phase I Environmental Site Assessment (ESA)
  Proposed the Mesas East (Mission Village)
  1,250 Acre Parcel of Land
  Valencia, California
  BA Environmental, February 7, 2005

The Mission Village area is partially located within the abandoned Castaic Junction Oil Field as shown in Figure A-5 (Attachment A). Additional information is also provided in the review of Castaic Junction Oil Field documents provided in Section 2.2.1, Castaic Junction Oil Field.

A Phase I Environmental Site Assessment was conducted at the Mission Village area in February 2005. The Phase I investigation included a reconnaissance of the subject property and vicinity, review of available relevant regulatory records, and review of the property history. In addition, 77 soil samples were collected on November 16, 2004. None of the soil samples analyzed contained any detectable concentrations of organochlorine pesticides or chlorinated herbicides, although organophosphorus pesticides were detected in several samples. Specifically, trace concentrations of Fensulfothion were detected in several samples. However, the concentrations of Fensulfothion were below the laboratory's quantitative detection limit of 0.05 mg/kg. Based on the trace concentrations, the Fensulfothion levels are less than significant. The following environmental conditions in connection with the area were identified:

- Approximately 47 oil wells and associated production area existed on the subject property;
- Staining was observed near several of the former oil wells;
- Structures related to a "gas plant" were located on Exxon Mesa;
- Three areas of structures were located on-site. Two were former oil company field offices and the third was associated with the former ranching operations. Aboveground Storage Tanks (ASTs) or Underground Storage Tanks (USTs) for fueling purposes may have been located at these structures;
- A large pond or sump was formerly located in the narrow strip of land in the north-central portion of the property, south of the Santa Clara River;
- Two day tanks and a 1,000-gallon AST area associated with a diesel powered water pump; and
- A former oil pad debris area was located in a small canyon on the southwest portion of the subject property. Debris was screened from this area, disclosing evidence of drums and buckets remaining in the area. No soil samples were collected from this area.

2.3.3 Activities to be Completed Prior to Development

According to the Phase I Environmental Site Assessment that was conducted at the Mission Village area in February 2005, the following activities should be conducted prior to site development:

- If disturbed, or if located within an area of redevelopment, all former oil wells located on the subject property should be re-abandoned according to all applicable local and state regulations;
- The areas of former sumps, gas plant, landfill, and structures should be assessed for potential impact to the subject site and remediated to meet current standards as described in the regulatory framework (Section 4.1, Regulatory Framework);
- Areas of visible staining should be assessed if they are not planned for excavation, or are located in an area planned to be raised in grade; and
- Areas of visible staining that are scheduled to be excavated should have any visibly impacted soil disposed of in accordance with all federal, state, and local regulations.

2.4 ENTRADA

2.4.1 Oil Field Investigation/Remediation Activities

A portion of the Castaic Junction Oil Field is located in the Entrada project area as shown in Figure A-3 (Attachment A). This area was approached in the same manner as described for the Mission Village project area.

Investigation and remediation activities occurred in the Tank Battery 5 (TB-5) and Tank Battery 8 (TB-8) areas within the Entrada project area. The location of these areas is provided in Figure A-4 (Attachment A). A summary of the activities conducted in each of these areas is provided in the following sections and a compilation of the analytical results is provided in Tables B-2a through B-2d (Attachment B).

Tank Battery 5 (TB-5)

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of seven trenches and the collection of 14 soil samples for chemical analysis (DPO 1995). Based on the results of the investigation, DPO recommended the removal of soil with surface contamination down to clean soil and additional investigation in selected areas including the heater treater unit area and along the north fence line. Exxon (1996) reported that this area was remediated using the general remediation plan that consisted of excavating areas of visually impacted soil and, following excavation, ripping the areas to promote natural revegetation.

Tank Battery 8

In 1995, a site investigation was conducted in this area as part of the Phase I activities and involved the installation of four trenches and the collection of 10 soil samples for chemical

analysis (DPO 1995). Based on the results of the investigation, DPO recommended the removal of asphaltic material and an oily-layer below the access road fill material and additional investigation in selected areas. Exxon (1996) reported that this area was remediated using the general remediation plan that consisted of excavating areas of visually impacted soil and, following excavation, ripping the areas to promote natural revegetation.

2.4.2 Non-Oil Field Investigation/Remediation Activities

The following section describes the environmental activities associated with the Entrada area based on information provided in the following documents:

- Phase II Subsurface Investigation
  Water Quality Basins
  Entrada ME 073-02 Basins
  Valencia, California
  BA Environmental, September 6, 2006

- Progress Report - Oil Well Issues
  Proposed Entrada Development
  Feedmill Road at The Old Road
  Los Angeles County, California
  Anacapa Geoservices, Inc. December, 2006

- Phase I Environmental Site Assessment (ESA)
  Entrada Park Site (Lot 526)
  Magic Mountain Parkway and The Old Road
  Valencia, California
  BA Environmental, March 6, 2007

The Entrada area is partially located within the abandoned Castaic Junction Oil Field as shown in Figure A-5 (Attachment A). Additional information is also provided in the review of Castaic Junction Oil Field documents provided in Section 2.2.1, Castaic Junction Oil Field.

In December 2006, Newhall Land retained Anacapa Geoservices to assess oil well related issues at the Entrada area. The investigation of oil well issues included a review of historic aerial photographs, topographic maps, geologic maps, DOGGR well files, and the physical location of each identified well. After the wells were located, the well covers were removed by a certified oil-field welder. DOGGR performed leak testing of each well on September 27, 2005. No wells were noted by DOGGR as leaking. The well heads were surveyed and each well head was marked for future access using an identifier plate welded to the well head cover. The excavations were backfilled, but the soil was not compacted. Two wells (Exxon NLF #49 and Exxon NLF #30) were transferred into the adjoining Mission Village area.

In March 2007, a Phase I Environmental Site Assessment was conducted at the 5.01-acre parcel of land proposed to be converted into a public park located within the Entrada area. The subject property is a roughly triangular parcel of land located approximately 2,400 feet southwest of the intersection of Magic Mountain Parkway and The Old Road. The Phase I investigation included

a topographic map review, assessment of site geology and hydrogeology, assessment of oil wells and oil fields, historical review, site reconnaissance, and a review of government records. No evidence of recognized environmental conditions in connection with that property was identified in the Phase I Environmental Site Assessment.

2.4.3 Activities to be Completed Prior to Development

The December 2006 Anacapa Geoservices report regarding oil well related issues at the Entrada area stated that the following tasks should be completed prior to site development, in compliance with DOGGR regulations:

- Determine finish grade at each location and decide whether each well needs to be cut or extended to conform to the DOGGR requirements that the wells be abandoned within six to nine feet of the finish surface;
- Fully assess and remediate discolored soil at well #35;
- Remove relict piping and other debris found in the vicinity of the wells;
- Determine the future use at and in proximity (as defined by DOGGR and Los Angeles County) to each well. Design the community, if possible to avoid placing structures over or in within 10 feet of wells;
- Advise the clearing, grubbing, and grading crews to monitor for evidence of past oil-field equipment, stained soil, and other related debris. Notify the Site Superintendent if these material are found;
- Determine the need to vent the wells. Oversight of this issue is managed by the County Department of Building and Safety. Design of a conforming vent, if necessary, shall be completed by a licensed and qualified professional engineer;
- Notify the crews to monitor for the possible presence of Chevron Well N52-19;
- Exercise caution on the Exxon NLF #51 pad, due to the presence of a high pressure gas line;
- Assess adversely impacted soil; and
- Following the completion of activities, the DOGGR will issue a Lot Release.

2.5 HOMESTEAD VILLAGE

2.5.1 Oil Field Investigation/Remediation Activities

The RSF oil lease is divided into six areas and portions of three of these areas (Areas 1, 2, and 6) are situated within the Homestead South project area as shown in Figure A-6 (Attachment A). Site assessment and remediation activities have been conducted in each of these areas and site closure certificates have been issued to most of the sites within each area through the process mediated by Brown and Caldwell.

A list of the sites within the Homestead South project area for which site closure certification has been issued by Brown and Caldwell is provided in Table B-3 (Attachment B) and the locations

of these sites are depicted in Figure A-6 (Attachment A). These sites are organized into four categories as follows:

- Discontinued Sites with Closure Certification – these sites are no longer in operation, analytical data indicates that remaining TPH concentrations are less than 100 ppm, and Brown and Caldwell has issued a site closure certification letter for the site.
- Deferred Sites with Incomplete Closure Certification – these sites are no longer in operation for which either there is no closure certificate from Brown and Caldwell, or the certificate indicated residual TPH concentrations above 100 ppm or other constituents are above EPA Preliminary Remediation Goals (PRGs) for residential land use.
- Deferred Sites – these sites are located adjacent to or overlap with active sites and remediation of these sites has been deferred until the time of cleanup for those active sites.

Specifically, the above sites are located within Areas 1, 2, and 6 of the Rancho San Francisco Oil Field. These areas are described as follows:

- Area 1 - Area 1 is located in the north central portion of the oil and gas lease area and includes production satellite station 1A, 16 potential earthen sumps, two water injection tanks, and two well site pads.
- Area 2 - Area 2 is located in the northwest portion of the oil and gas lease area and includes production satellite station 2A, six potential earthen sumps, one former tank battery, two water injection tanks, and three well site pads.
- Area 6 - Area 6 is located in the central portion of the oil and gas lease area and includes production satellite station 6A, 41 well site locations, 14 potential earthen sumps, six former tank batteries, a maintenance yard, one gas separator battery, four concrete pads, a field compressor, a historical trash pit, a well site pad, and a pipe yard area.

As reported in the Waterstone (2000) report, the following number of sites were remediated in the Homestead South area (i.e. discontinued sites with closure certification):

- Four wells sites in Area 2;
- Seven sump sites including four in Area 1, two in Area 2, and one in Area 6; and
- One tank site in Area 1.

Sites that were considered discontinued but have incomplete closure certification are not included in the above list since it cannot be confirmed that these sites were successfully remediated to below the regulatory standards. Accordingly, those sites in addition to the sites deferred sites are detailed in Section 2.5.3, Activities to be Completed Prior to Development, below.

2.5.2 Non-Oil Field Investigation/Remediation Activities

The following section describes the environmental activities associated with the Homestead North and South Village areas based on information provided in the following documents:

- Phase I Environmental Site Assessment (ESA) and Subsurface Investigation

Homestead North / South (2,886.4 Acres)
Valencia, California
BA Environmental
February 8, 2005

- Phase I Environmental Site Assessment (ESA) and Subsurface Investigation
  Proposed Public Park (Lot 1081)
  Valencia, California
  BA Environmental
  February 8, 2005

- Phase I Environmental Site Assessment (ESA) and Subsurface Investigation
  Proposed Public Park (Lot 514)
  Valencia, California
  BA Environmental
  February 8, 2005

- Phase I Environmental Site Assessment (ESA) and Subsurface Investigation
  Proposed Public Park (Lot 322)
  Valencia, California
  BA Environmental
  February 8, 2005

A portion of the Homestead Village area is located north of SR-126 between Chiquito Canyon and the Ventura County line (Homestead North). The second portion of Homestead Village is located south of SR-126 and Landmark Village (Homestead South). The Homestead South area is partially located within the Rancho San Francisco Oil Field as shown in Figure A-8 (Attachment A).

A Phase I Environmental Site Assessment was conducted at Homestead Village development site (Homestead North and Homestead South) (Phase I Environmental Site Assessment, February 8, 2005). The subject property consisted of an approximately 2,886.4-acre parcel of land, divided into the following seven individual developments:

- Chiquito Canyon/Chiquito Estates (434 Acres);
- Homestead Central (306.2 Acres);
- Homestead West (304.6 Acres);
- Mesas West (621.4 Acres)
- Long Canyon North/Long Canyon South (653 Acres)
- Onion Fields (350.5 Acres)
- Potrero Ridge (216.7 Acres)

The Phase I investigation included a reconnaissance of the subject property and vicinity, review of available relevant regulatory records, and review of the property history. The Phase I ESA

revealed the following historical recognized environmental conditions with regard to the subject site:

- Three former fuel USTs were located on the Homestead Central development. The tanks were removed in 1988 and received closure in 1996.
- At least 107 oil wells and associated production areas existed on the subject property;
- Several sumps and former sumps, former tank batteries, and landfill or trash dump areas existed on the subject property;
- Staining was observed near several of the former oil well locations, former tank locations and sumps (past and present);
- Several oil pipelines have been identified on the subject property;
- Two areas of grouped former structures were located on-site. One may have been a former oil company field office and associated with the former farming operations. ASTs and USTs for fueling purposes may have been located at these structures;
- Asbestos containing materials were identified in structures located in the Homestead Central Development; and
- Lead-based paint may exist in structures located in the Homestead Central development.

In addition to the above Phase I ESA for the larger Homestead Village area, three separate Phase I ESAs were conducted for three proposed public park sites, including Lot 514, Lot 322, and Lot 1081. The results of the three separate Phase I ESAs are summarized as follows.

Lot 514 is an 8.7-acre parcel within the Mesas West development site. The Phase I investigation included a reconnaissance of the subject property and vicinity, review of available relevant regulatory records, and review of the property history. In addition, limited soil sampling was performed to assess whether past use of pesticides or herbicides has impacted the shallow soils beneath the previously cultivated areas on the subject property. Specifically, on April 22. 2005, eight shallow soil samples were collected and analyzed for organochlorine pesticides, organophosphorus pesticides, and chlorinated herbicides. The results of the Phase I investigation indicate that concentrations of organochlorine pesticides were detected in several samples, including 4,4-DDE at 0.002 milligrams per kilogram (mg/kg) and gamma-BHC (Lindane) at 0.001 mg/kg, which is below the residential PRG level. No organophosphorus pesticides or chlorinated herbicides were detected. The overall Phase I Environmental Site Assessment identified the two oil wells and associated production areas that existed at the subject property as potential environmental conditions.

Lot 322 is a 5.8-acre parcel within the Homestead Central development site. The Phase I investigation included a reconnaissance of the subject property and vicinity, review of available relevant regulatory records, and review of the property history. In addition, limited soil sampling was performed to assess whether past use of pesticides or herbicides has impacted the shallow soils beneath the previously cultivated areas on the subject property. Specifically, o April 22, 2005, nine shallow soil samples were collected and analyzed for organochlorine pesticides, organophosphorus pesticides, and chlorinated herbicides. The results of the Phase I investigation indicate that concentrations of organochlorine pesticides were detected in several samples,

including 4,4-DDE at 0.002 mg/kg, which is below the residential PRG level. No organophosphorus pesticides or chlorinated herbicides were detected. The overall Phase I Environmental Site Assessment revealed no evidence of recognized environmental conditions.

Lot 1081 is a 5.92-acre parcel within the Long Canyon North/Long Canyon South development site. The Phase I investigation included a reconnaissance of the subject property and vicinity, review of available relevant regulatory records, and review of the property history. In addition, limited soil sampling was performed to assess whether past use of pesticides or herbicides has impacted the shallow soils beneath the previously cultivated areas on the subject property. Specifically, on April 21, 2005. eight shallow soil samples were collected and analyzed for organochlorine pesticides, organophosphorus pesticides, and chlorinated herbicides. None of the samples collected from the sites were found to have detectable concentrations of organochlorine pesticides, organophosphorus pesticides, or chlorinated herbicides. The overall Phase I Environmental Site Assessment identified the Unocal pipeline that crosses the western portion of the subject property as a potential environmental condition.

2.5.3 Activities to be Completed Prior to Development

Table 2-1 provides the available information for sites within each lease area for which historic sampling results exceed cleanup levels of 100 ppm for TPH and the U.S. EPA Region 9 preliminary remediation goals (PRGs) for residential land use. These areas will be remediated prior to development activity. They include sites for which no closure certification has been issued, deferred sites for which analytical data is available, and sites of concern that have been identified in previous reports at which no additional activities have been conducted. Table 2-1 does not include sites for which site closure certification has been issued by Brown and Caldwell. The locations of the sites are provided in Figure A-6 (Attachment A) and a summary of the analytical data associated with the sites is provided in Table B-4a through B-4d (Attachment B).

Table 2-1. Deferred sites with incomplete closure certification in Homestead South area.

Area	Site	Reason for Deferment
1	OMB-15	Identified as a potential concern based on soil sampling results from 1999. The soil sample results indicate detectable concentrations of TPH in one of the samples at a concentration of 2,219 ppm.
2	DM-31	Identified as a potential concern based on soil sampling results from 1990. The soil sample results indicate detectable concentrations of TPH in one of the samples at a concentration of 2,300 ppm.
6	OMB-171	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in two samples with a maximum concentration of 550 ppm.
6	OMB-176	Identified as a potential concern based on soil sampling results from 1999. The soil sample results indicate the following: • Detectable concentrations of TPH in three of the samples with a maximum concentration of 65,000 ppm; • Detectable concentrations of benzene in three samples with a maximum concentration of 912 ppm; • Detectable concentrations of ethylbenzene in all of the samples with a maximum concentration of 916 ppm; • Detectable concentrations of toluene in three samples with a maximum

		concentration of 147 ppm; and, • Detectable concentrations of total xylenes in all of the samples with a maximum concentration of 1,880 ppm.

In addition, the Phase I Environmental Site Assessment conducted at Homestead Village development site (Homestead North and Homestead South) (Phase I Environmental Site Assessment, February 8, 2005) recommended the following activities prior to site development:

- If disturbed, or if located within an area of redevelopment, all former oil wells located on the subject property should be re-abandoned according to all applicable local and state regulations. Active oil wells should also be abandoned in accordance with applicable local and state regulations prior to development, and any crude oil-impacted soil around the wells remediated;
- The areas of former sumps, tanks, and landfill identified in the development sections should be assessed for potential impacts to the subject site;
- If the on-site oil pipelines will continue to be used, they should be assessed for leakage. If the pipelines are planned to not be used, they should be removed and the soils beneath them further assessed for the potential for impact;
- Areas of visible staining should be assessed if they are not planned for excavation, or are located in an area planned to be raised in grade;
- Areas of visible staining that are scheduled to be excavated should have any visibly impacted soil disposed of in accordance with all federal, state, and local regulations;
- Asbestos containing materials should be abated prior to the demolition of any on-site structure. Any suspect material not already identified or tested should be sampled prior to demolition. All asbestos containing materials should be abated by a licensed asbestos abatement contractor;
- Prior to demolition, all structures should be sampled for lead-based paint. If confirmed to have lead-based paint, health and safety procedures should be initiated to protect workers during demolition activities; and
- All groundwater monitoring wells or production water wells in areas to be disturbed should be abandoned according to applicable local and state regulations, prior to redevelopment, if not planned to be used.

The three separated Phase I ESAs conducted for three proposed public park sites, including Lot 514, Lot 322, and Lot 1081 recommended the following activities prior to development:

- The abandoned oil wells at Lot 514 may need to be re-abandoned if located in areas of planned grading.
- Although not a recognized condition, the on-site water well at Lot 322 should be abandoned to applicable local and state regulations, prior to development, if not planned to be in use.
- If the Unocal pipeline at Lot 1081 is not to be used in the future, it should be removed and the soil beneath the pipeline should be assessed for possible petroleum hydrocarbon contamination.

2.6 POTRERO VALLEY

2.6.1 Oil Field Investigation/Remediation Activities

The oil lease is divided into six areas and portions of all of these areas are situated within the Potrero Valley project area as shown in Figure A-2 (Attachment A). Site assessment and remediation activities have been conducted in each of these areas and site closure certificates have been issued to most of the sites within each area through the process mediated by Brown and Caldwell.

A list of the sites within the Potrero Valley project area for which site closure certification has been issued by Brown and Caldwell is provided in Table B-3 (Attachment B) and the locations of these sites are provided in Figure A-6 (Attachment A).

Specifically, the above sites are located within Areas 2, 3, 4, 5, and 6 of the Rancho San Francisco Oil Field. These areas are described as follows:

- Area 2 - Area 2 is located in the northwest portion of the oil and gas lease area and includes production satellite station 2A, six potential earthen sumps, one former tank battery, two water injection tanks, and three well site pads.
- Area 3 - Area 3 is located in the southeastern portion of the oil and gas lease area and includes production satellite station 3A, two test separators, one transfer pump, two drum-type sumps, and two equipment pads.
- Area 4 - Area 4 is located in the southeastern portion of the oil and gas lease area and includes production satellite station 4A, seven potential earthen sumps, two water injection tanks, five historical stained areas, five stained areas, and one soil mound.
- Area 5- Area 5 is located in the north central portion of the oil and gas lease area and includes production satellite station 5A, four potential earthen sumps, a shipping storage tank area, two historic tank batteries, one concrete pad, and one well site pad.
- Area 6 - Area 6 is located in the central portion of the oil and gas lease area and includes production satellite station 6A, 41 well site locations, 14 potential earthen sumps, six former tank batteries, a maintenance yard, one gas separator battery, 4 concrete pads, a field compressor, a historical trash pit, a well site pad, and a pipe yard area.

As reported in the Waterstone (2000) report, the following number of sites were remediated in the Potrero Valley area (i.e. discontinued sites with closure certification):

- Nine wells sites including one in Area 2, two in Area 3, three in Area 4, and three in Area 6;
- Eleven sump sites including two in Area 2, one in Area 3, two in Area 4, one in Area 5, and five in Area 6;
- One tank site in Area 2;
- One Historic Tank Battery site in Area 2;
- Two sites in Area 3;
- One Concrete Pad site in Area 4;

- Two Storage Tank sites including one in Area 3 and one in Area 4;
- Two sites in Area 5; and
- One site in Area 4.

Sites that were considered discontinued but have incomplete closure certification are not included in the above list because it cannot be confirmed that these sites were successfully remediated to below the regulatory standards. Accordingly, those sites in addition to the sites deferred sites are detailed in Section 2.6.2, Activities to be Completed Prior to Development, below.

2.6.2 Activities to be Completed Prior to Development

Table 2-2 provide the available information for sites within each lease area for which historic sampling results exceed cleanup levels of 100 ppm for TPH and the U.S. EPA Region 9 preliminary remediation goals (PRGs) for residential land use. These sites will be remediated prior to development activity as required by the existing lease. They include sites for which no closure certification has been issued, deferred sites for which analytical data is available, and sites of concern that have been identified in previous reports at which no additional activities have been conducted. The discussion does not include sites for which site closure certification has been issued by Brown and Caldwell. The locations of the sites discussed below are provided in Figure A-6 (Attachment A) and a summary of the analytical data associated with the sites is provided in Table B-5 (Attachment B).

Table 2-2. Deferred sites with incomplete closure certification in Potrero Valley area.

Area	Site	Reason for Deferment
2	AET-39	Identified as a potential concern based on soil sampling results from 1992. The soil sample results indicate detectable concentrations of TPH in 11 of the samples with a maximum concentration of 36,496 ppm.
3	DM-SP3A-1	In 1990, Dames and Moore identified this area as a sump with potential impacts. No additional information is provided for this area.
3	DM-SP3A-2	In 1990, Dames and Moore identified this area as a sump with potential impacts. No additional information is provided for this area.
3	AET-46	Identified as a potential concern based on soil sampling results from 1992. TPH was detected in one sample at a concentration of 107 ppm.
3	OMB-48	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in one sample at a concentration of 1,126 ppm.
3	OMB-54	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in three samples with a maximum concentration of 1,750 ppm and barium was detected above background levels in one sample at a concentration of 2,050 ppm.
3	SP-12 (OMB-51)	Identified as a potential concern based on soil sampling results from 1999. The soil sample results indicate the following: • Detectable concentrations of TPH in two of the samples with a maximum concentration of 6,700 ppm; • Detectable concentrations of ethylbenzene in one sample at a concentration of 19.8 ppm; • Detectable concentrations of toluene in one sample at a concentration of 2.85 ppm; and • Detectable concentrations of total xylenes in one sample at a concentration of 16.2 ppm;
3	3-ST-06 (OMB-52 and OMB-62)	Identified as a potential concern based on soil sampling results from 1999. The soil sample results indicate the following: • Detectable concentrations of TPH in three of the samples with a maximum concentration of 18,000

		ppm; • Detectable concentrations of benzene in one sample at a concentration of 2.03 ppm; • Detectable concentrations of ethylbenzene in two of the samples with a maximum concentration of 2.45 ppm; • Detectable concentrations of toluene in six of the samples with a maximum concentration of 2.5 ppm; • Detectable concentrations of total xylenes in six of the samples with a maximum concentration of 4.31 ppm; and, • Detected concentrations above background for barium and lead in two samples with maximum concentrations of 5,440 and 255 ppm, respectively.
4	AET-68	Identified as a potential concern based on soil sampling results from 1992. was detected in one sample at a concentration of 5,490 ppm.
4	AET-71	Identified as a potential concern based on soil sampling results from 1992. was detected in one sample at a concentration of 6,680 ppm.
4	OMB-75	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in two samples with a maximum concentration of 11,000 ppm.
4	OMB-76	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in two samples with a maximum concentration of 188 ppm.
4	OMB-77	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in two samples with a maximum concentration of 6,400 ppm.
4	OMB-79	Identified as a potential concern based on soil sampling results from 1999. The soil sample results indicate the following: • Detectable concentrations of TPH in three of the samples with a maximum concentration of 26,050 ppm; • Detectable concentrations of benzene in one sample at a concentration of 11 ppm; • Detectable concentrations of ethylbenzene in three of the samples with a maximum concentration of 27.9 ppm; • Detectable concentrations of toluene in one sample at a concentration of 28.8 ppm; and • Detectable concentrations of total xylenes in three of the samples with a maximum concentration of 108 ppm.
4	OMB-85	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in two samples with a maximum concentration of 5,830 ppm.
4	OMB-86	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in two samples with a maximum concentration of 2,900 ppm.
4	OMB-90	Identified as a potential concern based on soil sampling results from 1999. TPH was detected in two samples with a maximum concentration of 370 ppm.
4	DM-SP4A-2	Potential earthen sump site identified as a potential concern based on soil sampling results from 1990. TPH was detected in the soil samples at a concentration of 7,300 ppm.
4	DM-SP4A-3	Potential earthen sump site identified as a potential concern based on soil sampling results from 1990. TPH was detected in the soil samples at a concentration of 51,000 ppm.
4	DM-SP4A-7	Identified as a sump with potential impacts; however, no additional information is provided for this area.
4	DM-SP4A-9	Identified as a sump with potential impacts; however, no additional information is provided for this area.
4	DM-SP4A-10	Identified as a sump with potential impacts; however, no additional information is provided for this area.
5	DM-SP5A-1 and DM-SP5A-2	Potential earthen sump site identified as a potential concern based on soil sampling results from 1990. The soil sample results indicate the following: • TPH was detected in four of the samples with a maximum concentration of 46,000 ppm; • Chrysene was detected in one sample at a concentration of 2.0 ppm; • Fluorene was detected in one sample at a concentration of 3.0 ppm; • Naphthalene was detected in two of the samples with a maximum concentration of 19 ppm,; • 2-methylnaphthalene was detected in two of the samples with a maximum concentration of 15 ppm; • Phenanthrene was detected in two of the samples with a maximum concentration of 18 ppm; • Benzene was detected in two of the samples with a maximum concentration of 0.61 ppm; • Toluene was detected in two of the samples with a maximum concentration of 0.44 ppm; • Ethylbenzene was detected in two of the samples with a maximum concentration of 2.0 ppm; and • Total xylenes was detected in two of the samples with a maximum concentration of 0.74 ppm.
5	DM-SP5A-4	Identified as a sump with potential impacts; however, no additional information is provided for this area.

5	DM-SP5A-10	Identified as a sump with potential impacts; however, no additional information is provided for this area.
5	DM-5A HT-5A-2 (DM-99)	Potential earthen sump site identified as a potential concern based on soil sampling results from 1990. The following compounds were detected: • TPH in two of the samples at a maximum concentration of 6,600 ppm; and • Di-N-butyl-phthalate in one sample at a concentration of 1.4 ppm. However, this detection is described as "likely lab contamination".
5	AET-102	Potential earthen sump site identified as a potential concern based on soil sampling results from 1992. The soil sample results indicate the following: • Detectable concentrations of TPH in eight of the samples with a maximum concentration of 37,100 ppm; • Detectable concentrations of ethylbenzene in one sample at a concentration of 1.6 ppm; • Detectable concentrations of total xylenes in one sample at a concentration of 1 ppm; • Detectable concentrations of phenanthrene in three samples with a maximum concentration of 9.5 ppm; • Detectable concentrations of dimethyl-phthalate in one sample at a concentration of 14 ppm; and • Detectable concentrations of 2-methyl-naphthalene in one sample at a concentration of 23 ppm.
5	AET-103	Potential earthen sump site identified as a potential concern based on soil sampling results from 1992. TPH was detected in one of the samples at a concentration of 1,190 ppm and di-n-butyl phthalate was detected in the one sample that was analyzed at a concentration of 1 ppm.
5	OMB-5-LP-01 (OMB-121)	Potential earthen sump site identified as a potential concern based on soil sampling results from 1999. The soil sample results indicate the following: • Detectable concentrations of TPH in two of the samples with a maximum concentration of 130 ppm; • Detectable concentrations of benzene in one sample at a concentration of 1.41 ppm; • Detectable concentrations of ethylbenzene in two of the samples with a maximum concentration of 1.92 ppm; • Detectable concentrations of toluene in all of the samples with a maximum concentration of 17.8 ppm; and, • Detectable concentrations of total xylenes in all of the samples with a maximum concentration of 8.3 ppm.
5	OMB-5-GP-03A (OMB-111, OMB-117, and OMB-122)	Potential earthen sump site identified as a potential concern based on soil sampling results from 1999. The soil sample results indicate the following: • Detectable concentrations of TPH in four of the samples with a maximum concentration of 2,200 ppm; • Detectable concentrations of ethylbenzene in four of the samples with a maximum concentration of 8.55 ppm; • Detectable concentrations of toluene in three of the samples with a maximum concentration of 4.65 ppm; and • Detectable concentrations of total xylenes in four of the samples with a maximum concentration of 18.6 ppm.
6	DM-SP6A-1, DM-SP6A-2, DM-SP6A-9, and DM-SP6A-12	Potential earthen sump site identified as a potential concern based on soil sampling results from 1990. The soil sample results indicate the following: • Detectable concentrations of TPH in four of the samples at a maximum concentration of 39,000 ppm; • Detectable concentrations of benzene in one sample at a concentration of 0.27 ppm, • Detectable concentrations of toluene in one sample at a concentration of 0.46 ppm; • Detectable concentrations of total xylenes in one sample at a concentration of 0.21 ppm; • Detectable concentrations of ethylbenzene in one sample at a concentration of 0.16 ppm; and, • Detectable concentrations of selected SVOCs in two of the samples.
6	DM-HT6A-3 And DM-HT6A-6	Sites near historic tank batteries identified as a potential concern based on sampling results from 1990. The soil sample results indicate: • Detectable concentrations of TPH in three of the samples at a maximum concentration of 19,000 ppm; • Detectable concentrations of benzene in one sample at a concentration of 24 ppm, • Detectable concentrations of toluene in one sample at a concentration of 12 ppm; • Detectable concentrations of total xylenes in one sample at a concentration of 7.7 ppm; • Detectable concentrations of ethylbenzene in one sample at a concentration of 5.5 ppm; and, • Detectable concentrations of phenanthrene in one sample at a concentration of 12 ppm .
6	AET-167	Potential earthen sump site identified as a potential concern based on soil sampling results from 1992.

		The soil sample results indicate the following: • Detectable concentrations of TPH in 20 of the samples with a maximum concentration of 53,430 ppm; • Detectable concentrations of ethylbenzene in the one sample analyzed at a concentration of 2 ppm; • Detectable concentrations of total xylenes in the one sample analyzed at a concentration of 1.9 ppm; • Detectable concentrations of naphthalene in two samples with a maximum concentration of 18 ppm; • Detectable concentrations of acenaphthylene in one sample at a concentration of 2.6 ppm; • Detectable concentrations of phenanthrene in six samples with a maximum concentration of 19 ppm; • Detectable concentrations of fluorene in one sample at a concentration of 5 ppm; • Detectable concentrations of di-n-butyl-phthalate in two samples with a maximum concentration of 2.8 ppm; and • Detectable concentrations of 2-methyl-naphthalene in five samples with a maximum concentration of 22 ppm.
6	6-PY-03 (AET-159)	Potential earthen sump site identified as a potential concern based on soil sampling results from 1992. The soil sample results indicate the following: • Detectable concentrations of TPH in eight of the samples with a maximum concentration of 55,400 ppm; • Detectable concentrations of ethylbenzene in four samples with a maximum concentration of 5 ppm; • Detectable concentrations of total xylenes in two samples with a maximum concentration of 3.1 ppm; and • Detectable concentrations of di-n-butyl-phthalate in one sample at a concentration of 14 ppm.
6	OMB-177	Potential earthen sump site identified as a potential concern based on soil sampling results from 1999. TPH was detected in two samples with a maximum concentration of 1,800 ppm. Waterstone (2000) does not provide any recommendations for this area[1].
6	OMB-196	Potential earthen sump site identified as a potential concern based on soil sampling results from 1999. The soil sample results indicate the following: • Detectable concentrations of TPH in seven of the samples with a maximum concentration of 74,000 ppm; • Detectable concentrations of benzene in four samples with a maximum concentration reported as <100 ppm; • Detectable concentrations of ethylbenzene in nine samples with a maximum concentration of 16,100 ppm; • Detectable concentrations of toluene in six samples with a maximum concentration of 20.4 ppm; • Detectable concentrations of total xylenes in seven samples with a maximum concentration of 22,400 ppm; and • Detectable concentrations of MTBE in five samples with a maximum concentration reported as <1000 ppm.
6	OMB-197	Potential earthen sump site identified as a potential concern based on soil sampling results from 1999. TPH was detected in three samples with a maximum concentration of 1,300 ppm, and total xylenes was detected in one sample at a concentration of 1.71 ppm. Waterstone (2000) does not provide any recommendations for this area.
[1] Pursuant to the 2003 lease amendment, any remaining environmental impacts from oil and gas operations will the oil field impacts will be fully remediated in accordance with the cleanup standards established by the settlement agreement.		

2.7 LANDMARK VILLAGE

2.7.1 Non-Oil Field Investigation/Remediation Activities

The following section describes the environmental activities associated with the Landmark Village area based on information provided in the following documents:

- Phase I Environmental Site Assessment (ESA) and Subsurface Investigation
  Landmark Village
  Valencia, California
  BA Environmental
  September 27, 2004

- Phase II Subsurface Investigation
  Landmark School Site
  Valencia, California
  BA Environmental
  September 1, 2006

- Addendum Letter: Phase I Environmental Site Assessment (ESA)
  Proposed Water Tank Locations and Utility Corridor Easements
  Valencia, California
  BA Environmental
  October 3, 2005

- District 26/32 Sludge Disposal Study
  Progress Report #1
  County Sanitation Districts of L.A. County
  September, 1977

A summary of the activities conducted in each of these areas is provided in the following sections and a compilation of the analytical results is provided in Tables B-6a through B-6c (Attachment B).

The Landmark Village area is partially located within the abandoned Castaic Junction Oil Field as shown in Figure A-7 (Attachment A).

A Phase I Environmental Site Assessment was conducted at the Landmark Village area on December 3, 2003. An addendum to that Phase I Environmental Site Assessment report was issued on October 3, 2005. The addendum specifically addressed the potential past and present use of pesticides on the open space area located in the center of the proposed tract. One of the soil samples analyzed for that area was reported to contain 0.002 mg/kg (ppm) of Dieldrin, an OCP. No other OCPs, OPPs, or CHs were detected in that area. According to the EPA Region 9 PRG Table, the Residential PRG for Dieldrin is 1.7 mg/kg (ppm). Based on this, the concentration of Dieldrin detected in the samples is well below the Residential PRG for that pesticide.

An additional Phase I Environmental Site Assessment was conducted at the Landmark Village area as reported in the September 27, 2004 Phase I ESA Report. The Phase I investigation included a reconnaissance of the subject property which consists of approximately 280 acres and two borrow sites where fill material will be derived from (known as Borrow Site "A" and Borrow Site "B"). Borrow Site "A" consists of approximately 400 acres and is currently covered in native vegetation. Historically, portions of the site were used for agriculture, and there is some evidence of past oil exploration in the site. Borrow Site "B" consists of approximately 300

acres, and there is currently an electrical transmission tower located in the area. Evidence of past oil wells and a possible existing oil pipeline are present within this site. The Phase I ESA also includes a review of available relevant regulatory records, and review of the property history. In addition, 69 soil samples were collected between January 29, 2004 and February 5, 2004. All of the soil samples analyzed were reported not to contain detectable concentrations of organophosphorus pesticides or chlorinated herbicides, although organochlorine pesticides were detected in several samples. However, the concentrations of organochlorine pesticides were below the residential or industrial use Preliminary Remediation Goals (PRGs) set up by the USEPA. The following items were recognized as environmental conditions in connection with the area:

- Several oil wells and associated production areas may exist on the subject property, and several on Borrow Sites "A" and "B";
- Several ASTs, likely associated with oil production, existed on-site in the 1950s;
- A portion of the waterline easement associated with the Zone 1A Tank Site is adjacent to an old trash dumping site;
- Several pipelines cross the subject property, and one pipeline crosses Borrow Site "B";
- Scattered suspect asbestos containing material debris was observed in the central and western portions of the subject property;
- Staining was observed beneath what appeared to be an abandoned pipeline along the old railroad easement, and near what was believed to be a former oil well on Burrow Site "B". In addition, staining was observed beneath a diesel AST associated with a potable water pump located in the eastern portion of the subject property; and
- Two equipment storage areas were observed on the subject site, one located in the eastern portion of the subject property and one in the central portion. The storage area in the central portion was associated with a former airstrip. Agricultural chemical storage and mixing was observed or may have taken place at these areas in the past. Soil staining was observed in both areas.

Subsequent to the above Phase I investigation, a Phase II Subsurface Investigation was also performed at the proposed nine-acre school site located in the north-central portion of the Landmark Village area (Phase I ESA Report, September 27, 2004) to assess whether past agricultural activities have impacted subsurface soil conditions beneath the subject property (Phase II Subsurface Investigation Report, September 2006). Accordingly, 32 soil shallow soil and 32 deeper soil samples were collected and analyzed for organophosphorus pesticides, organochlorine pesticides, chlorinated herbicides, paraquat, arsenic, and heavy metals. No detectable concentrations of organophosphorus pesticides, chlorinated herbicides, paraquat, arsenic, or elevated concentrations of heavy metals were found, although several samples were reported to contain low level concentrations of trifluralin, an organochlorine pesticide. However, the concentrations of trifluralin were well below the residential use PRGs and therefore safe. No additional subsurface investigations or remedial action is needed at this site.

An addendum to the Phase I ESA was performed at the two proposed water tank locations and utility corridor easements associated with the proposed Landmark Village area on May 5, 2004 (two addendums to the original report were also issued on September 28, 2004 and October 3,

2005). The subject property consists of two vacant parcels of land for proposed water tanks and narrow strips (approximately 35- to 140-feet wide) of land for proposed utility corridors. The subject site includes the following 10 subareas:

- Future Water Reclamation Plant to Future Potrero Road
- Future Potrero Road to Landmark Village Development
- Future Homestead Frontage Road
- Landmark Village Development-Spine Road
- Landmark Village Development to Commerce Center Drive
- Hancock Parkway-Commerce Center Drive
- Henry Mayo Road
- The Old Road
- Northern Proposed Water Tank Location
- Southern Proposed Water Tank Location

The following environmental conditions were recognized in conjunction with the subject property:

- Portions of the subject site are located within active or inactive oil fields;
- Portions of the subject property cross or run parallel to petroleum pipelines; and
- A portion of the waterline easement associated with the Zone 1A Tank Site is adjacent to an old trash dumping site.

No additional subsurface investigations or remedial action was recommended.

Land disposal of liquid digested sewage sludge (biosolids) has been conducted at the site since the Saugus-Newhall and Valencia Water Reclamation Plants were placed in operation during the latter part of 1962 and 1966 respectively. This activity can be conducted, subject to conditions established by the RWQCB. The Sanitation Districts previously operated six disposal sites for spreading sludge from the Saugus-Newhall and Valencia Water Reclamation Plants. Disposal Site 6 which was located within the Landmark Village area.

Disposal Site 6, approximately 60 acres in size, was only used for several years. Commonly called the Forneris site after the farmer who worked the site; sanitation operations ceased after odor complaints were received from nearby commercial residents. Sanitation District operations were then shifted to Site 1 located in Hasley Canyon. This is the only sludge site that is found within Landmark Village, however a small portion of the site runs outside of Landmark's proposed borders. The area was recently evaluated by the DTSC, and found to pose no health issue.

2.7.2 Activities to be Completed Prior to Development

The September 27, 2004 Phase I Environmental Site Assessment recommended that the following activities should be completed prior to development:

- If disturbed, or if located within an area of redevelopment, all former oil wells located on the subject property should be re-abandoned according to all applicable local and state regulations;
- If the pipelines on the subject site are not to be used in the future, they should be abandoned and soils beneath them assessed for petroleum hydrocarbon leakage. If the pipelines are planned to remain in use, the pipelines should be assessed for possible hydrocarbon leakage;
- Properly dispose of scattered suspect asbestos containing materials;
- The areas of former ASTs, current agricultural storage areas, and current soil staining observed on the subject site should be assessed for potential impact to the subject site; and
- Although not a recognized environmental condition, it is recommended that all groundwater monitoring wells or production water wells in areas to be disturbed be abandoned according to applicable local and state regulations, prior to redevelopment.

3.1 EXISTING SOUTHERN CALIFORNIA EDISON TRANSMISSION LINES

The Newhall Ranch Specific Plan site is traversed by Southern California Edison (SCE) 66 kilovolt (kV) and 220 kV transmission lines within a 300-foot easement in the northern portion of the site, and 66 kV and 230 kV transmission lines within a 75- to 240-foot (total width) easement in the central portion of the site. These regional transmission lines originate at two locations, the Saugus Substation east of Interstate 5 (I-5) across from the Six Flags Magic Mountain Amusement Park, and at the Valencia Industrial Park Pardee Substation east of I-5 and north of the Santa Clara River. Because high voltage electrical transmission lines create EMFs and because of ongoing debate over the potential health effects of EMFs, they are discussed in this section.

Electric and magnetic fields occur from energy sources that are electrical in nature. These energy sources and their associated electric and magnetic fields have been described and categorized within the electromagnetic spectrum as illustrated in Figure A-9 (National Institute of Environmental Health Sciences [NIEHS] and U.S. Department of Energy, 2002). The spectrum is organized by the frequency at which the electrical polarity of an energy source changes or oscillates with respect to time (in seconds). The frequency of an electric or magnetic field is expressed as Hertz (Hz). For instance, the earth's magnetic field does not change at any appreciable rate and is considered static. This lies at the extreme low end of the electromagnetic spectrum at zero Hz. At the opposite end of the electromagnetic spectrum are the gamma rays. These fields have an extremely high frequency (10^{21}) and a tremendous amount of energy. This is called ionizing radiation because this energy can ionize molecules. The spectrum also includes; visible light, microwaves, radio waves, and electricity.

The electricity we use each day is generated, transmitted, and distributed at a constant frequency of 60 Hz, also referred to as "power frequency". The unit of measure for electrical power is Watts. Watts can be described as a product of electrical voltage and flow of charge (electrical current measured in Amp). Power-frequency electric and magnetic fields are referred to as EMFs.

Voltage or electrical pressure on any energized conductor exerts a force field known as an electric field. This electric field is measured in units of volts per meter (V/m) and is dependent on the amount of charge. Therefore, a conductor energized at a higher level will have a higher electric field associated with it. Electric fields interact with other neighboring positive or negative charges to cause attracting or repelling forces. The strength of this field rapidly decreases with distance from the source. The electric field can easily be shielded. Trees, fences, buildings, and most other structures can shield electric fields from an overhead power line. The earth will shield the electric field from buried power lines. The strength of the electric field from a power line depends on the voltage level, the distance away from the line, and design of the system.

The use of electricity causes electric charges to flow as electric current. The current on a conductor creates magnetic fields. The unit of measure of magnetic fields is milliGauss (mG).

The strength of magnetic fields diminishes quickly as one moves away from the source, just like the electric field. Magnetic fields interact with neighboring magnetic fields and the resultant field depends on the magnitude and direction of each magnetic field source, (*i.e.*, currents). All SCE facilities contain multiple currents on circuits and depending on their arrangement can increase or decrease the strength of the magnetic field. Therefore, consideration of the direction and magnitude of the current and the configuration of conductors on poles or underground can be used to design facilities with reduced magnetic fields.

During recent years, questions have been raised about the possible health effects of power frequency EMF. Scientific communities have been unable to determine if EMF causes health effects or to establish any standard level of exposure that is known to be harmful (Nair, 1993). Current scientific research focuses on exposure to magnetic fields rather than electric fields.

So far, research on EMF effects on human health has not found sufficient evidence to link EMF exposure to the risk of cancer or other disease. Accordingly, the California Public Utilities Commission (CPUC) Decision 93-11-013 states: "It is not appropriate to adopt any specific numerical standard in association with EMF until we have a firm scientific basis for adopting any particular value". If even the highest risk estimates reported in some of the literature are real, the individual risk is likely to be small, particularly compared to other health risks and compared to the benefits we derive from electric power.

In 1993, a CPUC decision (D.93-11-013) created an EMF research and information program. This program was managed by the California Department of Health Services (CDHS) and funded by utility ratepayers. The purpose of the program was to perform policy analysis, and provide education and technical help to benefit Californians. Input to the CDHS was provided by a Stakeholders Advisory Consultant Group (SAC), comprising members of the public, consumer groups, health and scientific experts, and labor and utility representatives. More input also came from state agencies, consultants and special interest groups during the open-forum discussion periods at the SAC meetings.

In 2002, three scientists for CDHS concluded:

- To one degree or another, all three of the CDHS scientists are inclined to believe that EMFs can cause some degree of increased risk of childhood leukemia, adult brain cancer, Lou Gehrig's Disease, and miscarriage.
- They strongly believe that EMFs do not increase the risk of birth defects, or low birth weight.
- They strongly believe that EMFs are not universal carcinogens, since there are a number of cancer types that are not associated with EMF exposure.
- To one degree or another they are inclined to believe that EMFs do not cause an increased risk of breast cancer heart disease, Alzheimer's Disease, depression or symptoms attributed by some to a sensitivity to EMFs.

  However, all three scientists had judgments that were "close to the dividing line between believing and not believing" that EMFs cause some degree of increased risk of suicide, or for adult leukemia, two of the scientists were "close to the dividing line between believing or not believing" and one was "prone to believe" that EMF cause some degree of increased risk.

In 1996, the National Academy of Sciences (NAS) issued a report finding that there is no clear, convincing evidence to show that residential exposures to EMFs are a threat to human health. The NAS is a private, non-profit society of distinguished scholars that advises the federal government on scientific and technical issues (NAS, 1996).

The federal government has also conducted EMF research as a part of a $45-million research program managed by the National Institute of Environmental Health Sciences. This program, known as the EMF RAPID (Research and Public Information Dissemination) Program, submitted a final report to the U.S. Congress on June 15, 1999 (NIEHS, 1999). The report concludes that:

- "The scientific evidence suggesting that EMF exposures pose any health risk is weak."
- "EMF exposures cannot be recognized as entirely safe because of weak scientific evidence that exposures may pose a leukemia hazard."
- "The power industry should continue its current practice of siting power lines to reduce exposures and continue emphasis on educating both the public and providers of electricity about ways to reduce exposure."

In 2001, Britain's NRPB (National Radiological Protection Board) arrived at a similar conclusion:

> "After a wide-ranging and thorough review of scientific research, an independent Advisory Group to the Board of NRPB has concluded that the power frequency electromagnetic fields that exist in the vast majority of homes are not a cause of cancer in general. However, some epidemiological studies do indicate a possible small risk of childhood leukemia associated with exposures to unusually high levels of power frequency magnetic fields."

In 2002, World Health Organization's International Agency for Research on Cancer concluded:

> "…ELF magnetic fields are possibly carcinogenic to humans, based on consistent statistical associations of high-level residential magnetic fields with a doubling of risk of childhood leukemia. Children who are exposed to residential ELF magnetic fields less than 0.4 microTesla have no increased risk for leukemia. … In contrast, no consistent evidence was found that childhood exposures to ELF electric or magnetic fields are associated with brain tumors or any other kinds of solid tumors. No consistent evidence was found that residential or occupational exposures of adults to ELF magnetic fields increase risk for any kind of cancer."

SCE has identified methods to reduce magnetic fields unique to its facilities and has incorporated these techniques into the "EMF Design Guidelines for New Electrical Facilities: Transmission, Substation, Distribution" manual (SCE, 2004). Using these guidelines, "no- and low-cost" measures to reduce fields are implemented wherever available and practical in accordance with CPUC Decision 93-11-013.

SCE calculated EMF levels for the lines that cross the Specific Plan site; this was done at tract 45433, just east of the Specific Plan site. SCE reported that, at the edge of the right-of-way, EMF levels dropped to 1.1 mG. These levels are consistent with levels found along similar electrical transmission lines throughout California.

3.2 EXISTING SOUTHERN CALIFORNIA GAS COMPANY HIGH PRESSURE LINES

There are two Southern California Gas Company (SCGC) high pressure gas main lines on the site, including a 34-inch main located within a 25- to 30-foot-wide easement that traverses the central portion of the site, and a 12- to 16-inch main that originates at the Ventura County boundary and generally follows Potrero Valley Road and Pico Canyon Road to I-5.

SCGC patrols, inspects, tests, repairs, replaces and maintains its pipelines in compliance with CPUC-mandated safety requirements. CPUC General Order 112E, which is based upon the Federal Department of Transportation Guidelines contained in Part 192 of the Federal Code of Regulations, specifies a variety of design, construction, inspection, and notification requirements. The CPUC conducts annual audits of pipeline operations to ensure compliance with these safety standards. In areas that are designated High Consequence Areas, primarily highly populated areas, SCGC has implemented a rigorous Integrity Management Program which uses the latest pipeline safety inspection tools to check pipe condition and ensure these pipelines are maintained safely.

Because nearly 60 percent of the incidents on utility distribution pipelines are due to excavation damage, the SCGC's safety program includes the operation of a "call-before-you-dig" or a utility-locator service for excavators. In 1998, with the support and encouragement of the natural gas industry, Congress enacted a law establishing a national "call before you dig" safety program, known as One-Call. The One-Call Program is aimed at developing a variety of best practice procedures to prevent excavation damage to underground facilities. In 2005, the Federal Communications Commission designated 811 as a Nationwide 3-Digit Phone Number for contractors and others to call before conducting excavation activities.

In addition, SCGC installs above-ground markers to indicate the location of buried gas lines. At a minimum, line markers are placed at each crossing of a public road, except in very urban areas where utility-locator services are available.

3.3 CHIQUITA CANYON LANDFILL

The Chiquita Canyon Landfill is a 592-acre a Class III (non-hazardous) landfill, located north of and adjacent to State Route 126, immediately east and north of the RMDP project area. Currently, 257 acres are permitted for actual disposal of waste. The remainder of the site is for sedimentation ponds, future expansions, and buffer area. It currently receives approximately 5,000 to 6,000 tons of solid waste daily during a seven-day operating week. The site is owned and operated by Republic Services of California I, LLC. Since the facility was acquired by Republic Services in 1999, it has been upgraded with a new landfill gas management system, upgraded the leachate management system, improved internal roadways and implemented new operating procedures.

Additionally, Republic Services has improved the efficiency of the operation by purchasing two trailer tippers to speed the unloading of waste material at the active portion of the landfill.

New or expanded landfills must be lined with a composite liner (clay and plastic membrane) or other approved liner in accordance with CCR Title 27, not only to prevent water from entering

the refuse area of the landfill, but also to prevent water and other materials from entering ground or surface waters. In addition, all landfills must have collection systems, monitoring wells, and other surveillance programs established to ensure the environmental safety of the facility both during its operation and upon its closure. Environmental issues that are of concern regarding the operation of a landfill include, but are not limited to the following: odors, leachate, methane gas migration, water quality, dust generation, vectors, birds, windblown refuse, and truck traffic.

The network of environmental protection systems at the Chiquita Canyon Landfill includes a composite liner that exceeds federal requirements. The liner is made of clay and synthetic material. Two feet of clay is compacted to increase the impermeability of the liner. A geo-synthetic liner and a 40-mil high-density plastic membrane are placed over the clay. A drainage layer is installed over the liner. The liner system meets all state and federal regulations.

The environmental protection system also includes a leachate collection system in which perforated pipe is placed atop the liner to allow for proper drainage/collection of rainwater and other liquids in the landfill. Once collected, the liquid is shipped off site for treatment.

Rainfall that is diverted away from the landfill must also be managed. At the Chiquita Canyon Landfill, storm water runoff is collected and contained in sedimentation basins. These ponds allow soil particles to settle out of the water before it is discharged to a nearby waterway.

Groundwater is one of the most important concerns at a landfill and requires special monitoring. Groundwater monitoring wells have been installed throughout the site to ensure that landfill operations are not impacting groundwater. Each of the wells is sampled on a monthly basis, with the results sent to the California Department of Environmental Protection and Water Resources Board.

A gas management system was installed in the early 1990's and is used to control methane gas, which is naturally produced during waste decomposition. The gas is collected and safely burned at a single enclosed flare stack located on the site. This system has greatly reduced odors and prevents gas migration.

Access to the site is limited to one entrance and one exit. The facility records and tracks all shipments to the landfill with scales and gate receipts. Each load of incoming waste is visually inspected to ensure that only permitted materials are accepted for disposal. Once unloaded, the waste is immediately compacted to conserve airspace. At the end of each working day, daily cover is placed over the compacted waste to minimize odors.

Steps are also taken to control dust and litter at the landfill. Periodic watering of access roads prevents dust from rising when trucks travel in and out of the landfill. Litter is minimized by limiting the size of the active disposal area, applying daily cover and using fencing on windy days to catch lightweight materials. Laborers collect any litter that blows away from the landfill.

The facility is fully permitted by California Department of Environmental Protection, Water Resources Board, Los Angeles County Department of Health Services and the South Coast Air Quality Management Board. State and local inspectors regularly inspect the site.

3.4 DAM INUNDATION AREA

Dam inundation refers to the flooding and erosion of low lying areas due to catastrophic dam failure. Dam inundation may be caused by earthquakes or other events that compromise the integrity of dams upstream of the proposed Project. The Project site is located about eight miles downstream from the Castaic Dam which is located at the southern end of Castaic Lake and about 17 miles downstream from the Bouquet Dam which is located at the southern end of Bouquet Reservoir.

Less than 1% of the 308 recorded worldwide dam failures between 1766 and 1944 are attributable to earthquakes (Los Angeles County, 1990). The embankments of the Castaic Lake Dam and Bouquet Dam are composed of strong and densely compacted materials. According to the Los Angeles County Safety Element, "most engineered, mechanically-compacted dam embankments or fills of earth or rock materials have performed well under seismic shaking" (Los Angeles County, 1990). The area dams held up well during the Northridge Earthquake (magnitude 6.8 on the Richter Scale) with no signs of damage reported, and are likely to hold up well during other earthquakes of similar, if not greater magnitude (Los Angeles County, 1990). According to the California Department of Water Resources, the Castaic Dam is designed to resist both the maximum credible earthquake and the probable maximum precipitation flood. The dam's spillway has several times the capacity of creeks flow of record, and the dam's freeboard can easily handle any potential landslide, that might occur into the lake. Additionally, the dam provides incidental control benefits downstream.

In the event of a catastrophic dam failure, the limits of dam inundation would roughly follow the outline of the 100-year flood zone within the confines of the Santa Clara River bed (Federal Emergency Management Agency [FEMA], 1996). The 100-year flood is a flood that has a 1% chance of being equaled or exceeded in any given year. However, the volume of water being contained by the lakes is limited. The Project area is not in an area subject to run-up and the distances between the lakes and Project area are relatively large. An event resulting in the overtopping of the dam would be less significant than a dam inundation event.

The Project area also is located near the site of the St. Francis Dam that was built by the Bureau of Water Works and Supply of the City of Los Angeles. This dam was built in 1925-26 as a curved concrete gravity dam in San Francisquito Canyon, about five miles northeast of what is now Santa Clarita. The purpose of the dam was to provide an additional 38,000 acre-feet of storage for Los Angeles-Owens River Aqueduct water close to Los Angeles. The dam failed catastrophically upon its first filling on March 12, 1928. The reason for the dam failure has been attributed to three major factors: (1) the instability of the paleomegalandslide on which the dam was built; (2) the failure to compensate for the additional height added to the dam's design; and (3) the design and construction being overseen by only one person. The failure of the dam prompted the state Legislature, on August 14, 1929, to create what is now the Division of Safety and Dams under DWR. Division engineers and engineering geologists review and approve plans and specifications for the design of dams and oversee their construction to ensure compliance with the approved plans and specifications. Reviews include site geology, seismic setting, site investigations, construction material evaluation, dam stability, hydrology, hydraulics, and structural review of appurtenant structures. In addition, Division engineers annually inspect dams to ensure they are performing and being maintained in a safe manner to prevent dam failures in the future. (California Department of Water Resources, 2007.)

The following discussion first describes the extensive regulatory framework designed to protect humans and the environment from the hazards described in this chapter. The framework includes laws, ordinances, regulations, and guidelines implemented by regionally-responsible agencies.

4.1.1 Federal

Occupational Health and Safety Administration. The Occupational Health and Safety Administration (OSHA) published Standard 1910.120, which addresses dangers that hazardous materials pose in the workplace. (29 C.F.R. §1910.120.) The standard requires that employers evaluate the potential health hazard that hazardous materials pose in the workplace and communicate information concerning hazards and appropriate protective measures to employees. Under Standard 1910.120, a health hazard is defined to mean "a chemical, mixture of chemicals or a pathogen for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees." (29 C.F.R. §1910.120, subd. (a)(3).)

Resource Conservation and Recovery Act (RCRA) (42 U.S.C. §6901 *et seq.*). RCRA establishes a regulatory structure for the management of solid and hazardous wastes. RCRA gives the U.S. Environmental Protection Agency (USEPA) the authority to control the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous waste.

The 1986 amendments to RCRA, found in Subtitle I (40 C.F.R. §280 *et seq*.), enable the USEPA to address environmental problems that could result from underground storage tanks storing petroleum and other hazardous substances. RCRA focuses on active and future facilities; however, once a hazardous material is released to the environment, it is deemed a waste as soon as the material impacted is disturbed or moved. Therefore, contaminated soil can be regulated under RCRA. The California Department of Toxic Substance Control (DTSC) implements RCRA in California and regulations regarding hazardous waste are contained in Title 26 of the California Code of Regulations.

In addition, the USEPA has established Preliminary Remediation Goals (PRGs), which are tools for evaluating and cleaning up contaminated sites. The PRGs are risk-based concentrations that are intended to assist risk assessors in screening evaluations of environmental measurements. PRGs are guidelines to set initial cleanup goals and are not legally enforceable standards.

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. §136 *et seq.*). Pesticides are regulated by the federal government under the FIFRA, which establishes registration and labeling requirements for pesticides, herbicides, and other economic poisons. Registration requires documentation that the pesticide will not damage human health or the environment if used as intended. FIFRA prohibits the sale of any economic poison that has not been registered by the USEPA.

U.S. Department of Transportation. Title 49 of the Code of Federal Regulations and section 31303 of the California Vehicle Code prohibit the transportation of most hazardous materials through residential neighborhoods and require hazardous materials be transported over routes requiring the least overall travel time. Transport of hazardous materials along any city or state roadway or railway is subject to regulation by the U.S. Department of Transportation. The Department of Transportation defines hazardous materials as a substance or material that has been determined to pose "an unreasonable risk to health, safety, or property when transported in commerce." (C.F.R. §105.5, subd. (b).).

4.1.2 State

California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR). The Public Resources Code, Division 3, Chapters 1 through 4, governs the regulatory functions of DOGGR. The code charges the Division with the responsibility of supervising oil, gas, and geothermal well drilling, operation, maintenance, and abandonment operations to prevent damage to life, health, property, and natural resources. More specifically, DOGGR must:

- Prevent damage to underground oil, gas, and geothermal deposits;
- Prevent damage to underground and surface waters suitable for irrigation or domestic use;
- Prevent other surface environmental damage, including subsidence;
- Prevent conditions that may be hazardous to life or health; and
- Encourage the wise development of oil, gas, and geothermal resources through good conservation and engineering practices.

DOGGR is also charged with implementing Section 3208.1(a) of the Public Resources Code, which states, in part,

> To prevent, as far as possible, damage to life, health, and property, the supervisor or district deputy may order reabandonment of any previously abandoned well . . . because the owner of the property on which the well is located proposes construction on the property that would prevent or impede access to the well for purposes of remedying a currently perceived future problem.

After the statue was enacted in 1983, DOGGR developed the “Construction-Site Review Program,” which assists local permitting agencies that regulate land-use development by identifying and reviewing the status of oil wells near or beneath proposed structures.

The Construction-Site Plan Review Program is an integral part of building and safety procedures for urban development of oil field properties and helps to ensure that construction does not take place over improperly abandoned wells. Under its authority, and before issuing permits, local permitting agencies review and implement DOGGR’s pre-construction, oil-well recommendations and requirements. This serves to alleviate land-use issues and allow for responsible urban development of oil field properties.

DOGGR considers 10 feet to be the minimum distance needed to maintain access to a well for remedial work. Before any construction can begin, wells within 10 feet of the proposed construction must be plugged and abandoned to current standards and tested for gas or fluid leakage. Wells 10 feet or more from a proposed structure don't need to be plugged and abandoned to current standards unless future well access will be limited by topography, loss of entry or workspace, or grading alteration. Wells in this category must also be tested for gas or fluid leakage. Wells beneath a proposed structure must be plugged and abandoned to current standards and tested for gas or fluid leakage. For wells never found even after intensive surveying and excavation efforts by DOGGR and developers, DOGGR typically recommends surface control for gas that may leak into proposed structures near a well's historic location. Such controls may include the installation of gas leak detection sensors located in basements or low-lying areas where gas may accumulate. These measures help to ensure the continued protection of health and safety for urban development in proximity to oil fields.

Department of Toxic Substance Control (DTSC). The objective of the DTSC is to protect human health and the environment from exposure to hazardous material and waste. The DTSC has the authority to respond and enforce the cleanup of hazardous substance releases pursuant to the Hazardous Substance Account Act (HSA Act), Chapter 6.8, Division 20 of the Health and Safety Code, and the cleanup of hazardous waste under the Hazardous Waste Control Law, Chapter 6.6 (commencing with Section 25100).

The HSA Act contains a petroleum exclusion by which the term "hazardous substance" cannot apply to "petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance" (Health and Safety Code Section 25317). As a result, the DTSC can enforce the cleanup if the presence of hazardous substance results from: 1) the addition of hazardous substances to crude oil and the addition is not part of regular crude oil processing, or 2) use and wear of crude oil. (See 40 C.F.R. §261.3.)

Waste streams at oil production sites are generally considered waste, not substances, and are thus regulated by the DTSC when hazardous. Certain waste streams can be considered as recyclable material, not waste, provided that their ultimate disposal to land does not release contaminants to the environment (Health and Safety Code §25143). Most waste streams qualify for the "RCRA petroleum exclusion," described in Section 261.4 of the Code of Federal Regulations. Thus, most petroleum soil contamination resulting from typical "exploration, development, or production of crude oil, natural gas or geothermal energy" is excluded from RCRA classification. (40 C.F.R. §261.4(b)(5).) A clarification of the RCRA petroleum exclusion is provided in the March 22, 1993 issue of the Federal Register (Volume 58, p. 15.284). Drilling waste is classified under Section 66261.120 of CCR Title 22 as "special waste" and does not necessarily need to be disposed at hazardous waste treatment/storage/disposal (TSD) facilities even if it exhibits hazardous characteristics.

Under Government Code Section 65962.5.(a), the Department of Toxic Substances Control is required to compile and update as appropriate, but at least annually, and submit to the Secretary for Environmental Protection, a list of all of the following:

(1) All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.

(2) All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.

Los Angeles Regional Water Quality Control Board (CRWQCB-LA). The CRWQCB-LA protects ground and surface water quality in the Los Angeles Region by the development and enforcement of water quality objectives and implementation of a basin plan. The CRWQCB-LA governs requirements, issues waste discharge permits, takes enforcement action against violators, and monitors water quality. The CRWQCB-LA is also authorized to supervise the cleanup of hazardous wastes sites referred to it by the local agencies in those situations where water quality may be affected.

California State Board of Education. The California State Board of Education requires that schools be sited more than 100 feet from the edge of the right-of-way of 100 to 110 kilovolts (kV) lines; 150 feet from 220 to 230 kV lines; and 350 feet from 500 to 550 kV lines. (See Cal. Code of Regs., tit. 5, §14010, subd. (c).)

California Highway Patrol (CHP). The transport of hazardous materials throughout the state of California is regulated by the CHP. The Hazardous Materials Section of the CHP, located in Sacramento, licenses companies that haul hazardous materials. Three categories of hazardous materials are regulated by the CHP in that their transport is limited to designated routes and stopping places. These categories include explosives, inhalation hazard materials (*i.e.*, materials that are poisonous if inhaled), and radioactive materials. SR-126 is a designated route for the transport of explosive and inhalation materials, but not for radioactive materials. (See Cal. Code Regs., tit. 13, div. 2, ch. 6, art. 1, 2.5, and 2.7.)

Office of Health Hazard Assessment (OEHHA). In 1986, California voters approved an initiative to address their growing concerns about exposure to toxic chemicals. That initiative became the Safe Drinking Water and Toxic Enforcement Act of 1986, better known by its original name of Proposition 65. Proposition 65 requires the state to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm. The OEHHA, which is part of the California Environmental Protection Agency (Cal-EPA), administers the Proposition 65 program.

Proposition 65 requires businesses to notify Californians about significant amounts of chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. Proposition 65 also prohibits California businesses from knowingly discharging significant amounts of listed chemicals into sources of drinking water.

Public Resources Code Section 4291. The Project would be subject to the provisions of section 4291 of the Public Resources Code, which specifies standards for brush clearance around buildings or structures located in, upon, or adjoining any mountainous, forest, brush, or grassland area.

4.1.3 Local

Certified Unified Program Agency (CUPA). The Certified Unified Program Agency (CUPA) is an agency certified by the DTSC to conduct the Unified Program, which consists of hazardous waste generator and onsite treatment programs; aboveground and underground storage tank programs; Hazardous Materials Management, Business Plans, and Inventory Statements; and the Risk Management and Prevention Program. In the project area, the CUPA is part of the Los Angeles Fire Department Health Hazardous Materials Division.

Federal and state site remediation regulations are enforced by the DTSC and RWQCB. In the case of oil field remediation, the DTSC usually delegates its lead agency role to Regional Water Quality Control Boards (RWQCBs) as a result of the petroleum exclusions. In Los Angeles County, the RWQCB further delegates their responsibility to the CUPA especially when the threat to groundwater quality is limited.

The Site Mitigation Unit (SMU) of the Health Hazardous Materials Division supervises the remediation of contaminated soil sites in unincorporated portions of Los Angeles County. Los Angeles County CUPA will grant closure of an impacted site when confirmatory samples of soil and groundwater taken demonstrate that levels of contaminants are below the standards set by DTSC and RWQCB.

Los Angeles County Building Code, Section 308, subdivision (c). Los Angeles County Building Code section 308, subdivision (c), states that all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case the Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system. Any buildings or structures to be constructed in this area that are within 1,000 feet of an active landfill area would be required to meet all federal, state, and County code requirements pertaining to methane gas.

Los Angeles County Building Code, Section 308, subdivision(d). Los Angeles County Building Code section 308, subdivision (d), requires that all buildings and enclosed structures that would be constructed within 25 feet of oil or gas wells shall be provided with methane gas protection systems. In addition, buildings located between 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of DOGGR.

Los Angeles County Fire Code. Development within Los Angeles County-designated fire zones is subject to various governmental codes, guidelines, and programs, which are aimed at reducing the hazard potential to acceptable levels. Los Angeles County Fire Code standards related to development within areas designated as Fire Zones 3 or 4 include, but are not limited to:

- Remove and clear within 10 feet on each side of every roadway all flammable vegetation or combustible growth (Fire Code 27.327);
- Clear all hazardous flammable vegetation to the ground for a distance of 30 feet from any structure, or flammable vegetation to a height of 18 inches for another 70 feet (Fire Code 27.301 and 302);

- Remove that portion of any tree within 10 feet of the outlet of a chimney (Fire Code 27.30);
- Maintain any tree adjacent to or overhanging any building free of dead wood (Fire Code 27.301); and
- Access roads shall be constructed with all-weather materials (Fire Code 10.207).

In all cases, development projects, including the Newhall Ranch Specific Plan, are required to incorporate the most current state and County code requirements that are in effect at the time of building permit issuance.

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ATTACHMENT A

FIGURES

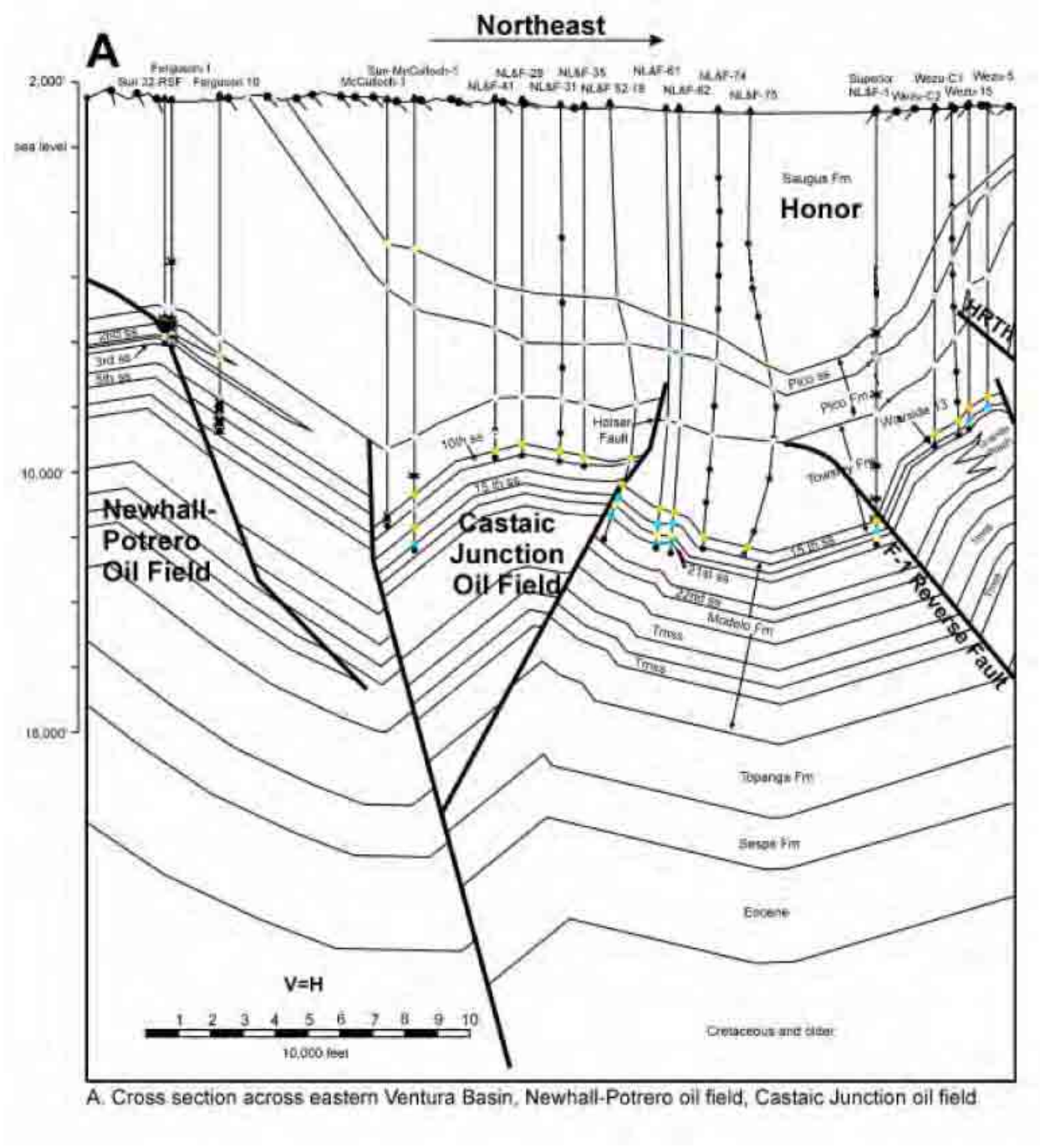

Figure A-1. Cross section across eastern Ventura Basin, Newhall-Potrero oil field and Castaic Junction oil field.

VALENCIA COMMERCE CENTER

DEL VALLE FIELD

LANDMARK

MAGIC MOUNTAIN

MISSION VILLAGE

POTRERO VALLEY

HOMESTEAD NORTH

ENTRADA

HOMESTEAD SOUTH

CASTAIC JUNCTION FIELD

SANTA CLARA RIVER

Santa Clara River

NEWHALL-POTRERO FIELD

LOS ANGELES COUNTY
VENTURA COUNTY

POTRERO VALLEY

NEWHALL RANCH HIGH COUNTRY SMA

Development Area

Oil Field

County Boundary

0 0.5 1 1.5 2
Miles

N

Projection: State Plane Zone 6, NAD 1983
Aerial Photograph Dated 2005

E N T R I X

Figure A-2

Newhall Ranch Specific Plan Areas
and
Oil Field Leases

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VALENCIA COMMERCE CENTER

CASTAIC JUNCTION FIELD (ABD)

MAGIC MOUNTAIN

LANDMARK

MISSION VILLAGE

SANTA CLARA RIVER

DEL VALLE FIELD

HOMESTEAD SOUTH

ENTRADA

NEWHALL-POTRERO FIELD

Development Area

Castaic Junction Oil Field

Other Oil Fields

0 600 1,200 1,800 2,400
Feet

N

Projection: State Plane Zone 6, NAD 1983
Aerial Photograph Dated 2005

ENTRIX

Figure A-3

Castaic Junction Oil Field
and
Newhall Specific Plan Areas

T:\GIS\ENTRIX\3109010_NewhallRanch\map\NHR_CastaicField_3422i_02.mxd

VALENCIA COMMERCE CENTER

LANDMARK

MISSION VILLAGE

MAGIC MOUNTAIN

ENTRADA

HOMESTEAD SOUTH

SANTA CLARA RIVER

DP-63

TB-4

TB-3

TB-6/7

GP-17 Sump

Flare Stack

Condensate Tank

Gas Plant

Round House/DP-15

TB-5

DP-4

TB-2

DP-11

TB-8

DP-49

TB-1

5

Development Area

Areas of Investigation and Remediation*

*Areas of investigation and remediation done at the Castaic Junction Oil Field from the following reports:

- "Castaic Junction Abandonment Phase I - Final Report" prepared by Downtown Production Organization dated October 1995.
- "Closure Report, Castaic Junction Oil Field" prepared by Exxon Complany, USA dated July 1996.
- "Final Closure Report, Castaic Junction Oil Field" prepared by Exxon Company, USA dated February 1997.
- "Castaic Junction Phase II" prepared by Downtown Production Organization dated May 1996.

0 400 800 1,200 1,600
Feet

N

Projection: State Plane Zone 6, NAD 1983
Aerial Photograph Dated 2005

ENTRIX

Figure A-4

Mission Village and Entrada
Investigation / Remediation
Activity Sites

T:\GIS\ENTRIX\3109010_NewhallRanch\map\NHR_MissionLegacyEntradas_FigA4_3422l_02.mxd

VALENCIA COMMERCE CENTER

LANDMARK

MISSION VILLAGE

MAGIC MOUNTAIN

ENTRADA

HOMESTEAD SOUTH

SANTA CLARA RIVER

Development Area

Site Identified in EDR Data Map Review

Phase I Environmental Site Assessment (ESA) and Subsurface Investigation. The Mesas East (AKA Mission Village) BA Environmental (2/05)

0 400 800 1,200 1,600
Feet

N

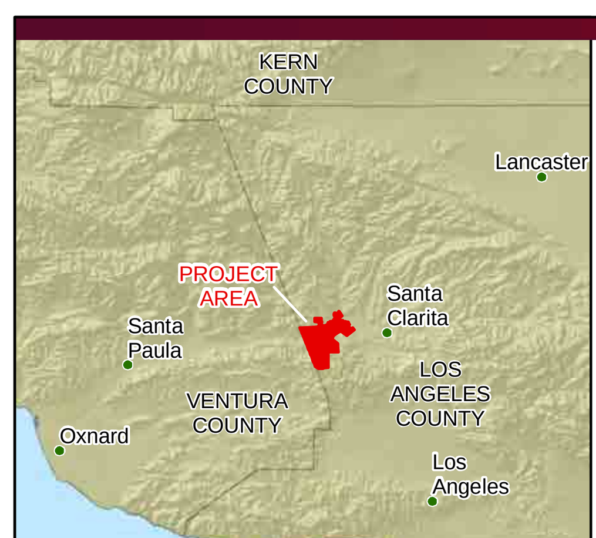
Projection: State Plane Zone 6, NAD 1983
Aerial Photograph Dated 2005

ENTRIX

Figure A-5

Mission Village and Entrada
Specific Plan Areas
Environmental Assessments

T:\GIS\ENTRIX\3109010_NewhallRanch\map\NHR_MissionLegacyEntradas_FigA5_3422i_02.mxd



SITE ID / SITE ID / SITE ID — Approximate Location of Deferred Discontinued Sites; Approximate Location of Discontinued Sites

WELL ID — Abandoned Wells; Active Wells

SITE ID — Location Identified in Phase I (status unknown); Phase II Sample Site (analytical results above settlement agreement levels; remediation unknown)

Development Area

Ranch San Francisco

Oil Fields

Oil Production Zone

Notes:
Sites ID'ed with RED signify a discontinued site with incomplete data.
Sites ID'ed with PURPLE signify sites mapped as discontinued without a closure letter.

0 600 1,200 1,800 2,400
Feet

N

Projection: State Plane Zone 6, NAD 1983
Aerial Photograph Dated 2005

E N T R I X

Figure A-6

Homestead South Specific Plan Area and Rancho San Francisco Oil and Gas Lease

T:\GIS\ENTRIX\3109010_NewhallRanch\map\NHR_RanchoSF_34i22i_02.mxd

BORROW SITE A

SLUDGE SITE #6

PHASE II SUB. INV.

LANDMARK

MISSION VILLAGE

SANTA CLARA RIVER

HOMESTEAD NORTH

HOMESTEAD SOUTH

BORROW SITE B

126

Development Area

Phase I Environmental Site Assessment (ESA) and Subsurface Investigation. Landmark Village, BA Environmental (9/04)

Phase II Subsurface Investigation. Landmark School Site, BA Environmental (9/06)

Historic Sludge Site #6. Districts 26/32 Sludge Disposal Study Progress Report #1, County Sanitation Districts of L.A. County (9/77)

Addendum Letter Phase I Environmental Site Assessment Proposed Water Tank Locations and Utility Corridor Easements. BA Environmental (9/04)

0 600 1,200 1,800 2,400
Feet

N

Projection: State Plane Zone 6, NAD 1983
Aerial Photograph Dated 2005

ENTRIX

Figure A-7

Landmark Village Specific Plan Area
Environmental Assessments
and Investigations

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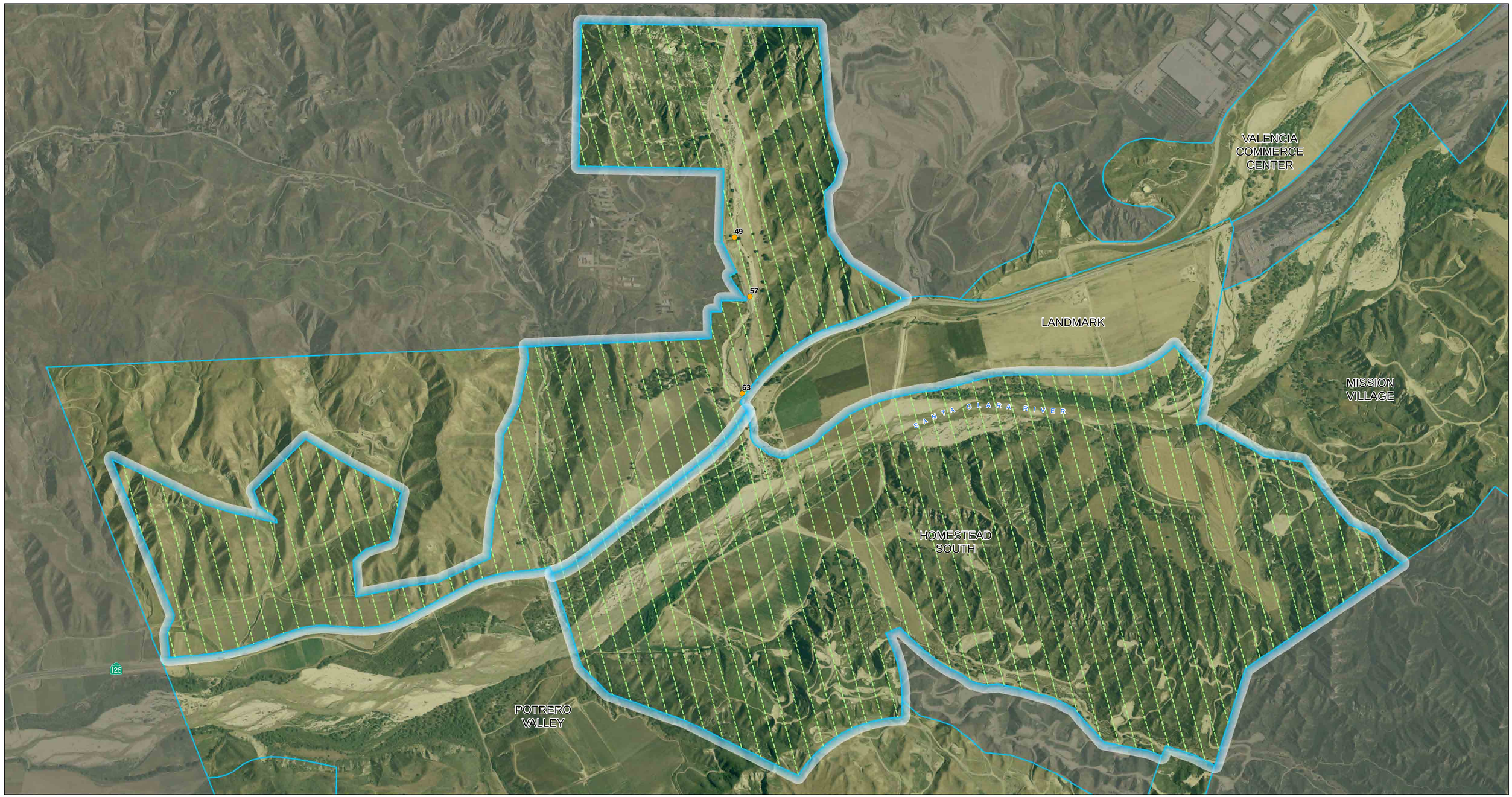

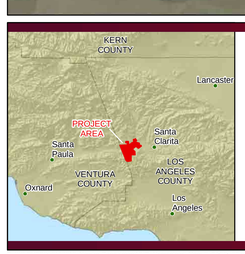

Development Area

Phase I Site Assessment and Subsurface Investigation
Homestead North/South (2,886 acres)
BA Environmental (2/05)

Sites Identified in EDR
Data Map Review

0 600 1,200 1,800 2,400
Feet

N

Projection: State Plane Zone 6, NAD 1983
Aerial Photograph Dated 2005

ENTRIX

Figure A-8

Homestead North and South
Specific Plan Areas
Environmental Assessments

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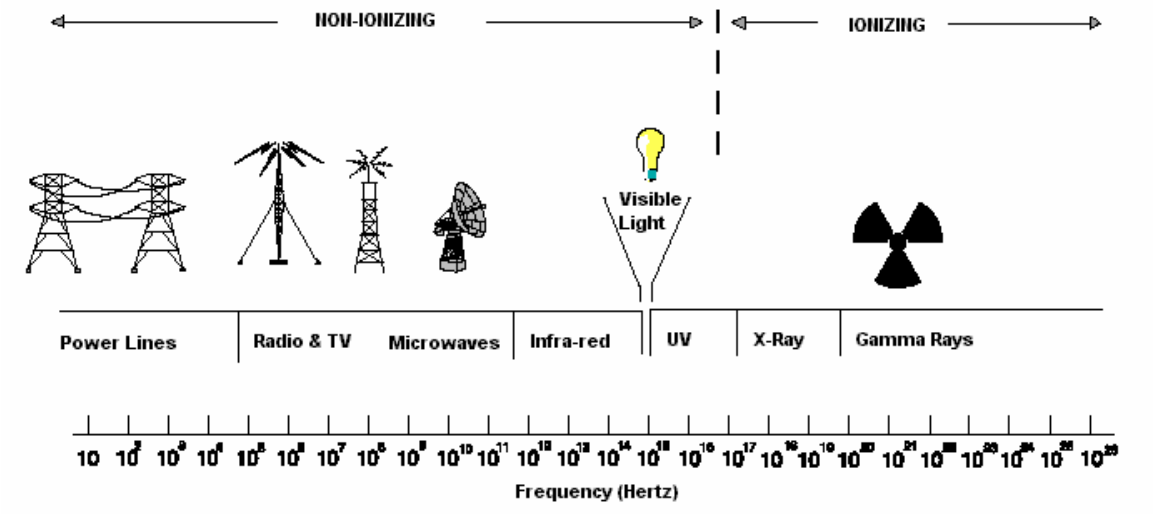

Figure A-9. Electromagnetic Spectrum.

ATTACHMENT B

ANALYTICAL DATA TABLES

Table B-1a. Mission Village Phase I Soil Sample Analytical Results

Sample Location*	Sample Date	Volatile Fuel Hydrocarbons	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Extractable Hydrocarbons**			Sample Depth
							C8-C12	C13-C22	C23-C40	
Tank Battery No. 2										
5ATB2-1	7/27/1995	830	ND	ND	**12**	4.1	**560**	**1100**	1000	9'
5ATB2-2	7/27/1995	550	ND	0.67	6.4	2.4	**440**	**1000**	930	15'
5ATB2-6	7/27/1995	ND	ND	ND	ND	ND	ND	9.8	67	2'
5ATB2-9	7/27/1995	ND	ND	ND	ND	ND	ND	890	2800	2'
5ATB2-15	7/27/1995	ND	ND	ND	ND	ND	ND	17	78	4'
5ATB2-16	7/27/1995	ND	ND	ND	ND	ND	ND	30	130	4.5'
5ATB2-21	8/7/1995	ND	ND	ND	ND	ND	ND	18	74	5'
5ATB2-22	8/15/1995	1700	ND	**1.2**	**12**	9	**720**	**1100**	1000	21'
Tank Battery No. 3										
6BTB3-1	7/25/1995	ND	ND	ND	ND	ND	ND	ND	7.8	2'
6BTB3-4	7/25/1995	1400	**11**	**2.3**	**14**	**22**	**720**	**8500**	12000	3'4"
6BTB3-10	7/25/1995	ND	ND	ND	ND	ND	ND	NA	8.4	2.5'
6BTB3-12	7/25/1995	ND	ND	ND	ND	ND	ND	730	3100	2'
6BTB3-13	7/25/1995	ND	ND	ND	ND	ND	ND	410	1700	4'
6BTB3-14	8/7/1995	ND	ND	ND	ND	ND	ND	NA	8.3	4'
6BTB3-15	8/15/1995	2000	2.6	2.4	12	60	1300	1900	590	13'
6BTB3-16	9/7/1995	4.9	ND	ND	ND	ND	10	69	23	32'
Tank Battery No. 4										
7TB4-1	7/26/1995	2.6	ND	ND	ND	ND	5.5	**150**	78	6'
Gas Plant Area										
9AGPA-1	8/11/1995	1000	**1.1**	**1.9**	6	**16**	**430**	**1900**	6100	15'
9AGPA-2	8/11/1995	1.1	ND	ND	ND	ND	ND	170	2300	8'
9AGPA-3	8/11/1995	3.8	ND	ND	ND	ND	ND	**2400**	8500	9'
9AGPA-4	8/14/1995	ND	ND	ND	ND	ND	ND	360	**21000**	2'
9EGPA-1	8/11/1995	ND	ND	ND	ND	ND	ND	ND	130	4'
9EGPA-2	8/11/1995	ND	ND	ND	ND	ND	**860**	320	1300	7'
9EGPA-3	8/11/1995	1300	ND	0.7	5.3	**40**	ND	100	860	15'
9EGPA-4	8/15/1995	1400	ND	0.66	ND	3.2	**950**	**2000**	820	4'
Tank Battery No. 6/7										
TB6/7-3	7/27/1995	ND	ND	ND	ND	ND	ND	ND	21	2'
TB6/7-5	7/27/1995	ND	ND	ND	ND	ND	ND	ND	17	4'
9d-TB6/7-6	8/7/1995	ND	ND	ND	ND	ND	ND	ND	5.6	3'
Flare Station										
9B-FS-1	8/7/1995	ND	ND	ND	ND	ND	ND	280	1500	6.5'
9B-FS-2	8/7/1995	ND	ND	ND	ND	ND	ND	7.8	73	3'
Round House 15										
11B-RHT-1	8/7/1995	ND	ND	ND	ND	ND	ND	ND	5.6	3'
11B-RHT-2	8/7/1995	ND	ND	ND	ND	ND	ND	ND	5.4	4'
11B-RHT-5	8/7/1995	280	ND	0.043	0.092	0.58	**210**	**1800**	3100	12'
11B-RHT-8	9/7/1995	ND	ND	ND	ND	ND	ND	5.4	5.9	27'
Equipment Storage Area										
11C-ESA-1	8/7/1995	250	ND	ND	0.099	0.46	390	1100	ND	2.5'
Condensate Tank										
3CT-1	8/11/1995	ND	ND	ND	ND	ND	ND	ND	11	2.5'
Detection Limit mg/kg		1	0.005	0.005	0.005	0.015	5.0	5.0	5.0	--

Notes

All units are mg/kg (ppm)

ND Analytes were not present above the stated limit of detection.

NA Not Analyzed

* Numbers refer to HLA plate and tank battery numbers and sample numbers.

** Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

Bold cells indicate analytes above CRWQCB, Los Angeles Region screening levels for soils 40-150 feet above groundwater. Screening levels for groundwater depths less than 40 feet were applied to TB-4

Table B-1b. Mission Village Closure Report Soil Sample Analytical Results.

Sample I.D.	Sample Date	Sample Depth (ft.)	C6-C12 Volatile Fuel Hydrocarbons	Benzene	Toluene	Ethyl-Benzene	Total Xylene	Extractable Hydrocarbons		
								C8-C12	C13-C24	C25-C40
Tank Battery 3										
TB3-3H	3/27/1996	2	ND	ND	ND	ND	ND	9.4 (C14-C38)		
TB3-5H	3/27/1996	2	ND	ND	ND	ND	ND	7.4 (C14-C38)		
TB3-5L	3/27/1996	4	ND	ND	ND	ND	ND	9.9 (C12-C32)		
LACT Wall	5/2/1996	2	ND	ND	ND	ND	ND	ND	10	35
LACT Floor	5/2/1996	6	ND	ND	ND	ND	ND	ND	7.7	21
Tank Battery 3 Sump										
TB3-CMP	4/4/1996	10	26	ND	ND	ND	ND	720 (C8-C38)		
Sump Floor	5/2/1996	10	ND	ND	ND	ND	ND	ND	17	34
TB 3 Culvert										
TB3-S Col	4/24/1996	35	ND	ND	ND	ND	ND	1.1	10	8
Screened Soil Piles										
TB3-P1A	4/25/1996	NR	ND	ND	ND	ND	ND	ND	280	430
TB3-P1B	4/25/1996	NR	ND	ND	ND	ND	ND	9	230	370
TB5-P1A	4/25/1996	NR	ND	ND	ND	ND	ND	ND	33	160
TB5-P2A	4/25/1996	NR	ND	ND	ND	ND	ND	0.68	15	78
TB5-P2B	4/25/1996	NR	ND	ND	ND	ND	ND	ND	50	190
Tank Battery 4 Sump										
TB-4 1W	4/4/1996	8	ND	ND	ND	ND	ND	85 (C8-C40)		
TB-4 2F	4/4/1996	10	ND	ND	ND	ND	ND	7.2 (C14-C34)		
Tank Battery 2 Sump										
TB-2 SW	4/5/1996	4	ND	ND	ND	ND	ND	8.6 (C14-C36)		
GP-17 Sump										
GP-17-W-A	5/15/1996	35	4.1	ND	ND	ND	ND	4	21	8
GP17SEWA	5/16/1996	35	97	0.26	0.22	0.29	0.26	220	720	210
GP17EWA	5/16/1996	55	220	ND	0.017	0.0093	0.1	250	1100	250
GT Soil	6/10/1996	NR	ND	ND	ND	ND	ND	ND	21	130
GP17										
EW35A	6/13/1996	35	ND	ND	ND	ND	ND	1.3	26	13
Flare Sump										
FS#1-A	5/2/1996	32	ND	ND	ND	ND	ND	0.88	2.7	1.7
FS#1-C	5/2/1996	32	2.1	ND	ND	ND	ND	7	46	26
FS#1-E	5/2/1996	32	6.5	ND	ND	0.04	0.31	130	180	74
FS#2AF	5/2/1996	22	430	ND	0.13	0.89	3.2	260	800	540
Drill Site Pit Investigation										
WSB-2	5/8/1996	2	ND	0.0054	0.012	ND	ND	ND	140	580
WSB-5	5/8/1996	5	ND	ND	ND	ND	ND	ND	17	69
WS49A-5	5/8/1996	5	ND	ND	ND	ND	ND	ND	6	33
WS15A-2	5/8/1996	2	ND	0.0085	0.023	ND	ND	ND	150	910
WS15A-5	5/8/1996	5	ND	ND	ND	ND	ND	ND	10	60
WS15B-5	5/8/1996	5	ND	ND	ND	ND	ND	ND	1.8	5.6

Notes

All units are mg/kg (ppm)

ND None detected above detection limits

NR Not Reported

Table B-1c. Mission Village Phase II Soil Sample Analytical Results.

Sample Location*	Sample Date	C4-C12 Volatile Fuel Hydrocarbons	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Extractable Hydrocarbons			C10-C40 418.1 TPH	Sample Depth
							C8-C12	C13-C22	C23-C40		
Trench 4/Flare Area											
BS-6/7-1	1/24/1996	ND	ND	ND	ND	ND	ND	ND	ND	87	15.5'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	NA	NA	NA	47	5.5'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	NA	NA	NA	6.3	20.5'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	ND	3.5	18	36	24.0'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	ND	ND	ND	13	25.5'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	ND	ND	ND	9.8	35.5'
BS-6/7-3	1/25/1996	ND	ND	ND	ND	ND	ND	0.9	8.3	34	5.5'
BS-6/7-3	1/25/1996	ND	ND	0.005	ND	ND	ND	50	210	520	10.5'
BS-6/7-3	1/25/1996	28	ND	ND	0.16	0.44	250	1200	840	6100	15.5'
BS-6/7-3	1/25/1996	ND	ND	ND	ND	ND	ND	790	2200	4200	20.5'
BS-6/7-3	1/25/1996	ND	ND	ND	ND	ND	ND	ND	ND	730	25.5'
BS-6/7-4	1/25/1996	ND	ND	ND	ND	ND	ND	ND	ND	16	10.5'
BS-6/7-4	1/25/1996	ND	ND	ND	ND	ND	ND	ND	ND	130	15.5'
BS-6/7-4	1/25/1996	ND	ND	ND	ND	ND	ND	ND	ND	27	25.5'
Tank Battery No. 2											
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	47	10.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	590	15.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.1	20.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	5.6	30.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	5.6	40.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.7	45.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	5.1	5.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	50	10.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	280	15.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	16	25.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	8.5	35.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	19	40.5'
BS-2-3	1/26/1996	3.1	ND	ND	0.0067	ND	ND	ND	ND	6.8	10.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	5.7	15.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	8	25.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.1	30.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	52	35.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	18	40.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	15	5.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	8	10.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.1	15.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	50	20.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	54	25.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	9.1	30.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	300	35.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	150	40.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	120	5.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	14	10.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	19	15.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	17	20.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	140	30.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	13	35.5'
GP 17 Sump											
BS-GP17-1	1/30/1996	ND	ND	ND	ND	ND	ND	48	640	1700	5.5'
BS-GP17-1	1/30/1996	ND	ND	ND	ND	ND	44	430	460	9.8	15.5'
BS-GP17-2	1/30/1996	3.7	ND	ND	ND	ND	22	1200	2600	6200	5.5'
BS-GP17-2	1/30/1996	9.5	ND	ND	0.037	0.04	100	4300	7900	18000	10.5'
BS-GP17-2	1/30/1996	ND	ND	ND	ND	ND	ND	ND	ND	30	15.5'
BS-GP17-2	1/30/1996	1100	0.16	0.47	0.79	5.6	1500	11000	11000	29000	20.5'
BS-GP17-2	1/30/1996	6.9	ND	ND	0.088	0.13	ND	ND	ND	720	25.5'
BS-GP17-2	1/30/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.1	31.5'
BS-GP17-2	1/30/1996	ND	ND	ND	ND	ND	ND	ND	ND	56	35.5'
BS-GP17-3	1/30/1996	600	0.099	0.4	1.8	7.3	370	5700	5900	26000	5.5'
BS-GP17-3	1/30/1996	660	0.48	0.23	1.5	6.6	340	4400	4800	14000	10.5'
BS-GP17-3	1/30/1996	1700	ND	1	3.9	2.9	420	5700	4900	17000	15.5'
BS-GP17-3	1/30/1996	1200	ND	0.28	5.1	0.74	520	3000	2300	10000	20.5'
BS-GP17-3	1/30/1996	2800	ND	1.1	25	39	1400	6300	3700	20000	25.5'
BS-GP17-3	1/30/1996	ND	ND	ND	ND	ND	630	2600	1900	17000	30.5'
BS-GP17-3	1/30/1996	ND	ND	ND	ND	ND	1.3	13	11	37	36.5'

Notes

All units are mg/kg (ppm)

ND None detected above detection limits

NR Not Reported

Table B-1d. Mission Village Cooling Tower Sump Excavation Confirmation Soil Sample Analytical Results.

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons*	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Extractable Hydrocarbons**			Total Hydrocarbons
							C8-C12	C13-C22	C23-C40	
FL00222	1059 WSE	ND	ND	ND	ND	ND	9.3	5.7		15
FL00225	TDU1120	ND	ND	ND	ND	ND	2.8	5.1	0.3	8.2
Detection Limit (mg/kg)		1.0	0.0050	0.0050	0.0050	0.015				5.0

Notes

All units are mg/kg (ppm)

* Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

** Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

ND Analytes were not present above the stated limit of detection.

Sample dates: 12/3/1996.

Analysis methods: EPA 5030/CA DHS Mod. 8015/8020, EPA 3550/Mod. 8015

Table B-1b. Mission Village Closure Report Soil Sample Analytical Results.

Sample I.D.	Sample Date	Sample Depth (ft.)	C6-C12 Volatile Fuel Hydrocarbons	Benzene	Toluene	Ethyl-Benzene	Total Xylene	Extractable Hydrocarbons		
								C8-C12	C13-C24	C25-C40
Tank Battery 3										
TB3-3H	3/27/1996	2	ND	ND	ND	ND	ND	9.4 (C14-C38)		
TB3-5H	3/27/1996	2	ND	ND	ND	ND	ND	7.4 (C14-C38)		
TB3-5L	3/27/1996	4	ND	ND	ND	ND	ND	9.9 (C12-C32)		
LACT Wall	5/2/1996	2	ND	ND	ND	ND	ND	ND	10	35
LACT Floor	5/2/1996	6	ND	ND	ND	ND	ND	ND	7.7	21
Tank Battery 3 Sump										
TB3-CMP	4/4/1996	10	26	ND	ND	ND	ND	720 (C8-C38)		
Sump Floor	5/2/1996	10	ND	ND	ND	ND	ND	ND	17	34
TB 3 Culvert										
TB3-S Col	4/24/1996	35	ND	ND	ND	ND	ND	1.1	10	8
Screened Soil Piles										
TB3-P1A	4/25/1996	NR	ND	ND	ND	ND	ND	ND	280	430
TB3-P1B	4/25/1996	NR	ND	ND	ND	ND	ND	9	230	370
TB5-P1A	4/25/1996	NR	ND	ND	ND	ND	ND	ND	33	160
TB5-P2A	4/25/1996	NR	ND	ND	ND	ND	ND	0.68	15	78
TB5-P2B	4/25/1996	NR	ND	ND	ND	ND	ND	ND	50	190
Tank Battery 4 Sump										
TB-4 1W	4/4/1996	8	ND	ND	ND	ND	ND	85 (C8-C40)		
TB-4 2F	4/4/1996	10	ND	ND	ND	ND	ND	7.2 (C14-C34)		
Tank Battery 2 Sump										
TB-2 SW	4/5/1996	4	ND	ND	ND	ND	ND	8.6 (C14-C36)		
GP-17 Sump										
GP-17-W-A	5/15/1996	35	4.1	ND	ND	ND	ND	4	21	8
GP17SEWA	5/16/1996	35	97	0.26	0.22	0.29	0.26	220	720	210
GP17EWA	5/16/1996	55	220	ND	0.017	0.0093	0.1	250	1100	250
GT Soil	6/10/1996	NR	ND	ND	ND	ND	ND	ND	21	130
GP17										
EW35A	6/13/1996	35	ND	ND	ND	ND	ND	1.3	26	13
Flare Sump										
FS#1-A	5/2/1996	32	ND	ND	ND	ND	ND	0.88	2.7	1.7
FS#1-C	5/2/1996	32	2.1	ND	ND	ND	ND	7	46	26
FS#1-E	5/2/1996	32	6.5	ND	ND	0.04	0.31	130	180	74
FS#2AF	5/2/1996	22	430	ND	0.13	0.89	3.2	260	800	540
Drill Site Pit Investigation										
WSB-2	5/8/1996	2	ND	0.0054	0.012	ND	ND	ND	140	580
WSB-5	5/8/1996	5	ND	ND	ND	ND	ND	ND	17	69
WS49A-5	5/8/1996	5	ND	ND	ND	ND	ND	ND	6	33
WS15A-2	5/8/1996	2	ND	0.0085	0.023	ND	ND	ND	150	910
WS15A-5	5/8/1996	5	ND	ND	ND	ND	ND	ND	10	60
WS15B-5	5/8/1996	5	ND	ND	ND	ND	ND	ND	1.8	5.6

Notes

All units are mg/kg (ppm)

ND None detected above detection limits

NR Not Reported

Table B-1c. Mission Village Phase II Soil Sample Analytical Results.

Sample Location*	Sample Date	C4-C12 Volatile Fuel Hydrocarbons	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Extractable Hydrocarbons			C10-C40 418.1 TPH	Sample Depth
							C8-C12	C13-C22	C23-C40		
Trench 4/Flare Area											
BS-6/7-1	1/24/1996	ND	ND	ND	ND	ND	ND	ND	ND	87	15.5'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	NA	NA	NA	47	5.5'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	NA	NA	NA	6.3	20.5'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	ND	3.5	18	36	24.0'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	ND	ND	ND	13	25.5'
BS-6/7-2	1/24/1996	ND	ND	ND	ND	ND	ND	ND	ND	9.8	35.5'
BS-6/7-3	1/25/1996	ND	ND	ND	ND	ND	ND	0.9	8.3	34	5.5'
BS-6/7-3	1/25/1996	ND	ND	0.005	ND	ND	ND	50	210	520	10.5'
BS-6/7-3	1/25/1996	28	ND	ND	0.16	0.44	250	1200	840	6100	15.5'
BS-6/7-3	1/25/1996	ND	ND	ND	ND	ND	ND	790	2200	4200	20.5'
BS-6/7-3	1/25/1996	ND	ND	ND	ND	ND	ND	ND	ND	730	25.5'
BS-6/7-4	1/25/1996	ND	ND	ND	ND	ND	ND	ND	ND	16	10.5'
BS-6/7-4	1/25/1996	ND	ND	ND	ND	ND	ND	ND	ND	130	15.5'
BS-6/7-4	1/25/1996	ND	ND	ND	ND	ND	ND	ND	ND	27	25.5'
Tank Battery No. 2											
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	47	10.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	590	15.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.1	20.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	5.6	30.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	5.6	40.5'
BS-2-1	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.7	45.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	5.1	5.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	50	10.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	280	15.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	16	25.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	8.5	35.5'
BS-2-2	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	19	40.5'
BS-2-3	1/26/1996	3.1	ND	ND	0.0067	ND	ND	ND	ND	6.8	10.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	5.7	15.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	8	25.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.1	30.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	52	35.5'
BS-2-3	1/26/1996	ND	ND	ND	ND	ND	ND	ND	ND	18	40.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	15	5.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	8	10.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.1	15.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	50	20.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	54	25.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	9.1	30.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	300	35.5'
BS-2-4	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	150	40.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	120	5.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	14	10.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	19	15.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	17	20.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	140	30.5'
BS-2-5	1/29/1996	ND	ND	ND	ND	ND	ND	ND	ND	13	35.5'
GP 17 Sump											
BS-GP17-1	1/30/1996	ND	ND	ND	ND	ND	ND	48	640	1700	5.5'
BS-GP17-1	1/30/1996	ND	ND	ND	ND	ND	44	430	460	9.8	15.5'
BS-GP17-2	1/30/1996	3.7	ND	ND	ND	ND	22	1200	2600	6200	5.5'
BS-GP17-2	1/30/1996	9.5	ND	ND	0.037	0.04	100	4300	7900	18000	10.5'
BS-GP17-2	1/30/1996	ND	ND	ND	ND	ND	ND	ND	ND	30	15.5'
BS-GP17-2	1/30/1996	1100	0.16	0.47	0.79	5.6	1500	11000	11000	29000	20.5'
BS-GP17-2	1/30/1996	6.9	ND	ND	0.088	0.13	ND	ND	ND	720	25.5'
BS-GP17-2	1/30/1996	ND	ND	ND	ND	ND	ND	ND	ND	7.1	31.5'
BS-GP17-2	1/30/1996	ND	ND	ND	ND	ND	ND	ND	ND	56	35.5'
BS-GP17-3	1/30/1996	600	0.099	0.4	1.8	7.3	370	5700	5900	26000	5.5'
BS-GP17-3	1/30/1996	660	0.48	0.23	1.5	6.6	340	4400	4800	14000	10.5'
BS-GP17-3	1/30/1996	1700	ND	1	3.9	2.9	420	5700	4900	17000	15.5'
BS-GP17-3	1/30/1996	1200	ND	0.28	5.1	0.74	520	3000	2300	10000	20.5'
BS-GP17-3	1/30/1996	2800	ND	1.1	25	39	1400	6300	3700	20000	25.5'
BS-GP17-3	1/30/1996	ND	ND	ND	ND	ND	630	2600	1900	17000	30.5'
BS-GP17-3	1/30/1996	ND	ND	ND	ND	ND	1.3	13	11	37	36.5'

Notes

All units are mg/kg (ppm)

ND None detected above detection limits

NR Not Reported

Table B-1d. Mission Village Cooling Tower Sump Excavation Confirmation Soil Sample Analytical Results.

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons*	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Extractable Hydrocarbons**			Total Hydrocarbons
							C8-C12	C13-C22	C23-C40	
FL00222	1059 WSE	ND	ND	ND	ND	ND	9.3	5.7		15
FL00225	TDU1120	ND	ND	ND	ND	ND	2.8	5.1	0.3	8.2
Detection Limit (mg/kg)		1.0	0.0050	0.0050	0.0050	0.015				5.0

Notes

All units are mg/kg (ppm)

* Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

** Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

ND Analytes were not present above the stated limit of detection.

Sample dates: 12/3/1996.

Analysis methods: EPA 5030/CA DHS Mod. 8015/8020, EPA 3550/Mod. 8015

Table B-2a. Entrada Phase II Soil Sample Analytical Results, Pesticides (September 2006)

Sample No.	Date	Depth bgs	OPPs (mg/kg)	CH (mg/kg)	OC (mg/kg)	Paraquat (mg/kg)	Ammonia (mg/kg)	Nitrate (mg/kg)	Nitrite (mg/kg)	Arsenic (mg/kg)	CAM-17 (mg/kg)
EB1-1A,1B,1C,1D-0.5	8/2/2006	0.5	ND	ND	ND	ND	ND	**0.612**	ND	--	--
EB1-2A,2B,2C,2D-0.5	8/2/2006	0.5	ND	ND	ND	ND	ND	**2.79**	ND	--	--
EB1-3A,3B,3C,3D-0.5	8/2/2006	0.5	ND	ND	ND	ND	**8.08**	**2.39**	**0.187**	--	--
EB2-1A,1B,1C,1D-0.5	8/2/2006	0.5	ND	ND	ND	ND	**1.31**	**5.5**	ND	--	--
EB2-2A,2B,2C,2D-0.5	8/2/2006	0.5	ND	ND	ND	ND	ND	**1.45**	ND	--	--
EB2-3A,3B,3C,3D-0.5	8/2/2006	0.5	ND	ND	ND	ND	**0.858**	**2.34**	ND	--	--
EB2-4A,4B,4C,4D-0.5	8/2/2006	0.5	ND	ND	ND	ND	ND	**3.77**	ND	--	--
EB2-5A,5B,5C,5D-0.5	8/2/2006	0.5	ND	ND	ND	ND	**0.933**	**4.51**	ND	--	--
EB2-6A,6B,6C,6D-0.5	8/2/2006	0.5	ND	ND	ND	ND	**3.78**	**5.38**	ND	--	--
EB2-5C-2	8/2/2006	0.5	NA	NA	NA	NA	ND	**7.05**	ND	--	--
EB1-2A-0.5	8/2/2006	0.5	--	--	--	--	--	--	--	ND	Below 10x STLC
EB1-3B-0.5	8/2/2006	0.5	--	--	--	--	--	--	--	ND	Below 10x STLC
EB1-5C-0.5	8/2/2006	0.5	--	--	--	--	--	--	--	ND	Below 10x STLC
EB2-1B-0.5	8/2/2006	0.5	--	--	--	--	--	--	--	ND	Below 10x STLC
EB2-4A-0.5	8/2/2006	0.5	--	--	--	--	--	--	--	ND	Below 10x STLC
EB2-6C-0.5	8/2/2006	0.5	--	--	--	--	--	--	--	ND	Below 10x STLC
BG1-0.5	8/2/2006	0.5	--	--	--	--	--	--	--	ND	Below 10x STLC
BG2-0.5	8/2/2006	0.5	--	--	--	--	--	--	--	ND	Below 10x STLC
Detection Limits (mg/kg)			0.05-0.10	0.02-20.0	0.001-0.20	1	0.5	0.5	0.1	0.3	0.19-5.0

Notes

CH Chlorinated Herbicides
OCP Organochlorine Pesticides
OPP Organophosphorous Pesticides
ND Analytes were not present above the stated limit of detection.
NA Not Analyzed
STLC Soluable Threshold Limit Concentration
bgs below ground surface
Bold cells indicate analytes stated limit of detection.
Analyses for OPP were performed in accordance with the EPA Method No. 8141A
Analyses for CH were performed in accordance with the EPA Method No. 8151A
Analyses for TPH were performed in accordance with the EPA Method No. 8015B
Analyses for Ammonia were performed in accordance with the EPA Method No. 350.3M
Analyses for Nitrate were performed in accordance with the EPA Method No. 353.3M
Analyses for Nitrite were performed in accordance with the EPA Method No. 353.3M
Analyses for Paraquat were performed in accordance with the EPA Method No. Chevron RM8-10
Analyses for CAM- 17 Metals were perfomred in accordance with the EPA Method No. 6000/7000 series
Analyses for Arsenic were performed in accordance with the EPA Method No. 6010B

Table B-2b. Entrada Progress Report (Oil Well Issues) Soil Sample Analytical Results (December 2006)

Sample No.	Date	VOCs (ug/kg)	Arsenic (mg/kg)	Cam-17 (mg/kg)	TPH (C_4-C_{12}) (mg/kg)	TPH (C_{13}-C_{22}) (mg/kg)	TPH (C_{23}-C_{40}) (mg/kg)
44 Entrada	7/1/2006	ND	ND	Below 10x STLC	ND	ND	ND
Detection Limit		2.0-25.0	1	0.1-2.5	0.5	5	5

Notes

ND Analytes were not present above the stated limit of detection.

STLC Soluable Threshold Limit Concentration

Table B-2c. Entrada Soil Sample Analytical Results

Sample Location*	Sample Date	Volatile Fuel Hydrocarbons	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Extractable Hydrocarbons**			Sample Depth
							C8-C12	C13-C22	C23-C40	
Tank Battery No. 5										
8TB5-8	7/26/1995	ND	ND	ND	ND	ND	ND	ND	8.1	4'
Tank Battery No. 8										
10TB8-5	7/26/1995	350	ND	ND	1.5	3.8	64	**6100**	**11000**	7'
10TB8-5A	8/15/1995	2.8	ND	ND	0.005	0.031	ND	230	1300	7'
10TB8-6	7/26/1995	1.3	ND	0.0076	0.0072	0.048	8	78	110	1.5'
10TB8-7	9/7/1995	ND	ND	ND	ND	ND	ND	ND	7.8	20'
Detection Limit (mg/kg)		1	0.005	0.005	0.005	0.015	5.0	5.0	5.0	--

Notes

Concentrations are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm)

ND Analytes were not present above the stated limit of detection.

* Numbers refer to HLA plate and tank battery numbers and sample numbers.

** Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

Bold cells indicate analytes above CRWQCB, Los Angeles Region screening levels for soils 40-150 feet above groundwater.

Table B-3. Rancho Sante Fe Oil Field Sites with Closure Certifications Issued by by Brown and Caldwell.

Area	Discontinued Sites with Closure Certification	Discontinued Sites with Incomplete Closure Certification	Sites Mapped as Discontinued No Closure Certification	Sites Identified in Phase II with No Closure Certification	Deferred Sites with Pase II Information	Deferred Sites without Pahse II Information	Sites Identified in Phase I, No Further Action
1							
2	2-SP-03	2-SP-08[2]		AET-39			
	2-TK-01	2-WL-26[3]					
	2-WL-024						
	2-SP-02						
3	3-HT-01	3-SP-05[3]	3-DP-02	OMB-48	3-SP-12	3-DP-05	DM-SP3A-1
	3-OP-01	3-WL-139[1,3]	3-WL-49	OMB-54	3-ST-06		DM-SP3A-3
	3-SP-07		3-SS-01	AET-46			
	3-ST-03			OMB-52			
	3-WL-33						
	3-WL-032						
	3-OP-03						
4	4-CP-02	4-WL-64[3]		AET-68		4-PC-05	DM-SP4A-7
	4-SP-11	4-WL-153[3]		OMB-93		4-ST-11	DM-SP4A-9
	4-SP-27	4-PC-01[3]		OMB-90			DM-SP4A-10
	4-WL-14			OMB-86			
	4-WL-38			OMB-79			
	4-WL-151			OMB-85			
	4-PC-05			AET-71			
	4-ST-11			OMB-76			
				OMB-75			
				OMB-77			
				AET-72			
				DM-SP4A-2			
				DM-SP4A-3			
5	5-GP-07	5-SP-11[1,2]	5-SS-01B	5A DM	5-LP-01	5-TK-01	DM-SP5A-10
	5-GP-04	5-SP-24[2]	5-WL-22	AET-103	5-GP-03A	5-GP-03B	DM-SP5A-4
	5-SP-16	5-WL-13[2]	5-SP-25	DM-99		5-SP-05	
			5-SP-27	DM-HT5A-2		5-TK-02A	
			5-SP-07	SP5A-1		5-OP-01	
			5-SP-09	SP5A-2		5-SS-03	
			5-GP-02				
			5-SP-06				
			5-GP-01				
6	6-SP-03	6-WL-08[3]	6-DP-10	DM-HT6A-3	6-PY-03	6-PC-01	
	6-WL-018	6-WL-118[3]	6-SS-01	DM-HT6A-6	DM-SP6A-9	6-FC-01	
	6-SP-31	6-SP-35[3]	6-WL-06	AET-167	DM-SP6A-2	6-DP-01	
	6-WL-018		6-WL-01	OMB-192	DM-SP6A-12	6-TK-02	
	6-SP-41		6-TK-05	OMB-177	DM-SP6A-1	6-PY-02	
	6-WL-87		6-FC-02	OMB-196		6-PY-01	
	6-SP-40		6-DP-07	OMB-197		6-DP-04	
	6-SP-13		6-WL-34			6-DP-14	
			6-BD-02			6-BD-01	

Notes

[1]- TPH- levels above settlement agreement.

[2]- VOC's/SVOC's , Pesticides, CAM 17 Metals- not given as individual constituents, thus unable to check against PRG's.

[3]- VOC's/SVOC's, Pesticides, CAM 17 Metals- no information given.

DM - Danes and Moore. 1990
AET- Applied Environmental Technologies, 1992
OMB - Omnibus, 1999

Table B-4a. Homestead Soil Sample Analytical Results for Areas Identified with Analyte Levels Exceeding the Newhall Ranch Settlement Agreement (Source: Dames and Moore, 1990)

Sample Location	Sample Date	TPH	Depth (ft bgs)	Naphthalene	Phenanthrene	2-Methylnaphthalene
Earthen Sump SP1A-3						
SP1A-3	1990	520	1.5'	NA	NA	NA
Production Satellite Station 2A- overflow tank						
NH-21	1990	2,300	0.5'	NA	NA	NA
Earthen Sump SP2A-3						
SP2A-3	1990	26,000	8.5'	21	12	33
Earthen Sump SP2A-4						
SP2A-4	1990	NA	760'	2.5	NA	NA

Notes

Concentrations are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm)
TPH Total Petroleum Hydrocarbons
NA Not Analyzed
bgs Below ground surface

Table B-4b. Homestead Soil Sample Analytical Results for Areas Identified with Analyte Levels Exceeding the Newhall Ranch Settlement Agreement (Source: Omnibus, August 1999)

Sample Location	Sample Date	Depth (ft bgs)	Benzene	Ethyl-benzene	MTBE	Toluene	Xylene	TCLP Benzene	C10-11	C44+	C8-9	C12-13	C14-15	C16-17	C18-19	C20-23	C24-27	C28-31	C32-35	C36-39	C40-43	C4-12	Total Carbon Chain Range	Carbon Chain Grouping					Total Hydro-carbons
																								C4-12	C8-12	C13-22	C23-32	C33+	
OMB-7																													
1A-1-1	7/22/1999	2	0	5	0	0	9	<0.025	120	110	50	310	380	460	380	490	330	190	100	78	92	NA	3100	NA	325	1743	668	355	3090
1A-1-2	7/22/1999	5	0	0	0	0	0	NA	6	110	0	26	71	130	140	230	190	120	66	55	81	NA	1200	NA	19	527	384	296	1225
1A-1-3	7/22/1999	10	0	6	0	1	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
1A-1-4	7/22/1999	12	0	0	0	0	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
OMB-10																													
1A-4-1	7/22/1999	5	0	0	0	0	0	NA	0	95	0	0	4	7	13	39	60	63	44	40	60	NA	430	NA	0	53	144	228	425
1A-4-2	7/22/1999	5	0	0	0	0	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
1A-4-3	7/22/1999	10	0	2	0	0	1	<0.025	59	110	42	160	180	200	180	260	230	190	120	65	70	NA	1900	NA	181	835	515	335	1866
1A-4-4	7/22/1999	15	0	0	0	0	0	NA	0	31	0	0	0	4	5	11	12	9	8	7	11	NA	98	NA	0	17	26	55	98
OMB- 15																													
1A-11-2	7/23/1999	1	0	0	0	0	0	NA	0	83	0	8	74	240	300	500	440	300	150	69	55	NA	2200	NA	4	993	903	320	2219
1A-11-3	7/23/1999	5	0	0	0	0	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
1A-11-4	7/23/1999	10	0	0	0	0	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
1A-11-5	7/23/1999	15	0	0	0	0	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
OMB-169																													
6A-2-1	8/24/1999	2	0	0	0	0	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
6A-2-2	8/24/1999	5	0	0	0	0	0	NA	0	32	0	0	0	6	10	25	29	21	13	9	14	NA	160	NA	0	35	60	65	159
6A-2-3	8/24/1999	9	0	0	0	0	0	<0.025	0	32	0	0	9	17	22	41	41	31	17	12	15	NA	240	NA	0	79	87	72	237
6A-2-4	8/24/1999	15	0	0	0	0	0	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
OMB-176																													
6A-10-2	7/8/1999	2	214	497	<50.00	88.6	375	<0.025	1300	540	690	3100	3800	5200	4700	6500	6200	4600	1700	520	380	NA	39000	NA	3540	20125	12850	2715	39230
6A-10-3	7/8/1999	6	238	476	<50.00	147	290	<0.025	1800	680	1100	3800	4400	5600	5000	7000	7700	5000	2800	990	480	NA	45000	NA	4800	22150	15150	4250	46350
6A-10-4	7/8/1999	9	0	2.47	0	0	1.21	<0.025	0	0	0	0	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0	0	0	0
6A-10-5	7/8/1999	12	912	916	<50.00	102	1880	<0.025	1200	6500	1400	2600	4400	6900	6500	9800	9000	6600	2800	1800	5200	NA	65000	NA	3900	26450	18750	15600	64700

Notes

Concentrations are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm)

NA Not Analyzed

TCLP Toxicity Characteristic Leaching Procedure

MTBE Methyl tertiary-butyl ether

bgs Below ground surface

Table B-4c. Homestead Heavy Metals Soil Sample Analytical Results for Areas Identified with Analyte Levels Exceeding the Newhall Ranch Settlement Agreement (Source: Omnibus, August 1999)

Sample Location	Sample Date	TTLC Results							STLC Results				TCLP Results (0≤0.05)		
		Arsenic	Barium	Chromium	Lead	Nickel	Zinc	Mercury	Barium	Chromium	Lead	Zinc	Chromium	Lead	Barium
OMB-7															
1A-1-1	7/22/1999	<2.50	886	11.6	14.3	5.5	38.8	<0.20	NA	NA	NA	NA	NA	NA	NA
1A-1-2	7/22/1999	<2.50	725	8.05	12.1	2.96	31.2	<0.20	NA	NA	NA	NA	NA	NA	NA
1A-1-3	7/22/1999	<2.50	43.8	6.7	8.39	<2.50	23.4	<0.20	NA	NA	NA	NA	NA	NA	NA
1A-1-4	7/22/1999	<2.50	64.6	6.35	7.85	<2.50	24.7	<0.20	NA	NA	NA	NA	NA	NA	NA
OMB-10															
1A-4-1	7/22/1999	<2.50	1200	25.8	17.7	5.75	40.8	<0.20	NA	NA	NA	NA	NA	NA	NA
1A-4-2	7/22/1999	<2.50	1460	26.2	14.8	5.18	31.2	<0.20	NA	NA	NA	NA	NA	NA	NA
1A-4-3	7/22/1999	<2.50	94.3	7.64	6.7	5.23	24.8	<0.20	NA	NA	NA	NA	NA	NA	NA
1A-4-4	7/22/1999	<2.50	44.5	6.69	9.4	<2.50	19.3	<0.20	NA	NA	NA	NA	NA	NA	NA
OMB-15															
1A-11-2	7/23/1999	<2.50	510	17.4	23.2	16.2	49.7	<0.20	NA	NA	NA	NA	NA	NA	NA
1A-11-3	7/23/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1A-11-4	7/23/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1A-11-5	7/23/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OMB-169															
6A-2-1	8/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6A-2-2	8/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6A-2-3	8/24/1999	<2.50	2300	231	39.8	12	64.6	<0.20	9.28	4.14	NA	NA	NA	NA	NA
6A-2-4	8/24/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OMB-176															
6A-10-2	7/8/1999	<2.50	5000	16.1	27.2	17.8	71.6	<0.20	30.7	NA	NA	NA	NA	NA	NA
6A-10-3	7/8/1999	<2.50	7000	18.5	48.4	19.7	84.7	<0.20	31.8	NA	NA	NA	NA	NA	NA
6A-10-4	7/8/1999	<2.50	64.5	17.7	3.67	7.01	54.7	<0.20	NA	NA	NA	NA	NA	NA	NA
6A-10-5	7/8/1999	<2.50	669	14	11.1	15.8	51.9	<0.20	NA	NA	NA	NA	NA	NA	NA

Notes

Concentrations are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm)

TTLC Total Threshold Limit Concentration

NA Not Analyzed

STLC Soluable Threshold Limit Concentration

TCLP Toxicity Characteristic Leaching Procedure

Table B-4d. Homestead Soil Sample Analytical Results for Areas Identified with Analyte Levels Exceeding the Newhall Ranch Settlement Agreement (Source: Applied Environmental Technologies, July 1, 1992)

Sample Location	Sample Date	Depth	TRPH	Naphthalene	2-methylnaphthalene	acenaphthylene	Fluorene	Phenanthrene	di-n-buthylphthalate
FO AET-6									
FO-1	Jul-99	6	ND	NA	NA	NA	NA	NA	NA
FO-1	Aug-99	11	ND	NA	NA	NA	NA	NA	NA
FO-1	Sep-99	17	53	NA	NA	NA	NA	NA	NA
FO-1	Oct-99	19.5	ND	NA	NA	NA	NA	NA	NA
FO-1	Nov-99	26	ND	NA	NA	NA	NA	NA	NA
FO-2	Dec-99	8	ND	NA	NA	NA	NA	NA	NA
FO-2	Jan-00	11	ND	NA	NA	NA	NA	NA	NA
FO-2	Feb-00	16	15900	ND	78000	ND	ND	75000	ND
FO-2	Mar-00	17.5	ND	NA	NA	NA	NA	NA	NA
FO-2	Apr-00	21	ND	NA	NA	NA	NA	NA	NA
FO-2	May-00	26	ND	NA	NA	NA	NA	NA	NA
FO-3	Jun-00	4.5	ND	NA	NA	NA	NA	NA	NA
FO-3	Jul-00	9.5	ND	NA	NA	NA	NA	NA	NA
FO-3	Aug-00	12	1950	NA	NA	NA	NA	NA	NA
FO-3	Sep-00	14	ND	NA	NA	NA	NA	NA	NA
FO-3	Oct-00	19.5	ND	NA	NA	NA	NA	NA	NA
FO-3	Nov-00	24.5	ND	NA	NA	NA	NA	NA	NA
FO-3	Dec-00	29.5	ND	NA	NA	NA	NA	NA	NA
FO-3	Jan-01	34.5	ND	NA	NA	NA	NA	NA	NA
FO-3	Feb-01	39.5	ND	NA	NA	NA	NA	NA	NA

Notes

Concentrations are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm)

TRPH Total Recoverable Petroleum Hydrocarbons

NA Not Analyzed

STLC Soluable Threshold Limit Concentration

TCLP Toxicity Characteristic Leaching Procedure

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
DAMES & MOORE																																	
Area 1A																																	
Area 1A	1990	NH-11	5A	20	(92)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	1990	NH-12	5A	20	(86)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	1990	NH-15	2A	4	(60)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	1990	NH-26	2A	1	(ND)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	1990	NH-26	4A	10	(ND)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	1990	SP1A-3	1A	1.5	(520)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	1990	SP1A-7	1A	8.5	(1600)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A																																	
Area 2A	1990	NH-21	1A	0.5	(2300)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	1990	NH-21	2A	5	(60)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	1990	NH-39	2A	5	(99)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	1990	SP2A-3	1A	8.5	(26000)	--	--	--	--	--	21000	12000	33000	--	--	1400	4300	2900	400	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	1990	SP2A-4	1A	2.5	(760)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	1990	SP2A-6	2A	8.5	(8800)	--	--	--	--	--	--	3700	2100	--	1500	--	--	40	60	--	15000	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	1990	HT2A-5	2A	2	(7200)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 3A																																	
Area 3A	1990	NH-10	1A	1	(1600)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A																																	
Area 4A	1990	NH-29	1A	1	(53)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	1990	NH-62	1A	1	(210)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	1990	NH-66	1A	1	(320)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	1990	SP4A-2	1A	7.5	(7300)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	1990	SP4A-3	1A	4	(51000)	--	--	--	--	--	9100	15000	21000	400	7400	--	--	--	--	--	--	--	--	1300	--	--	--	--	--	--	--	--	--
Area 4A	1990	SP4A-11	1A	2.5	(33)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	1990	ST-4-1	1A	8.5	(9000)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	1990	ST-4-1	2A	15	(160000)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	1990	CP4A-4	1A	0.5	(3400)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	1990	CP4A-5	1A	1.5	(2200)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A																																	
Area 5A	1990	NH-54	1A	1	(114)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	NH-56	1A	1	(6100)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	NH-57	2A	5	(41)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	NH-58	1A	1	(200)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	SP5A-1	1A	12	(46000)	--	--	--	--	--	7300	18000	15000	--	--	2000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	SP5A-2	1A	2	(23000)	--	--	--	--	--	19000	--	--	2000	3000		610	440	190	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	SP5A-3	2A	10.5	(28000)	--	--	--	--	--	2700	1100	3100	--	--	140	210	420	740	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	SP5A-3-4-1	1A	15	(25000)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	HT5A-1	5A	1.5	(540)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	HT5A-1-6	1A	1.5	(6600)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	1990	SP5A	1A	2	--	--	--	--	--	--	--	6700	27000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A																																	
Area 6A	1990	NH-5	1A	1	(4200)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-5	2A	5	(12000)	--	--	--	--	--	48000	--	35000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-5	4A	15	(1300)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-5	5A	20	(490)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-5	6A	25	(31)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-15A	1A	1	(5400)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-15A	3A	9	(12000)	--	--	--	--	--	--	--	--	--	--	90000	190000	440000	580000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-46	2A	5	(14000)	--	--	--	--	--	--	12000	--	--	--	7700	24000	12000	5500	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-46	4A	15	(19000)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-46	7A	30	(49)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-71	1A	1	(730)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-71	2A	5	(ND)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-75	1A	1	(40)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-76	2A	5	(7400)	--	--	--	--	--	--	--	--	--	--	1400	5300	7500	7000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-76	3A	10	(ND)	--	--	--	--	--	--	--	--	--	--	60	150	140	750	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-89	1A	1	(94)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-94	1A	1	(ND)	--	--	--	--	--	--	--	--	--	--	200	--	--	1600	--	--	1100	--	--	--	--	--	--	--	--	--	--	--

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
Area 6A	1990	NH-94	3A	10	(ND)	--	--	--	--	--	--	--	--	--	--	14	--	3.2	98	--	--	--	6.9	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-95	1A	1	(ND)	--	--	--	--	--	--	--	--	--	--	67	--	--	700	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-95	3A	10	(ND)	--	--	--	--	--	--	--	--	--	--	21	--	2.5	230	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-96	1A	10	(ND)	--	--	--	--	--	--	--	--	--	--	9.6	68	--	47	--	--	--	4	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-96	3A	1	(ND)	--	--	--	--	--	--	--	--	--	--	3.1	--	--	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	NH-97	1A	1	(6600)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	SP6A-1	1A	1	(39000)	--	--	--	--	--	9000	8000	8600	--	--	160	270	460	210	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	SP6A-2	3A	10.5	(3600)	--	--	--	--	--	5500	2300	11000	--	1200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	SP6A-9	1A	7	(5500)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	SP6A-12-2	1A	12	(1400)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	HT6A-5	1A	2	(1500)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	CP6A-1	1A	1	(660)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	1990	CP6A-2	1A	1	(23000)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APPLIED ENVIRONMENTAL TECHNOLOGIES, INC. (AET)																																	
Area 1A																																	
Area 1A	7/1/92	52-1	--	6	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	7/1/92	52-1	--	11	219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	460	20	46	--	15	60	--	--
Area 1A	7/1/92	52-2	--	6	146	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	760	20	55	--	15	65	--	--
Area 1A	7/1/92	57-1	--	6	336	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	200	15	20	--	20	60	--	--
Area 1A	7/1/92	57-2	--	6	343	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	145	25	80	--	25	50	52	--
Area 1A	7/1/92	61-6	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	10	15	--	10	50	--	--
Area 1A	7/1/92	63-1	--	6	35200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	460	20	30	--	20	65	--	--
Area 1A	7/1/92	63-2	--	6	7310	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	60	20	20	--	20	70	--	--
Area 1A	7/1/92	8-5	--	2	690	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	7/1/92	8-5	--	4.5	18100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	7/1/92	8-5	--	8	30300	--	--	--	--	--	--	--	--	--	--	1600	--	--	1000	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	7/1/92	8-5	--	12	2160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	7/1/92	BO-1	--	6	900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	360	10	240	--	10	30	--	--
Area 1A	7/1/92	BO-3	--	6	890	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	340	25	100	--	30	70	--	--
Area 1A	7/1/92	FO-1	--	17	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	7/1/92	FO-2	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	160	25	45	--	30	70	640	--
Area 1A	7/1/92	FO-2	--	16	15900	--	--	--	--	--	78000	7500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 1A	7/1/92	FO-3	--	12	1950	--	--	--	--	--	10000	9700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	--	--	--	--	--
Area 1A	7/1/92	JO-2	--	1	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	80	25	--	--	20	65	--	--
Area 2A																																	
Area 2A	7/1/92	4A-1	--	2	115000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	160	25	30	0.4	15	50	--	--
Area 2A	7/1/92	4A-1	--	6.5	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	70	20	25	0.1	15	50	--	--
Area 2A	7/1/92	4A-1	--	8	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	15	25	--	15	50	--	--
Area 2A	7/1/92	4A-1	--	9.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35	15	25	--	15	45	--	--
Area 2A	7/1/92	4A-1	--	15.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	15	20	--	10	55	--	--
Area 2A	7/1/92	4A-1	--	20	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	50	15	20	--	10	55	--	--
Area 2A	7/1/92	4A-1	--	24.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	45	20	20	--	15	60	--	--
Area 2A	7/1/92	4A-1	--	29	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	40	15	15	--	10	50	--	--
Area 2A	7/1/92	4A-1	--	40	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	15	15	--	10	50	--	--
Area 2A	7/1/92	4A-2	--	2	78040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	100	40	40	0.2	20	80	110	--
Area 2A	7/1/92	4A-2	--	6	23376	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	70	20	25	--	15	70	--	--
Area 2A	7/1/92	4A-2	--	9	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	75	25	30	--	25	90	--	--
Area 2A	7/1/92	4A-2	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	620	--	--	--	75	25	30	--	25	90	--	--
Area 2A	7/1/92	4A-2	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	680	--	--	4	60	20	30	--	15	70	--	--
Area 2A	7/1/92	4A-2	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	860	--	--	4	50	20	25	--	15	70	--	--
Area 2A	7/1/92	4A-2	--	25	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	880	--	--	3	50	20	20	--	15	70	--	--
Area 2A	7/1/92	4A-2	--	31	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	980	--	--	3	50	15	25	--	15	60	--	--
Area 2A	7/1/92	4A-3	--	2	186880	--	--	--	--	--	--	5600	--	--	--	--	--	--	--	--	--	5500	9300	--	3	320	30	30	0.2	20	70	--	--
Area 2A	7/1/92	4A-3	--	6	129784	--	--	--	--	--	--	20000	--	--	--	--	--	--	--	--	--	3000	--	--	--	3	300	30	45	0.3	20	80	100	--
Area 2A	7/1/92	4A-3	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	960	--	--	--	--	50	15	20	--	10	55	--	--
Area 2A	7/1/92	4A-3	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1100	--	--	--	3	55	20	25	--	20	80	--	--
Area 2A	7/1/92	4A-3	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1000	--	--	--	40	15	15	--	10	50	--	--
Area 2A	7/1/92	4A-3	--	26	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1100	--	--	--	45	15	20	--	10	60	--	--
Area 2A	7/1/92	4A-4	--	2	1410	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1100	--	--	--	--	--	35	--	--	--	--	--
Area 2A	7/1/92	4-1	--	3	167976	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	49-4	--	26	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	49-4	--	31	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	49-5	--	2	38700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	49-5	--	4.5	193	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
Area 2A	7/1/92	52-1	--	6	29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	52-1	--	11	219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	68-1	--	26	107	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	6-1	--	2	34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	20	25	--	20	80	--	--
Area 2A	7/1/92	6-1	--	6	109456	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	55	35	35	--	35	95	--	--
Area 2A	7/1/92	6-1	--	9	326904	--	--	--	--	--	--	14000	29000	--	--	230	--	--	--	--	--	--	--	--	--	65	20	25	--	20	90	--	--
Area 2A	7/1/92	6-1	--	11	235736	--	--	--	--	--	--	8700	29000	--	--	--	--	--	--	--	--	--	--	--	--	70	20	30	--	20	90	--	--
Area 2A	7/1/92	6-2	--	1	632	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	6-2	--	6	712520	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	20	20	--	30	75	--	--
Area 2A	7/1/92	6-2	--	8	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	6-2	--	11	147032	--	--	--	--	--	--	4800	--	--	--	--	--	--	--	--	--	--	--	--	--	65	20	25	--	20	85		--
Area 2A	7/1/92	7-1	--	2	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	7-1	--	6	36496	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	300	140	--	--	15	50	--	--
Area 2A	7/1/92	7-2	--	5	33216	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	130	40	100	0.01	25	50	--	--
Area 2A	7/1/92	7-2	--	16	181	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	7-2	--	20	LOST	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	7-2	--	26	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	7-3	--	6	27640	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	150	30	--	--	15	50	--	--
Area 2A	7/1/92	7-3	--	8	144	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	7-3	--	16	328	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	7-3	--	21	421	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	7-4	--	4.5	216	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 2A	7/1/92	7-4	--	6.5	7350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 2A	7/1/92	81-2	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	10	20	--	10	35	--	--
Area 2A	7/1/92	82-1	--	6	6680	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 3A																																	
Area 3A	7/1/92	63-3	--	20.5	88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 3A	7/1/92	66-2	--	6	5490	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	500	25	40	--	15	100	360	--
Area 3A	7/1/92	68-1	--	26	107	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	15	15	10	45	--	--	--
Area 4A																																	
Area 4A	7/1/92	52-2	--	6	146	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	57-1	--	6	336	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	57-2	--	6	343	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	145	25	80	--	25	50	520	
Area 4A	7/1/92	61-1	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	10	15	--	10	50	--	--
Area 4A	7/1/92	63-1	--	6	35200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	460	20	30	--	20	65	--	--
Area 4A	7/1/92	63-2	--	6	7310	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	60	20	20	--	20	70	--	--
Area 4A	7/1/92	63-3	--	20.5	88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	66-2	--	6	5490	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	500	25	40	--	15	100	36	--
Area 4A	7/1/92	68-1	--	26	107	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	15	15	--	10	45	--	--
Area 4A	7/1/92	6-1	--	2	34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	20	25	--	20	80	--	--
Area 4A	7/1/92	6-1	--	6	109456	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	55	35	35	--	35	95	--	--
Area 4A	7/1/92	6-1	--	9	326904	--	--	--	--	--	--	1400	29000	--	--	230	--	--	--	--	--	--	--	--	--	65	20	25	--	20	90	--	--
Area 4A	7/1/92	6-1	--	11	235736	--	--	--	--	--	--	8700	29000	--	--	--	--	--	--	--	--	--	--	--	--	70	20	30	--	20	90	--	--
Area 4A	7/1/92	6-2	--	1	632	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	6-2	--	6	712520	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	6-2	--	8	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	6-2	--	11	147032	--	--	--	--	--	--	4800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	7-1	--	2	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	7-1	--	6	36496	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	7-3	--	16	328	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	7-3	--	21	421	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	7-4	--	4.5	216	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	7-4	--	6.5	7350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 4A	7/1/92	81-2	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	10	20	--	10	35	--	--
Area 4A	7/1/92	82-1	--	6	6680	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 4A	7/1/92	82-2	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	110	20	65	--	35	85	--	--
Area 4A	7/1/92	8-1	--	6	20900	--	--	--	--	--	--	5000	--	--	--	--	--	--	--	--	--	--	--	--	4	130	20	25	--	20	70	--	--
Area 4A	7/1/92	8-1	--	11	14300	--	--	--	--	--	--	4100	23000	--	--	--	--	--	--	--	--	--	--	--	3	65	20	30	--	20	85	--	--
Area 4A	7/1/92	8-1	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50	15	20	--	15	65	--	--
Area 4A	7/1/92	8-1	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	15	20	--	10	50	--	--
Area 4A	7/1/92	8-1	--	26	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	50	20	25	--	15	70	--	--
Area 4A	7/1/92	8-1	--	31	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	30	30	--	20	90	--	--
Area 4A	7/1/92	8-2	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	70	25	30	--	20	100	--	--
Area 4A	7/1/92	8-2	--	11	39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	20	25	--	20	80	--	--
Area 4A	7/1/92	8-2	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	25	35	--	20	90	--	--
Area 4A	7/1/92	8-2	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	80	30	40	--	30	100	--	--

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
Area 4A	7/1/92	8-2	--	26	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	50	20	20	--	15	65	--	--
Area 4A	7/1/92	8-3	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	50	20	20	--	15	65	--	--
Area 4A	7/1/92	8-3	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	12	15	--	12	50	--	--
Area 4A	7/1/92	8-3	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	15	20	--	12	55	--	--
Area 4A	7/1/92	8-3	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	15	20	--	12	55	--	--
Area 4A	7/1/92	8-4	--	2	37100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 4A	7/1/92	8-5	--	2	690	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 4A	7/1/92	8-5	--	4.5	18100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 4A	7/1/92	8-5	--	8	30300	--	--	--	--	--	--	--	--	--	--	1600	--	--	1000	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 4A	7/1/92	8-5	--	12	2160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 4A	7/1/92	BO-1	--	6	900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	360	10	240	--	10	30	--	--
Area 4A	7/1/92	BO-3	--	6	890	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	340	25	100	--	30	70	--	--
Area 4A	7/1/92	FO-1	--	17	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A																																	
Area 5A	7/1/92	8 -1	--	6	20900	--	--	--	--	--	--	5000	--	--	--	--	--	--	--	--	--	--	--	--	4	130	20	25	--	20	70	--	--
Area 5A	7/1/92	8 -1	--	11	14300	--	--	--	--	--	--	4100	2300	--	--	--	--	--	--	--	--	--	--	--	3	65	20	30	--	20	85	--	--
Area 5A	7/1/92	8 -2	--	11	39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	20	25	--	20	80	--	--
Area 5A	7/1/92	8 -4	--	2	37100	--	--	--	--	--	--	9500	--	--	--	--	--	--	--	14000	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	7/1/92	8 -5	--	2	690	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 5A	7/1/92	8 -5	--	4.5	18100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 5A	7/1/92	8 -5	--	8	30300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 5A	7/1/92	8 -5	--	12	2160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 5A	7/1/92	BO-1	--	6	900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	360	10	240	--	10	30	--	--
Area 5A	7/1/92	BO-3	--	6	890	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	340	25	100	--	30	70	--	--
Area 5A	7/1/92	16 -3	--	16	1190	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	7/1/92	17 -1	--	6	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	7/1/92	17 -2	--	6	2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	280	25	25	--	20	70	--	--
Area 5A	7/1/92	17 -2	--	11	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2000	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	7/1/92	17 -2	--	16	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	7/1/92	17 -3	--	6	116736	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2600	--	--	--	--	280	55	80	0.2	30	55	300	--
Area 5A	7/1/92	17 -3	--	16	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	7/1/92	17 -4	--	5	70300	--	--	--	--	--	--	--	--	--	--	290	--	--	530		2600	--	--	--	--	--	--	35	--	--	--	--	--
Area 5A	7/1/92	17 -4	--	11.5	67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--	--	--
Area 5A	7/1/92	25 -1	--	26	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	7/1/92	33 -1	--	6	882	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 5A	7/1/92	33 -3	--	2	25600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	40	20	0.2	--	45	--	--
Area 5A	7/1/92	33 -3	--	4	55400	--	--	--	--	--	--	--	--	--	--	130	--	--	43	--	--	--	--	--	--	95	85	45	0.2	25	55	--	--
Area 5A	7/1/92	33 -3	--	6	20100	--	--	--	--	--	--	--	--	--	--	32	--	--	--	--	--	--	--	--	4	80	50	40	--	20	55	--	--
Area 5A	7/1/92	33 -4	--	2	6460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	--	--	--	--	--
Area 6A																																	
Area 6A	7/1/92	33-1	--	6	882	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	33-1	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	55	15	20	--	15	50	--	--
Area 6A	7/1/92	33-1	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	55	15	20	--	15	45	--	--
Area 6A	7/1/92	33-1	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	60	15	20	--	15	45	--	--
Area 6A	7/1/92	33-1	--	26	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	5	--		20	--	--
Area 6A	7/1/92	33-2	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	55	15	20	--	15	50	--	--
Area 6A	7/1/92	33-2	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	55	20	20	--	20	55	--	--
Area 6A	7/1/92	33-2	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	55	15	15	--	15	50	--	--
Area 6A	7/1/92	33-2	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	70	20	20	--	20	60	--	--
Area 6A	7/1/92	33-2	--	26	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	75	20	20	--	20	65	--	--
Area 6A	7/1/92	33-3	--	2	25600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	40	20	0.2	--	45	--	--
Area 6A	7/1/92	33-3	--	4	55400	--	--	--	--	--	--	--	--	--	--	130	--	--	43	--	--	--	--	--	--	95	85	45	0.2	25	55	--	--
Area 6A	7/1/92	33-3	--	6	20100	--	--	--	--	--	--	--	--	--	--	32	--	--	--	--	--	--	--	--	4	80	50	40	--	20	55	--	--
Area 6A	7/1/92	33-3	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	15	15	--	20	50	--	--
Area 6A	7/1/92	33-3	--	16A	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	85	20	15	--	20	55	--	--
Area 6A	7/1/92	33-3	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	15	5	--		15	--	--
Area 6A	7/1/92	33-3	--	26	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	15	10	--	10	40	--	--
Area 6A	7/1/92	33-3	--	31	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	15	10	--	10	35	--	--
Area 6A	7/1/92	33-3	--	36	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	30	10	--	10	60	--	--
Area 6A	7/1/92	33-4	--	2	6460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	--	--	--	--	--
Area 6A	7/1/92	33-4	--	7	26600	--	--	--	--	--	--	--	--	--	--	5000	--	--	3100	14000	--	--	--	--	--	--	--	60	--	--	--	--	--
Area 6A	7/1/92	33-4	--	9.5	1080	--	--	--	--	--	--	--	--	--	--	23	--	--	--	--	--	--	--	--	--	--	--	25	--	--	--	--	--
Area 6A	7/1/92	33-4	--	12	54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25	--	--	--	--	--
Area 6A	7/1/92	33-4	--	17	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--	--	--

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
Area 6A	7/1/92	33-4	--	22	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--	--	--
Area 6A	7/1/92	33-4	--	29.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	--	--	--	--	--
Area 6A	7/1/92	33-4	--	34.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--	--	--
Area 6A	7/1/92	33-4	--	38	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--	--	--
Area 6A	7/1/92	34-3	--	6	26800	--	--	--	--	--	30000	--	30000	--	--	--	--	--	--	--	--	--	--	--	4	65	20	20	--	20	70	--	--
Area 6A	7/1/92	34-3	--	11	11000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	80	25	25	--	25	80	--	--
Area 6A	7/1/92	34-3	--	16	15500	--	--	--	--	--	--	--	29000	--	--	--	--	--	--	--	--	--	--	--	3	30	10	--	--	--	25	--	--
Area 6A	7/1/92	34-4	--	2.5	23340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	--	--	--	--	--
Area 6A	7/1/92	34-4	--	7	29000	--	--	--	--	--	--	--	49000	--	--	18000	--	--	1500	--	--	--	--	--	--	--	--	15	--	--	--	--	--
Area 6A	7/1/92	34-4	--	12	13250	--	--	--	--	--	--	--	42000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35	--	--	--	--	--
Area 6A	7/1/92	34-4	--	17	5440	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	--	--	--	--	--
Area 6A	7/1/92	34-4	--	19.5	884	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--	--	--
Area 6A	7/1/92	34-4	--	24.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	--	--	--	--	--
Area 6A	7/1/92	34-4	--	29.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15	--	--	--	--	--
Area 6A	7/1/92	34-4	--	34.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	--	--	--	--	--
Area 6A	7/1/92	36-A	--	--	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	36-B	--	--	741	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	36-C	--	--	27400	--	--	--	--	--	--	--	--	--	--	290	--	--	530	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	40-1	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	60	15	10	--	10	40	--	--
Area 6A	7/1/92	42-1	--	1	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	90	25	25	--	20	70	--	--
Area 6A	7/1/92	42-2	--	1	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	80	20	20	--	20	60	--	--
Area 6A	7/1/92	43-1	--	6	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	80	20	20	--	20	70	--	--
Area 6A	7/1/92	44-1	--	6	779	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	600	20	60	--	25	65	--	--
Area 6A	7/1/92	44-1	--	11	735	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	44-1	--	16	73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	44-1	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	44-3	--	6	730	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	400	30	300	--	40	75	--	--
Area 6A	7/1/92	46-1	--	6	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	46-1	--	11	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	46-2	--	6	135	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		50	10	20	--	10	40	--	--
Area 6A	7/1/92	49-1	--	3.5	53430	--	--	--	--	--	--	19000	20000	--	5000	--	--	--	--	--	--	--	--	--	3	420	30	45	0.3	25	65	--	--
Area 6A	7/1/92	49-1	--	6	37434	--	--	--	--	--	--	9600	--	--	--	--	--	--	--	--	--	--	--	--	3	400	20	25	--	20	70	--	--
Area 6A	7/1/92	49-1	--	16	44806	--	--	--	--	--	--	11000	22000	--	--	--	--	--	--	--	--	--	--	--	5	200	120	380	0.2	40	75	240	--
Area 6A	7/1/92	49-1	--	21	10391	--	--	--	--	--	8500	5400	18000	--	--	--	--	--	--	--	--	--	--	--	3	50	20	25	--	20	70	--	--
Area 6A	7/1/92	49-1	--	26	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	49-1	--	31	337	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	49-2	--	6	19754	--	--	--	--	--	--	6200	--	--	--	--	--	--	--	--	1200				3	500	15	25	0.1	20	60	--	--
Area 6A	7/1/92	49-2	--	11	412	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	49-2	--	16	21972	--	--	--	--	--	18000	13000	35000	--	--	--	--	--	--	--	2800	--	--	2600	--	40	15	20	--	15	60	--	--
Area 6A	7/1/92	49-2	--	21	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	49-2	--	26	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	49-3	--	6	3800	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	520	55	100	1.2	25	70	115	--
Area 6A	7/1/92	49-3	--	11	13400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	50	20	25	--	20	70	--	--
Area 6A	7/1/92	49-3	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	40	20	20	--	15	65	--	--
Area 6A	7/1/92	49-3	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	40	15	20	--	15	60	--	--
Area 6A	7/1/92	49-3	--	26	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	40	15	20	--	15	55	--	--
Area 6A	7/1/92	49-4	--	6	8300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	720	25	45	0.2	20	75	--	--
Area 6A	7/1/92	49-4	--	11	24300	--	--	--	--	--	--	--	21000	--	--	2000	--	--	1900	--	--	--	--	--	--	55	30	30	0.2	20	80	100	--
Area 6A	7/1/92	49-4	--	16	17300	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	170	40	40	2	20	80	560	--
Area 6A	7/1/92	49-4	--	21	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	40	20	20	--	15	60	--	--
Area 6A	7/1/92	49-4	--	26	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	35	10	15	--	10	40	--	--
Area 6A	7/1/92	49-4	--	31	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	40	15	20	--	15	50	--	--
Area 6A	7/1/92	49-5	--	2	38700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	50	--	--	--	--	--
Area 6A	7/1/92	49-5	--	4.5	193	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	49-5	--	9.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	4A-1	--	2	115000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	160	25	30	0.4	15	50	--	--
Area 6A	7/1/92	4A-1	--	6.5	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	70	20	25	0.1	15	50	--	--
Area 6A	7/1/92	4A-1	--	8	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	15	25	--	15	50	--	--
Area 6A	7/1/92	4A-1	--	9.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35	15	25	--	15	45	--	--
Area 6A	7/1/92	4A-1	--	15.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	15	20	--	10	55	--	--
Area 6A	7/1/92	4A-1	--	20	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	50	15	20	--	10	55	--	--

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
Area 6A	7/1/92	4A-1	--	24.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	45	20	20	--	15	60	--	--
Area 6A	7/1/92	4A-1	--	29	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	40	15	15	--	10	50	--	--
Area 6A	7/1/92	4A-1	--	40	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	15	15	--	10	50	--	--
Area 6A	7/1/92	4A-2	--	2	78040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	100	40	40	0.2	20	80	110	--
Area 6A	7/1/92	4A-2	--	6	23376	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	70	20	25	--	15	70	--	--
Area 6A	7/1/92	4A-2	--	9	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	75	25	30	--	25	90	--	--
Area 6A	7/1/92	4A-2	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	75	25	30	--	25	90	--	--
Area 6A	7/1/92	4A-2	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	60	20	25	--	15	70	--	--
Area 6A	7/1/92	4A-2	--	21	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	50	20	20	--	15	70	--	--
Area 6A	7/1/92	4A-2	--	25	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	50	20	25	--	15	70	--	--
Area 6A	7/1/92	4A-2	--	31	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	50	15	20	--	15	60	--	--
Area 6A	7/1/92	FO-1	--	16	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	FO-1	--	17	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	FO-1	--	19.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	FO-2	--	11	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	160	25	45	--	30	70	640	--
Area 6A	7/1/92	FO-2	--	16	15900	--	--	--	--	--	--	75000	78000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	FO-2	--	17.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	FO-3	--	9.5	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	FO-3	--	12	1950	--	--	--	--	--	--	9700	10000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	60	--	--	--	--	--
Area 6A	7/1/92	FO-3	--	14	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	JO-2	--	1	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	80	25	--	--	20	65	--	--
Area 6A	7/1/92	MWF-8	--	Water	ND	--	--	--	--	--	--	--	--	--	--	0.51	--	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A	7/1/92	MWF-49	--	Water	ND	--	--	--	--	--	--	--	--	--	--	1.6	0.59	1.1	6.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OMNIBUS (OMB)																																	
Area 1A																																	
1A1A	7/22/99	15	1	2	--	--	325	1743	668	355	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	886	--	14.3	<0.20	5.5	--	38.8	11.6
1A1A	7/22/99	15	2	5	--	--	19	527	384	296	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	725	--	12.1	<0.20	2.96	--	31.2	8.05
1A1A	7/22/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	43.8	--	8.39	<0.20	<2.50	--	23.4	6.7
1A1A	7/22/99	8	4	12	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	466	--	23	<0.20	4.26	--	28	12
1A2A	7/22/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	64.6	--	7.85	<0.20	<2.50	--	24.7	6.35
1A2A	7/22/99	15	2	5	--	--	0	15	24	54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	164	--	9.85	<0.20	<2.50	--	29	8.02
1A2A	7/22/99	10	3	10	--	--	0	15	24	55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	59.3	--	6.48	<0.20	<2.50	--	23.1	7.43
1A2A	7/22/99	8	4	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	30	--	4.34	<0.20	2.96	--	12.5	3.02
1A3A	7/22/99	15	2	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	41	--	7.66	<0.20	2.63	--	17.4	6.24
1A3A	7/22/99	8	3	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	41.7	--	6.98	<0.20	<2.50	--	16.2	5.75
1A3A	7/22/99	22	4	10	--	--	0	92	129	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	431	--	20.1	<0.20	5.6	--	33.1	72.8
1A3A	7/22/99	17	5	14	--	--	123	292	168	176	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1200	--	17.7	<0.20	5.75	--	40.8	25.8
1A4A	7/22/99	15	1	5	--	--	0	53	144	228	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1200	--	17.7	<0.20	5.75	--	40.8	25.8
1A4A	7/22/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1460	--	14.8	<0.20	5.18	--	31.2	26.2
1A4A	7/22/99	22	3	10	--	--	181	835	515	335	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	94.3	--	6.7	<0.20	5.23	--	24.8	94.3
1A4A	7/22/99	8	4	15	--	--	0	17	26	55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	44.5	--	9.4	<0.20	<2.50	--	19.3	44.5
1A5A	7/21/99	4	1	3	--	--	0	13	20	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	21	--	3.99	<0.20	<2.50	--	21.6	21
1A5A	7/21/99	1	2	10	--	--	0	10	20	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	28	--	4.22	<0.20	12.6	--	14.8	28
1A5A	7/21/99	27	3	5	--	--	0	8	19	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A5A	7/21/99	27	4	11	--	--	0	9	19	44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A5C	7/21/99	10	1	2	--	--	0	10	22	49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	55.2	--	6.47	<0.20	<2.50	--	26.4	8.06
1A5C	7/21/99	10	2	5	--	--	0	26	24	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.45	75.6	--	12.3	<0.20	5.48	--	47.8	17.3
1A5C	7/21/99	4	3	10	--	--	0	18	23	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A5C	7/21/99	14	4	15	--	--	0	13	22	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A5F	7/21/99	10	1	2	--	--	0	15	24	54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	57.5	--	14.2	<0.20	5.35	--	46.3	17.5
1A5F	7/21/99	10	2	5	--	--	0	13	21	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	55.5	--	13.5	<0.20	5.57	--	47.2	18.1
1A5F	7/21/99	14	3	10	--	--	0	15	22	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A5F	7/21/99	5	4	15	--	--	0	10	22	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A7A	7/21/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A7A	7/26/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	35.4	--	8.61	<0.20	<2.50	--	20.8	5.71
1A9A	7/23/99	15	1	2	--	--	3	137	242	215	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2010	--	32	<0.20	19.7	--	74.7	38.1
1A10A	8/4/99	28	2	5	--	--	0	83	173	112	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1740	--	47.5	<0.20	16.4	--	148	29.1
1A10A	8/4/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	58.4	--	12.2	<0.20	<2.50	--	25.4	4.96
1A10B	8/4/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	21.3	--	7.4	<0.20	3.09	--	13.6	21.3
1A11A	7/23/99	2	2	1	--	--	4	993	903	320	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	510	--	23.2	<0.20	16.2	--	49.7	17.4
1A13A	8/24/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	238	--	26.1	<0.20	3.85	--	34.9	14.2
1A13A	8/24/99	15	2	5	--	--	4	402	960	613	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	4030	--	51.7	<0.20	14.1	--	256	16.1
1A13A	8/24/99	26	3	8	--	--	185	9835	9150	4150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	4510	--	2070	<0.20	11.2	--	57.8	10.8

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
1A14A	7/19/99	13	5	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	208	--	136	<0.20	12.7	--	54.4	22.6
1A14A	7/19/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	75	--	13.9	<0.20	7.51	--	45.9	15.9
1A14A	7/19/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	62.6	--	15.1	<0.20	8.53	--	46.6	15.7
1A14A	7/19/99	10	3	8	--	--	0	35	188	277	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1140	--	30.1	<0.20	13.7	--	380	32.8
1A14A	7/19/99	--	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	80.9	--	18.8	<0.20	9.67	--	57.6	21.1
1A16A	9/1/99	10	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.7	--	34.9	<0.20	11	--	60.9	24
1A16B	9/1/99	10	1	1	--	--	10	1275	2775	1550	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	5220	--	28.9	<0.20	13.8	--	704	5.65
1A16B	9/1/99	15	2	1	--	--	0	399	1131	1235	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A16B	9/1/99	0	4	1	--	--	0	73	518	625	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A18A	7/20/99	5	3	10	--	--	25	435	1465	2615	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.1	--	17	<0.20	15.1	--	70.9	26.9
1A18B	7/20/99	5	1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	72.7	--	17.4	<0.20	13.1	--	69.7	28.6
1A19A	7/14/99	8	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	82.6	--	11.2	<0.20	14.9	--	109	26.9
1A20A	7/14/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.6	--	9.57	<0.20	9.4	--	50	14.6
1A21A	7/19/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	62.7	--	15.2	<0.20	9.49	--	52.4	18.6
1A21A	7/19/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	64.9	--	18.6	<0.20	10.4	--	55.1	20.6
1A21B	7/19/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	74.3	--	16.7	<0.20	10.8	--	60.4	23.5
1A21B	7/19/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	61.8	--	15.1	<0.20	11.1	--	52.7	19.7
1A22A	7/14/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	65.3	--	11	<0.20	10.9	--	62	20.8
1A23A	7/16/99	29	2	3	--	--	0	52	299	392	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	119	--	17	<0.20	19.9	--	376	31.4
1A24A	7/16/99	15	2	5	--	--	0	91	212	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	79.5	--	11.3	<0.20	7.47	--	74.9	17.7
1A24A	7/16/99	3	3	4	--	--	8	766	1193	422	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2320	--	18.5	<0.20	8.83	--	101	12.8
1A24A	7/16/99	0	5	4	--	--	220	1908	2720	4883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2100	--	37.4	<0.20	9.77	--	166	10.4
1A24A	7/16/99	0	6	14	--	--	0	251	420	884	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	308	--	11.1	<0.20	5.62	--	53.7	14.9
1A26A	7/16/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	65.4	--	9.01	<0.20	4.21	--	51.4	16.3
1A26A	7/16/99	25	3	10	--	--	0	23	119	199	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A26B	7/16/99	10	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	58	--	10.5	<0.20	5.53	--	45.7	13.6
1A26B	7/16/99	3	4	13	--	--	0	25	142	212	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1A28A	7/20/99	20	4	15	--	--	3190	12925	5195	1330	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1320	--	8.93	<0.20	8.16	--	40.1	11.4
1A28A	7/20/99	8	5	15	--	--	7820	24575	9203	2123	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1010	--	18.2	<0.20	12.9	--	49.2	22
1A29A	7/14/99	8	3	10	--	--	90	1353	1889	1269	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	933	--	53.5	<0.20	23.9	--	80	36.7
1A29A	7/14/99	7	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	61.7	--	12.2	<0.20	9.56	--	50	16.5
1A30A	7/21/99	28	1	2	--	--	3	96	226	239	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	542	--	12.9	<0.20	3.54	--	25	7.19
1A30A	7/21/99	22	3	10	--	--	25	1000	1823	2933	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	28.7	--	4.76	<0.20	<2.50	--	6	2.66
1A30A	7/21/99	8	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	24.3	--	5.01	<0.20	<2.50	--	6.48	3.21
1A30A	7/21/99	18	2	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1070	--	97.4	<0.20	25.8	--	156	43.5
1A31A	7/21/99	15	1	2	--	--	0	10	20	44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	28.9	--	6.66	<0.20	<2.50	--	14.6	5.42
1A31A	7/21/99	22	2	5	--	--	25	1008	2125	2623	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1720	--	84.8	<0.20	28.7	--	85.1	51.2
1A31A	7/21/99	26	3	10	--	--	0	9	20	46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	33.7	--	4.53	<0.20	<2.50	--	15.2	4.12
1A31A	7/21/99	8	4	15	--	--	0	9	19	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	39	--	7.09	<0.20	<2.50	--	15.1	5.75
1A34A	7/19/99	7.5	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	117	--	21.7	<0.20	11.2	--	67.1	25
1A34A	7/19/99	7.5	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	848	--	18.8	<0.20	7.8	--	62.8	23.2
1A34A	7/19/99	11	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	58.4	--	11.9	<0.20	7.38	--	51	16.2
1A34A	7/19/99	2	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	57.5	--	13.3	<0.20	6.34	--	50.2	15.5
1A36A	7/23/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	256	--	18	<0.20	10.2	--	79.3	20.5
1A36A	7/23/99	15	2	6	--	--	3	193	575	386	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	431	--	18.2	<0.20	14.4	--	74.9	30.9
1A36A	7/23/99	23	3	10	--	--	2355	2910	2078	2528	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.75	50.6	--	10.4	<0.20	5.85	--	36.1	12.5
1A36A	7/23/99	8	4	15	--	--	68	146	129	231	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.4	--	14.2	<0.20	6.35	--	44.8	17
Area 2A																																	
2A3A	8/6/99	10	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	20.2	--	8.56	<0.20	<2.50	--	17.3	6.24
2A4A	8/6/99	1	2	3	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	177	--	44.6	<0.20	12.5	--	67.8	29
2A6A	8/6/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	150	--	37.7	<0.20	16.2	--	62.8	262
2A6A	8/6/99	10	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	43.4	--	19.3	<0.20	<2.50	--	214	8.29
2A7A	8/6/99	2	2	10	--	--	1120	4088	2838	1760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2A7A	8/5/99	22	4	12	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	101	--	58.3	<0.20	3.07	--	71.5	26.6
2A7B	8/6/99	2	2	10	--	--	1120	4088	2838	1760	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	23.3	--	6.67	<0.20	<2.50	--	13.6	3.55
2A7B	8/6/99	15	3	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	69.7	--	31.9	<0.20	4.94	--	50	20.7
2A7C	8/23/99	20	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	44.6	--	21.8	<0.20	3.17	--	34.9	10.3
2A7D	8/5/99	23	1	2	--	--	2090	7800	5700	3525	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	90.4	--	28.9	<0.20	10.8	--	49.8	14.3
2A7D	8/5/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	122	--	56.2	<0.20	7.59	--	69	27.5
2A7E	8/23/99	4	1	1	--	--	15	1868	3800	3013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2A7E	8/23/99	13	4	9	--	--	135	2055	2813	2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	47.1	--	26.1	<0.20	7.11	--	37	13
2A7F	8/23/99	2	1	2	--	--	4160	2638	1758	1635	13200	--	--	--	--	16900	19400	74200	--	--	--	--	--	--	<2.50	493	--	12	<0.20	4.59	--	19.7	<2.50
2A7G	8/23/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	68.8	--	36.6	<0.20	6.97	--	52.7	18.9
Area 3A																																	

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
3A1A	8/2/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	21.1	--	10.6	<0.20	<2.50	--	17.7	4.28
3A1A	8/2/99	22	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	54.3	--	19.5	<0.20	5.81	--	32.9	9.95
3A1A	8/2/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	84.1	--	27	<0.20	11.9	--	53.3	18.9
3A2B	8/2/99	0	1	4	--	--	3	140	463	521	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	137	--	75	<0.20	15.7	--	54.2	23
3A2B	8/2/99	4	2	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	64.8	--	25.7	<0.20	8.34	--	42.7	15.3
3A3A	8/26/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	39.8	--	12.6	<0.20	<2.50	--	24	7.46
3A3A	8/26/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	62.4	--	13.7	<0.20	<2.50	--	26.9	8.24
3A3A	8/26/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	364	--	77	<0.20	12.1	--	50.6	21.6
3A4A	8/26/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	99.7	--	48.2	<0.20	10.5	--	69	27.9
3A4A	8/26/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	101	--	45.9	<0.20	13.2	--	66.2	28.2
3A5A	8/3/99	15	2	5	--	--	0	29	54	189	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	474	--	57.9	<0.20	15.6	--	195	29.4
3A5A	8/3/99	22	3	10	--	--	260	1588	1528	3305	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	201	--	86.4	<0.20	25.4	--	405	36.7
3A5A	8/3/99	28	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	92.4	--	37.8	<0.20	7.37	--	58.2	20.4
3A6A	8/26/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	75.6	--	20.5	<0.20	2.98	--	46.9	20.3
3A6A	8/26/99	15	2	5	--	--	1620	9463	5475	1358	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	5440	--	255	<0.20	8.55	--	142	8.24
3A8A	8/4/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	273	--	118	<0.20	20.8	--	20.8	36.9
3A8A	8/4/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	73.2	--	36.8	<0.20	8.02	--	8.02	21.4
3A9A	8/3/99	15	2	5	--	--	0	30	65	221	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	378	--	119	<0.20	30.7	--	30.7	48.3
3A9A	8/3/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	102	--	52.6	<0.20	12.4	--	79.3	30.4
3A9A	8/3/99	17	4	10	--	--	0	183	623	920	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2050	--	58.4	<0.20	10.8	--	92.8	20.6
3A9A	8/3/99	20	5	15	--	--	0	94	113	198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3A10A	8/3/99	9	3	7	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	325	--	112	<0.20	21.8	--	81.7	48.8
3A11A	8/26/99	0	4	0	--	--	0	12	52	137	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3A11A	8/26/99	7.5	2	5	--	--	0	45	193	167	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	945	--	60.8	<0.20	20.7	--	84.5	36.2
3A11A	8/26/99	7.5	3	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	119	--	22	<0.20	6.52	--	46.9	20.5
3A12A	8/24/99	7.5	1	1	--	--	4	75	175	298	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2370	--	84.6	<0.20	10.3	--	57.2	12.9
3A12A	8/24/99	7.5	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	57.2	--	30.6	<0.20	8.78	--	47.5	18.3
3A13A	8/2/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	101	--	52.7	<0.20	14.1	--	71.4	27.8
3A13A	8/2/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	80.2	--	41.8	<0.20	15.2	--	55.5	22.4
3A13A	8/2/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	106	--	56.2	<0.20	14.4	--	71.4	27.7
3A15A	8/3/99	15	1	2	--	--	0	27	59	204	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3A15A	8/3/99	15	2	5	--	--	0	81	252	187	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2200	--	77.9	<0.20	15.4	--	80.6	23.6
3A15A	8/3/99	10	3	8	--	--	375	13435	8100	4720	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	476	--	50.7	<0.20	19.8	--	75.7	26.6
3A15A	8/3/99	18	4	15	--	--	2	53	87	231	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3A16A	8/25/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	97.9	--	44	<0.20	17	--	70.1	25.9
3A16A	8/25/99	15	2	5	--	--	0	36	84	142	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	181	--	97.5	<0.20	19.2	--	78.6	31.2
3A16A	8/25/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	85.1	--	42.6	<0.20	16.1	--	68.3	26.9
3A17A	8/25/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	72.8	--	34.5	<0.20	10.9	--	55.8	22.2
3A17A	8/25/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.4	--	36	<0.20	9.52	--	55.3	22.9
3A17A	8/25/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	72.5	--	41.7	<0.20	9.9	--	57	23.4
3A19H1	8/31/99	3	1	--	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	66.3	--	14.1	<0.20	6.28	--	44.3	11.1
3A19H2	8/31/99	0	1	--	--	--	65	2730	7425	2830	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	279	--	33.3	<0.20	9.97	--	81.6	8.57
3A19H3	8/31/99	3	1	--	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	52.7	--	13	<0.20	7.32	--	37.1	10.1
3A19H4	8/31/99	3	1	--	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	80.4	--	21.9	<0.20	15.3	--	60.3	16.6
Area 4A																																	
4A2A	7/26/99	15	1	2	--	--	3	543	1003	828	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1080	--	91.8	<0.20	28	--	114	47.7
4A2A	7/26/99	15	2	15	--	--	26	674	668	573	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1080	--	113	<0.20	17.1	--	62.3	33
4A2A	7/26/99	24	4	7	--	--	34	186	100	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	942	--	74.2	<0.20	13.8	--	66.1	22.7
4A2A	7/26/99	21	5	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	32.5	--	11.2	<0.20	8.16	--	33.1	10.4
4A3H1	9/1/99	3	1	--	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.4	--	20.3	<0.20	<2.50	--	42.1	14
4A3H1	9/1/99	10	3	--	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.8	--	18.9	<0.20	<2.50	--	41.2	13.4
4A3H1	9/1/99	15	4	--	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	47	--	13.8	<0.20	4.23	--	33.4	9.22
4A4A	7/26/99	7	2	5	--	--	0	345	843	1653	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4A4A	7/26/99	15	1	2	--	--	25	1595	4075	4985	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	442	--	32.5	<0.20	21.6	--	119	28.6
4A5A	7/28/99	15	1	2	--	--	0	6	26	69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	82.5	--	38	<0.20	8.87	--	58.4	20.5
4A5A	7/28/99	15	2	5	--	--	0	10	26	68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4A5A	7/28/99	22	3	10	--	--	0	78	50	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	82.9	--	36.4	<0.20	9.56	--	58.8	22.1
4A5A	7/28/99	8	4	15	--	--	0	10	26	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4A7A	7/29/99	15	2	5	--	--	20	923	1978	3430	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2580	--	73.3	<0.20	27.5	--	177	32.6
7A7A	7/29/99	25	3	11	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	43.2	--	20.6	<0.20	6.85	--	36.3	12.2
4A8A	7/28/99	15	1	2	--	--	0	10	26	66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	48.3	--	20.6	<0.20	4	--	35.1	12.2
4A8A	7/28/99	15	2	5	--	--	0	10	26	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4A8A	7/28/99	22	3	10	--	--	0	6	26	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	47.8	--	22.5	<0.20	3.14	--	38.2	13.2
4A8A	7/28/99	22	4	15	--	--	0	6	24	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
4A8B	7/28/99	15	1	2	--	--	0	6	25	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	44.7	--	21.6	<0.20	5.29	--	32.7	10.4
4A8B	7/28/99	15	2	5	--	--	0	5	24	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4A8B	7/28/99	8	3	10	--	--	0	6	24	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	44.3	--	19.1	<0.20	5.19	--	37.6	11.4
4A8B	7/28/99	22	4	15	--	--	0	5	24	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4A8C	7/28/99	10	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.2	--	25.4	<0.20	5.33	--	45.1	14.2
4A8C	7/28/99	7	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	54.1	--	29.6	<0.20	6.69	--	45	16.2
4A8D	7/29/99	10	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	51.4	--	19.9	<0.20	8.65	--	43.5	15.3
4A8D	7/29/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	55.9	--	24.1	<0.20	7.07	--	44.1	14.2
4A9A	7/29/99	7.5	1	2	--	--	520	1970	12400	7200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	52.8	--	25.4	<0.20	9.01	--	46.3	13.9
4A9A	7/29/99	7.5	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	57.9	--	28.2	<0.20	6.58	--	46.3	15.6
4A9A	7/29/99	12	3	10	--	--	755	1155	7550	4550	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	52	--	28.1	<0.20	7.09	--	44.4	15.1
4A9A	7/29/99	5	4	14	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	58.8	--	28.5	<0.20	7.79	--	49.2	15.5
4A10A	7/30/99	15	2	5	--	--	0	24	79	158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.6	--	29.5	<0.20	6.69	--	44.8	16.1
4A10A	7/30/99	22	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	55.7	--	29.9	<0.20	2.96	--	42.4	15.1
4A11A	7/30/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	54	--	19.7	<0.20	3.17	--	33.5	10.4
4A11A	7/30/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	43.5	--	17.8	<0.20	3.66	--	32.1	10
4A12A	7/30/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	42.7	--	19.5	<0.20	5.12	--	32.8	9.89
4A12A	7/30/99	6	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	73.6	--	30.3	<0.20	3.45	--	53.3	17.2
4A13A	7/30/99	15	1	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	42	--	17.2	<0.20	3.76	--	31.6	9.4
4A13A	7/30/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	35.1	--	15.8	<0.20	2.52	--	27.5	8.14
4A14A	7/30/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	50.2	--	19	<0.20	3.14	--	35.6	11.5
4A14A	7/30/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	52.4	--	19.7	<0.20	4.28	--	39.9	13.8
4A15A	7/29/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	58.6	--	25.2	<0.20	7.35	--	42.8	15.2
4A15A	7/29/99	15	2	5	--	--	0	608	1563	3570	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	182	--	85.8	<0.20	24.2	--	70.2	33.6
4A16A	7/29/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.5	--	26.8	<0.20	8.45	--	50.5	19
4A16A	7/29/99	15	2	5	--	--	0	323	1136	1431	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	4000	--	120	<0.20	16.4	--	236	25
4A17A	8/24/99	15	1	0	--	--	20	601	1949	4450	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	1130	--	92.7	<0.20	8.25	--	52.3	8.66
4A17A	8/24/99	7.5	2	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	76.5	--	27.3	<0.20	9.41	--	52.7	16.1
4A18A	7/27/99	7.5	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	68.2	--	11.1	<0.20	12.1	--	49.3	15.2
4A18A	7/27/99	7.5	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	76.3	--	14.3	<0.20	10.1	--	57.6	20.1
4A20A	7/27/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	80.9	--	19.7	<0.20	9.95	--	56.8	19.9
4A20A	7/27/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	78	--	17.2	<0.20	13.7	--	56	21.6
4A21A	7/26/99	15	1	2	--	--	3	107	356	455	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	486	--	17.2	<0.20	9.11	--	48.5	15.9
4A21A	7/26/99	20	3	8	--	--	0	31	73	333	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	449	--	98.3	<0.20	16	--	65.2	22.5
4A22A	7/27/99	0	2	1	--	--	160	1520	13850	9750	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	73.6	--	13.2	<0.20	12.3	--	51	14.5
4A22A	7/27/99	7.5	4	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	74.5	--	13.5	<0.20	14.3	--	55.7	18
4A23H1	8/31/99	5	1	--	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	51.7	--	12.5	<0.20	5.88	--	36.2	10.2
4A24A	7/28/99	15	1	2	--	--	0	69	179	119	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	137	--	33.3	<0.20	10.9	--	62.9	21
4A24A	7/28/99	15	2	5	--	--	0	12	35	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4A24A	7/28/99	22	3	10	--	--	0	11	30	85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	93.9	--	33.4	<0.20	10.8	--	63.6	24.4
4A24A	7/28/99	8	4	15	--	--	0	7	29	75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4A25A	7/27/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	61.7	--	10.7	<0.20	6.57	--	42.3	13.3
4A25A	7/27/99	22	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	61.8	--	12.4	<0.20	7.5	--	43.2	14.5
4A26A	7/27/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	60.4	--	16.7	<0.20	10.3	--	49.2	17.6
4A26A	7/27/99	8	4	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	58.3	--	14.4	<0.20	8.91	--	50	18.3
Area 5A																																	
5A1A	6/14/99	0	1	5	--	0	9.5	83	570.5	518	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	45.4	--	18.4	<0.20	6.61	--	51.8	9.01
5A1A	6/14/99	0	2	10	--	7.82	1045	1395	9425	3725	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	84.8	--	30	<0.20	11.9	--	65.1	24.70
5A1A	6/14/99	0	3	15	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	61.2	--	26.3	<0.20	15.1	--	59.1	19.60
5A2A	6/15/99	15	1	2	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	74.1	--	33.3	<0.20	11.2	--	66.8	22.00
5A2A	6/15/99	15	2	5	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	69.0	--	32.2	<0.20	11.2	--	60.9	23.30
5A2A	6/15/99	8	3	10	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	54.8	--	24.1	<0.20	4.73	--	49.7	18.50
5A2A	6/15/99	22	4	9	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	99.7	--	35.4	<0.20	15.5	--	74.9	26.30
5A2A	6/15/99	8	5	15	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	103.0	--	39.4	<0.20	12.2	--	77.5	29.40
5A3A	9/1/99	20	4	10	--	--	3	453	892.5	270.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	50.5	--	18.2	<0.20	13.1	--	46.2	11.3
5A5A	6/22/99	15	1	2	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	112	--	32.6	<0.20	10.7	--	56.9	19.4
5A5A	6/22/99	7	3	10	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	86.7	--	26.5	<0.20	12.7	--	51.7	19.5
5A5A	6/22/99	24	4	6	--	--	0	36.25	90.5	64.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	7710	--	29	<0.20	14	--	67.9	11.2
5A5A	6/22/99	25	5	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	79	--	23.2	<0.20	5.52	--	47	17.8
5A6A	6/15/99	15	1	2	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	81.3	--	34.3	<0.20	10.3	--	65	27.6
5A6A	6/15/99	15	2	5	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.4	--	35.3	<0.20	15.8	--	61.3	27.4
5A6A	6/15/99	8	3	10	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.3	--	30.8	<0.20	6.78	--	61.3	22.7
5A6A	6/15/99	22	4	14	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	69.6	--	31.3	<0.20	8.7	--	59.5	26
5A7A	6/23/99	10	1	2	--	--	0	25.5	124	112.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	61.2	--	10.1	<0.20	5.06	--	42.6	20

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
5A7A	6/23/99	8	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.01	40.7	--	9.25	<0.20	4.8	--	37.3	14.1
5A7A	6/23/99	16	3	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.45	42.4	--	9.83	<0.20	4	--	37.6	14.7
5A7B	6/23/99	10	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	47.4	--	9.2	<0.20	2.99	--	39.9	12.6
5A7B	6/23/99	10	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.54	29.7	--	4.85	<0.20	<2.50	--	21.5	8.79
5A7B	6/23/99	22	4	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	46.5	--	8.98	<0.20	4.27	--	35.3	12.2
5A7B	6/23/99	15	5	8	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	43	--	8.63	<0.20	4.82	--	37.6	14.8
5A8A	6/25/99	15	2	5	--	--	0	57.5	179.5	125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.99	61.5	--	11.6	<0.20	9.75	--	48.7	17.7
5A8A	6/25/99	8	3	8	--	--	1560	10500	7535	1875	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12.4	1030	--	35.7	<0.20	19.6	--	109	84.4
5A8A	6/25/99	22	4	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.84	43.2	--	8.6	<0.20	5.4	--	39	13.6
5A8A	6/25/99	15	5	15	--	--	615	2340	1492.5	375.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.81	45.7	--	9.9	<0.20	6.59	--	37.9	13.3
5A9A	6/25/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.7	--	12.4	<0.20	8.82	--	49.5	18.2
5A9A	6/25/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.78	53	--	11.9	<0.20	5.64	--	45.3	15.3
5A9A	6/25/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.88	49.2	--	9.93	<0.20	4.44	--	43.3	14.7
5A9A	6/25/99	8	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	42.4	--	9.39	<0.20	6.21	--	37.4	14.3
5A11A	6/25/99	15	1	2	--	--	0	4.5	28.75	510075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5A13H1	9/1/99	2	1	--	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	61	--	20.3	<0.20	4.79	--	46.6	17.1
5A14A	6/28/99	0	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	65.1	--	12.2	<0.20	13.2	--	48.5	19.9
5A15A	6/23/99	5	3	10	--	--	0	15.5	51	59.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2930	--	40.4	<0.20	26.8	--	489	30.9
5A15A	6/23/99	15	4	15	--	--	0	9	31.5	54.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	104	--	26.8	<0.20	7.61	--	56.8	19.9
5A16A	6/28/99	10	1	2	--	--	115	770	682.5	592.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	98.7	--	16.8	<0.20	8.99	--	51.1	22.1
5A16A	6/28/99	10	2	5	--	--	128	496	301	97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.4	--	12.8	<0.20	5.67	--	42.5	15.4
5A16A	6/23/99	15	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.3	--	14.4	<0.20	10.4	--	50.4	18.6
5A16A	6/23/99	5	4	12	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	60.3	--	12.5	<0.20	13.7	--	50.8	21.9
5A17A	6/23/99	10	2	5	--	--	0	482.5	1392.5	1075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	77.3	--	14.4	<0.20	11.6	--	53.5	21.5
5A17A	6/23/99	15	3	8	--	--	4150	20575	12200	5975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	1890	--	187	<0.20	33.3	--	161	20.2
5A17A	6/23/99	5	4	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	84.5	--	12.4	<0.20	5.98	--	45.4	16.1
5A17A	6/23/99	5	5	14	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.5	--	9.82	<0.20	4.42	--	42.8	15.3
5A18A	6/15/07	10	1	2	--	0	19	537.5	2002.5	652	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	271	--	103	<0.20	17.5	--	163	143
5A18A	6/15/99	10	2	5	--	1.65	143	500.5	347.5	350	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	82	--	25.7	<0.20	12.3	--	59.1	29.8
5A18A	6/15/99	5	3	10	--	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	95.7	--	27	<0.20	13.5	--	62.3	42.4
5A18A	6/15/99	20	4	10	--	0.211	41	143.25	78	106.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	60.3	--	20.9	<0.20	11.2	--	49.8	26
5A18A	6/15/99	15	5	13	--	0.273	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	80.1	--	25.3	<0.20	8.85	--	53.4	35.9
5A20A	9/1/99	0	4	0	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	106	--	36.7	<0.20	16.2	--	74.5	27.8
5A21A	6/22/99	7	1	2	--	--	0	4.5	37.5	49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5A22A	6/28/99	10	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.09	77	--	19.2	<0.20	8.7	--	60.9	25
5A23A	6/23/99	15	1	2	--	--	0	27.75	69	109.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5A23A	6/23/99	8	2	4	--	--	0	399.5	950	305.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5A23A	6/23/99	15	3	5	--	--	500	8930	10075	3975	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5A23A	6/23/99	8	4	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5A23A	6/23/99	22	5	10	--	--	23	217.5	181.5	103	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Area 6A																																	
6A2A	8/24/99	15	2	5	--	--	0	35	60	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6A2A	8/24/99	20	3	9	--	--	0	79	87	72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2300	--	39.8	<0.20	12	--	64.6	231
6A3A	7/13/99	15	2	5	--	--	3	268	763	420	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	708	--	71.5	<0.20	19.8	--	119	34
6A4A	7/1/99	4	2	5	--	--	0	202	253	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2910	--	19.8	<0.20	21.6	--	69.9	29.9
6A4A	7/1/99	22	4	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	49.1	--	<2.50	<0.20	3.15	--	20.6	4.94
6A4A	7/1/99	33	5	5	--	--	0	44	67	67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2030	--	17.5	<0.20	15.2	--	59.6	23.5
6A4A	7/1/99	12	6	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	40.1	--	<2.50	<0.20	<2.50	--	17.4	6.3
6A6A	7/1/99	15	4	9	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	51.3	--	<2.50	<0.20	3.15	--	36.9	11.5
6A6A	7/1/99	22	5	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	38.2	--	<2.50	<0.20	<2.50	--	30.4	8.68
6A6A	7/1/99	8	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	39.8	--	3.96	<0.20	<2.50	--	28.8	9.31
6A6A	7/1/99	4	5	1	--	--	0	24	85	67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2230	--	7.53	<0.20	19.5	--	69.9	31.8
6A7A	7/1/99	13	2	5	--	--	0	21	122	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	592	--	13.8	<0.20	23.1	--	160	29.7
6A7A	7/1/99	0	3	3	--	--	0	17	109	82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	3890	--	14.7	<0.20	21.6	--	240	29.2
6A7A	7/1/99	22	4	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	50.8	--	4.49	<0.20	6.08	--	37	12.1
6A7A	7/1/99	10	5	16	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	80.5	--	4.79	<0.20	5.51	--	43.6	15.3
6A8A	7/7/99	9	3	5	--	--	0	7700	21600	45000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2430	--	63.7	<0.20	13	--	37.1	6.1
6A8A	7/7/99	15	4	7	--	--	0	23	54	49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	763	--	155	<0.20	14	--	53.3	21.9
6A8A	7/7/99	18	6	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	74.7	--	13.9	<0.20	8.95	--	52.8	19.6
6A8A	7/7/99	28	7	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	329	--	18.2	<0.20	8.76	--	55	16.3
6A8A	7/7/99	15	1	2	--	--	0	13	9	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	558	--	21.2	<0.20	7.75	--	48.4	15.4
6A8A	7/7/99	11	3	8	--	--	0	17	61	42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6A8A	7/7/99	26	5	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	3830	--	28.9	<0.20	13.6	--	65.7	23
6A9A	7/7/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	68.2	--	22	<0.20	12.4	--	66.3	23.9

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
6A9A	7/7/99	9	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	63.5	--	16	<0.20	13.9	--	58	21.2
6A10A	7/7/99	15	2	2	--	--	3540	20125	12850	2715	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	5000	--	27.2	<0.20	17.8	--	71.6	16.1
6A10A	7/7/99	15	3	6	--	--	4800	22150	15150	4250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	7000	--	48.4	<0.20	19.7	--	84.7	18.5
6A10A	7/7/99	28	4	9	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	64.5	--	3.67	<0.20	7.01	--	54.7	17.7
6A10A	7/7/99	11	5	12	--	--	3900	26450	18750	15600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	669	--	11.1	<0.20	15.8	--	51.9	14
6A10A	7/7/99	15	2	5	--	--	0	7	47	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	217	--	16.1	<0.20	17	--	116	27.5
6A10A	7/7/99	26	3	8	--	--	0	185	960	645	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	144	--	14.8	<0.20	9.58	--	57.5	17.2
6A10A	7/7/99	12	4	12	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	70.2	--	14	<0.20	11.8	--	60.3	18.4
6A10A	7/7/99	8	5	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	56	--	16.7	<0.20	13.3	--	60.6	21.1
6A12A	7/6/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	89.2	--	13.8	<0.20	8.13	--	51.9	15.8
6A12A	7/6/99	21	4	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	64.5	--	16.8	<0.20	11.1	--	165	17.5
6A12A	7/6/99	22	5	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	68.5	--	11	<0.20	5.36	--	45.8	14.5
6A12A	7/6/99	8	6	10	--	--	19	151	86	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	90	--	14.5	<0.20	10.1	--	61	18.2
6A13A	7/6/99	11	1	3	--	--	0	80	324	137	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	12	--	41.6	<0.20	19.7	--	491	37
6A14A	7/8/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	4800	--	15.2	<0.20	17.3	--	131	25.5
6A15A	7/12/99	22	3	6	--	--	0	673	1490	2268	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	2200	--	310	<0.20	28.7	--	153	48.2
6A15A	7/12/99	20	4	11	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	43.5	--	16.7	<0.20	4.23	--	34.6	10.9
6A16A	7/6/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	37.1	--	7.03	<0.20	3.27	--	31	8.72
6A16A	7/6/99	8	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	42.9	--	8.72	<0.20	3.15	--	33.3	10
6A17A	7/13/99	15	1	2	--	--	0	55	338	404	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	3140	--	493	<0.20	44.7	--	524	21.6
6A17A	7/13/99	15	2	5	--	--	0	7	52	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	20900	--	804	<0.20	46.3	--	1200	37.4
6A17A	7/13/99	8	3	10	--	--	0	0	11	48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6A17B	7/13/99	15	1	2	--	--	0	373	1390	1668	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.82	4040	--	487	<0.20	89.2	--	5300	38.1
6A17B	7/13/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	74.9	--	11.5	<0.20	7.35	--	53.6	17.2
6A18A	7/8/99	0	1	1	--	--	0	258	658	425	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	376	--	17.7	<0.20	11.7	--	66.3	20.5
6A18B	7/8/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	66.4	--	3.98	<0.20	10.3	--	55.8	21.9
6A19A	6/30/99	15	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	142	--	4.91	<0.20	11.4	--	58	19.9
6A19A	6/30/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	62.5	--	4.79	<0.20	10.7	--	51.6	17.8
6A19A	6/30/99	22	6	1	--	--	0	85	173	134	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6A19A	6/30/99	22	5	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	97.6	--	3.48	<0.20	6.21	--	58.6	19.4
6A19A	6/30/99	22	6	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	4350	--	67	<0.20	40.4	--	99.3	40.9
6A20A	7/2/99	15	5	0	--	--	10	278	685	259	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	65.6	--	6.99	<0.20	11.1	--	39.1	7.36
6A20A	7/2/99	15	1	3	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6A24A	7/9/99	10	1	2	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	135	--	19.5	<0.20	17.5	--	84.9	28.6
6A25A	9/1/99	22	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	71.8	--	31.3	<0.20	12	--	65.3	23.6
6A26A	9/1/99	20	1	1	--	--	50	1845	2263	1328	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	5590	--	1400	<0.20	17.9	--	51.7	14.5
6A26A	9/1/99	0	0	3	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	137	--	33.4	<0.20	15.1	--	55.6	17
6A27A	9/1/99	20	3	8	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	712	--	53.6	<0.20	8.84	--	50.1	17.7
6A27A	9/1/99	23	5	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11.9	521	--	56.1	<0.20	22.1	--	19.2	36.1
6A27A	6/29/99	32	6	8	--	--	24	540	1025	311	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	130	--	197	<0.20	27.4	--	54.6	28.3
6A27A	6/29/99	40	7	8	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	284	--	46.9	<0.20	13	--	55.8	23.5
6A27B	6/29/99	15	1	3	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	97.7	--	16.4	<0.20	9.61	--	60	23.8
6A27B	6/29/99	15	2	6	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	76.2	--	15.3	<0.20	10.7	--	57	22.9
6A27B	6/29/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	69.5	--	14.2	<0.20	9.77	--	56.9	22.8
6A27B	6/29/99	8	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	66.4	--	17.9	<0.20	14.5	--	59.5	23.7
6A28A	6/30/99	1	1	2	--	--	0	305	477	150	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	179	--	12.5	<0.20	14.8	--	71.4	23.6
6A28A	6/30/99	15	2	6	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	91.8	--	17.1	<0.20	10.5	--	58.9	19.4
6A28A	6/30/99	22	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	55.2	--	3.93	<0.20	9.73	--	52	16.8
6A28A	6/30/99	24	4	11	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	50.8	--	6.6	<0.20	7.78	--	51	17.6
6A29A	7/9/99	7	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	53.9	--	9.4	<0.20	8.58	--	42.3	12.3
6A29B	7/9/99	15	2	6	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	68.4	--	10.1	<0.20	8.88	--	48.5	11.3
6A29C	7/9/99	11	1	2	--	--	3950	6400	3608	2443	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	57.4	--	5.06	<0.20	7.15	--	43.4	15.1
6A29C	7/9/99	15	2	5	--	--	21200	31050	15300	5530	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	57	--	7.83	<0.20	8.54	--	41	13.5
6A29C	7/12/99	15	3	11	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	65.1	--	9.77	<0.20	8.41	--	52.6	17.3
6A29C	7/12/99	5	4	15	--	--	0	16	9	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	51.6	--	11.3	<0.20	5.65	--	44.2	15.8
6A29D	7/12/99	28	1	1	--	--	1610	14025	7288	2268	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	95.3	--	14.3	<0.20	11.3	--	53.7	18.1
6A29E	7/9/99	5	1	4	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	65.8	--	10.2	<0.20	8.52	--	46.7	14.8
6A29E	7/9/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	374	--	11.9	<0.20	7.57	--	33.7	10.4
6A29E	7/9/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	59.3	--	7.05	<0.20	7.04	--	43.2	13.8
6A29E	7/9/99	8	4	15	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	63.3	--	14.9	<0.20	12.1	--	52.5	18.5
6A29F	7/9/99	8	3	10	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	52.4	--	14.3	<0.20	8.29	--	52.7	17.6
6A29G	7/12/99	4	1	2	--	--	2285	2728	1365	1373	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	77.8	--	15.4	<0.20	7.75	--	61.8	24.3
6A29G	7/12/99	15	2	5	--	--	10	86	86	87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	84.7	--	22.9	<0.20	6.8	--	69.9	28
6A29G	7/12/99	2	3	10	--	--	253	349	215	137	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	75.3	--	17.7	<0.20	12.5	--	66.3	23.7

Table B-5. Rancho Santa Fe Site Characterization Data (Source: Waterstone Environmental Inc. February 28, 2000)

Rancho Santa Fe Oil Field Soil Sample Analytical Results (Source: Dames and Moore, 1990)	Sample Date	Boring Number	Sample Number	Depth (ft)	TRPH (TPH) (mg/kg)	C4-C12 (mg/kg)	C8-C12 (mg/kg)	C13-C22 (mg/kg)	C23-C32 (mg/kg)	C33+ (mg/kg)	Naphthalene (ug/kg)	Phenanthrene (ug/kg)	2-Methylnaphthalene (ug/kg)	Chrysene (ug/kg)	Fluorene (ug/kg)	Ethylbenzene (ug/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Xylene (ug/kg)	Dimethylphthalate (ug/kg)	di-n-buthyl-phthalate (ug/kg)	Acetone (ug/kg)	Methylchloride (ug/kg)	Acenapthylene (ug/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Chromium (mg/kg)
6A29G	7/12/99	8	4	15	--	--	223	217	140	103	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	57.2	--	14.3	<0.20	13.1	--	58.7	20.1
6A30B	7/15/99	10	1	2	--	--	4	272	640	339	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	96	--	31.6	<0.20	10.5	--	51.5	15.3
6A30B	7/15/99	10	2	5	--	--	0	65	210	219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6A30C	7/15/99	12	1	0.5	--	--	0	82	406	498	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	76.5	--	5.2	<0.20	4.91	--	21.7	5.93
6A30C	7/15/99	15	2	5	--	--	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.50	55.9	--	6.95	<0.20	7.84	--	46.7	14.9

Table B-6a. Landmark Phase I Soil Sample Analytical Results, Pesticides (September 2004).

Sample No.	Date	Depth (feet bgs)	OCP											OPPs (mg/kg)	CH (mg/kg)
			alpha-Chlordane (mg/kg)	gamma-Chlordane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	Dieldrin (mg/kg)	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endrin (mg/kg)	Endosulfan Sulfate (mg/kg)	Heptachlor Epoxide (mg/kg)		
G3-A,B,C,D	1/29/2004	1.5	ND	**0.001**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
G6-A,B,C,D	1/29/2004	1.5	ND	ND	ND	ND	ND	**0.002**	ND	ND	ND	ND	ND	ND	ND
G7-A,B,C,D	1/29/2004	1.5	ND	ND	ND	ND	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND
G9-A,B,C,D	2/4/2004	1.5	ND	ND	ND	ND	ND	ND	ND	ND	**0.001**	ND	ND	ND	ND
G10-A,B,C,D	2/4/2004	1.5	ND	ND	ND	ND	ND	ND	ND	ND	**0.001**	ND	ND	ND	ND
G11-A,B,C,D	2/4/2004	1.5	**0.012**	**0.017**	ND	**0.008**	**0.014**	ND	ND	**0.018**	**0.061**	ND	ND	ND	ND
G12-A,B,C,D	2/4/2004	1.5	ND	ND	ND	ND	**0.022**	ND	ND	ND	**0.029**	ND	ND	ND	ND
G13-A,B,C,D	2/2/2004	1.5	**0.001**	**0.004**	**0.001**	**0.026**	**0.006**	ND	ND	ND	**0.061**	ND	**0.001**	ND	ND
G14-A,B,C,D	2/2/2004	1.5	**0.002**	**0.015**	**0.001**	**0.007**	**0.015**	**0.003**	**0.001**	ND	**0.082**	**0.005**	ND	ND	ND
G15-A,B,C,D	2/2/2004	1.5	**0.003**	**0.004**	**0.001**	**0.034**	**0.007**	ND	ND	ND	**0.055**	ND	ND	ND	ND
G16-A,B,C,D	2/2/2004	1.5	ND	ND	ND	**0.002**	**0.003**	ND	ND	ND	**0.004**	ND	ND	ND	ND
G17-A,B,C,D	2/4/2004	1.5	**0.018**	**0.027**	ND	**0.012**	**0.023**	ND	ND	**0.034**	**0.136**	ND	ND	ND	ND
PRGs Residential			1.6 ca*	1.6 ca*	2.4 ca	1.7 ca	1.7 ca*	0.03 ca	370 nc	370 nc	18 nc	NA	0.053 ca*	NA	NA
PRGs Industrial			6.5 ca*	6.5 ca*	10 ca	7.0 ca	7.0 ca*	0.11 ca	3700 nc	3700 nc	180 nc	NA	0.19 ca*	NA	NA
Detection Limits (mg/kg)			0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.020-3.35	0.020-20.0

Notes

CH - Chlorinated Herbicides
OCP - Organochlorine Pesticides
OPP - Organophosphorous Pesticides
PRG - Primary Remediation Goal
ND - None Detected above detection limits
NA - Not Analyzed
MCL - Maximum Contamination Level
bgs - below ground surface
ca - Cancer PRG
ca* - Cancer PRG (where nc<100x ca)
nc - Non-cancer PRG
Bold cells indicate analytes stated limit of detection.
Concentrations are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm)
Analyses for OCP were performed in accordance with the Environmental Protection Agency (EPA) Method No. 8081
Analyses for OPP were performed in accordance with the EPA Method No. 8141
Analyses for CH were performed in accordance with the EPA Method No. 8151

Table B-6b. Landmark Phase II Soil Sample Analytical Results, Pesticides, Metals (September 2004).

Sample No.	Date	Depth (feet bgs)	OPPs (mg/kg)	CH (mg/kg)	OCP (mg/kg)	Paraquat (ug/kg)
SS-1A, 1B, 1C, 1D-0.5	8/9/2006	0.5	ND	ND	**0.046 Trifluralin**	ND
SS-1A-0.5	8/9/2006	0.5	NA	NA	**0.101 Trifluralin**	NA
SS-1B-0.5	8/9/2006	0.5	NA	NA	**0.196 Trifluralin**	NA
SS-1C-0.5	8/9/2006	0.5	NA	NA	**0.010 Trifluralin**	NA
SS-1D-0.5	8/9/2006	0.5	NA	NA	**0.005 Trifluralin**	NA
SS-4A,4B,4C,4D-0.5	8/9/2006	0.5	ND	ND	**0.038 Trifluralin**	ND
SS-6A,6B,6C,6D-0.5	8/9/2006	0.5	ND	ND	**0.033 Trifluralin**	ND
SS-7A,7B,7C,7D-0.5	8/9/2006	0.5	ND	ND	**0.022 Trifluralin**	ND
SS-8A,8B,8C,8D-0.5	8/9/2006	0.5	ND	ND	**0.023 Trifluralin**	ND
PRGs Residential			---	---	63 Trifluralin ca**	---
PRGs Industrial			---	---	220 Trifluralin ca*	---
Detection Limits (mg/kg)			0.05-0.10	0.02-20.0	0.001-0.20	1.0

Notes
CH - Chlorinated Herbicides
OCP - Organochlorine Pesticides
OPP - Organophosphorous Pesticides
PRG - Primary Remediation Goal
ND - None Detected above detection limits
NA - Not Analyzed
* = Reported in micrograms per liter (ug/l)
bgs - below ground surface
ca - Cancer PRG
ca* - Cancer PRG (where nc<100x ca)
nc - Non-cancer PRG

Table B-6c. Landmark Phase II Soil Sample Analytical Results,

Sample No.	Date	Depth (feet bgs)	Arsenic (mg/kg)	Cam-17 (mg/kg)
SS-1C-0.5	8/9/2006	0.5	ND	Below 10x STLC
SS-4B-0.5	8/9/2006	0.5	ND	Below 10x STLC
SS-6B-0.5	8/9/2006	0.5	ND	Below 10x STLC
SS-8A-0.5	8/9/2006	0.5	ND	Below 10x STLC
DUPB-0.5	8/9/2006	0.5	ND	Below 10x STLC
BG1-0.5	8/9/2006	0.5	ND	Below 10x STLC
BG2-0.5	8/9/2006	0.5	ND	Below 10x STLC
BG3-0.5	8/9/2006	0.5	ND	Below 10x STLC
BG4-0.5	8/9/2006	0.5	ND	Below 10x STLC
Detection Limits (mg/kg)			0.3	0.19-5.0

Notes

ND - None Detected above detection limits

NA - Not Analyzed

bgs - below ground surface

Concentrations are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm)

Analyses for CAM- 17 Metals were perfomred in accordance with the EPA Method No. 6000/7000 series

Analyses for Arsenic were performed in accordance with the EPA Method No. 6010B