55 Glenlake Parkway, NE
Atlanta, GA 30328-3474

Ms. Barbara Jakub
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Subject:
Corrective Action Plan
UPS Oakland Hub
8400 Pardee Drive, Oakland, CA 94621
Global ID T0600100939
State ID # 583
EPA ID # CAD 09707509

Dear Ms. Jakub:

Attached please find the Corrective Action Plan for the above-referenced site. The report, which was prepared for United Parcel Service (UPS) by ARCADIS U.S., Inc. (ARCADIS), includes a plan to reduce residual total petroleum hydrocarbon diesel range organic (TPH-DRO) impacts at the UPS Oakland Hub.

I declare under penalty of perjury, that the information and/or recommendations contained in the attached Corrective Action Plan are true and correct.

Please feel free to contact me directly at 404.828.8991 should you have any questions or comments.

Sincerely,

United Parcel Service

Julie Straub
Remediation and Assessment Manager

ARCADIS
Infrastructure, environment, buildings

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Corrective Action Plan

United Parcel Service

8400 Pardee Drive, Oakland, California

December 2011

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David M. Sonders.
Project Environmental Engineer

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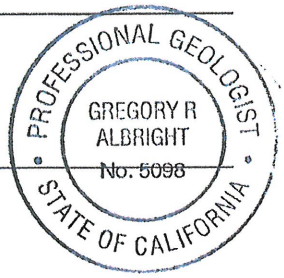

Corrective Action Plan

UPS-Oakland Hub
8400 Pardee Drive
Oakland, CA

Prepared for:
United Parcel Service

Prepared by:
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Our Ref.:
B0038398.00004

Date:
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Section 1 – Introduction

The goal of this Corrective Action Plan (CAP) is reduce residual impacts from the former diesel underground storage tanks (USTs) in accordance with Petroleum Low-Threat Closure Policy proposed by the California Environmental Protection Agency (CA EPA) and the State Water Resources Control Board (SWRCB). The general criteria that must be satisfied by all candidate sites are listed as follows:

a. The unauthorized release is located within the service area of a public water system;
b. The unauthorized release consists only of petroleum;
c. The unauthorized ("primary") release from the UST system has been stopped;
d. Free product has been removed to the maximum extent practicable;
e. A conceptual site model has been developed;
f. Secondary source removal has been addressed and
g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15.

ARCADIS and UPS believe that all of the conditions above have been met at this site with the exception of the "d" and "f". "d" is currently in the process as being met with the installation of full time passive skimmers in the wells that have historical contained a veneer of free product. "f's" condition will be met by implementation of this CAP. Implementation of the CAP will reduce any secondary sources to CA EPA/SWRCB proposed Petroleum Low-Threat Closure Policy levels.

United Parcel Service (UPS) operates a package distribution center at the Oakland Hub. Fuel dispensing to trucks and minor vehicle maintenance occurs at the site. This includes vehicle oil/lubricant changing operations and oil filter replacement. The CAP is presented to address residual petroleum hydrocarbons associated with the former diesel USTs that were removed in 2009.

The location of the site is shown on the topographic map (United States Geological Survey (USGS) 7.5 minute San Leandro quadrangle) presented as **Figure 1**. The land surface is flat with a ground elevation at the site of approximately 10 feet above mean sea level (ft-amsl). **Figure 2** is an aerial photograph of the site and its vicinity, showing the location of adjacent and nearby properties. **Figure 3** is a site map that depicts the location of the site relative to the surrounding area.

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Section 2 – Contaminant and Site Conditions

Contaminants

The contaminants of concern (COCs) at the site are limited to petroleum hydrocarbons; specifically diesel fuel. Initial discover of the release occurred in 1989. In June 1990, a limited Site Assessment was performed on the southern diesel fuel dispensing facility. Five monitoring wells and three soil borings were installed on the site in August 1990. Monthly free –product, or phase-separated hydrocarbons (PSH) removal and semi-annual groundwater sampling continued from the mid-1990's into 2009 when the southern fueling area diesel USTs were closed via removal. The wells have been sampled for benzene, toluene, ethylbenzene, xylenes (BTEX), and total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and diesel range organics (TPH-DRO).another constituent that has been tested for at the site is methyl tertiary butyl ether (MTBE). Historically, only DRO has been detected above laboratory reporting limits. **Tables 3**, **4A,** and **4B** outline the current and historical analytical results for both soil and groundwater.

During the most recent soil and groundwater assessment events conducted in February 2011, the only COC identified above the San Francisco Bay Regional Water Quality Control Board Environmental Screening Level (ESL) was TPH-DRO and TPH-GRO. TPH-DRO concentrations above ESLs were detected in the soil and groundwater. Free product has been intermittently identified in up to 3 monitoring wells on-site. Free product is currently being recovered by a passive skimmer system.

A forensic analysis of the composition of the TPH in soil and groundwater was conducted in May 2010. The results indicated that there were groundwater and soil samples exhibiting a predominantly diesel signature in the proximity of the former UST area. There were also groundwater and soil samples exhibiting a predominantly heavier than diesel hydrocarbon signature. This TPH component is not believed to be associated with petroleum hydrocarbons from the former UST and its origin is unknown and is not assumed to be associated with historical UPS activities.

Analytical results for soil and groundwater collected during the most recent phase of investigation were presented in a Summary of Soil and Groundwater Investigation Activities Report dated February 15, 2011 and previously submitted to the Alameda County Department of Environmental Health (ACEH).

Regional and Site Specific Geology and Hydrogeology

Geology

The site is located in the East Bay Plain, which is characterized by Quaternary Age Bay mud composed of unconsolidated plastic clay and silty clay rich in organic material with some lenses of silt and sand. The area in which the site is located is underlain by artificial fill over San Francisco Bay mud. Soils encountered during the 2010 and previous investigations were artificial fill composed of gravel, sand and silty sand to depths of 5 feet to approximately 10 feet underlain by native bay muds (clay) to maximum depths of investigation.

Hydrogeology

Regional groundwater flow is indicated from east to west generally correlating to topography, localized groundwater flow can be influenced by east-west oriented buried stream channels as well as the tidal from the nearby Bay. There is a very low, if any, gradient at the site and the groundwater flow appears to alternate to the northwest and southeast. During the most recent groundwater sampling event conducted at the site depths-to-water (DTW) measurements were recorded in monitoring wells MW-2, MW-3, MW-4, MW-8, MW-9, MW-10, MW-11 and OW-1 prior to groundwater sampling. The top of well casing elevations, DTW, and groundwater elevation data are summarized in **Table 1**. The apparent groundwater flow direction was to the southeast. A groundwater contour map is included as **Figure 4.**

Sensitive Receptor Survey

Figure 2 is an aerial photograph of the site and its vicinity, showing the location of adjacent and nearby properties. San Leandro Channel is located about 150 feet from the eastern property boundary and flows in a northwesterly direction toward San Leandro Bay.

On-site utilities are shown on **Figure 3**. The below-ground on-site utilities are sanitary sewer lines, a water line, electrical lines and storm drains. The electrical and sewer lines are in the immediate vicinity of the former UST area. Notification of the CAP will be sent via certified mail to the owners of the properties that are contiguous to the UPS property.

Groundwater Well Search

The well search was performed for the area within approximately one-mile of the site and identified 25 wells within the search parameters. ARCADIS determined that the well search included 24 shallow monitoring wells and one possible water supply well. The possible groundwater supply well is located approximately 2,500 feet southeast of the site former UST area. Due to the distance and low permeability of the natural sediments and extremely low hydraulic gradient, this possible water supply well is not considered at risk.

Soil and Groundwater Quality

Summary of Soil Analytical Data

Soil analytical results collected at the site prior to April 2010 have been previously submitted in separate reports. The soil analytical results for the soil borings installed in April 2010 are summarized herein and on **Table 4A**.

During the April 2010 site assessment a total of 12 soil borings (SB-01 through SB-12) were advanced at the site. ARCADIS collected a total of 18 samples, including 12 “shallow” soil samples collected at approximately 4 to 7.5 feet bgs for horizontal delineation and 6 “deeper” soil samples collected at approximately 8 to 13 feet bgs for vertical delineation.

Each soil sample was analyzed for BTEX using United States Environmental Protection Agency (U.S. EPA) Method 8260B, and TPH-GRO and TPH-DRO using U.S. EPA Method 8015. Additionally, select soil samples (SB-01 (4.5-5.0), SB-02 (7.0-7.5), SB-05 (4.5-5.0), SB-06 (7.0-7.5), SB-07 (4.5-5.0), and SB-08 (4.5-5.0) were submitted for forensic analysis by full scan gas chromatography mass spectrometry (full scan GS/MS) to assist in the determination of the source of petroleum hydrocarbons detected in the vicinity of the former diesel USTs.

Shallow soil samplings taken at SB-01, SB-02, SB-05, SB-06, and SB-07 exhibited TPH-DRO concentrations exceeding its respective ESL.

No other constituents were detected above their respective ESLs as listed on **Table 4A**. **Figure 6** depicts the location of each soil sample relative to pertinent site features.

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The most recent soil assessment activities were conducted in August 2011. Soil samples were collected from the 0-2' and 8-10' intervals from 10 soil borings locations. These soil samples were analyzed for BTEX PAHs using U.S. EPA Method 8270. These soil samples were compared to the RWQCB ESLs for soils collected where groundwater is a current or potential source of drinking water. The soil samples collected were also compared to Table 1 of the Low-Threat UST Closure Policy Scoping Document.

Analytical data from these soil samples shows that benzo(a)anthracene was detected above the RWQCB ESL of 0.038 milligrams per kilogram (mg/kg) in soil samples collected from SB-4 (8') at 0.51 mg/kg, SB-13 (2') at 0.85 mg/kg, and SB-13A (2') at 0.51 mg/kg.

Benzo(a)pyrene was detected above the RWQCB ESL of 0.038 mg/kg in soil collected from SB-2 (8') at 0.04 mg/kg, SB-4 (8') at 0.4 mg/kg, SB-6 (8') at 0.043 mg/kg, SB-7 (8') at 0.047 mg/kg, SB-13 (2') at 0.061 mg/kg, and SB-13A (2') at 0.45 mg/kg.

Benzo(b)fluoranthene was detected above the RWQCB ESL of 0.038 mg/kg in soil collected from SB-4 (8') at 0.53 mg/kg, SB-13 (2') at 1.3 mg/kg, and SB-13A (2') at 0.87 mg/kg.

Benzo(k)fluoranthene was detected above the RWQCB ESL of 0.038 mg/kg in soil collected from SB-13 (2') at 0.48 mg/kg.

Dibenz(a,h)anthracene was detected above the RWQCB ESL of 0.062 mg/kg in soil collected from SB-4 (8') at 0.087 mg/kg, SB-13 (2') at 0.11 mg/kg, and SB-13A (2') at 0.063 mg/kg.

The soil analytical results for the August 2011 sampling event are summarized in **Table 4B.** The laboratory analytical reports, including chain of custody documentation, are included as **Appendix A**.

Summary of Groundwater Analytical Data

Groundwater analytical results collected at the site prior to September 2011 have been previously submitted in separate reports. The last comprehensive groundwater monitoring event was conducted on September 1, 2011. Analytical results for the September 2011 sampling event are summarized herein and on **Table 3**.

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On September 1, 2011, groundwater samples were collected from existing monitoring wells MW-2, MW-3, MW-4, MW-8, MW-9, MW-10, and MW-11 located at the site.

Groundwater samples collected from monitoring wells MW-2, MW-3, MW-4, MW-8, MW-9, MW-10, and MW-11 on September 1, 2011 were analyzed for TPH-DRO EPA Method 8015B. The samples were also analyzed for BTEX, MTBE, and TPH-GRO by EPA Method 8260B/CA LUFT.

BTEX and MTBE were not detected at or above their respective maximum contaminant levels (MCLs), environmental screening levels (ESLs), or laboratory reporting limit (RL) in monitoring wells MW-2, MW-3, MW-4, MW-8, MW-9, MW-10, or MW-11 during this groundwater monitoring event.

TPH-DRO was detected above the odor and taste threshold per the California Regional Water Quality Control Board regulations (100 µg/L) and ESLs (100 µg/L for drinking water and 210 µg/L for non-drinking water) in monitoring wells MW-2 (4,600 µg/L) MW-3 (24,000 µg/L), MW-4 (7,700 µg/L), MW-9 (240 µg/L), MW-10 (250 µg/L), and MW-11 (1,100 µg/L). In the MW-8, only the drinking water ESL (100 µg/L) was exceeded (200 µg/L); however it was below the non-drinking water ESL.

TPH-GRO was detected above ESLs (100 µg/L) for drinking water in monitoring wells MW-2 (140 µg/L), MW-3 (450 µg/L), and MW-4 (430 µg/L), The ESL for non-drinking water (210 µg/L) was exceeded only in monitoring wells MW-3 and MW-4.

Figure 5 shows the groundwater sample results and location of the monitoring wells.

Section 3 – Previous Remediation Efforts

UST Removal and Excavation

Between March 31 and April 3, 2009, three 10,000 gallon diesel USTs, dispensers, and associated product piping were removed from the former UST area. Approximately 626 tons of petroleum impacted soil and pea gravel was removed from the site. Excavation of impacted soils was halted as it became evident that the impacts were wide spread and further assessment was necessary.

Enhanced Fluid Recovery

On April 14, 2010, ARCADIS performed an enhanced fluid recovery (EFR) event to recover free product. Negative pressure was applied to monitoring wells OW-1 and MW-2 using a drop tube and a vacuum truck for the extraction of product, groundwater, and soil vapor. Subsurface pressure and depth to water was monitored at monitoring well MW-3 and at temporary test wells VT-1A, VT-1B, VT-2A, and VT-2B.

Separate EFR events were conducted at monitoring wells MW-3 and OW-1 for a total of 4 hours each well. The drop tube was set to 1-2 feet below the initial depth to water level and a negative pressure of approximately 21 inches of mercury (in Hg) was applied to the well. Approximately 1,700 gallons of groundwater and PSH were recovered during the combined 8-hour EFR event.

On May 5, 2010, the depth to water and product thickness was gauged at the site. Free product was detected in monitoring wells MW-2, MW-3, and OW-1. The EFR event possibly mobilized product to the extraction points. This would suggest that creating a consistent product gradient towards extraction points would aid in timely product recovery versus the EFR intermittent recovery that was currently being conducted at the site. Passive product recovery skimmers which remain in the well were recommended as an alternative to the EFR events for product recovery and believed to be a more effective remediation strategy as they will continuously collect free product.

Passive Skimmers

Downwell passive PSH (free product) recovery skimmers were installed in monitoring wells OW-1, MW-2, and MW-3 in April 2011. Free product is collected in the integral skimmer sump and collected monthly for disposal. The skimmers are equipped with hydrophobic or water-rejecting screen which prevents water from entering the sump

and allowing collection of PSH only. PSH recovery has been conducted monthly since May 2011 and is on-going to date.

During the recent fieldwork, the PSH thickness of <0.01 feet was maintained in MW-2 and in the months of September and October the product was recovered at full integral holding capacity (20 oz). In MW-3 also, PSH was recovered at almost the full holding capacity. In OW-1, the height of the skimmer was readjusted to recover just about the full holding capacity each month. The skimmers are working well and PSH recovery has been on a consistent basis. The PSH was observed to be translucent with unpleasant odor and was non-measureable. The PSH recovery data collected from June 2011 onwards is presented in **Table 2**.

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Section 4 – Cleanup Goals

The purpose of the remedial actions described in this CAP is to remediate the soil and groundwater impacts associated with the diesel impacts discovered at the former diesel UST area in 1989 per the CA EPA/SWRCB proposed Petroleum Low-Threat Closure Policy. The groundwater and soil will be remediated to ESLs as dictated by the SRWCB ESLs for Environmental Concerns at Sites with Contaminated Soil and Groundwater INTERIM FINAL - November 2007 (Revised May 2008) San Francisco Bay Region, CA, and in accordance with ACEH direction and/or those outlined by the CA EPA/SWRCB proposed Petroleum Low-Threat Closure Policy.

Section 5 – Technology Screening

Multi-phase Extraction

Two multi-phase extraction (MPE) technology methodologies were evaluated: a system using down-well pumps and a system using a high-vacuum extraction blower. The MPE methodology with down-well pumps utilizes separate mechanical equipment for drawing groundwater (down-well pump) and extracting vapors (vacuum blower) independently. The other type of MPE methodology utilizes a single high-vacuum pump to extract total fluids and vapors simultaneously through a small drop tube (stinger) inserted in a recovery well. The purpose of both technologies is to recover subsurface hydrocarbons, drawdown the water table, and expose the smear zone for mass removal (e.g. dissolved-phase and vapor-phase). It requires the recovery and treatment and disposal of groundwater MPE technology is not recommended for this site due to the site lithology (i.e. clay). ***Approximate Cost to closure for implementation - $1.8 million.***

Groundwater Pump and Treat

The groundwater pump and treat remedial option consists of installing groundwater extraction wells or trenches and treating the groundwater using an ex-situ treatment system. This option could be used to hydraulically control the plume and over time may effectively remediate the COCs. The cleanup timeframe for pump and treat system may be several years to decades long. The infrastructure cost and long term operation and maintenance costs make this option financially unfeasible. ***Approximate Cost to closure for implementation - $5 million.***

Excavation

The excavation remedial option consists of the excavation, transportation, and disposal of petroleum impacted soil. Excavation is an effective method of removing impacts to the soil but is not directly effective in remediating the groundwater. An excavation is also not logistically feasible at this time as the size of the excavation required to remove all the impacted soil would take up the majority of the driveway and significantly impact the capabilities of the sorting and distribution facility. In addition, excavation alone would most likely need additional groundwater treatment to reach ESLs. ***Approximate Cost to closure for implementation - $2.6 million.***

Chemical Oxidation

Chemical oxidation techniques are in-situ methods that utilize abiotic chemical reactions to destroy COCs in soil and groundwater. Chemical oxidation techniques include the use of reactive chemicals such as peroxide, permanganate, persulfate, or ozone. These reactive chemicals produce strongly oxidizing species, such as hydroxyl radicals from peroxide or sulfate radicals from persulfate that promote desorption of the COCs from the soil and react with and destroy organic COCs in the dissolved phase. By products from the destruction of COCs such as dissolved petroleum hydrocarbons are innocuous and include carbon dioxide and water. It has been ARCADIS' experience that finding an appropriate chemical for the oxidation chemistry to remediate TPH-DRO can be very challenging and may not be the most effective remedial alternative. ***Approximate Cost to closure for implementation - $1.2 million.***

Enhanced Bioremediation – Anaerobic Biological Oxidation

In general, aquifers impacted by petroleum hydrocarbons are typically anaerobic because dissolved oxygen (DO) is energetically favorable and is preferentially consumed by indigenous microbes during aerobic biological oxidation of the petroleum hydrocarbons. In these processes, the hydrocarbon materials serve as an electron donor for microbial respiration and work to deplete available oxygen within the system

Once oxygen has been depleted, alternative electron acceptors (i.e., nitrate, iron, manganese, sulfate, and carbon dioxide) are utilized in the continued anaerobic oxidation of petroleum hydrocarbons. As a result of these processes, geochemical conditions at many hydrocarbon-impacted sites are mildly anaerobic (e.g., iron-, nitrate-, or sulfate-reducing). The anaerobic oxidation of petroleum hydrocarbons under these dominant electron accepting processes is well-founded in the literature (Wiedemeier, et al., 1999; Suthersan and Payne, 2005; and Foght, 2008). Engineered anaerobic biological oxidation has seen less attention in practice while the focus has been on aerobic bioremediation systems (i.e., bio-sparging, air sparging, oxygenated water injection, ORM injection). Similar to enhanced aerobic systems, engineered anaerobic approaches rely on redox couples such as nitrate reduction, ferric iron reduction, sulfate reduction, and methanogenesis to facilitate cellular respiration using the petroleum hydrocarbon as an electron donor.

Anaerobic processes generally occur at slower kinetic rates than that observed with oxygen, but non-oxygen electron acceptors (i.e. sulfate and nitrate) can be

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advantageous to oxygen injection approaches as they are significantly more soluble (sulfate solubility can be greater than 100 grams per liter [g/L]) and as a result can be supplied at elevated dissolved concentrations. In addition, these alternative electron acceptors have minimal abiotic or non-target reactions that typically limit the persistence of oxygen and thereby the effectiveness of aerobic treatment processes within the subsurface. The anaerobic biological oxidation approaches – particularly those utilizing dissolved sulfate – offer distinct advantages when compared to oxygen delivery strategies. The higher concentrations of sulfate that can be delivered and sustained allow for more effective means of achieving hydrocarbon degradation. Thus, while the kinetic rates of anaerobic hydrocarbon bio-oxidation may be moderately slower than those under aerobic conditions, the ability to deliver elevated concentrations of non-oxygen electron acceptors over a relatively long time period during infrequent events is more cost-effective compared to long-term operation of continuous oxygen sparging or other engineered aerobic treatment alternatives.

Historical site data indicate that biological degradation may already be occurring at the site. Since biological degradation is already occurring, enhancement of this natural biodegradation process may be an effective remedial approach and is the selected remedial technology for this site. ***Approximate Cost to closure for implementation - $890,000.***

Section 6 – Selected Remedial Technology

Historical site investigation data suggest that residual hydrocarbon impacts remain within the shallow, saturated soil materials across the Site. To address soil and groundwater impacts at the Site, a network of injection wells will be utilized to support delivery of an electron acceptor solution (i.e., sulfate) within the target treatment interval. Given the distribution of these materials across the Site, a phased implementation approach will be applied to include a preliminary injection in a known hydrocarbon hot spot to allow for collection of hydraulic information (groundwater velocity, volume-radial distribution relationship, injection flow rates) and performance data prior to expansion of the full-scale injection network. A layout of the conceptual phased approach is presented on **Figure 7**.

The Phase 1 injection network will consist of six newly installed injection wells in the former UST area. Phase 1 monitoring will be supported by an existing series of existing monitoring wells to be used to confirm treatment extent. The proposed injection wells will be used for the delivery of a dilute magnesium sulfate (Epsom salts) solution to support further development of sulfate-reducing conditions and promote the biological oxidation process. Distribution of delivered electron acceptors via direct injection and subsequent ambient groundwater flow will establish an anaerobic oxidation reactive zone, the extent of which will be characterized via the monitoring network.

The Phase 2 monitoring and injection wells are proposed to fully cover the former UST area. Coupled with the Phase 1 well network, these wells will support delivery of the sulfate electron acceptor within known hot spots at the Site. Injection monitoring results will be used to characterize hydraulic parameters during the injection event (subsurface injectability, volume-radial distribution relationship); and post-injection sampling will be used to characterize the groundwater velocity and remedial effectiveness. Following the Phase 1 test, these results will be evaluated and incorporated in an interim report. These results will also be used to determine the required Phase 2 injection network, the sulfate substrate dosing concentrations, and the injection methodology to optimize treatment performance.

The anticipated schedule for the phased implementation approach is detailed below:

- Installation and baseline sampling of proposed Phase 1 injection wells;
- Setup and completion of the first Phase 1 injection event;
- Phase 1 post-injection monitoring period (two quarters);
- Setup and completion of the second Phase 1 injection event;

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- Phase 1 post-injection monitoring period (two quarters);
- Evaluation and design of the Phase 2 well network
- Phase 2 well network installation;
- Phase 2 injection (both Phase 1 and Phase 2 injection wells, as necessary);
- Phase 2 post-injection monitoring and sampling; and
- Additional injection and monitoring, as necessary.

Phase 1 Injection Setup and Completion

During the Phase 1 injection event, all six of the proposed monitoring well locations will be injected into simultaneously. Individual wellheads will be connected via above-grade hose and a distribution manifold to allow for continuous flow from a batch mixing tank to each well location. Flow meters and inline pressure gauges will be used to monitor both the injection rate and wellhead pressure applied. Based on the shallow DTW, the injection pressure will be limited to the extent possible (< five pounds per square inch (psi)) and injections will be initiated under gravity feed. In the event that slow (< 0.5 gallons per minute (GPM)) injection rates are observed under gravity feed conditions, a minimal amount of pressure may be applied with an injection pump to enhance fluid delivery. Based on the Site lithology, it is estimated that injection flow rates will vary between one and two GPM.

Each well will be connected above ground with 1-inch poly hosing to a distribution manifold near the temporary tank. The manifold will include flow control valves and flow meters to adjust the application rate and quantify injection volumes. The manifold will be connected to a variable speed pump at the base of the mixing tank powered by a portable generator. ARCADIS personnel will be on-site to execute the injection process and record injection parameters throughout the event. It is estimated that the Phase 1 injection event will take approximately five to seven days to complete.

As presented on **Figure 7**, the target radius of influence from each individual injection well is approximately 12.5 feet. Injection wells will be constructed utilizing a 0.010-inch slotted stainless steel well screen with a 2-inch PVC riser. Injection screen intervals will be installed between approximately four to nine feet below ground surface (bgs) to target the interval in which soil mass is observed within the saturated zone. A polyethylene holding tank with approximately 3,000 gallon capacity will be temporarily stored on-site for mixing and application of the magnesium sulfate solution. During the Phase 1 injection, approximately 12,000 gallons of potable water from an on-site municipal water source will be used to dissolve approximately 2,635 pounds (lbs) of

solid magnesium sulfate. The quantities result in a target injection concentration of up to five grams per liter (g/L). The target in-situ sulfate concentration is approximately one to 1.2 g/L, assuming a groundwater dilution factor of approximately three to four along the flow path from injection well to dose response monitoring wells. Based on relevant experience at other sites the sulfate consumption half life is on the order of 10 to 20 days, which results in an anticipated sulfate longevity of three to four months.

Injection volumes are based on a target 12.5-foot radius of influence, a five-foot vertical interval, and an estimated mobile porosity of 10%, up to 350 gallons will be injected per well during the Phase 1 event. During the event, periodic monitoring (i.e., grab sampling via bailer) will be conducted at monitoring wells MW-2, MW-3, MW-4, OW-1, MW-8, and MW-9 to evaluate the distribution of sulfate within the subsurface. Samples will be collected for qualitative analysis with a field hand-held monitoring device (YSI, Horiba, or similar) to confirm evidence of hydraulic breakthrough (i.e., increased response in specific conductance). Injection volumes will be adjusted as necessary in the field to achieve positive confirmation of injected solution at dose response monitoring wells MW-2, MW-3, MW-4, and OW-1. Dose response data will be used to refine the overall injection volumes, the resulting radial distribution of substrate, and the necessary well spacing prior to Phase 2 expansion.

Section 7 – Sampling Plan

Baseline Sampling

Following Phase 1 injection well installation and development, samples will be collected for TPH-DRO total magnesium, and sulfate from the injection wells and monitoring wells MW-2, MW-3, MW-4, OW-1, MW-8, and MW-9. These locations will be used to complete the delineation of hydrocarbons along the injection line and to ensure that injection in the Phase 1 wells is required. These data will also support evaluation of changes in groundwater concentrations prior to and post-injection.

Injection Sampling

During the injection event, field personnel will collect periodic grab samples from monitoring wells MW-2, MW-3, MW-4, and OW-1 to evaluate for arrival of the injection solution. Field parameters collected for baseline groundwater conditions and the batch injection solution will be used to confirm the relative difference in conductivity (likely two orders of magnitude) prior to injection. Grab samples collected from the injection monitoring network will then be used to evaluate changes in conductivity over the course of injection. Following completion of the injection event, one sample will be collected from each of the above wells and will be submitted for sulfate laboratory analysis.

Post-Injection Sampling

Following completion of the electron acceptor injection, two quarters of groundwater monitoring will be conducted to assess the efficacy of anaerobic bio-oxidation. Post-injection sampling will monitoring wells MW-2, MW-3, MW-4, OW-1, MW-8, and MW-9, and will include select geochemical parameters to characterize overall treatment extent. Total magnesium, sulfate, sulfide, total iron, and dissolved iron analyses will be collected from the monitoring wells and these results will be used as additional lines of evidence to evaluate changes in geochemical conditions as a result of the sulfate injection event.

Ultimately, the results from the Phase 1 injection event will be used to steer the Phase 2 remedial expansion. As presented on **Figure 7**, nine additional injection wells are tentatively proposed as part of the Phase 2 approach, but this quantity will be increased or decreased as appropriate based on the results observed following the Phase 1 injection. The phased approach is meant to support an adaptive remedial

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methodology, and Phase 1 results will be used to make any additional recommendations (injection methods and delivery system, supplemental remedial substrates) in order to optimize Phase 2 expansion.

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Section 8 – Conclusions

Field activities are expected to begin within 60 to 120 days following approval of this CAP and necessary supporting permits. Sampling results and details pertaining to the field activities will be included as part of the ongoing assessment and remediation process. These reports will summarize the field activities, specific field measurements collected during the injection and monitoring events, laboratory analytical data and performance monitoring data, and any recommendations for future monitoring and/or remedial operations at the Site.

As detailed above, sampling results collected during and following the Phase 1 injection event will be used to refine the Phase 2 approach as, or if necessary. These changes may include adjustments to the total injection volumes, the quantity of well locations to be installed, the delivery methodology, and the remedial substrate. Any modifications to this current program will be submitted to Alameda County for approval prior to field implementation.

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Tables

TABLE 1
HISTORICAL GROUNDWATER ELEVATION SUMMARY

UPS-OAKLAND HUB
8400 PARDEE DRIVE
OAKLAND, CALIFORNIA
STATE ID # 583

Monitoring Well	Reference Elevation	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Measurement (ft)	Product Thickness (ft)	Volume Product Recovered (mL)
MW-1	7.43	8/28/1990	3.80	3.63	--	0.00	
		9/20/1990	3.99	3.44	-0.19	0.00	
		6/19/1991	3.47	3.96	0.52	NM	
		7/23/1991	3.70	3.73	-0.23	NM	
		8/26/1991	3.92	3.51	-0.22	NM	
		11/18/1991	4.21	3.22	-0.29	NM	
		2/3/1992	3.99	3.44	0.22	NM	
		6/29/1992	3.38	4.05	0.61	NM	
		6/23/1993	2.72	4.71	0.66	NM	
		10/11/1993	3.87	3.56	-1.15	NM	
		1/4/1994	3.34	4.09	0.53	NM	
		5/10/1994	2.14	5.29	1.20	NM	
		2/1/1995	1.84	5.59	0.30	NM	
		8/2/1995	3.10	4.33	-1.26	NM	
		10/16/1995	3.75	3.68	-0.65	NM	
		12/28/1995	3.56	3.87	0.19	NM	
		6/4/1997	3.16	4.27	0.40	0.00	
		9/30/1999	3.75	3.68	-0.59	0.00	
		10/11/2000	3.88	3.55	-0.13	0.00	
		9/3/2002	3.73	3.70	0.15	0.00	
		10/22/2002	5.11	2.32	-1.38	0.05	
		12/23/2002	3.51	3.92	1.60	0.00	NR
		3/28/2003	3.52	3.91	-0.01	0.00	NR
		5/30/2003	3.37	4.06	0.15	0.00	NR
		6/20/2003	3.50	3.93	-0.13	0.00	
		7/14/2003	3.65	3.78	-0.15	0.00	
		8/25/2003	3.87	3.56	-0.22	0.00	NR
		9/9/2003	4.02	3.41	-0.15	0.00	
		9/25/2003	4.10	3.33	-0.08	0.00	NR
		10/28/2003	4.29	3.14	-0.19	0.00	NR
		11/18/2003	4.32	3.11	-0.03	0.00	
		12/2/2003	4.34	3.09	-0.02	0.00	
		1/27/2004	3.88	3.55	0.46	0.00	
		2/24/2004	2.75	4.68	1.13	0.00	
		3/29/2004	3.45	3.98	-0.70	0.00	
		4/19/2004	3.55	3.88	-0.10	0.00	NR
		5/20/2004	3.69	3.74	-0.14	0.00	
		6/22/2004	3.81	3.62	-0.12	0.00	NR
		7/27/2004	3.99	3.44	-0.18	0.00	NR
		8/24/2004	4.14	3.29	-0.15	0.00	
		9/29/2004	4.32	3.11	-0.18	0.00	NR
		10/25/2004	3.89	3.54	0.43	0.00	
		12/15/2004	3.18	4.25	0.71	0.00	NR
		1/24/2005	2.69	4.74	0.49	0.00	
		2/23/2005	2.48	4.95	0.21	0.00	NR
		3/23/2005	2.21	5.22	0.27	0.00	NR
		4/29/2005	2.57	4.86	-0.36	0.00	NR
		5/27/2005	2.68	4.75	-0.11	0.00	NR
		6/29/2005	2.97	4.46	-0.29	0.00	NR
		7/20/2005	3.13	4.30	-0.16	0.00	NR
		8/24/2005	3.48	3.95	-0.35	0.00	NR
		9/27/2005	3.69	3.74	-0.21	0.00	NR
		10/19/2005	3.87	3.56	-0.18	0.00	NR
		11/29/2005	3.79	3.64	0.08	0.00	
		12/29/2005	3.08	4.35	0.71	0.00	
		1/31/2006	2.91	4.52	0.17	0.00	
		2/28/2006	2.84	4.59	0.07	0.00	NR
		3/27/2006	2.26	5.17	0.58	0.00	NR
		4/28/2006	2.40	5.03	-0.14	0.00	
		6/27/2006	3.09	4.34	-0.69	0.00	
		7/31/2006	3.35	4.08	-0.26	0.00	
		8/29/2006	3.60	3.83	-0.25	0.00	
		9/28/2006	3.90	3.53	-0.30	0.00	
		10/27/2006	3.97	3.46	-0.07	0.00	
		11/22/2006	3.64	3.79	0.33	0.00	
		12/26/2006	3.04	4.39	0.60	0.00	
		1/25/2007	3.26	4.17	-0.22	0.00	NR
		2/16/2007	3.12	4.31	0.14	0.00	
		3/19/2007	2.91	4.52	0.21	0.00	NR
		4/26/2007	2.93	4.50	-0.02	0.00	
		5/29/2007	3.15	4.28	-0.22	0.00	NR
		6/28/2007	3.42	4.01	-0.27	0.00	NR
		7/30/2007	3.60	3.83	-0.18	0.00	
		8/30/2007	3.85	3.58	-0.25	0.00	
		9/25/2007	4.00	3.43	-0.15	0.00	NR
		10/29/2007	4.05	3.38	-0.05	0.00	NR
		11/29/2007	4.10	3.33	-0.05	0.00	NR
		12/28/2007	3.80	3.63	0.30	0.00	NR
		1/24/2008	3.14	4.29	0.66	0.00	NR
		2/21/2008	2.44	4.99	0.70	0.00	NR
		3/28/2008	2.84	4.59	-0.40	0.00	
		4/30/2008	3.00	4.43	-0.16	0.00	NR
		5/29/2008	3.24	4.19	-0.24	0.00	NR
		6/25/2008	3.39	4.04	-0.15	0.00	NR
		7/29/2008	3.64	3.79	-0.25	0.00	
		8/27/2008	3.85	3.58	-0.21	0.00	NR
		9/30/2008	4.08	3.35	-0.23	0.00	NR
		10/31/2008	4.20	3.23	-0.12	0.00	NR
		11/26/2008	4.14	3.29	0.06	0.00	
		12/30/2008	3.94	3.49	0.20	0.00	NR
		1/22/2009	3.93	3.50	0.01	0.00	NR
		4/3/2009	ABANDONED				

TABLE 1
HISTORICAL GROUNDWATER ELEVATION SUMMARY

UPS-OAKLAND HUB
8400 PARDEE DRIVE
OAKLAND, CALIFORNIA
STATE ID # 583

Monitoring Well	Reference Elevation	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Measurement (ft)	Product Thickness (ft)	Volume Product Recovered (mL)
MW-2	7.15	8/28/1990	4.98	2.17	--	0.00	
		9/20/1990	4.94	2.21	0.04	N/A	
		6/19/1991	4.66	2.49	0.28	N/A	
		7/23/1991	4.81	2.34	-0.15	N/A	
		8/26/1991	4.89	2.26	-0.08	N/A	
		11/18/1991	4.93	2.22	-0.04	N/A	
		2/3/1992	4.44	2.71	0.49	N/A	
		6/29/1992	4.80	2.35	-0.36	N/A	
		6/23/1993	4.38	2.77	0.42	N/A	
		10/11/1993	5.20	1.95	-0.82	N/A	
		1/4/1994	4.56	2.59	0.64	N/A	
		5/10/1994	4.20	2.95	0.36	N/A	
		2/1/1995	4.00	3.15	0.20	N/A	
		8/2/1995	4.71	2.44	-0.71	N/A	
		10/16/1995	5.02	2.13	-0.31	N/A	
		12/28/1995	4.56	2.59	0.46	N/A	
		6/12/1996	NM	--	--	0.25	
		6/4/1997	6.02	1.13	-1.46	Small globules	
		9/30/1999	4.95	2.20	1.07	0.00	
		10/11/2000	4.97	2.18	-0.02	0.08	
		2/12/2002	4.26	2.89	0.71	0.01	24.00
		9/3/2002	5.02	2.13	-0.76	0.07	
		9/27/2002	4.89	2.26	0.13	0.09	222.30
		10/22/2002	5.11	2.04	-0.22	0.05	125.00
		12/23/2002	4.25	2.90	0.86	0.04	99.00
		1/16/2003	4.28	2.87	-0.03	0.02	49.00
		2/12/2003	4.26	2.89	0.02	0.01	24.00
		3/28/2003	4.35	2.80	-0.09	0.01	25.00
		5/30/2003	3.60	3.55	0.75	0.02	49.00
		6/20/2003	4.55	2.60	-0.95	0.01	
		7/14/2003	4.56	2.59	-0.01	0.00	
		8/25/2003	4.79	2.36	-0.23	0.01	25.00
		9/9/2003	4.90	2.25	-0.11	0.01	
		9/25/2003	4.97	2.18	-0.07	0.01	25.00
		10/28/2003	4.98	2.17	-0.01	0.04	104.00
		11/18/2003	4.83	2.32	0.15	0.00	
		12/3/2003	4.87	2.28	-0.04	0.00	
		1/27/2004	7.39	-0.24	-2.52	0.00	
		2/24/2004	4.56	2.59	2.83	0.01	
		3/29/2004	4.24	2.91	0.32	0.01	
		4/19/2004	4.50	2.65	-0.26	0.01	25.00
		5/20/2004	4.53	2.62	-0.03	0.00	
		6/22/2004	4.65	2.50	-0.12	0.00	NR
		7/27/2004	4.80	2.35	-0.15	0.00	NR
		8/24/2004	5.93	1.22	-1.13	0.00	
		9/29/2004	5.00	2.15	0.93	0.02	50.00
		10/25/2004	4.68	2.47	0.32	0.00	
		12/15/2004	4.34	2.81	0.34	0.02	50.00
		1/24/2005	4.15	3.00	0.19	0.00	
		2/23/2005	4.95	2.20	-0.80	0.03	74.00
		3/23/2005	4.96	2.19	-0.01	0.02	49.00
		4/29/2005	4.23	2.92	0.73	0.10	246.00
		5/27/2005	4.20	2.95	0.03	0.02	50.00
		6/29/2005	4.29	2.86	-0.09	0.00	NR
		7/20/2005	4.48	2.67	-0.19	0.04	98.00
		8/24/2005	4.71	2.44	-0.23	0.00	NR
		9/27/2005	4.98	2.17	-0.27	0.03	70.00
		10/19/2005	5.08	2.07	-0.10	0.00	NR
		11/29/2005	4.68	2.47	0.40	0.01	
		12/29/2005	4.19	2.96	0.49	0.01	
		1/31/2006	4.05	3.10	0.14	0.00	
		2/28/2006	4.16	2.99	-0.11	0.00	25.00
		3/27/2006	4.11	3.04	0.05	0.01	NR
		4/28/2006	4.03	3.12	0.08	0.00	
		6/27/2006	4.45	2.70	-0.42	0.01	
		7/31/2006	4.60	2.55	-0.15	0.02	
		8/29/2006	4.84	2.31	-0.24	0.01	
		9/28/2006	4.96	2.19	-0.12	0.03	
		10/27/2006	4.98	2.17	-0.02	0.00	
		11/22/2006	4.58	2.57	0.40	0.00	
		12/26/2006	4.22	2.93	0.36	0.02	
		1/25/2007	4.44	2.71	-0.22	0.00	NR
		2/16/2007	4.13	3.02	0.31	0.00	
		3/19/2007	4.30	2.85	-0.17	0.01	NR
		4/26/2007	4.17	2.98	0.13	0.03	
		5/29/2007	4.42	2.73	-0.25	0.01	25.00
		6/28/2007	5.16	1.99	-0.74	0.01	25.00
		7/30/2007	4.71	2.44	0.45	0.00	
		8/30/2007	4.94	2.21	-0.23	0.03	
		9/25/2007	5.06	2.09	-0.12	0.01	25.00
		10/29/2007	4.75	2.40	0.31	0.01	25.00
		11/29/2007	4.69	2.46	0.06	0.00	NR
		12/28/2007	4.35	2.80	0.34	0.00	NR
		1/24/2008	4.08	3.07	0.27	0.00	NR
		2/21/2008	3.97	3.18	0.11	0.01	25.00
		3/28/2008	4.18	2.97	-0.21	0.00	
		4/30/2008	4.40	2.75	-0.22	0.00	NR
		5/29/2008	4.58	2.57	-0.18	0.01	20.00
		6/25/2008	4.58	2.57	0.00	0.00	NR
		7/29/2008	4.85	2.30	-0.27	0.00	
		8/27/2008	4.89	2.26	-0.04	0.01	25.00
		9/30/2008	5.14	2.01	-0.25	0.04	98.00
		10/31/2008	5.23	1.92	-0.09	0.03	NR
		11/26/2008	4.74	2.41	0.49	0.04	
		12/30/2008	4.33	2.82	0.41	0.01	25.00
		1/22/2009	4.45	2.70	-0.12	0.01	25.00
	9.63	5/5/2010	4.03	5.60	2.90	0.13	
		10/29/2010	4.98	4.65	-0.95	0.08	
		2/25/2011	3.73	5.90	1.25	0.00	NR
		9/1/2011	4.96	4.67	-1.23	0.00	NR

TABLE 1
HISTORICAL GROUNDWATER ELEVATION SUMMARY

UPS-OAKLAND HUB
8400 PARDEE DRIVE
OAKLAND, CALIFORNIA
STATE ID # 583

Monitoring Well	Reference Elevation	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Measurement (ft)	Product Thickness (ft)	Volume Product Recovered (mL)
MW-3	7.42	8/28/1990	3.88	3.54	--	0.00	
		9/20/1990	3.99	3.43	-0.11	0.00	
		6/19/1991	3.49	3.93	0.50	0.00	
		7/23/1991	3.71	3.71	-0.22	0.00	
		8/26/1991	3.94	3.48	-0.23	0.00	
		11/18/1991	4.23	3.19	-0.29	0.00	
		2/3/1992	4.01	3.41	0.22	0.00	
		6/29/1992	3.40	4.02	0.61	0.00	
		6/23/1993	2.75	4.67	0.65	0.00	
		10/11/1993	3.84	3.58	-1.09	0.00	
		1/4/1994	3.40	4.02	0.44	0.00	
		5/10/1994	2.25	5.17	1.15	0.00	
		2/1/1995	2.43	4.99	-0.18	0.00	
		8/2/1995	3.20	4.22	-0.77	0.00	
		10/16/1995	3.72	3.70	-0.52	0.00	
		12/28/1995	3.56	3.86	0.16	0.00	
		6/4/1997	3.20	4.22	0.36	0.00	
		6/3/1998	NM	--	--	0.00	
		9/30/1999	3.72	3.70	-0.52	0.00	
		10/11/2000	3.88	3.54	-0.16	0.00	
		9/3/2002	3.75	3.67	0.13	0.00	
		12/23/2002	3.50	3.92	0.25	0.00	NR
		3/28/2003	3.56	3.86	-0.06	0.00	NR
		5/30/2003	3.38	4.04	0.18	0.00	NR
		6/20/2003	3.52	3.90	-0.14	0.00	
		7/14/2003	3.65	3.77	-0.13	0.00	
		8/25/2003	3.99	3.43	-0.34	0.00	NR
		9/9/2003	3.99	3.43	0.00	0.00	
		9/25/2003	4.06	3.36	-0.07	0.00	NR
		10/28/2003	4.15	3.27	-0.09	0.00	NR
		11/18/2003	4.28	3.14	-0.13	0.00	
		12/2/2003	4.31	3.11	-0.03	0.00	
		1/27/2004	3.85	3.57	0.46	0.00	
		2/24/2004	3.70	3.72	0.15	0.00	
		3/29/2004	3.47	3.95	0.23	0.00	
		4/19/2004	3.55	3.87	-0.08	0.00	NR
		5/20/2004	3.65	3.77	-0.10	0.00	
		6/22/2004	3.83	3.59	-0.18	0.00	NR
		7/27/2004	3.98	3.44	-0.15	0.00	NR
		8/24/2004	4.14	3.28	-0.16	0.00	
		9/29/2004	4.30	3.12	-0.16	0.00	NR
		10/25/2004	3.85	3.57	0.45	0.00	
		12/15/2004	3.16	4.26	0.69	0.00	NR
		1/24/2005	2.65	4.77	0.51	0.00	
		2/23/2005	2.50	4.92	0.15	0.00	NR
		3/23/2005	2.48	4.94	0.02	0.00	NR
		4/29/2005	2.59	4.83	-0.11	0.00	NR
		5/27/2005	2.75	4.67	-0.16	0.00	NR
		6/29/2005	3.05	4.37	-0.30	0.00	NR
		7/20/2005	3.10	4.32	-0.05	0.00	NR
		8/24/2005	3.45	3.97	-0.35	0.00	NR
		9/27/2005	3.71	3.71	-0.26	0.00	NR
		10/19/2005	3.73	3.69	-0.02	0.00	NR
		11/29/2005	3.75	3.67	-0.02	0.00	
		12/29/2005	3.08	4.34	0.67	0.00	
		1/31/2006	2.99	4.43	0.09	0.00	
		2/28/2006	2.95	4.47	0.04	0.00	NR
		3/27/2006	2.60	4.82	0.35	0.00	NR
		4/28/2006	2.90	4.52	-0.30	0.00	
		6/27/2006	3.01	4.41	-0.11	0.00	
		7/31/2006	4.33	3.09	-1.32	0.00	
		8/29/2006	3.62	3.80	0.71	0.00	
		9/28/2006	3.80	3.62	-0.18	0.00	
		10/27/2006	3.90	3.52	-0.10	0.00	
		11/22/2006	3.60	3.82	0.30	0.00	
		12/26/2006	3.07	4.35	0.53	0.00	
		1/25/2007	3.25	4.17	-0.18	0.00	NR
		2/16/2007	3.09	4.33	0.16	0.00	
		3/19/2007	2.83	4.59	0.26	0.00	NR
		4/26/2007	2.94	4.48	-0.11	0.00	
		5/29/2007	3.18	4.24	-0.24	0.00	NR
		6/28/2007	3.41	4.01	-0.23	0.00	NR
		7/30/2007	3.62	3.80	-0.21	0.00	
		8/30/2007	3.84	3.58	-0.22	0.00	
		9/25/2007	4.03	3.39	-0.19	0.00	NR
		10/29/2007	4.06	3.36	-0.03	0.00	NR
		11/29/2007	4.10	3.32	-0.04	0.00	NR
		12/28/2007	3.78	3.64	0.32	0.00	NR
		1/24/2008	3.16	4.27	0.63	0.00	NR
		2/21/2008	2.41	5.02	0.75	0.00	NR
		3/28/2008	2.94	4.48	-0.54	0.00	
		4/30/2008	3.08	4.34	-0.14	0.00	NR
		5/29/2008	3.24	4.18	-0.16	0.00	NR
		6/25/2008	3.30	4.12	-0.06	0.00	NR
		7/29/2008	3.50	3.92	-0.20	0.00	
		8/27/2008	3.84	3.58	-0.34	0.00	NR
		9/30/2008	4.03	3.39	-0.19	0.00	NR
		10/31/2008	4.20	3.22	-0.17	0.00	NR
		11/26/2008	4.23	3.19	-0.03	0.00	
		12/30/2008	3.96	3.46	0.27	0.00	NR
		1/22/2009	3.96	3.46	0.00	0.00	NR
	9.89	5/5/2010	3.13	6.76	3.30	0.02	
		10/29/2010	4.70	5.19	-1.57	0.00	
		2/25/2011	1.54	8.35	3.16	0.02	NR
		9/1/2011	4.12	5.77	-2.58	0.02	NR
MW-4	9.77	5/5/2010	2.96	6.81	--	0.00	
		10/29/2010	4.53	5.24	-1.57	0.00	
		2/25/2011	1.34	8.43	3.19	0.00	NR
		9/1/2011	3.99	5.78	-2.65	0.00	NR
MW-8	8.22	5/5/2010	2.56	5.66	--	0.00	
		10/29/2010	4.39	3.83	-1.83	0.00	
		2/25/2011	2.69	5.53	1.70	0.00	NR
		9/1/2011	3.67	4.55	-0.98	0.00	NR
MW-9	14.63	5/5/2010	6.28	8.35	--	0.00	
		10/29/2010	6.28	8.35	0.00	0.00	
		2/25/2011	5.55	9.08	0.73	0.00	NR
		9/1/2011	6.05	8.58	-0.50	0.00	NR
MW-10	9.68	5/5/2010	8.28	1.40	--	0.00	
		10/29/2010	8.27	1.41	0.01	0.00	
		2/25/2011	4.45	5.23	3.82	0.00	NR
		9/1/2011	8.35	1.33	-3.90	0.00	NR

TABLE 1
HISTORICAL GROUNDWATER ELEVATION SUMMARY

UPS-OAKLAND HUB
8400 PARDEE DRIVE
OAKLAND, CALIFORNIA
STATE ID # 583

Monitoring Well	Reference Elevation	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Measurement (ft)	Product Thickness (ft)	Volume Product Recovered (mL)
MW-11	9.49	5/5/2010	7.21	2.28	--	0.00	
		10/29/2010	6.83	2.66	0.38	0.00	
		2/25/2011	2.83	6.66	4.00	0.00	NR
		9/1/2011	6.05	3.44	-3.22	0.00	NR
OW-1	N/A	6/4/1997	7.22	NC	--	0.01	
		9/30/1999	8.35	NC	1.13	0.01	
		10/11/2000	6.90	NC	-1.45	0.09	
		2/12/2002	5.23	NC	-1.67	0.01	38.00
		9/27/2002	7.02	NC	1.79	0.14	345.78
		10/22/2002	7.34	NC	0.32	0.01	40.00
		12/23/2002	5.17	NC	-2.17	0.03	167.00
		1/16/2003	4.97	NC	-0.20	0.01	40.00
		2/12/2003	5.23	NC	0.26	0.01	38.00
		3/28/2003	5.16	NC	-0.07	0.01	25.00
		5/30/2003	4.41	NC	-0.75	0.02	77.00
		6/20/2003	4.93	NC	0.52	0.01	
		7/14/2003	5.33	NC	0.40	0.00	
		8/25/2003	5.85	NC	0.52	0.00	NR
		9/9/2003	6.33	NC	0.48	0.00	
		9/25/2003	6.52	NC	0.19	0.01	25.00
		10/28/2003	7.26	NC	0.74	0.03	176.00
		11/18/2003	7.29	NC	0.03	0.00	
		12/2/2003	7.23	NC	-0.06	0.03	
		1/27/2004	7.96	NC	0.73	0.01	
		2/24/2004	6.26	NC	-1.70	0.02	
		3/29/2004	6.08	NC	-0.18	0.02	
		4/19/2004	6.29	NC	0.21	0.03	116.00
		5/20/2004	6.16	NC	-0.13	0.00	
		6/22/2004	6.37	NC	0.21	0.00	NR
		7/27/2004	5.67	NC	-0.70	0.04	225.00
		8/24/2004	6.81	NC	1.14	0.00	
		9/29/2004	7.08	NC	0.27	0.04	153.00
		10/25/2004	6.74	NC	-0.34	0.04	
		12/15/2004	5.33	NC	-1.41	0.04	155.00
		1/24/2005	3.98	NC	-1.35	0.00	
		2/23/2005	3.44	NC	-0.54	0.01	NR[5]
		3/23/2005	3.34	NC	-0.10	0.02	77.00
		4/29/2005	6.89	NC	3.55	0.13	501.00
		5/27/2005	7.18	NC	0.29	0.11	425.00
		6/29/2005	7.12	NC	-0.06	0.10	450.00
		7/20/2005	7.20	NC	0.08	0.10	556.00
		8/24/2005	7.15	NC	-0.05	0.06	249.00
		9/27/2005	7.43	NC	0.28	0.12	450.00
		10/19/2005	7.48	NC	0.05	0.11	425.00
		11/29/2005	7.00	NC	-0.48	0.04	
		12/29/2005	5.22	NC	-1.78	0.00	
		1/31/2006	5.64	NC	0.42	0.00	
		2/28/2006	6.53	NC	0.89	0.01	39.00
		3/27/2006	5.80	NC	-0.73	0.01	NR
		4/28/2006	6.39	NC	0.59	0.00	
		6/27/2006	7.82	NC	1.43	0.06	
		7/31/2006	5.82	NC	-2.00	0.05	
		8/29/2006	7.05	NC	1.23	0.07	
		9/28/2006	7.10	NC	0.05	0.02	
		10/27/2006	7.27	NC	0.17	0.02	
		11/22/2006	7.05	NC	-0.22	0.02	
		12/26/2006	6.73	NC	-0.32	0.03	
		1/25/2007	7.15	NC	0.42	0.00	NR
		2/16/2007	7.71	NC	0.56	0.01	
		3/19/2007	6.77	NC	-0.94	0.02	NR
		4/26/2007	6.66	NC	-0.11	0.01	
		5/29/2007	6.86	NC	0.20	0.02	76.00
		6/28/2007	6.97	NC	0.11	0.20	75.00
		7/30/2007	7.06	NC	0.09	0.01	
		8/30/2007	7.25	NC	0.19	0.03	
		9/25/2007	7.25	NC	0.00	0.03	115.00
		10/29/2007	7.43	NC	0.18	0.02	78.00
		11/29/2007	7.37	NC	-0.06	0.00	NR
		12/28/2007	7.28	NC	-0.09	0.01	40.00
		1/24/2008	6.61	NC	-0.67	0.01	38.00
		2/21/2008	6.33	NC	-0.28	0.01	37.00
		3/28/2008	6.80	NC	0.47	0.01	
		4/30/2008	7.44	NC	0.64	0.03	166.90
		5/29/2008	7.09	NC	-0.35	0.01	38.00
		6/25/2008	7.07	NC	-0.02	0.02	112.00
		7/29/2008	7.34	NC	0.27	0.00	
		8/27/2008	7.28	NC	-0.06	0.02	78.00
		9/30/2008	7.82	NC	0.54	0.03	167.00
		10/31/2008	7.31	NC	-0.51	0.01	NR
		11/26/2008	6.93	NC	-0.38	0.01	
		12/30/2008	7.25	NC	0.32	0.02	112.00
		1/22/2009	7.05	NC	-0.20	0.01	56.00
	9.55	5/5/2010	7.08	2.47	--	0.06	
		10/29/2010	7.37	2.18	-0.29	0.08	
		2/25/2011	6.17	3.38	1.20	0.05	NR
		9/1/2011	7.35	2.20	-1.18	0.03	

Notes:
1. Reference elevation surveyed relative to mean sea level by Geraghty and Miller (Geraghty and Miller, Inc., 1990)
2. Depth to groundwater measured from notch/mark on north edge of well casing
3. Sources: Geraghty and Miller, 1996; BBL
4. NM = Not measured; NC = Not calculated; N/A= Not Available; NR = No Recovery
5. SPH detected but amount insufficient to bail
Volume of product recovered on 9/27/02 and 3/23/05 calculated based on measurements from field data sheets

TABLE 2
PSH Recovery Event Results

UPS-OAKLAND HUB
8400 PARDEE DRIVE
OAKLAND, CALIFORNIA
STATE ID # 583

Monitoring Well	Date Collected	Time	Well Size	Depth to Water(foot)	Depth to Product (foot)	Product Thickness (inches)	Amount of product recovered from the Skimmer	Amount of water from the Skimmer	Notes
OW-1	12/20/2011	12:20	6"	7.32	7.30	0.02	5 OZ	-	0.75 yellow and 4.25 black
OW-1	11/22/2011	1:00	6"	7.09	7.06	0.03	1 OZ	-	Black liquid
OW-1	10/19/2011	12:20	6"	7.42	7.45	0.03	6 OZ Black 12 OZ Yellow	-	Black & stinky rainbow bubbles, yellow slightly translucent
OW-1	9/20/2011	12:20	6"	7.41	7.37	0.04	20 OZ	-	Yellow stinky semi-translucent with layer of black liquid
OW-1	8/18/2011	2:20	6"	7.35	7.38	0.03	5 OZ	0	Black stinky liquid
OW-1	7/19/2011	2:45	6"	7.3	7.1	0.2	4 OZ	16 OZ	16 OZ Yellow brown black substance on top 4 OZ Brownish-black both had bad smell
OW-1	6/14/2011	3:25	6"	6.78	6.7	0.08	-	20 OZ	No separation, smells bad, yellowish
MW-2	12/20/2011	12:30	4"	4.92	4.91	0.01	18 OZ	-	Pretty Clear-Slightly Yellowish
MW-2	11/22/2011	1:20	4"	4.92	-	-	18 OZ	-	Yellowish liquid-stinks
MW-2	10/19/2011	12:30	4"	4.77	4.78	0.01	20 OZ Yellow Translucent	-	Yellow translucent, stinky. Clack sediments
MW-2	9/20/2011	12:30	4"	5.075	5.07	-	20 OZ	-	Yellow stinky with layer of black liquid translucent but more transparent, black sheen on top and black particulates floating
MW-2	8/18/2011	2:50	4"	4.8	-	sheen	0	0	Little black stinky liquid
MW-2	7/19/2011	3:15	4"	4.72	4.71	0.1	2 OZ	0	Black yellowish liquid
MW-2	6/14/2011	3:15	4"	4.23	4.2	0.03	0	0	Nothing inside well, black sludge
MW-3	12/20/2011	12:45	4"	4.7	-	-	18 OZ	-	Translucent & yellow with black particles, smelly.
MW-3	11/22/2011	1:30	4"	4.75	-	-	18 OZ	-	Yellowish, stinky
MW-3	10/19/2011	12;45	4"	4.34	-	-	19 OZ Yellow	-	Translucent & Smelly, Clearer than other wells
MW-3	9/20/2011	12;45	4"	4.41	4.41	0.05	20 OZ	-	Yellow stinky with layer of black liquid translucent but more transparent
MW-3	8/18/2011	2:35	4"	3.98	-	sheen	20	-	Slightly translucent yellow stinky
MW-3	7/19/2011	3:30	4"	3.53	3.51	0.2	18 OZ	0	Yellowish with little black liquid
MW-3	6/14/2011	3:00	4"	3.25	3.2	0.05	sheen	18 OZ	Top of the skimmers have buildups

Note: PSH = Phase Seperated Hydrocarbons

TABLE 3

HISTORICAL GROUNDWATER MONITORING RESULTS SUMMARY

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
STATE ID # 583

Monitoring Well	Date	Benzene µg/L	Toluene µg/L	Ethyl-benzene µg/L	Total Xylenes µg/L	MTBE µg/L	TPH as gasoline µg/L	TPH as diesel µg/L	D.O. (mg/L)	EDB µg/L	1,2-DCA µg/L	Naphthalene µg/L	TDS (mg/L)
MCL	--	1.00	150.00	300.00	1750.00	13.00	--	100*	--	--	--	--	--
ESL - Drinking Water	--	1	40	30	20	5	100	100	--	0.05	6	17	NA
ESL - Non-Drinking Water	--	46	100	43	100	1800	210	210	--	150	200	24	NA
MW-1	8/28/1990	3.00	1.40	4.00	2.40	NA	NA	21,000	NA				
	6/19/1991	1.70	0.70	0.50	0.90	NA	NA	7,100	NA				
	7/23/1991	1.60	1.10	0.50	1.50	NA	220	8,700	NA				
	8/26/1991	180.00	120.00	31.00	160.00	NA	NA	2,800	NA				
	11/18/1991	1.10	0.40	0.50	< 0.3	NA	NA	6,600	NA				
	2/3/1992	0.90	< 0.3	0.80	0.70	NA	NA	2,200	NA				
	6/29/1992	0.80	0.40	0.40	0.90	NA	NA	2,100	NA				
	6/23/1993	0.66	< 0.5	0.50	< 0.5	NA	NA	3,200	NA				
	10/11/1993	1.30	< 0.5	< 0.5	< 0.5	NA	NA	9,600	NA				
	1/4/1994	2.10	0.65	1.30	2.10	NA	NA	12,000	NA				
	5/10/1994	0.54	0.53	< 0.5	1.10	NA	NA	6,400	NA				
	2/1/1995	< 1.0	< 1.0	1.00	< 1.0	NA	510	10,000	NA				
	8/2/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	510	8,700	NA				
	10/16/1995	2.80	< 0.5	< 0.5	< 0.5	NA	830	15,000	NA				
	12/28/1995	2.10	< 0.5	< 0.5	< 0.5	NA	560	15,000	NA				
	6/4/1997	NA	NA	NA	NA	NA	NA	28,000	0.76				
	9/30/1999	< 0.5	0.60	< 0.5	1.80	<3.0	1,600	28,000	9.90				
	10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5	260	21,000	0.39				
	9/3/2002	<0.5	<0.5	<0.5	0.50	<0.5	1,00	38,000	NA				
	3/28/2003	<5	<5	<5	<10	<5.0	250	35,000	NM				
	9/9/2003	<0.5	<0.5	<0.5	<1.0	0.60	440	11,000	NM				
	4/19/2004	3.20	<2.5	<2.5	<5.0	<2.5	280	24,000ndp	NM				
	9/29/2004	<1.0	<1.0	<1.0	<2.0	2.10	1,400 g	150,000 ndp	NM				
	3/23/2005	<1.0	<1.0	<1.0	<2.0	<1.0	550 Q1	15,000 Q2	NM				
	11/29/2005	< 0.50	< 0.50	< 0.50	<1.0	0.94	310	7800	NM				
	3/27/2006	< 0.50	< 0.50	< 0.50	<1.0	0.62	420	11000	NM				
	9/28/2006	< 0.50	< 0.50	< 0.50	<1.0	0.87	220	28000	NM				
	3/19/2007	< 0.50	< 0.50	< 0.50	<1.0	<1.0	940	11000	NM				
	9/25/2007	<0.50	<0.50	<0.50	1.1	<0.50	240	9700	NM				
	3/28/2008	<0.50	<0.50	<0.50	<1.0	<0.50	55	13000	NM				
	9/30/2008	<0.50	<0.50	<0.50	<1.0	<0.50	280	9800	NM				
	5/5/2010	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/25/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	8/28/1990	0.60	0.40	0.60	0.70	NA	NA	3,500	NA				
	6/19/1991	0.50	< 0.3	< 0.3	< 0.3	NA	NA	<500	NA				
	7/23/1991	0.70	< 0.3	< 0.3	< 0.3	NA	<500	660	NA				
	8/26/1991	0.70	< 0.3	< 0.3	< 0.3	NA	NA	<500	NA				
	11/18/1991	0.80	< 0.3	< 0.3	< 0.3	NA	NA	3,200	NA				
	2/3/1992	0.70	< 0.3	< 0.3	0.50	NA	NA	400	NA				
	6/29/1992	0.60	< 0.3	< 0.3	< 0.3	NA	NA	250	NA				
	6/23/1993	0.55	< 0.5	< 0.5	< 0.5	NA	NA	11,000	NA				
	10/11/1993	1.20	< 0.5	< 0.5	1.30	NA	NA	1,400	NA				
	1/4/1994	0.72	< 0.5	< 0.5	1.10	NA	NA	3,700	NA				
	5/10/1994	0.74	< 0.5	< 0.5	0.70	NA	NA	2,300	NA				
	2/1/1995	2.10	< 1.0	< 1.0	< 1.0	NA	<100	2,100	NA				
	8/2/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	210	3,600	NA				
	10/16/1995	0.73	< 0.5	< 0.5	< 0.5	NA	130	1,400	NA				
	12/28/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	210	2,800	NA				
	6/12/1996	NS	NS	NS	NS	NS	NS	--	NS				
	6/4/1997	NA	NA	NA	NA	NA	NA	3,300	0.52				
	9/30/1999	< 0.5	< 0.5	< 0.5	< 1.0	< 3.0	220	6,300	9.50				
	10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5.0	170	4,400	0.43				
	9/27/2002	0.7J	<2.5	<2.5	<2.5	<2.5	17000	67,000	NM				
	3/28/2003	<25	<25	<25	<50	<25	1600	10,000	NM				
	9/25/2003	0.52	<0.50	<0.50	<1.0	<0.50	150	12,000	NM				
	3/29/2004	0.51	<0.50	<0.50	<1.0	<0.50	84 g	7,800 ndp	NM				
	9/29/2004	<0.50	<0.50	<0.50	<1.0	<0.50	630 g	10,000 ndp	NM				
	1/24/2005	<0.50	<0.50	<0.50	<1.0	<0.50	2,300 Q1	15,000 Q2	NM				
	11/29/2005	<1.0	<1.0	<1.0	<2.0	<1.0	1,900	22,000	NM				
	3/27/2006	<1.0	<1.0	<1.0	<2.0	<1.0	710	8,900	NM				
	9/28/2006	<0.50	<0.50	<0.50	<1.0	<0.50	62	7,500	NM				
	3/19/2007	<0.50	<0.50	<0.50	<1.0	<0.50	<50	11,000	NM				
	9/25/2007	<0.50	<0.50	<0.50	<1.0	<0.50	55	8,700	NM				
	3/28/2008	<0.50	<0.50	<0.50	<1.0	<0.50	210	6,200	NM				
	9/30/2008	<0.50	<0.50	<0.50	<1.0	<0.50	220	23,000	NM				
	5/5/2010	NA	NA	NA	NA	NA	<50	3,700	NM	<0.5	<0.6	<1.0	2,800
	2/25/2011	<0.50	<0.50	<0.50	<1.0	<0.50	**360**	**37,000**	NM				
	9/1/2011	0.59	4.90	0.98	10.0	ND	140.00	**4,600**	NA				

TABLE 3

HISTORICAL GROUNDWATER MONITORING RESULTS SUMMARY

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
STATE ID # 583

Monitoring Well	Date	Benzene µg/L	Toluene µg/L	Ethyl-benzene µg/L	Total Xylenes µg/L	MTBE µg/L	TPH as gasoline µg/L	TPH as diesel µg/L	D.O. (mg/L)	EDB µg/L	1,2-DCA µg/L	Naphthalene µg/L	TDS (mg/L)
MW-3	8/28/1990	0.50	0.80	4.30	2.30	NA	NA	18,000	NA				
	6/19/1991	0.40	0.40	1.70	1.40	NA	NA	1,300	NA				
	7/23/1991	0.30	< 0.3	1.50	0.50	NA	330	6,800	NA				
	8/26/1991	13.00	13.00	5.80	26.00	NA	NA	<50	NA				
	11/18/1991	0.60	< 0.3	< 0.3	< 0.3	NA	NA	2,500	NA				
	2/3/1992	0.40	< 0.3	1.30	0.60	NA	NA	1,100	NA				
	6/29/1992	< 0.3	< 0.3	1.30	0.30	NA	NA	3,200	NA				
	6/23/1993	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA	8,100	NA				
	10/11/1993	1.00	< 0.5	1.50	2.40	NA	NA	7,100	NA				
	1/4/1994	< 0.5	< 0.5	1.60	< 0.5	NA	NA	7,400	NA				
	5/10/1994	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA	5,700	NA				
	2/1/1995	< 1.0	< 1.0	2.70	4.10	NA	810	10,000	NA				
	8/2/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	1200	6,500	NA				
	10/16/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	930	9,800	NA				
	12/28/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	690	11,000	NA				
	6/4/1997	NA	NA	NA	NA	NA	NA	34,000	0.84				
	9/30/1999	< 0.5	0.60	0.70	1.20	< 3.0	1300	8,700	8.60				
	10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5.0	430	20,000	0.51				
	9/3/2002	<0.5	<0.5	<0.5	<0.5	<0.5	2,300	14,000	NA				
	3/28/2003	<25	<25	<25	<50	<25	2,500	19,000	NM				
	9/9/2003	<0.5	<0.5	<0.5	<1.0	<0.5	700	73,000	NM				
	4/19/2004	<0.50	<0.50	<0.50	<1.0	<0.50	99	14,000 ndp	NM				
	9/29/2004	<2.5	<2.5	<2.5	<5.0	<2.5	390 g	10,000 ndp	NM				
	1/24/2005	<2.5	<2.5	<2.5	<5.0	<2.5	330 Q1	14,000 Q2	NM				
	11/29/2005	< 1.0	< 1.0	<1.0	< 2.0	< 1.0	1,200	8,300	NM				
	3/27/2006	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	430	13,000	NM				
	9/28/2006	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	370	17,000	NM				
	3/19/2007	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	510	26,000	NM				
	9/25/2007	<1.0	<1.0	<1.0	<2.0	<1.0	390	11,000	NM				
	3/28/2008	<0.50	<0.50	<0.50	<1.0	<0.50	280	21,000	NM				
	9/30/2008	<0.50	<0.50	<0.50	<1.0	<0.50	270	9,500	NM				
	5/5/2010	NA	NA	NA	NA	NA	<150	24,000	NM	<0.50	<0.50	2.2	910
	2/25/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/1/2011	ND	ND	1.70	2.1	ND	**450**	**24,000**					
MW-4	5/5/2010	NA	NA	NA	NA	NA	<50	5200	NM	<5.0	<5.0	<1.0	1,100
	10/29/2010	<0.5	<0.5	<0.5	<1.0	<0.5	150	2000	NM	NM	NM	<1.0	NM
	2/25/2011	<0.50	<0.50	<0.50	<1.0	<0.50	**250**	**24,000**	NM	NM	NM	NM	NM
	9/1/2011	ND	ND	ND	ND	ND	**430**	**7,700**					
MW-8	5/5/2010	NA	NA	NA	NA	NA	<50	70	NM	<0.50	<0.50	<1.0	2,900
	10/29/2010	<0.5	<0.5	<0.5	<1.0	<0.5	<50	1100	NM	NM	NM	<1.0	NM
	2/25/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	**280**	NM	NM	NM	NM	NM
	9/1/2011	ND	ND	ND	ND	ND	ND	200					
MW-9	5/5/2010	NA	NA	NA	NA	NA	<50	110	NM	<0.50	<0.50	<1.0	6,200
	2/25/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	**580**	NM	NM	NM	NM	NM
	9/1/2011	ND	0.55	ND	ND	ND	ND	**240**					
MW-10	5/5/2010	NA	NA	NA	NA	NA	<50	110	NM	<0.50	<0.50	<1.0	2,100
	10/29/2010	<0.5	<0.5	<0.5	<1.0	<0.5	<50	650	NM	NM	NM	<1.0	NM
	2/25/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	**5,600**	NM	NM	NM	NM	NM
	9/1/2011	ND	0.55	ND	ND	ND	ND	**250**					
MW-11	5/5/2010	NA	NA	NA	NA	NA	<50	430	NM	<0.50	<0.50	<1.0	10,000
	10/29/2010	<0.5	<0.5	<0.5	<1.0	<0.5	<50	7200	NM	NM	NM	<1.0	NM
	2/25/2011	<0.50	<0.50	<0.50	<1.0	<0.50	<50	**1,900**	NM	NM	NM	NM	NM
	9/1/2011	ND	0.55	ND	ND	ND	ND	**1,100**					

TABLE 3

HISTORICAL GROUNDWATER MONITORING RESULTS SUMMARY

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
STATE ID # 583

Monitoring Well	Date	Benzene µg/L	Toluene µg/L	Ethyl-benzene µg/L	Total Xylenes µg/L	MTBE µg/L	TPH as gasoline µg/L	TPH as diesel µg/L	D.O. (mg/L)	EDB µg/L	1,2-DCA µg/L	Naphthalene µg/L	TDS (mg/L)
OW-1	6/23/1993	< 0.5	< 0.5	< 0.5	31.00	NA	NA	34,000,000	NA				
	6/4/1997	NS	NS	NS	NS	NS	NS	NS	NS				
	9/30/1999	< 2.0	< 2.0	< 2.0	4.20	< 12.0	8,300	28,000,000	9.70				
	9/30/1999	< 1.0	< 1.0	1.90	8.90	< 6.0	2,900	340,000	--				
	10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5.0	2,100	58,000	0.74				
	9/27/2002	0.6J	<2.5	<2.5	<2.5	<2.5	17,000	23,000	NA				
	3/28/2003	<50	<50	<50	<100	<50	820	81,000	NM				
	9/25/2003	<50	530.00	500.00	6200.00	<50	220	91,000	NM				
	3/29/2004	<0.50	<0.50	<0.50	<1.0	<0.50	510	280,000 ndp	NM				
	9/29/2004	<2.5	<2.5	<2.5	<5.0	<2.5	2,800 g	440,000 ndp	NM				
	1/24/2005	<0.50	<0.50	<0.50	<1.0	<0.50	220 Q1	16,000 Q2	NM				
	11/29/2005	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	650	30,000	NM				
	3/27/2006	<13	<13	<13	<25	<13	<1,300	58,000	NM				
	9/28/2006	<2.5	<2.5	<2.5	<5.0	<2.5	820	130,000	NM				
	3/19/2007	<2.5	<2.5	<2.5	<5.0	<2.5	460	76,000	NM				
	9/25/2007	<2.0	<2.0	<2.0	<4.0	<2.0	<200	42,000	NM				
	3/28/2008	<0.50	<0.50	<0.50	<1.0	<0.50	1,700	120,000	NM				
	9/30/2008	<0.50	<0.50	<0.50	<1.0	<0.50	340	180,000	NM				
	5/5/2010	NA	NA	NA	NA	NA	74	7,000	NM	<0.50	<0.50	<1.0	1,800
	2/25/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

(µg/L) = are micrograms per liter and mg/L are milligrams per liter.
NA = Not Analyzed; NS = Not Sampled; NM = Not Measured
TPH = Total petroleum hydrocarbons; MTBE = Methyl tertiary butyl ether.
Title 22 of the California Code of Regulations, California Maximum Contaminant Levels (MCLs) for drinking water.
D.O. = Dissolved Oxygen measured in the field.
Results collected between the dates of 8/28/90 and 12/28/95 are based on prior reporting by Geraghty & Miller, Inc. (1996).
Bold values indicate analytical detections above MCL.
The 9/96, 10/96 BBL reports revealed concentrations reported as TPH as diesel did not resemble the diesel chromatogram standard, containing > C-26.
J - Estimated value between MDL and PQL.
ndp - Hydrocarbon reported does not match the pattern of laboratory Diesel standard.
* = Not an MCL; Odor and taste threshold per the California Regional Water Quality Control Board regulations
Q2 = Quantity of unknown hydrocarbon(s) in sample based on diesel.
Q1 = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

RWQCB ESLs = Regional Water Quality Control Board ESLs for Environmental Concerns at Sites with Contaminated Soil and Groundwater INTERIM FINAL - November 2007 (Revised May 2008) San Francisco Bay Region, CA

TABLE 4A

HISTORICAL SOIL ANALYTICAL RESULTS SUMMARY

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
STATE ID # 583

Sample ID	Sample Date	Sample Depth (feet bgs)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)
		ESL - drinking water	83	83	0.044	2.9	2.3	2.3	0.023
		ESL - non-drinking water	100	100	0.12	9.3	2.3	11	8.4
SB-01 4.5-5.0	4/8/2010	4.5 - 5.0	**5,000**	82	<0.0039	<0.0039	<0.0039	<0.0077	<0.0039
SB-01 12-13	4/8/2010	12.0 - 13.0	8.7	<0.25	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
SB-02 7.0-7.5	4/8/2010	7.0 - 7.5	**1,400**	1.8	<0.0041	<0.0041	0.0043	<0.0083	<0.0041
SB-02 9.5-10	4/8/2010	9.5 - 10.0	4.2	<0.32	<0.0064	<0.0064	<0.0064	<0.013	<0.0064
SB-03 4.0-4.5	4/8/2010	4.0 - 4.5	<1.0	<0.19	<0.0039	<0.0039	<0.0039	<0.0078	<0.0039
SB-03 7.5-8.0	4/8/2010	7.5 - 8.0	25	NA	NA	NA	NA	NA	NA
SB-05 4.5-5.0	4/9/2010	4.5 - 5.0	**5,000**	53	<0.0037	<0.0037	<0.0037	<0.0075	<0.0037
SB-05 10.0-10.5	4/9/2010	10.0 - 10.5	<0.99	<0.33	<0.0066	<0.0066	<0.0066	<0.013	<0.0066
SB-06 7.0-7.5	4/9/2010	7.0 - 7.5	**990**	NA	NA	NA	NA	NA	NA
SB-07 4.5-5.0	4/9/2010	4.5 - 5.0	**340**	NA	NA	NA	NA	NA	NA
SB-07D [a]	4/9/2010	4.5 - 5.0	**670**	NA	NA	NA	NA	NA	NA
SB-08 4.5-5.0	4/9/2010	4.5 - 5.0	66	NA	NA	NA	NA	NA	NA
SB-09 5.0-5.5	4/12/2010	5.0 - 5.5	5.3	<0.20	<0.0041	<0.0041	<0.0041	<0.0081	<0.0041
SB-09 9.5-10.0	4/12/2010	9.5 - 10.0	<1.0	<0.26	<0.0053	<0.0053	<0.0053	<0.011	<0.0053
SB-10 7.0-7.5	4/12/2010	7.0 - 7.5	31	<0.20	<0.0040	<0.0040	<0.0040	<0.0081	<0.0040
SB-10 9.5-10.0	4/12/2010	9.5 - 10.0	1.0	<0.24	<0.0047	<0.0047	<0.0047	<0.0095	<0.0047
SB-11 3.0-3.5	4/12/2010	3.0 - 3.5	<0.99	NA	NA	NA	NA	NA	NA
SB-12 6.0-6.5	4/13/2010	6.0 - 6.5	<1.0	<0.19	<0.0038	<0.0038	<0.0038	<0.0076	<0.0038

Abbreviations:

bgs = below ground surface

mg/kg = milligrams per kilogram

TPH-DRO = total petroleum hydrocarbons as diesel range organics

TPH-GRO = total petroleum hydrocarbons as gasoline range organics

MTBE = methyl tertiary-butyl ether

< = analyte not detected at or above the noted laboratory method detection limit

ESL = San Francisco Bay Regional Water Quality Control Board. Environmental Screening Levels, Interim Final - November 2007 (Revised May 2008).

Table A, for Shallow Soils, Commercial/industrial Land Use, Groundwater is current of potentail source of drinking water.

Table B, for Shallow Soils, Commercial/industrial Land Use, Groundwater is not current of potentail source of drinking water.

Notes:

Bold = concentration is above one or more of the respective screening levels.

a = duplicate sample

TABLE 4B

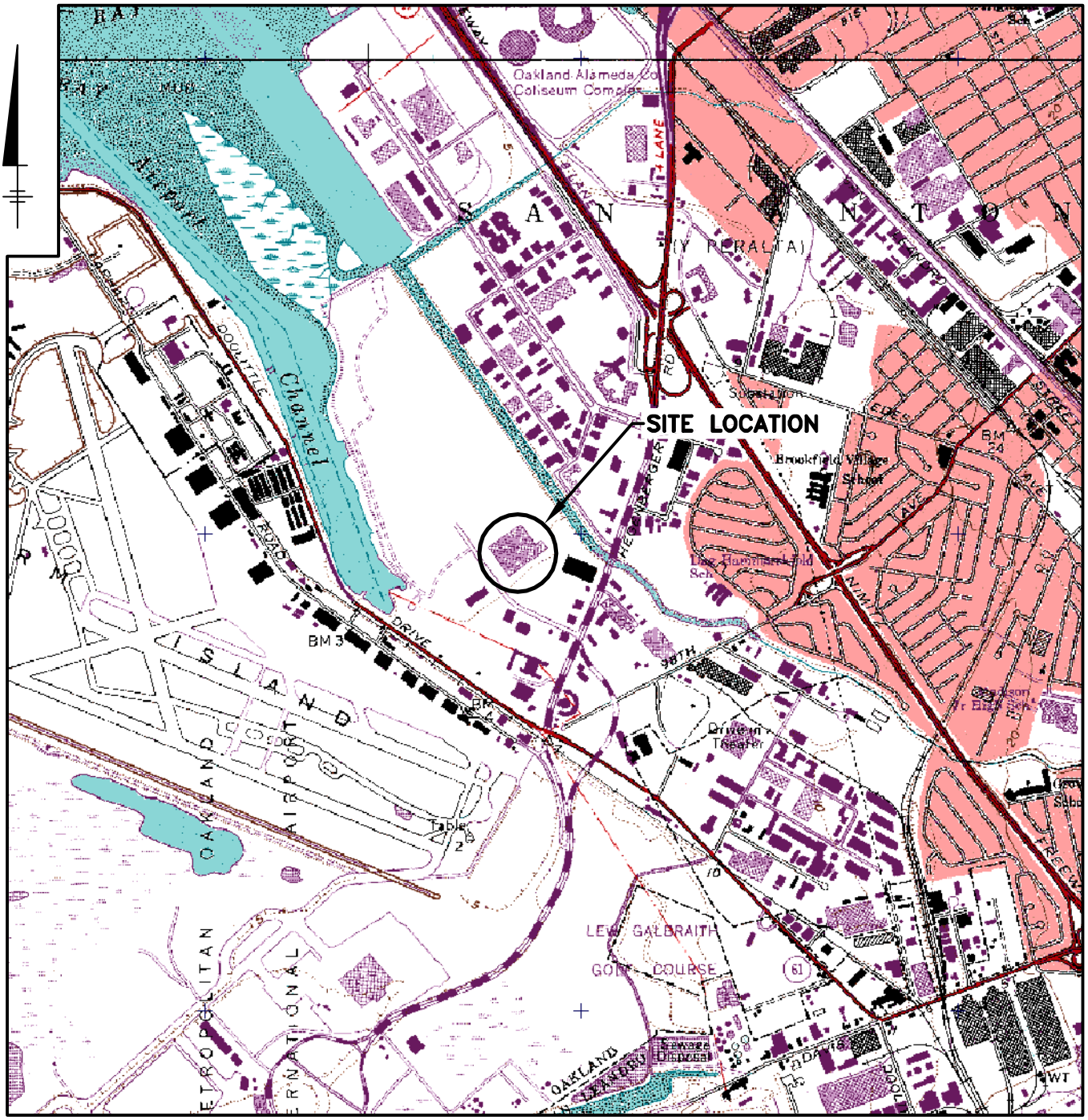
HISTORICAL SOIL ANALYTICAL RESULTS SUMMARY (PAHs)

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
STATE ID # 583

Sample ID		Date Collected	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo[a]anthracene (mg/kg)	Benzo[a]pyrene (mg/kg)	Benzo[b]fluoranthene (mg/kg)	Benzo[g,h,i]perylene (mg/kg)	Benzo[k]fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenz[a,h]anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno[1,2,3-cd]pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
RWQCB Environmental Screening Levels (ESLs)	**Shallow Soil (≤3 m-bgs)**	**Residential**	**16**	**13**	**2.8**	**0.38**	**0.038**	**0.38**	**27**	**0.38**	**23**	**0.062**	**40**	**8.9**	**0.62**	**1.3**	**11**	**85**
		Com./Ind.	**16**	**13**	**2.8**	**1.3**	**0.13**	**1.3**	**27**	**1.3**	**23**	**0.21**	**40**	**8.9**	**2.1**	**2.8**	**11**	**85**
	Deep Soil (>3 m-bgs)	**Residential**	**16**	**13**	**2.8**	**12**	**1.5**	**15**	**27**	**2.7**	**23**	**2.4**	**60**	**8.9**	**13**	**3.4**	**11**	**85**
		Com./Ind.	**16**	**13**	**2.8**	**12**	**1.5**	**15**	**27**	**2.7**	**23**	**2.4**	**60**	**8.9**	**13**	**3.4**	**11**	**85**
Low-Threat Standards	**0-5'**	**--**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**13**	**NE**	**NE**
	5-10'	**--**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**1500**	**NE**	**NE**
SB-01-02-AUG1111	8	8/11/2011	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.032	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
SB-01-08--AUG1111	8	8/11/2011	0.023	0.047	< 0.01	< 0.01	< 0.01	0.015	< 0.01	< 0.01	< 0.01	< 0.01	0.015	0.16	< 0.01	0.012	0.24	0.019
SB-01-08-DUP-AUG1111	8	8/11/2011	0.02	0.016	0.014	0.011	0.011	0.026	0.0067	0.0078	0.016	< 0.005	0.022	0.057	0.0052	0.035	0.098	0.03
SB-02-02-AUG1111	2	8/11/2011	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
SB-02-08-AUG1111	8	8/11/2011	0.061	0.15	0.11	< 0.025	**0.04**	0.089	0.025	0.026	0.04	< 0.025	< 0.025	0.5	< 0.025	0.68	0.89	0.029
SB-03-02-AUG1111	2	8/11/2011	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	0.014	0.013	< 0.01	0.012	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099
SB-03-08-AUG1111	8	8/11/2011	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.073	0.052	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.056	0.05
SB-04-02-AUG1111	2	8/11/2011	< 0.0099	< 0.0099	< 0.0099	< 0.0099	0.012	0.016	0.011	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099
SB-04-08-AUG1111	8	8/11/2011	< 0.005	0.064	0.21	**0.51**	**0.4**	**0.53**	0.21	0.16	0.49	**0.087**	1.1	< 0.05	0.18	< 0.05	0.74	1.1
SB-05-02-AUG1111	2	8/11/2011	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.059	< 0.05	< 0.05	0.081	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SB-05-08-AUG1111	8	8/11/2011	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.052	< 0.025	< 0.025	0.027	< 0.025	0.034	< 0.025	< 0.025	< 0.025	0.037	0.045
SB-06-02-AUG1111	2	8/11/2011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.029	< 0.01	< 0.01	0.032	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.022	0.021
SB-06-08-AUG1111	8	8/11/2011	< 0.0099	0.014	0.013	0.044	**0.043**	0.074	0.035	0.022	0.051	0.011	0.079	0.019	0.029	0.21	0.047	0.12
SB-07-02-AUG1111	2	8/11/2011	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	0.2	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	0.14	< 0.12
SB-07-08-AUG1111	8	8/11/2011	< 0.025	< 0.025	< 0.025	0.049	**0.047**	0.085	0.041	< 0.025	0.085	< 0.025	0.11	< 0.025	0.029	0.25	0.11	0.11
SB-12-02-AUG1111	2	8/11/2011	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	0.059	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049
SB-12-08-AUG1111	8	8/11/2011	< 0.05	< 0.05	< 0.05	0.066	0.08	0.099	0.062	< 0.05	0.065	< 0.05	0.12	< 0.05	< 0.05	< 0.05	0.093	0.16
SB-13-02-AUG1111	2	8/11/2011	0.44	< 0.099	0.27	**0.85**	**0.75**	**1.3**	0.3	**0.48**	0.97	**0.11**	2.2	0.2	0.28	< 0.099	1.7	2
SB-13-08-AUG1111	8	8/11/2011	< 0.005	0.01	0.0053	0.043	**0.061**	0.097	0.037	0.036	0.055	0.013	0.096	0.02	0.034	< 0.005	0.029	0.099
SB-13A-02-AUG1111	2	8/11/2011	0.55	< 0.049	0.17	**0.51**	**0.45**	**0.87**	0.16	0.26	0.62	**0.063**	1.1	0.28	0.14	< 0.049	0.97	1.2

ARCADIS

Figures



NOTES:

1. Base Map Source: USGS 7.5 Min. Topo. Quad., San Leandra, Calif.(1993)
2. Property Location is Approximate Only.

0 2000' 4000'

APPROXIMATE SCALE: 1"=2000'

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA

SITE LOCATION MAP

ARCADIS

FIGURE 1

0 200' 400'

GRAPHIC SCALE

SOURCE: AERIAL PHOTOGRAPHY PROVIDED BY GOOGLE EARTH PRO.

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA

FACILITY LAYOUT MAP

ARCADIS

FIGURE
2

CITY:TAMPA DIV/GROUP:ENV-141 DB:JAR LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Tampa-BVAC\TB0038398 Oakland\0006\00100\2nd SA GMR Sept 2011\B0038398B01.dwg LAYOUT: 2SAVED: 11/14/2011 11:24 AM ACADVER: 18.0S (LMS TECH) PAGESETUP: PDF-AP PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 11/14/2011 11:24 AM BY: RICHARDS, JIM
XREFS: IMAGES: PROJECTNAME: ---
AREA MAP.jpg
UPSOakland.jpg

LEGEND:

- MONITORING WELL LOCATION
- TEMPORARY VACUUM TEST WELL
- SOIL BORING LOCATION (2010)
- PROPERTY BOUNDARY
- E — UNDERGROUND ELECTRICAL LINE
- S — STORM WATER/SEWER LINE
- W — WATER/FIRE SERVICE/IRRIGATION
- UG — ELECTRIC/WATER LINE
- CATCH BASIN/STORM DRAIN
- LIGHT POST/ POWER POLE

0 50' 100'

GRAPHIC SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA

SITE MAP

ARCADIS

FIGURE 3

MONITORING WELL LOCATION

PROPERTY BOUNDARY

E — UNDERGROUND ELECTRICAL LINE

S — STORM WATER/SEWER LINE

W — WATER/FIRE SERVICE/IRRIGATION

UG — ELECTRIC/WATER LINE

CATCH BASIN/STORM DRAIN

LIGHT POST/ POWER POLE

(5.78) GROUNDWATER ELEVATION (FEET)

GROUNDWATER ELEVATION CONTOUR
CONTOUR INTERVAL = 1.0 FOOT

APPARENT DIRECTION OF
GROUNDWATER FLOW

0 50' 100'

GRAPHIC SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA

GROUNDWATER CONTOUR MAP

ARCADIS

FIGURE
4

MW-4	
DATE	9/1/2011
B	ND
T	ND
E	ND
X	ND
M	ND
TPHG	**430**
TPHD	**7,700**

MW-9	
DATE	9/1/2011
B	ND
T	0.55
E	ND
X	ND
M	ND
TPHG	ND
TPHD	**240**

MW-2	
DATE	9/1/2011
B	0.59
T	4.90
E	0.98
X	10.0
M	ND
TPHG	140
TPHD	**4,600**

MW-10	
DATE	9/1/2011
B	ND
T	0.55
E	ND
X	ND
M	ND
TPHG	ND
TPHD	**250**

MW-11	
DATE	9/1/2011
B	ND
T	0.55
E	ND
X	ND
M	ND
TPHG	ND
TPHD	**1,100**

MW-8	
DATE	9/1/2011
B	ND
T	ND
E	ND
X	ND
M	ND
TPHG	ND
TPHD	**200**

MW-3	
DATE	9/1/2011
B	ND
T	ND
E	1.70
X	2.1
M	ND
TPHG	**450**
TPHD	**24,000**

LEGEND:

- MONITORING WELL LOCATION
- SOIL BORING LOCATION (2010)
- PROPERTY BOUNDARY
- E — UNDERGROUND ELECTRICAL LINE
- S — STORM WATER/SEWER LINE
- W — WATER/FIRE SERVICE/IRRIGATION
- UG — ELECTRIC/WATER LINE
- CATCH BASIN/STORM DRAIN
- LIGHT POST/ POWER POLE

SAMPLE LOCATION	
DATE	SAMPLE DATE
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
M	METHYL TERT-BUTYL ETHER
TPHG	TPH GASOLINE
TPHD	TPH DIESEL

RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L).

0 50' 100'

GRAPHIC SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA

GROUNDWATER QUALITY MAP

ARCADIS

FIGURE
5

SB-07	
DEPTH	4.5–5'
ESL	83/100 [83/100]
TPHD	**340 [670]**

SB-06	
DEPTH	7–7.5'
ESL	83/100
TPHD	**990**

SB-02		
DEPTH	7–7.5'	9.5–10'
ESL	83/100	83/100
TPHD	**1,400**	4.2

SB-05		
DEPTH	4.5–5'	10–10.5'
ESL	83/100	83/100
TPHD	**5,000**	<0.99

SB-01		
DEPTH	4–4.5'	12–13'
ESL	83/100	83/100
TPHD	**5,000**	8.7

LEGEND:

- MONITORING WELL LOCATION
- SOIL BORING LOCATION (2010)
- PROPERTY BOUNDARY
- E — UNDERGROUND ELECTRICAL LINE
- S — STORM WATER/SEWER LINE
- W — WATER/FIRE SERVICE/IRRIGATION
- UG — ELECTRIC/WATER LINE
- CATCH BASIN/STORM DRAIN
- LIGHT POST/ POWER POLE

SAMPLE LOCATION	
DEPTH	SAMPLE DEPTH INTERVAL
ESL	ESL DRINKING/NON-DRINKING
TPHD	TPH-DRO EXCEEDING-ESL

TPH-DRO RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

NE = NO EXCEEDANCE

ESL PRESENTED AS DRINKING WATER/NON DRINKING WATER

340[370] = PRIMARY/DUPLICATE SAMPLE RESULTS

0 50' 100'

GRAPHIC SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
CORRECTIVE ACTION PLAN

TPH-DRO SOIL ESL EXCEEDANCE MAP

ARCADIS

FIGURE
6

LEGEND:

- MONITORING WELL LOCATION
- TEMPORARY VACUUM TEST WELL
- SOIL BORING LOCATION (2010)
- PROPERTY BOUNDARY
- E — UNDERGROUND ELECTRICAL LINE
- S — STORM WATER/SEWER LINE
- W — WATER/FIRE SERVICE/IRRIGATION
- UG — ELECTRIC/WATER LINE
- CATCH BASIN/STORM DRAIN
- LIGHT POST/ POWER POLE
- PHASE I INJECTION WELL
- PHASE II INJECTION WELL
- PHASE I MONITORING WELL
- PHASE II MONITORING WELL
- RADIUS OF INFLUENCE 12.5'

0 50' 100'

GRAPHIC SCALE

UPS-OAKLAND HUB
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA
CORRECTIVE ACTION PLAN

INJECTION PLAN

ARCADIS

FIGURE
7

ARCADIS

Appendix A

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

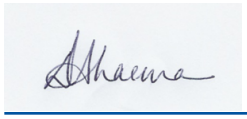
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-36911-1
Client Project/Site: UPS-Oakland

For:
ARCADIS U.S. Inc
1000 Cobb Place Blvd NW
Suite 500-A
Kennesaw, Georgia 30144

Attn: Ms. Jennifer LeBeau



Authorized for release by:
08/19/2011 02:14:03 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit (Dioxin)
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or method detection limit if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-36911-1

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-36911-1

Comments
No additional comments.

Receipt
Received Trip Blank sample not listed on COC. Sample logged and placed on hold.

All other samples were received in good condition within temperature requirements.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of target analytes: SB-02-02-AUG1111 (720-36911-7), SB-02-08-AUG1111 (720-36911-8), SB-04-02-AUG1111 (720-36911-1), SB-04-08-AUG1111 (720-36911-2), SB-05-02-AUG1111 (720-36911-9), SB-06-02-AUG1111 (720-36911-5), SB-06-08-AUG1111 (720-36911-6), SB-07-02-AUG1111 (720-36911-3), SB-07-08-AUG1111 (720-36911-4). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

Client Sample ID: SB-04-02-AUG1111 — Lab Sample ID: 720-36911-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	12		9.9		ug/Kg	2		8270C SIM	Total/NA
Benzo[b]fluoranthene	16		9.9		ug/Kg	2		8270C SIM	Total/NA
Benzo[g,h,i]perylene	11		9.9		ug/Kg	2		8270C SIM	Total/NA

Client Sample ID: SB-04-08-AUG1111 — Lab Sample ID: 720-36911-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	64		50		ug/Kg	10		8270C SIM	Total/NA
Anthracene	210		50		ug/Kg	10		8270C SIM	Total/NA
Benzo[a]anthracene	510		50		ug/Kg	10		8270C SIM	Total/NA
Benzo[a]pyrene	400		50		ug/Kg	10		8270C SIM	Total/NA
Benzo[b]fluoranthene	530		50		ug/Kg	10		8270C SIM	Total/NA
Benzo[g,h,i]perylene	210		50		ug/Kg	10		8270C SIM	Total/NA
Benzo[k]fluoranthene	160		50		ug/Kg	10		8270C SIM	Total/NA
Chrysene	490		50		ug/Kg	10		8270C SIM	Total/NA
Dibenz(a,h)anthracene	87		50		ug/Kg	10		8270C SIM	Total/NA
Fluoranthene	1100		50		ug/Kg	10		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	180		50		ug/Kg	10		8270C SIM	Total/NA
Phenanthrene	740		50		ug/Kg	10		8270C SIM	Total/NA
Pyrene	1100		50		ug/Kg	10		8270C SIM	Total/NA

Client Sample ID: SB-07-02-AUG1111 — Lab Sample ID: 720-36911-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	200		120		ug/Kg	5		8270C SIM	Total/NA
Chrysene	260		120		ug/Kg	5		8270C SIM	Total/NA
Phenanthrene	140		120		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-07-08-AUG1111 — Lab Sample ID: 720-36911-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	49		25		ug/Kg	5		8270C SIM	Total/NA
Benzo[a]pyrene	47		25		ug/Kg	5		8270C SIM	Total/NA
Benzo[b]fluoranthene	85		25		ug/Kg	5		8270C SIM	Total/NA
Benzo[g,h,i]perylene	41		25		ug/Kg	5		8270C SIM	Total/NA
Chrysene	85		25		ug/Kg	5		8270C SIM	Total/NA
Fluoranthene	110		25		ug/Kg	5		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	29		25		ug/Kg	5		8270C SIM	Total/NA
Naphthalene	250		25		ug/Kg	5		8270C SIM	Total/NA
Phenanthrene	110		25		ug/Kg	5		8270C SIM	Total/NA
Pyrene	110		25		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-06-02-AUG1111 — Lab Sample ID: 720-36911-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	29		10		ug/Kg	2		8270C SIM	Total/NA
Chrysene	32		10		ug/Kg	2		8270C SIM	Total/NA
Phenanthrene	22		10		ug/Kg	2		8270C SIM	Total/NA
Pyrene	21		10		ug/Kg	2		8270C SIM	Total/NA

Client Sample ID: SB-06-08-AUG1111 — Lab Sample ID: 720-36911-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	14		9.9		ug/Kg	2		8270C SIM	Total/NA

Client Sample ID: SB-06-08-AUG1111 (Continued) — Lab Sample ID: 720-36911-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	13		9.9		ug/Kg	2		8270C SIM	Total/NA
Benzo[a]anthracene	44		9.9		ug/Kg	2		8270C SIM	Total/NA
Benzo[a]pyrene	43		9.9		ug/Kg	2		8270C SIM	Total/NA
Benzo[b]fluoranthene	74		9.9		ug/Kg	2		8270C SIM	Total/NA
Benzo[g,h,i]perylene	35		9.9		ug/Kg	2		8270C SIM	Total/NA
Benzo[k]fluoranthene	22		9.9		ug/Kg	2		8270C SIM	Total/NA
Chrysene	51		9.9		ug/Kg	2		8270C SIM	Total/NA
Dibenz(a,h)anthracene	11		9.9		ug/Kg	2		8270C SIM	Total/NA
Fluoranthene	79		9.9		ug/Kg	2		8270C SIM	Total/NA
Fluorene	19		9.9		ug/Kg	2		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	29		9.9		ug/Kg	2		8270C SIM	Total/NA
Naphthalene	210		9.9		ug/Kg	2		8270C SIM	Total/NA
Phenanthrene	47		9.9		ug/Kg	2		8270C SIM	Total/NA
Pyrene	120		9.9		ug/Kg	2		8270C SIM	Total/NA

Client Sample ID: SB-02-02-AUG1111 — Lab Sample ID: 720-36911-7

No Detections

Client Sample ID: SB-02-08-AUG1111 — Lab Sample ID: 720-36911-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	61		25		ug/Kg	5		8270C SIM	Total/NA
Acenaphthylene	150		25		ug/Kg	5		8270C SIM	Total/NA
Anthracene	110		25		ug/Kg	5		8270C SIM	Total/NA
Benzo[a]pyrene	40		25		ug/Kg	5		8270C SIM	Total/NA
Benzo[b]fluoranthene	89		25		ug/Kg	5		8270C SIM	Total/NA
Benzo[g,h,i]perylene	25		25		ug/Kg	5		8270C SIM	Total/NA
Benzo[k]fluoranthene	26		25		ug/Kg	5		8270C SIM	Total/NA
Chrysene	40		25		ug/Kg	5		8270C SIM	Total/NA
Fluorene	500		25		ug/Kg	5		8270C SIM	Total/NA
Naphthalene	680		25		ug/Kg	5		8270C SIM	Total/NA
Phenanthrene	890		25		ug/Kg	5		8270C SIM	Total/NA
Pyrene	29		25		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-05-02-AUG1111 — Lab Sample ID: 720-36911-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	59		50		ug/Kg	5		8270C SIM	Total/NA
Chrysene	81		50		ug/Kg	5		8270C SIM	Total/NA

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-04-02-AUG1111
Date Collected: 08/11/11 10:50
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Acenaphthylene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Anthracene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Benzo[a]anthracene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Benzo[a]pyrene	**12**		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Benzo[b]fluoranthene	**16**		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Benzo[g,h,i]perylene	**11**		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Benzo[k]fluoranthene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Chrysene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Dibenz(a,h)anthracene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Fluoranthene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Fluorene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Indeno[1,2,3-cd]pyrene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Naphthalene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Phenanthrene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2
Pyrene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 17:42	2

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*33 - 120*	*08/16/11 09:57*	*08/16/11 17:42*	*2*
Terphenyl-d14	*94*		*35 - 146*	*08/16/11 09:57*	*08/16/11 17:42*	*2*

Client Sample ID: SB-04-08-AUG1111
Date Collected: 08/11/11 10:55
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Acenaphthylene	**64**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Anthracene	**210**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Benzo[a]anthracene	**510**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Benzo[a]pyrene	**400**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Benzo[b]fluoranthene	**530**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Benzo[g,h,i]perylene	**210**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Benzo[k]fluoranthene	**160**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Chrysene	**490**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Dibenz(a,h)anthracene	**87**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Fluoranthene	**1100**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Fluorene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Indeno[1,2,3-cd]pyrene	**180**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Naphthalene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Phenanthrene	**740**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10
Pyrene	**1100**		50		ug/Kg		08/16/11 09:57	08/16/11 18:52	10

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*79*		*33 - 120*	*08/16/11 09:57*	*08/16/11 18:52*	*10*
Terphenyl-d14	*91*		*35 - 146*	*08/16/11 09:57*	*08/16/11 18:52*	*10*

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-07-02-AUG1111
Date Collected: 08/11/11 11:40
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Acenaphthylene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Anthracene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Benzo[a]anthracene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Benzo[a]pyrene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Benzo[b]fluoranthene	**200**		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Benzo[g,h,i]perylene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Benzo[k]fluoranthene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Chrysene	**260**		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Dibenz(a,h)anthracene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Fluoranthene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Fluorene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Indeno[1,2,3-cd]pyrene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Naphthalene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Phenanthrene	**140**		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5
Pyrene	ND		120		ug/Kg		08/16/11 09:57	08/16/11 19:15	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*33 - 120*	*08/16/11 09:57*	*08/16/11 19:15*	*5*
Terphenyl-d14	*88*		*35 - 146*	*08/16/11 09:57*	*08/16/11 19:15*	*5*

Client Sample ID: SB-07-08-AUG1111
Date Collected: 08/11/11 11:45
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Acenaphthylene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Benzo[a]anthracene	**49**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Benzo[a]pyrene	**47**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Benzo[b]fluoranthene	**85**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Benzo[g,h,i]perylene	**41**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Benzo[k]fluoranthene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Chrysene	**85**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Fluoranthene	**110**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Fluorene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Indeno[1,2,3-cd]pyrene	**29**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Naphthalene	**250**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Phenanthrene	**110**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5
Pyrene	**110**		25		ug/Kg		08/16/11 09:57	08/16/11 19:38	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*33 - 120*	*08/16/11 09:57*	*08/16/11 19:38*	*5*
Terphenyl-d14	*98*		*35 - 146*	*08/16/11 09:57*	*08/16/11 19:38*	*5*

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-06-02-AUG1111
Date Collected: 08/11/11 12:20
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Acenaphthylene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Anthracene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Benzo[a]anthracene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Benzo[a]pyrene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Benzo[b]fluoranthene	**29**		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Benzo[g,h,i]perylene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Benzo[k]fluoranthene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Chrysene	**32**		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Dibenz(a,h)anthracene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Fluoranthene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Fluorene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Naphthalene	ND		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Phenanthrene	**22**		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2
Pyrene	**21**		10		ug/Kg		08/16/11 09:57	08/16/11 20:02	2

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*33 - 120*	*08/16/11 09:57*	*08/16/11 20:02*	*2*
Terphenyl-d14	*89*		*35 - 146*	*08/16/11 09:57*	*08/16/11 20:02*	*2*

Client Sample ID: SB-06-08-AUG1111
Date Collected: 08/11/11 12:25
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Acenaphthylene	**14**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Anthracene	**13**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Benzo[a]anthracene	**44**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Benzo[a]pyrene	**43**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Benzo[b]fluoranthene	**74**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Benzo[g,h,i]perylene	**35**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Benzo[k]fluoranthene	**22**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Chrysene	**51**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Dibenz(a,h)anthracene	**11**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Fluoranthene	**79**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Fluorene	**19**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Indeno[1,2,3-cd]pyrene	**29**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Naphthalene	**210**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Phenanthrene	**47**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2
Pyrene	**120**		9.9		ug/Kg		08/16/11 09:57	08/16/11 20:25	2

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*33 - 120*	*08/16/11 09:57*	*08/16/11 20:25*	*2*
Terphenyl-d14	*83*		*35 - 146*	*08/16/11 09:57*	*08/16/11 20:25*	*2*

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-02-02-AUG1111
Date Collected: 08/11/11 13:48
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Acenaphthylene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Anthracene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Benzo[a]anthracene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Benzo[a]pyrene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Benzo[b]fluoranthene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Benzo[g,h,i]perylene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Benzo[k]fluoranthene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Chrysene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Dibenz(a,h)anthracene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Fluoranthene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Fluorene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Indeno[1,2,3-cd]pyrene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Naphthalene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Phenanthrene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10
Pyrene	ND		100		ug/Kg		08/16/11 09:57	08/16/11 20:49	10

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*33 - 120*	*08/16/11 09:57*	*08/16/11 20:49*	*10*
Terphenyl-d14	*102*		*35 - 146*	*08/16/11 09:57*	*08/16/11 20:49*	*10*

Client Sample ID: SB-02-08-AUG1111
Date Collected: 08/11/11 13:55
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**61**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Acenaphthylene	**150**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Anthracene	**110**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Benzo[a]anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Benzo[a]pyrene	**40**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Benzo[b]fluoranthene	**89**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Benzo[g,h,i]perylene	**25**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Benzo[k]fluoranthene	**26**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Chrysene	**40**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Fluoranthene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Fluorene	**500**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Indeno[1,2,3-cd]pyrene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Naphthalene	**680**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Phenanthrene	**890**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5
Pyrene	**29**		25		ug/Kg		08/16/11 09:57	08/16/11 21:12	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*89*		*33 - 120*	*08/16/11 09:57*	*08/16/11 21:12*	*5*
Terphenyl-d14	*104*		*35 - 146*	*08/16/11 09:57*	*08/16/11 21:12*	*5*

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-05-02-AUG1111
Date Collected: 08/11/11 14:10
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36911-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Acenaphthylene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Anthracene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Benzo[a]anthracene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Benzo[a]pyrene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Benzo[b]fluoranthene	**59**		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Benzo[g,h,i]perylene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Benzo[k]fluoranthene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Chrysene	**81**		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Dibenz(a,h)anthracene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Fluoranthene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Fluorene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Indeno[1,2,3-cd]pyrene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Naphthalene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Phenanthrene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5
Pyrene	ND		50		ug/Kg		08/16/11 09:57	08/16/11 21:36	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*50*		*33 - 120*	*08/16/11 09:57*	*08/16/11 21:36*	*5*
Terphenyl-d14	*59*		*35 - 146*	*08/16/11 09:57*	*08/16/11 21:36*	*5*

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-97349/1-A
Matrix: Solid
Analysis Batch: 97365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 97349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Acenaphthylene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Anthracene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[a]anthracene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[a]pyrene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Chrysene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Fluoranthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Fluorene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Naphthalene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Phenanthrene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Pyrene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1

Surrogate	*MB % Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*33 - 120*	*08/16/11 09:57*	*08/16/11 17:18*	*1*
Terphenyl-d14	*104*		*35 - 146*	*08/16/11 09:57*	*08/16/11 17:18*	*1*

Lab Sample ID: LCS 720-97349/2-A
Matrix: Solid
Analysis Batch: 97365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 97349

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Acenaphthene	333	261		ug/Kg		78	49 - 120
Acenaphthylene	333	261		ug/Kg		78	52 - 120
Anthracene	333	273		ug/Kg		82	52 - 120
Benzo[a]anthracene	333	254		ug/Kg		76	52 - 120
Benzo[a]pyrene	333	281		ug/Kg		85	54 - 120
Benzo[b]fluoranthene	333	294		ug/Kg		88	51 - 120
Benzo[g,h,i]perylene	333	283		ug/Kg		85	48 - 120
Benzo[k]fluoranthene	333	241		ug/Kg		73	56 - 120
Chrysene	333	180		ug/Kg		54	40 - 120
Dibenz(a,h)anthracene	333	311		ug/Kg		94	50 - 120
Fluoranthene	333	274		ug/Kg		82	57 - 120
Fluorene	333	256		ug/Kg		77	52 - 120
Indeno[1,2,3-cd]pyrene	333	300		ug/Kg		90	48 - 120
Naphthalene	333	247		ug/Kg		74	46 - 120
Phenanthrene	333	285		ug/Kg		86	48 - 120
Pyrene	333	282		ug/Kg		85	53 - 120

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*70*		*33 - 120*
Terphenyl-d14	*89*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-97349/3-A
Matrix: Solid
Analysis Batch: 97365

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 97349

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Acenaphthene			332	266		ug/Kg		80	49 - 120	2	20
Acenaphthylene			332	267		ug/Kg		80	52 - 120	2	20
Anthracene			332	288		ug/Kg		87	52 - 120	6	20
Benzo[a]anthracene			332	264		ug/Kg		79	52 - 120	4	20
Benzo[a]pyrene			332	296		ug/Kg		89	54 - 120	5	20
Benzo[b]fluoranthene			332	293		ug/Kg		88	51 - 120	0	20
Benzo[g,h,i]perylene			332	295		ug/Kg		89	48 - 120	4	20
Benzo[k]fluoranthene			332	271		ug/Kg		82	56 - 120	12	20
Chrysene			332	183		ug/Kg		55	40 - 120	2	20
Dibenz(a,h)anthracene			332	325		ug/Kg		98	50 - 120	4	20
Fluoranthene			332	286		ug/Kg		86	57 - 120	4	20
Fluorene			332	259		ug/Kg		78	52 - 120	1	20
Indeno[1,2,3-cd]pyrene			332	313		ug/Kg		94	48 - 120	4	20
Naphthalene			332	255		ug/Kg		77	46 - 120	3	20
Phenanthrene			332	288		ug/Kg		87	48 - 120	1	20
Pyrene			332	286		ug/Kg		86	53 - 120	1	20

Surrogate	*LCSD % Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*75*		*33 - 120*
Terphenyl-d14	*91*		*35 - 146*

Lab Sample ID: 720-36911-1 MS
Matrix: Solid
Analysis Batch: 97365

Client Sample ID: SB-04-02-AUG1111
Prep Type: Total/NA
Prep Batch: 97349

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits		
Acenaphthene	ND		333	263		ug/Kg		79	33 - 120		
Acenaphthylene	ND		333	265		ug/Kg		80	28 - 120		
Anthracene	ND		333	285		ug/Kg		86	36 - 120		
Benzo[a]anthracene	ND		333	275		ug/Kg		81	29 - 120		
Benzo[a]pyrene	12		333	295		ug/Kg		85	24 - 120		
Benzo[b]fluoranthene	16		333	293		ug/Kg		83	17 - 132		
Benzo[g,h,i]perylene	11		333	297		ug/Kg		86	21 - 120		
Benzo[k]fluoranthene	ND		333	266		ug/Kg		78	35 - 120		
Chrysene	ND		333	195		ug/Kg		57	29 - 120		
Dibenz(a,h)anthracene	ND		333	307		ug/Kg		91	36 - 120		
Fluoranthene	ND		333	282		ug/Kg		83	24 - 120		
Fluorene	ND		333	262		ug/Kg		79	35 - 120		
Indeno[1,2,3-cd]pyrene	ND		333	297		ug/Kg		87	20 - 126		
Naphthalene	ND		333	236		ug/Kg		71	32 - 120		
Phenanthrene	ND		333	291		ug/Kg		86	28 - 120		
Pyrene	ND		333	317		ug/Kg		93	24 - 123		

Surrogate	*MS % Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl	*71*		*33 - 120*
Terphenyl-d14	*95*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: 720-36911-1 MSD
Matrix: Solid
Analysis Batch: 97365

Client Sample ID: SB-04-02-AUG1111
Prep Type: Total/NA
Prep Batch: 97349

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		331	262		ug/Kg		79	33 - 120	1	20
Acenaphthylene	ND		331	262		ug/Kg		79	28 - 120	1	20
Anthracene	ND		331	290		ug/Kg		88	36 - 120	2	20
Benzo[a]anthracene	ND		331	277		ug/Kg		82	29 - 120	1	20
Benzo[a]pyrene	12		331	311		ug/Kg		90	24 - 120	5	20
Benzo[b]fluoranthene	16		331	309		ug/Kg		88	17 - 132	5	20
Benzo[g,h,i]perylene	11		331	319		ug/Kg		93	21 - 120	7	20
Benzo[k]fluoranthene	ND		331	281		ug/Kg		83	35 - 120	5	20
Chrysene	ND		331	197		ug/Kg		57	29 - 120	1	20
Dibenz(a,h)anthracene	ND		331	327		ug/Kg		98	36 - 120	6	20
Fluoranthene	ND		331	299		ug/Kg		89	24 - 120	6	20
Fluorene	ND		331	260		ug/Kg		79	35 - 120	1	20
Indeno[1,2,3-cd]pyrene	ND		331	319		ug/Kg		94	20 - 126	7	20
Naphthalene	ND		331	236		ug/Kg		71	32 - 120	0	20
Phenanthrene	ND		331	298		ug/Kg		89	28 - 120	2	20
Pyrene	ND		331	320		ug/Kg		94	24 - 123	1	20

Surrogate	*MSD % Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl	*72*		*33 - 120*
Terphenyl-d14	*96*		*35 - 146*

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

GC/MS Semi VOA

Prep Batch: 97349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-97349/1-A	Method Blank	Total/NA	Solid	3546	
LCS 720-97349/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-97349/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
720-36911-1 MS	SB-04-02-AUG1111	Total/NA	Solid	3546	
720-36911-1 MSD	SB-04-02-AUG1111	Total/NA	Solid	3546	
720-36911-1	SB-04-02-AUG1111	Total/NA	Solid	3546	
720-36911-2	SB-04-08-AUG1111	Total/NA	Solid	3546	
720-36911-3	SB-07-02-AUG1111	Total/NA	Solid	3546	
720-36911-4	SB-07-08-AUG1111	Total/NA	Solid	3546	
720-36911-5	SB-06-02-AUG1111	Total/NA	Solid	3546	
720-36911-6	SB-06-08-AUG1111	Total/NA	Solid	3546	
720-36911-7	SB-02-02-AUG1111	Total/NA	Solid	3546	
720-36911-8	SB-02-08-AUG1111	Total/NA	Solid	3546	
720-36911-9	SB-05-02-AUG1111	Total/NA	Solid	3546	

Analysis Batch: 97365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-97349/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	97349
LCSD 720-97349/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	97349
MB 720-97349/1-A	Method Blank	Total/NA	Solid	8270C SIM	97349
720-36911-1	SB-04-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-1 MS	SB-04-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-1 MSD	SB-04-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-2	SB-04-08-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-3	SB-07-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-4	SB-07-08-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-5	SB-06-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-6	SB-06-08-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-7	SB-02-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-8	SB-02-08-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36911-9	SB-05-02-AUG1111	Total/NA	Solid	8270C SIM	97349

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

Client Sample ID: SB-04-02-AUG1111 — Lab Sample ID: 720-36911-1

Date Collected: 08/11/11 10:50 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		2	97365	08/16/11 17:42	ML	TAL SF

Client Sample ID: SB-04-08-AUG1111 — Lab Sample ID: 720-36911-2

Date Collected: 08/11/11 10:55 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		10	97365	08/16/11 18:52	ML	TAL SF

Client Sample ID: SB-07-02-AUG1111 — Lab Sample ID: 720-36911-3

Date Collected: 08/11/11 11:40 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97365	08/16/11 19:15	ML	TAL SF

Client Sample ID: SB-07-08-AUG1111 — Lab Sample ID: 720-36911-4

Date Collected: 08/11/11 11:45 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97365	08/16/11 19:38	ML	TAL SF

Client Sample ID: SB-06-02-AUG1111 — Lab Sample ID: 720-36911-5

Date Collected: 08/11/11 12:20 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		2	97365	08/16/11 20:02	ML	TAL SF

Client Sample ID: SB-06-08-AUG1111 — Lab Sample ID: 720-36911-6

Date Collected: 08/11/11 12:25 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		2	97365	08/16/11 20:25	ML	TAL SF

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

Client Sample ID: SB-02-02-AUG1111

Lab Sample ID: 720-36911-7

Date Collected: 08/11/11 13:48
Matrix: Solid
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		10	97365	08/16/11 20:49	ML	TAL SF

Client Sample ID: SB-02-08-AUG1111

Lab Sample ID: 720-36911-8

Date Collected: 08/11/11 13:55
Matrix: Solid
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97365	08/16/11 21:12	ML	TAL SF

Client Sample ID: SB-05-02-AUG1111

Lab Sample ID: 720-36911-9

Date Collected: 08/11/11 14:10
Matrix: Solid
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97365	08/16/11 21:36	ML	TAL SF

Laboratory References:
TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36911-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-36911-1	SB-04-02-AUG1111	Solid	08/11/11 10:50	08/12/11 13:00
720-36911-2	SB-04-08-AUG1111	Solid	08/11/11 10:55	08/12/11 13:00
720-36911-3	SB-07-02-AUG1111	Solid	08/11/11 11:40	08/12/11 13:00
720-36911-4	SB-07-08-AUG1111	Solid	08/11/11 11:45	08/12/11 13:00
720-36911-5	SB-06-02-AUG1111	Solid	08/11/11 12:20	08/12/11 13:00
720-36911-6	SB-06-08-AUG1111	Solid	08/11/11 12:25	08/12/11 13:00
720-36911-7	SB-02-02-AUG1111	Solid	08/11/11 13:48	08/12/11 13:00
720-36911-8	SB-02-08-AUG1111	Solid	08/11/11 13:55	08/12/11 13:00
720-36911-9	SB-05-02-AUG1111	Solid	08/11/11 14:10	08/12/11 13:00

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton, CA 94566-7756
Phone: (925) 484-1919 • Fax: (925) 600-3002

720-36911

Reference #: 133073

Date 8/11/11 Page 1 of 1

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Page 21 of 22

Report To

Attn: Jennifer Halcomb-LeBeau
Company: ARCADIS Kennesaw, GA 30144
Address: 1000 Cobb Place Blvd, Bldg 500-A
Phone: 770-428-9909 Email: jennifer.lebeau@arcadis-us.com
Bill To: ARCADIS PROJ# below
Sampled By: Kathryn Firich
Attn: Jennifer LeBeau
Phone: 703.303.7158

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.	TPH EPA – ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	(HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☒ EPA 8270 ☐ 625 PAH	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Low Level Metals by EPA 200.8/6020 (ICP-MS): ___	☐ W.E.T (STLC) ☐ TCLP	☐ Hexavalent Chromium ☐ pH (24h hold time for H_2O)	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	Number of Containers
~~SB-01-02-Aug111~~	8/11/11		S	N/A						X											
SB-04-02-Aug111	8/11/11	1050	S	None						X											
SB-04-08-Aug111	8/11/11	1058	S	None						X											
SB-07-02-Aug111	8/11/11	1140	S	None						X											
SB-07-08 Aug 111	8/11/11	1145	S	None						X											
SB-06-02-Aug111	8/11/11	1220	S	None						X											
SB-06-08-Aug 111	8/11/11	1225	S	None						X											
SB-02-02-Aug111	8/11/11	1348	S	None						X											
SB-02-08-Aug111	8/11/11	1355	S	None						X											
SB-05-02-Aug111	8/11/11	1410	S	None						X											

Project Info

Project Name: UPS-Oakland
Project#: B0038398.0010
PO#:
Credit Card#:

Sample Receipt

of Containers: 9
Head Space: N/A
Temp: Ice
Conforms to record:

TAT: 5 Day | 3 Day | 2 Day | 1 Day | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EOF

Special Instructions / Comments: ☐ Global ID ___

Temp - 4.0 °C

See Terms and Conditions on reverse.
*TestAmerica SF reports 8015M from C_{10}-C_{24} (industry norm). Default for 8015B is C_{10}-C_{28}

1) Relinquished by: Signature 1130 Time; Kathryn Firich 8/12/11 Printed Name Date; ARCADIS Company

2) Relinquished by: Signature 13:00 Time; Gerald Naylor 8-12-11 Printed Name Date; T.A. Company

3) Relinquished by: Signature Time; Printed Name Date; Company

1) Received by: Signature 11:30 Time; Gerald Naylor 8-12-11 Printed Name Date; T.A. Company

2) Received by: Signature 1300 Time; Printed Name 8/12/11 Date; DOST Company

3) Received by: Signature Time; Printed Name Date; Company

Rev 09/09

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 720-36911-1

Login Number: 36911

List Source: TestAmerica San Francisco

List Number: 1

Creator: Apostol, Anita

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

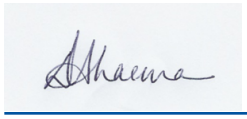
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-36912-1
Client Project/Site: UPS-Oakland

For:
ARCADIS U.S. Inc
1000 Cobb Place Blvd NW
Suite 500-A
Kennesaw, Georgia 30144

Attn: Ms. Jennifer LeBeau



Authorized for release by:
08/19/2011 02:26:14 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

Table of Contents

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit (Dioxin)
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or method detection limit if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Job ID: 720-36912-1

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-36912-1

Comments
No additional comments.

Receipt
Received Trip Blank sample not listed on COC. Sample logged and placed on hold.

All other samples were received in good condition within temperature requirements.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SB-01-02-AUG1111 (720-36912-5), SB-01-08--AUG1111 (720-36912-7), SB-05-08-AUG1111 (720-36912-1), SB-13-02-AUG1111 (720-36912-2), SB-13A-02-AUG1111 (720-36912-4), SB-03-02-AUG1111 (720-36912-6), SB-03-08-AUG1111 (720-36912-9), SB-12-02-AUG1111 (720-36912-10), SB-12-08-AUG1111 (720-36912-11). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Client Sample ID: SB-05-08-AUG1111 — Lab Sample ID: 720-36912-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	52		25		ug/Kg	5		8270C SIM	Total/NA
Chrysene	27		25		ug/Kg	5		8270C SIM	Total/NA
Fluoranthene	34		25		ug/Kg	5		8270C SIM	Total/NA
Phenanthrene	37		25		ug/Kg	5		8270C SIM	Total/NA
Pyrene	45		25		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-13-02-AUG1111 — Lab Sample ID: 720-36912-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	440		99		ug/Kg	10		8270C SIM	Total/NA
Anthracene	270		99		ug/Kg	10		8270C SIM	Total/NA
Benzo[a]anthracene	850		99		ug/Kg	10		8270C SIM	Total/NA
Benzo[a]pyrene	750		99		ug/Kg	10		8270C SIM	Total/NA
Benzo[b]fluoranthene	1300		99		ug/Kg	10		8270C SIM	Total/NA
Benzo[g,h,i]perylene	300		99		ug/Kg	10		8270C SIM	Total/NA
Benzo[k]fluoranthene	480		99		ug/Kg	10		8270C SIM	Total/NA
Chrysene	970		99		ug/Kg	10		8270C SIM	Total/NA
Dibenz(a,h)anthracene	110		99		ug/Kg	10		8270C SIM	Total/NA
Fluoranthene	2200		99		ug/Kg	10		8270C SIM	Total/NA
Fluorene	200		99		ug/Kg	10		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	280		99		ug/Kg	10		8270C SIM	Total/NA
Phenanthrene	1700		99		ug/Kg	10		8270C SIM	Total/NA
Pyrene	2000		99		ug/Kg	10		8270C SIM	Total/NA

Client Sample ID: SB-13-08-AUG1111 — Lab Sample ID: 720-36912-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	10		5.0		ug/Kg	1		8270C SIM	Total/NA
Anthracene	5.3		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	43		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	61		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	97		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	37		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	36		5.0		ug/Kg	1		8270C SIM	Total/NA
Chrysene	55		5.0		ug/Kg	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	13		5.0		ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	96		5.0		ug/Kg	1		8270C SIM	Total/NA
Fluorene	20		5.0		ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	34		5.0		ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	29		5.0		ug/Kg	1		8270C SIM	Total/NA
Pyrene	99		5.0		ug/Kg	1		8270C SIM	Total/NA

Client Sample ID: SB-13A-02-AUG1111 — Lab Sample ID: 720-36912-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	550		49		ug/Kg	5		8270C SIM	Total/NA
Anthracene	170		49		ug/Kg	5		8270C SIM	Total/NA
Benzo[a]anthracene	510		49		ug/Kg	5		8270C SIM	Total/NA
Benzo[a]pyrene	450		49		ug/Kg	5		8270C SIM	Total/NA
Benzo[b]fluoranthene	870		49		ug/Kg	5		8270C SIM	Total/NA
Benzo[g,h,i]perylene	160		49		ug/Kg	5		8270C SIM	Total/NA
Benzo[k]fluoranthene	260		49		ug/Kg	5		8270C SIM	Total/NA
Chrysene	620		49		ug/Kg	5		8270C SIM	Total/NA
Dibenz(a,h)anthracene	63		49		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-13A-02-AUG1111 (Continued) — Lab Sample ID: 720-36912-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	1100		49		ug/Kg	5		8270C SIM	Total/NA
Fluorene	280		49		ug/Kg	5		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	140		49		ug/Kg	5		8270C SIM	Total/NA
Phenanthrene	970		49		ug/Kg	5		8270C SIM	Total/NA
Pyrene	1200		49		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-01-02-AUG1111 — Lab Sample ID: 720-36912-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	32		25		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-03-02-AUG1111 — Lab Sample ID: 720-36912-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	14		9.9		ug/Kg	2		8270C SIM	Total/NA
Benzo[g,h,i]perylene	13		9.9		ug/Kg	2		8270C SIM	Total/NA
Chrysene	12		9.9		ug/Kg	2		8270C SIM	Total/NA

Client Sample ID: SB-01-08--AUG1111 — Lab Sample ID: 720-36912-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	23		10		ug/Kg	2		8270C SIM	Total/NA
Acenaphthylene	47		10		ug/Kg	2		8270C SIM	Total/NA
Benzo[b]fluoranthene	15		10		ug/Kg	2		8270C SIM	Total/NA
Fluoranthene	15		10		ug/Kg	2		8270C SIM	Total/NA
Fluorene	160		10		ug/Kg	2		8270C SIM	Total/NA
Naphthalene	12		10		ug/Kg	2		8270C SIM	Total/NA
Phenanthrene	240		10		ug/Kg	2		8270C SIM	Total/NA
Pyrene	19		10		ug/Kg	2		8270C SIM	Total/NA

Client Sample ID: SB-01-08-DUP-AUG1111 — Lab Sample ID: 720-36912-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	20		5.0		ug/Kg	1		8270C SIM	Total/NA
Acenaphthylene	16		5.0		ug/Kg	1		8270C SIM	Total/NA
Anthracene	14		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[a]anthracene	11		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[a]pyrene	11		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	26		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	6.7		5.0		ug/Kg	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	7.8		5.0		ug/Kg	1		8270C SIM	Total/NA
Chrysene	16		5.0		ug/Kg	1		8270C SIM	Total/NA
Fluoranthene	22		5.0		ug/Kg	1		8270C SIM	Total/NA
Fluorene	57		5.0		ug/Kg	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	5.2		5.0		ug/Kg	1		8270C SIM	Total/NA
Naphthalene	35		5.0		ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	98		5.0		ug/Kg	1		8270C SIM	Total/NA
Pyrene	30		5.0		ug/Kg	1		8270C SIM	Total/NA

Client Sample ID: SB-03-08-AUG1111 — Lab Sample ID: 720-36912-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	73		50		ug/Kg	5		8270C SIM	Total/NA
Benzo[g,h,i]perylene	52		50		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-03-08-AUG1111 (Continued) — Lab Sample ID: 720-36912-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	56		50		ug/Kg	5		8270C SIM	Total/NA
Pyrene	50		50		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-12-02-AUG1111 — Lab Sample ID: 720-36912-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	59		49		ug/Kg	5		8270C SIM	Total/NA

Client Sample ID: SB-12-08-AUG1111 — Lab Sample ID: 720-36912-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	66		50		ug/Kg	5		8270C SIM	Total/NA
Benzo[a]pyrene	80		50		ug/Kg	5		8270C SIM	Total/NA
Benzo[b]fluoranthene	99		50		ug/Kg	5		8270C SIM	Total/NA
Benzo[g,h,i]perylene	62		50		ug/Kg	5		8270C SIM	Total/NA
Chrysene	65		50		ug/Kg	5		8270C SIM	Total/NA
Fluoranthene	120		50		ug/Kg	5		8270C SIM	Total/NA
Phenanthrene	93		50		ug/Kg	5		8270C SIM	Total/NA
Pyrene	160		50		ug/Kg	5		8270C SIM	Total/NA

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-05-08-AUG1111
Date Collected: 08/11/11 15:00
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Acenaphthylene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Benzo[a]anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Benzo[a]pyrene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Benzo[b]fluoranthene	**52**		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Benzo[g,h,i]perylene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Benzo[k]fluoranthene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Chrysene	**27**		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Fluoranthene	**34**		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Fluorene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Indeno[1,2,3-cd]pyrene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Naphthalene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Phenanthrene	**37**		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5
Pyrene	**45**		25		ug/Kg		08/16/11 09:57	08/16/11 21:59	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*33 - 120*	*08/16/11 09:57*	*08/16/11 21:59*	*5*
Terphenyl-d14	*95*		*35 - 146*	*08/16/11 09:57*	*08/16/11 21:59*	*5*

Client Sample ID: SB-13-02-AUG1111
Date Collected: 08/11/11 15:50
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**440**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Acenaphthylene	ND		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Anthracene	**270**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Benzo[a]anthracene	**850**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Benzo[a]pyrene	**750**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Benzo[b]fluoranthene	**1300**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Benzo[g,h,i]perylene	**300**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Benzo[k]fluoranthene	**480**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Chrysene	**970**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Dibenz(a,h)anthracene	**110**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Fluoranthene	**2200**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Fluorene	**200**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Indeno[1,2,3-cd]pyrene	**280**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Naphthalene	ND		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Phenanthrene	**1700**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10
Pyrene	**2000**		99		ug/Kg		08/16/11 09:57	08/16/11 22:23	10

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*33 - 120*	*08/16/11 09:57*	*08/16/11 22:23*	*10*
Terphenyl-d14	*88*		*35 - 146*	*08/16/11 09:57*	*08/16/11 22:23*	*10*

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-13-08-AUG1111
Date Collected: 08/11/11 16:10
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Acenaphthylene	**10**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Anthracene	**5.3**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Benzo[a]anthracene	**43**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Benzo[a]pyrene	**61**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Benzo[b]fluoranthene	**97**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Benzo[g,h,i]perylene	**37**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Benzo[k]fluoranthene	**36**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Chrysene	**55**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Dibenz(a,h)anthracene	**13**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Fluoranthene	**96**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Fluorene	**20**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Indeno[1,2,3-cd]pyrene	**34**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Naphthalene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Phenanthrene	**29**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1
Pyrene	**99**		5.0		ug/Kg		08/16/11 09:57	08/16/11 22:46	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*79*		*33 - 120*	*08/16/11 09:57*	*08/16/11 22:46*	*1*
Terphenyl-d14	*117*		*35 - 146*	*08/16/11 09:57*	*08/16/11 22:46*	*1*

Client Sample ID: SB-13A-02-AUG1111
Date Collected: 08/11/11 16:20
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**550**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Acenaphthylene	ND		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Anthracene	**170**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Benzo[a]anthracene	**510**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Benzo[a]pyrene	**450**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Benzo[b]fluoranthene	**870**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Benzo[g,h,i]perylene	**160**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Benzo[k]fluoranthene	**260**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Chrysene	**620**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Dibenz(a,h)anthracene	**63**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Fluoranthene	**1100**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Fluorene	**280**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Indeno[1,2,3-cd]pyrene	**140**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Naphthalene	ND		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Phenanthrene	**970**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5
Pyrene	**1200**		49		ug/Kg		08/16/11 09:57	08/16/11 23:09	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*33 - 120*	*08/16/11 09:57*	*08/16/11 23:09*	*5*
Terphenyl-d14	*89*		*35 - 146*	*08/16/11 09:57*	*08/16/11 23:09*	*5*

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-01-02-AUG1111
Date Collected: 08/11/11 16:55
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Acenaphthylene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Benzo[a]anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Benzo[a]pyrene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Benzo[b]fluoranthene	**32**		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Benzo[g,h,i]perylene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Benzo[k]fluoranthene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Chrysene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Fluoranthene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Fluorene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Indeno[1,2,3-cd]pyrene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Naphthalene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Phenanthrene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5
Pyrene	ND		25		ug/Kg		08/16/11 09:57	08/16/11 23:33	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*33 - 120*	*08/16/11 09:57*	*08/16/11 23:33*	*5*
Terphenyl-d14	*100*		*35 - 146*	*08/16/11 09:57*	*08/16/11 23:33*	*5*

Client Sample ID: SB-03-02-AUG1111
Date Collected: 08/11/11 17:25
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Acenaphthylene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Anthracene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Benzo[a]anthracene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Benzo[a]pyrene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Benzo[b]fluoranthene	**14**		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Benzo[g,h,i]perylene	**13**		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Benzo[k]fluoranthene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Chrysene	**12**		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Dibenz(a,h)anthracene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Fluoranthene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Fluorene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Indeno[1,2,3-cd]pyrene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Naphthalene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Phenanthrene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2
Pyrene	ND		9.9		ug/Kg		08/16/11 09:57	08/17/11 21:52	2

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*33 - 120*	*08/16/11 09:57*	*08/17/11 21:52*	*2*
Terphenyl-d14	*86*		*35 - 146*	*08/16/11 09:57*	*08/17/11 21:52*	*2*

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-01-08--AUG1111
Date Collected: 08/11/11 17:20
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**23**		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Acenaphthylene	**47**		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Anthracene	ND		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Benzo[a]anthracene	ND		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Benzo[a]pyrene	ND		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Benzo[b]fluoranthene	**15**		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Benzo[g,h,i]perylene	ND		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Benzo[k]fluoranthene	ND		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Chrysene	ND		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Dibenz(a,h)anthracene	ND		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Fluoranthene	**15**		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Fluorene	**160**		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Indeno[1,2,3-cd]pyrene	ND		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Naphthalene	**12**		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Phenanthrene	**240**		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2
Pyrene	**19**		10		ug/Kg		08/16/11 09:57	08/17/11 00:20	2

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*33 - 120*	*08/16/11 09:57*	*08/17/11 00:20*	*2*
Terphenyl-d14	*106*		*35 - 146*	*08/16/11 09:57*	*08/17/11 00:20*	*2*

Client Sample ID: SB-01-08-DUP-AUG1111
Date Collected: 08/11/11 17:20
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**20**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Acenaphthylene	**16**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Anthracene	**14**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Benzo[a]anthracene	**11**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Benzo[a]pyrene	**11**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Benzo[b]fluoranthene	**26**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Benzo[g,h,i]perylene	**6.7**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Benzo[k]fluoranthene	**7.8**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Chrysene	**16**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Fluoranthene	**22**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Fluorene	**57**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Indeno[1,2,3-cd]pyrene	**5.2**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Naphthalene	**35**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Phenanthrene	**98**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1
Pyrene	**30**		5.0		ug/Kg		08/16/11 09:57	08/17/11 00:43	1

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*33 - 120*	*08/16/11 09:57*	*08/17/11 00:43*	*1*
Terphenyl-d14	*90*		*35 - 146*	*08/16/11 09:57*	*08/17/11 00:43*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-03-08-AUG1111
Date Collected: 08/11/11 17:30
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Acenaphthylene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Anthracene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Benzo[a]anthracene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Benzo[a]pyrene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Benzo[b]fluoranthene	**73**		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Benzo[g,h,i]perylene	**52**		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Benzo[k]fluoranthene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Chrysene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Dibenz(a,h)anthracene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Fluoranthene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Fluorene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Indeno[1,2,3-cd]pyrene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Naphthalene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Phenanthrene	**56**		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5
Pyrene	**50**		50		ug/Kg		08/16/11 09:57	08/17/11 22:15	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*33 - 120*	*08/16/11 09:57*	*08/17/11 22:15*	*5*
Terphenyl-d14	*80*		*35 - 146*	*08/16/11 09:57*	*08/17/11 22:15*	*5*

Client Sample ID: SB-12-02-AUG1111
Date Collected: 08/11/11 17:50
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Acenaphthylene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Anthracene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Benzo[a]anthracene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Benzo[a]pyrene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Benzo[b]fluoranthene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Benzo[g,h,i]perylene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Benzo[k]fluoranthene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Chrysene	**59**		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Dibenz(a,h)anthracene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Fluoranthene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Fluorene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Indeno[1,2,3-cd]pyrene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Naphthalene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Phenanthrene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5
Pyrene	ND		49		ug/Kg		08/16/11 09:57	08/17/11 22:38	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*33 - 120*	*08/16/11 09:57*	*08/17/11 22:38*	*5*
Terphenyl-d14	*83*		*35 - 146*	*08/16/11 09:57*	*08/17/11 22:38*	*5*

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Method: 8270C SIM - PAHs by GCMS (SIM)

Client Sample ID: SB-12-08-AUG1111
Date Collected: 08/11/11 18:10
Date Received: 08/12/11 13:00

Lab Sample ID: 720-36912-11
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Acenaphthylene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Anthracene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Benzo[a]anthracene	**66**		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Benzo[a]pyrene	**80**		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Benzo[b]fluoranthene	**99**		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Benzo[g,h,i]perylene	**62**		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Benzo[k]fluoranthene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Chrysene	**65**		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Dibenz(a,h)anthracene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Fluoranthene	**120**		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Fluorene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Indeno[1,2,3-cd]pyrene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Naphthalene	ND		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Phenanthrene	**93**		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5
Pyrene	**160**		50		ug/Kg		08/16/11 09:57	08/17/11 23:01	5

Surrogate	*% Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*66*		*33 - 120*	*08/16/11 09:57*	*08/17/11 23:01*	*5*
Terphenyl-d14	*83*		*35 - 146*	*08/16/11 09:57*	*08/17/11 23:01*	*5*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-97349/1-A
Matrix: Solid
Analysis Batch: 97365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 97349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Acenaphthylene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Anthracene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[a]anthracene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[a]pyrene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Chrysene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Fluoranthene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Fluorene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Naphthalene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Phenanthrene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1
Pyrene	ND		5.0		ug/Kg		08/16/11 09:57	08/16/11 17:18	1

Surrogate	*MB % Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*33 - 120*	*08/16/11 09:57*	*08/16/11 17:18*	*1*
Terphenyl-d14	*104*		*35 - 146*	*08/16/11 09:57*	*08/16/11 17:18*	*1*

Lab Sample ID: LCS 720-97349/2-A
Matrix: Solid
Analysis Batch: 97365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 97349

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Acenaphthene	333	261		ug/Kg		78	49 - 120
Acenaphthylene	333	261		ug/Kg		78	52 - 120
Anthracene	333	273		ug/Kg		82	52 - 120
Benzo[a]anthracene	333	254		ug/Kg		76	52 - 120
Benzo[a]pyrene	333	281		ug/Kg		85	54 - 120
Benzo[b]fluoranthene	333	294		ug/Kg		88	51 - 120
Benzo[g,h,i]perylene	333	283		ug/Kg		85	48 - 120
Benzo[k]fluoranthene	333	241		ug/Kg		73	56 - 120
Chrysene	333	180		ug/Kg		54	40 - 120
Dibenz(a,h)anthracene	333	311		ug/Kg		94	50 - 120
Fluoranthene	333	274		ug/Kg		82	57 - 120
Fluorene	333	256		ug/Kg		77	52 - 120
Indeno[1,2,3-cd]pyrene	333	300		ug/Kg		90	48 - 120
Naphthalene	333	247		ug/Kg		74	46 - 120
Phenanthrene	333	285		ug/Kg		86	48 - 120
Pyrene	333	282		ug/Kg		85	53 - 120

Surrogate	*LCS % Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*70*		*33 - 120*
Terphenyl-d14	*89*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-97349/3-A
Matrix: Solid
Analysis Batch: 97365

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 97349

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Acenaphthene			332	266		ug/Kg		80	49 - 120	2	20
Acenaphthylene			332	267		ug/Kg		80	52 - 120	2	20
Anthracene			332	288		ug/Kg		87	52 - 120	6	20
Benzo[a]anthracene			332	264		ug/Kg		79	52 - 120	4	20
Benzo[a]pyrene			332	296		ug/Kg		89	54 - 120	5	20
Benzo[b]fluoranthene			332	293		ug/Kg		88	51 - 120	0	20
Benzo[g,h,i]perylene			332	295		ug/Kg		89	48 - 120	4	20
Benzo[k]fluoranthene			332	271		ug/Kg		82	56 - 120	12	20
Chrysene			332	183		ug/Kg		55	40 - 120	2	20
Dibenz(a,h)anthracene			332	325		ug/Kg		98	50 - 120	4	20
Fluoranthene			332	286		ug/Kg		86	57 - 120	4	20
Fluorene			332	259		ug/Kg		78	52 - 120	1	20
Indeno[1,2,3-cd]pyrene			332	313		ug/Kg		94	48 - 120	4	20
Naphthalene			332	255		ug/Kg		77	46 - 120	3	20
Phenanthrene			332	288		ug/Kg		87	48 - 120	1	20
Pyrene			332	286		ug/Kg		86	53 - 120	1	20

Surrogate	*LCSD % Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*75*		*33 - 120*
Terphenyl-d14	*91*		*35 - 146*

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

GC/MS Semi VOA

Prep Batch: 97349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-97349/1-A	Method Blank	Total/NA	Solid	3546	
LCS 720-97349/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-97349/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
720-36912-1	SB-05-08-AUG1111	Total/NA	Solid	3546	
720-36912-2	SB-13-02-AUG1111	Total/NA	Solid	3546	
720-36912-3	SB-13-08-AUG1111	Total/NA	Solid	3546	
720-36912-4	SB-13A-02-AUG1111	Total/NA	Solid	3546	
720-36912-5	SB-01-02-AUG1111	Total/NA	Solid	3546	
720-36912-6	SB-03-02-AUG1111	Total/NA	Solid	3546	
720-36912-7	SB-01-08--AUG1111	Total/NA	Solid	3546	
720-36912-8	SB-01-08-DUP-AUG1111	Total/NA	Solid	3546	
720-36912-9	SB-03-08-AUG1111	Total/NA	Solid	3546	
720-36912-10	SB-12-02-AUG1111	Total/NA	Solid	3546	
720-36912-11	SB-12-08-AUG1111	Total/NA	Solid	3546	

Analysis Batch: 97365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-97349/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	97349
LCSD 720-97349/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	97349
MB 720-97349/1-A	Method Blank	Total/NA	Solid	8270C SIM	97349
720-36912-1	SB-05-08-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-2	SB-13-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-3	SB-13-08-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-4	SB-13A-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-5	SB-01-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-7	SB-01-08--AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-8	SB-01-08-DUP-AUG1111	Total/NA	Solid	8270C SIM	97349

Analysis Batch: 97431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-36912-6	SB-03-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-9	SB-03-08-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-10	SB-12-02-AUG1111	Total/NA	Solid	8270C SIM	97349
720-36912-11	SB-12-08-AUG1111	Total/NA	Solid	8270C SIM	97349

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Client Sample ID: SB-05-08-AUG1111 — Lab Sample ID: 720-36912-1

Date Collected: 08/11/11 15:00 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97365	08/16/11 21:59	ML	TAL SF

Client Sample ID: SB-13-02-AUG1111 — Lab Sample ID: 720-36912-2

Date Collected: 08/11/11 15:50 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		10	97365	08/16/11 22:23	ML	TAL SF

Client Sample ID: SB-13-08-AUG1111 — Lab Sample ID: 720-36912-3

Date Collected: 08/11/11 16:10 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	97365	08/16/11 22:46	ML	TAL SF

Client Sample ID: SB-13A-02-AUG1111 — Lab Sample ID: 720-36912-4

Date Collected: 08/11/11 16:20 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97365	08/16/11 23:09	ML	TAL SF

Client Sample ID: SB-01-02-AUG1111 — Lab Sample ID: 720-36912-5

Date Collected: 08/11/11 16:55 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97365	08/16/11 23:33	ML	TAL SF

Client Sample ID: SB-03-02-AUG1111 — Lab Sample ID: 720-36912-6

Date Collected: 08/11/11 17:25 — **Matrix: Solid**
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		2	97431	08/17/11 21:52	ML	TAL SF

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Client Sample ID: SB-01-08--AUG1111

Lab Sample ID: 720-36912-7

Date Collected: 08/11/11 17:20
Matrix: Solid
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		2	97365	08/17/11 00:20	ML	TAL SF

Client Sample ID: SB-01-08-DUP-AUG1111

Lab Sample ID: 720-36912-8

Date Collected: 08/11/11 17:20
Matrix: Solid
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	97365	08/17/11 00:43	ML	TAL SF

Client Sample ID: SB-03-08-AUG1111

Lab Sample ID: 720-36912-9

Date Collected: 08/11/11 17:30
Matrix: Solid
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97431	08/17/11 22:15	ML	TAL SF

Client Sample ID: SB-12-02-AUG1111

Lab Sample ID: 720-36912-10

Date Collected: 08/11/11 17:50
Matrix: Solid
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97431	08/17/11 22:38	ML	TAL SF

Client Sample ID: SB-12-08-AUG1111

Lab Sample ID: 720-36912-11

Date Collected: 08/11/11 18:10
Matrix: Solid
Date Received: 08/12/11 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3546			97349	08/16/11 09:57	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	97431	08/17/11 23:01	ML	TAL SF

Laboratory References:
TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: UPS-Oakland

TestAmerica Job ID: 720-36912-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-36912-1	SB-05-08-AUG1111	Solid	08/11/11 15:00	08/12/11 13:00
720-36912-2	SB-13-02-AUG1111	Solid	08/11/11 15:50	08/12/11 13:00
720-36912-3	SB-13-08-AUG1111	Solid	08/11/11 16:10	08/12/11 13:00
720-36912-4	SB-13A-02-AUG1111	Solid	08/11/11 16:20	08/12/11 13:00
720-36912-5	SB-01-02-AUG1111	Solid	08/11/11 16:55	08/12/11 13:00
720-36912-6	SB-03-02-AUG1111	Solid	08/11/11 17:25	08/12/11 13:00
720-36912-7	SB-01-08--AUG1111	Solid	08/11/11 17:20	08/12/11 13:00
720-36912-8	SB-01-08-DUP-AUG1111	Solid	08/11/11 17:20	08/12/11 13:00
720-36912-9	SB-03-08-AUG1111	Solid	08/11/11 17:30	08/12/11 13:00
720-36912-10	SB-12-02-AUG1111	Solid	08/11/11 17:50	08/12/11 13:00
720-36912-11	SB-12-08-AUG1111	Solid	08/11/11 18:10	08/12/11 13:00

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane Pleasanton, CA 94566-4756
Phone: (925) 484-1919 FAX (925) 600-3002

720.3698

Reference #: 133074

Date 8/11/11 Page 1 of 2

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Report To

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Phone: 770-428-9009 Email: jennifer.lebeau@arcadis-us.com
Bill To: ARCADIS PN below
Sampled By: Kathryn Finch
Attn: Jennifer Lebeau
Phone: 703.303.7158

Analysis Request

Sample ID	Date	Time	Matrix	Preserv	TPH EPA - ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	(HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☒ EPA 8270 ☐ 625 PAH	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Low Level Metals by EPA 200.8/6020 (ICP-MS): ___	☐ W.E.T (STLC) ☐ TCLP	☐ Hexavalent Chromium ☐ pH (24h hold time for H_2O)	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	Number of Containers
SB-05-08-Aug1111	8/11/11	1500	S	None						X											1
SB-13-02-Aug1111	8/11/11	1550	S	None						X	/										1
SB-13-08-Aug1111	8/11/11	1610	S	None						X											1
SB-13A-02-Aug1111	8/11/11	1620	S	None						X											1
~~SB-13A-08-Aug1111~~	~~8/11/11~~	~~1720~~	~~S~~	~~None~~						~~X~~											~~1~~
~~SB-13A-08-DUP-Aug1111~~	~~8/11/11~~	~~1720~~	~~S~~	~~None~~						~~X~~											~~1~~
SB-01-02-Aug1111	8/11/11	1655	S	None						X											1
SB-03-02-Aug11	8/11/11	1725	S	None						X											1
SB-01-08-Aug1111	↓	1720	↓	↓						X											1
SB-01-08-DUP-Aug1111	↓	1720	↓	↓						X											1

Project Info

Project Name: UPS Oakland
Project#: 60038398.0010
PO#:
Credit Card#:

Sample Receipt

# of Containers: 8
Head Space: N/A
Temp: Ice
Conforms to record:

TAT: 5 Day | 3 Day | 2 Day | 1 Day | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank
Fund EDF
Special Instructions / Comments: ☐ Global ID ___

Temp. 4.0°C

See Terms and Conditions on reverse
*TestAmerica SF reports 8015M from C_{11}-C_{24} (industry norm). Default for 8015B is C_{10}-C_{36}

1) Relinquished by:
Signature: [signature] Time: 1136
Printed Name: Kathryn Finch Date: 8/12/11
Company: ARCADIS

2) Relinquished by:
Signature: [signature] Time: 1300
Printed Name: Gerald Naylor Date: 8-12-11
Company: T.A.

3) Relinquished by:
Signature: Time:
Printed Name: Date:
Company:

1) Received by:
Signature: [signature] Time: 1300
Printed Name: Gerald Naylor 8-12-11 Date:
Company: T.A.

2) Received by:
Signature: [signature] Time: 1300
Printed Name: [signature] Date: 8/12/11
Company: TASF

3) Received by:
Signature: Time:
Printed Name: Date:
Company:

Rev09/09

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton, CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

720-36912

Reference #: 133074 (400)

Date 8/11/11 Page 2 of 2

08/19/2011

Report To

Attn: Jennifer Halcomb-LeBeau
Company: ARCADIS Kennesaw GA
Address: 1000 Cobb Place Blvd, Bldg 500-A 30144
Phone: 770.428.9004 Email: jennifer.lebeau@arcadis-us.com
Bill To: ARCADIS PN below
Sampled By: Kathryn Firican
Attn: Jennifer LeBeau Phone: 703.303.7158

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.	TPH EPA - ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	(HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☒ EPA 8270 ☐ 625 PAH	Oil and Grease (EPA 1664) ☐ Petroleum ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other:	Low Level Metals by EPA 200.8/6020 (ICP-MS):	☐ W.E.T (STLC) ☐ TCLP	☐ Hexavalent Chromium ☐ pH (24h hold time for H_2O)	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4					Number of Containers
SB-03-08-Avg1111	8/11/11	1730	S	None						X																1
SB-12-02-Avg1111	↓	1750	↓	↓						X																1
SB-12-08-Avg1111	↓	1810	↓	↓						X																1

Project Info

Project Name: UPS Oakland
Project#: B0038398.0010
PO#:
Credit Card#:

Sample Receipt

of Containers: 3
Head Space: None
Temp: Ice
Conforms to record:

TAT: 5 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day ☐ Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF
Special Instructions / Comments: ☐ Global ID

Temp. 4.0 °C

See Terms and Conditions on reverse
*TestAmerica SF reports 8015M from C_8-C_{34} (industry norm). Default for 8015B is C_{10}-C_{28}

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 1136	Signature: [signature] Time: 13:06	Signature: Time:
Printed Name: Kathryn Firican Date: 8/12/11	Printed Name: Gerald Naylon Date: 8-12-11	Printed Name: Date:
Company: ARCADIS	Company: T.A.	Company:
1) Received by:	**2) Received by:**	**3) Received by:**
Signature: [signature] Time: 11:30	Signature: [signature] Time: 1300	Signature: Time:
Printed Name: Gerald Naylon Date: 8-12-11	Printed Name: Cinta Oporto Date: 8/12/11	Printed Name: Date:
Company: T.A.	Company: DASF	Company:

Rev09/09

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 720-36912-1

Login Number: 36912

List Source: TestAmerica San Francisco

List Number: 1

Creator: Apostol, Anita

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	