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Field Summary Report for the Full-Scale In Situ Chemical Oxidation Removal Action At Installation Restoration Site 9 Shallow Alameda Point, Alameda, California

Final Field Summary Report

FINAL

FIELD SUMMARY REPORT FOR THE FULL-SCALE IN SITU CHEMICAL OXIDATION REMOVAL ACTION AT INSTALLATION RESTORATION SITE 9 SHALLOW

Alameda Point, Alameda, California

Environmental Remedial Action
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Acronyms and Abbreviations

µg/L	micrograms per liter
bgs	below ground surface
BSU	Bay Sediment Unit
COC	contaminant of concern
cis-1,2-DCE	cis-1,2-dichloroethene
DVE	dual-phase vapor extraction
EPA	U.S. Environmental Protection Agency
FWBZ	first water-bearing zone
IR	Installation Restoration
ISCO	in situ chemical oxidation
ISOTEC	In-Situ Oxidative Technologies, Inc.
IT	IT Corporation
JMM	James M. Montgomery
MCL	Maximum Contaminant Level
MW	Montgomery Watson
ND	nondetect
PRC	PRC Environmental Management, Inc.
RI	remedial investigation
ROI	radius of influence
SOP	Standard Operating Procedure
SVOC	semivolatile organic compound
TPH-E	total petroleum hydrocarbon measured as extractables
TtEMI	Tetra Tech Environmental Management, Inc.
VOC	volatile organic compound
VC	vinyl chloride

Executive Summary

Shaw Environmental, Inc., conducted a removal action consisting of full-scale application of in situ chemical oxidation (ISCO) for the mass removal of contaminants in the saturated zone at Installation Restoration Site 9 located at Alameda Point, Alameda, California. The removal action location is herein referred to as Installation Restoration Site 9 Shallow. The ISCO process used a modified Fenton's reagent-based oxidation chemistry consisting of hydrogen peroxide and a patented chelated iron complex.

The removal action was conducted within the first water-bearing zone between approximately 8 and 15 feet below ground surface. Three oxidant injection events were conducted at the site, with the first being conducted from January 24, 2006 through January 28, 2006. Additional oxidant injection events were conducted from April 3, 2006 through April 7, 2006; and between May 23, 2006 and May 26, 2006.

The primary objective of the removal action was to achieve mass reduction of contaminants within the saturated zone to reduce the dissolved-phase contaminant concentrations to below their respective Maximum Contaminant Levels (MCLs) or to levels that are technically or economically practicable. The main contaminants of concern are cis-1,2-dichloroethene and vinyl chloride. Additionally, concentrations of benzene, trimethylbenzene, and methyl tertiary-butyl ether have been detected.

In the case of traditional Fenton's chemistry, the reaction is performed under low pH conditions to keep iron in solution. However, a modified Fenton's approach was used for the full-scale application. The modified approach used chelated iron as a catalyst, which did not require low pH conditions for the oxidation reactions allowing the approach to be effective in neutral conditions (pH approximately 7). The modified Fenton's approach also used a relatively dilute concentration of hydrogen peroxide (approximately 12 percent), which reduced or eliminated the potential for significant exothermic reactions (temperature increases).

Based on review of the baseline and post-injection analytical data (both increases and decreases), the ISCO removal action has had definitive impacts on total mass at Installation Restoration Site 9 Shallow. Of the seven monitoring wells with baseline cis-1,2-dichloroethene groundwater concentrations above the MCL of 6 micrograms per liter, four were reduced to below the MCL following the third injection event (DVE-15A, DVE-17, DVE-19, and DVE-20). Four of the nine wells with baseline vinyl chloride concentrations above the MCL of 0.5 microgram per liter were also reduced to below the MCL following injection activities (P-9-MWS04, DVE-3, DVE-15A, and DVE-17).

It is recommended to conduct several quarters of groundwater monitoring to allow the monitoring wells that exhibit elevated contaminant concentrations to decrease. The dissolved concentrations at the Installation Restoration Site 9 Shallow monitoring wells should decline over time. A decision regarding the need for additional ISCO treatment should not be made until at least three quarters of additional groundwater sampling are completed.

1.0 Introduction

This report discusses the implementation and results of the full-scale removal action conducted by Shaw Environmental, Inc., using in situ chemical oxidation (ISCO) technology at Installation Restoration (IR) Site 9, located at Alameda Point, Alameda, California (Figure 1, "Facility Location Map," and Figure 2, "Installation Restoration Site 9 Location Map"). The removal action location is referred to as IR Site 9 Shallow (Figure 3, "IR Site 9 Shallow Full-Scale ISCO Removal Action and Pilot Test Location Map"). The removal action was conducted to achieve mass reduction within the saturated zone to reduce dissolved-phase chlorinated volatile organic compounds (VOCs) to levels below their respective Maximum Contaminant Levels (MCLs) or to levels that are technically and economically practicable.

The removal action was performed in general accordance with the *Final Work Plan, Full-Scale In-Situ Chemical Oxidation Testing at Installation Restoration Sites 9 and 16, Alameda Point, Alameda, California*, herein referred to as the Work Plan (Shaw, 2003). As stated in the Work Plan, the full-scale ISCO system will be shutdown when concentrations of VOCs in the groundwater are reduced to levels that are technically and economically practicable, as will be determined by little or no continued reduction in VOC mass and indications that further oxidation is occurring.

The ISCO technology used Fenton's-based oxidation chemistry to determine the effectiveness of the reagents in reducing the contaminant mass. In the case of traditional Fenton's chemistry, the reaction is performed under low pH conditions to keep the reaction catalyst iron in solution. However, the modified Fenton's approach uses chelated iron as a catalyst, which do not require low pH conditions; therefore, allowing the approach to be effective at neutral conditions (pH approximately 7). The modified Fenton's approach also used a relatively dilute concentration of hydrogen peroxide (approximately 12 percent), which reduced or eliminated the potential for significant temperature increases from exothermic reactions.

An ISCO pilot test was conducted at IR Site 9 Shallow in November 2002 using the modified Fenton's approach (see Figure 3). The pilot test targeted the first water bearing zone (FWBZ) from 8 to 15 feet below ground surface (bgs). The results of the pilot test suggested that reductions in contaminant concentrations could be achieved through introduction of reagents into the subsurface. Based on the pilot test results, Shaw recommended, and the Navy agreed, that full-scale ISCO application be utilized at Site 9 Shallow. The results of the pilot test provided sufficient data for design for the full-scale application of the ISCO technology for the removal action.

The full-scale application of the ISCO technology was designed and the specifications listed in the Work Plan (Shaw, 2003). The primary objective of the removal action was to achieve mass reduction of groundwater VOC contaminant of concern (COC) concentrations to below their respective MCLs or to levels that were technically or economically practicable. The main COCs at IR Site 9 Shallow were cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC). Additionally, concentrations of trimethylbenzene, benzene, and methyl tertiary-butyl ether were detected above their respective MCLs.

The full-scale removal action area consisted of an approximate 60,000 square-foot area located along the northeastern portion of Building 410 (see Figure 3). During development of the full-scale monitoring wells, significant petroleum hydrocarbon product, approximately 4 feet of floating product, was encountered in well F9SMW04. Therefore, all full-scale ISCO activities were suspended until the floating product could be addressed. A dual-phase vapor extraction (DVE) system was installed and operated under a separate Navy contract task order to conduct liquid-phase product removal. The objective of liquid phase removal was achieved and the full-scale ISOC activities were resumed in January 2006. However, in some areas significant TPH mass remained in the adsorbed phase along with residual product. Once the full-scale ISCO were resumed, the original removal action area was expanded to encompass the area outside the original removal action area treatment where DVE wells were operated (Figure 4, "IR Site 9 Shallow Monitoring Well Network").

The removal action consisted of the injection of catalyst (chelated iron) and oxidant (hydrogen peroxide) at a predetermined injection pattern through a series of temporary injection points. The injection points consisted of a 8-foot section of screen set within a retractable rod attached to the bottom of the push rods that were advanced into the subsurface using direct-push drilling methods. The entire screen length targeted the saturated zone. Injections were conducted in the Shallow zone (approximately 8 to 15 feet bgs). The full-scale application consisted of three field injection events. The first injection event was conducted between January 24, 2006 and January 28, 2006. The second injection event was conducted between April 3, 2006 and April 7, 2006. The third injection event was conducted between May 23, 2006 and May 26, 2006. Baseline and post-oxidant injection groundwater samples were collected, analyzed, and reviewed to evaluate the mass reduction of COC concentrations and relative success of the removal action.

1.1 Report Organization

This report has been prepared to describe the activities conducted for the full-scale removal action and also presents the results and significant conclusions. This information is presented in the subsequent sections as follows:

- **Section 2.0:** Presents site background, including site description and history, and a summary of previous investigations.
- **Section 3.0:** Outlines the activities performed in support of the field activities.
- **Section 4.0:** Describes the ISCO full-scale removal action activities and results of the baseline and post-oxidant injection soil and groundwater sampling.
- **Section 5.0:** Evaluates the results from the removal action and presents conclusions and recommendations.
- **Section 6.0:** Lists the references cited in the report.
- **Appendix A - Boring and Well Construction Diagrams:** presents boring logs and well construction diagrams (On Compact Disc).
- **Appendix B - Analytical Results:** presents detailed and analytical results (On Compact Disc).
- **Appendix C - In-Situ Oxidative Technologies, Inc. Draft Full-Scale In-Situ Chemical Oxidation Report for Installation Restoration Site 9 Intermediate:** presents the Draft Full-Scale In-Situ Chemical Oxidation Report for Installation Restoration Site 9 Shallow, Alameda Point, Alameda, California.
- **Appendix D - Data Quality Assessment Report:** Contains the data quality assessment report.

2.0 Site Background

The following provides a brief overview of IR Site 9. Alameda Point is located on the western tip of Alameda Island, along the eastern margin of the San Francisco Bay (see Figure 1). The northern portion of Alameda Island was formerly comprised of tidelands, marshlands, and sloughs located adjacent to the historical San Antonio Channel, now known as the Oakland Inner Harbor. Filling of subtidal areas, natural tidelands, marshlands, and sloughs with dredge spoils from the surrounding San Francisco Bay, Seaplane Lagoon, and Oakland Inner Harbor from the late 1800s to the 1960s created most of the land that is now Alameda Point.

Installation Restoration Site 9 (see Figure 2) consists of 2.9 acres located in the southwestern corner of Alameda Point, and includes Buildings 351, 410, and 588 (demolished), as well as the adjacent paved open space. Building 351 was used as a corrosion control facility until 1990, and is currently abandoned. Building 410 is the largest building at IR Site 9 and was used as an aircraft paint stripping facility between 1958 and 1990. Building 410 was then used between 1990 and 1996 by a garbage contractor and for stockpiling soil from drilling activities. The Building 410 floor drain lines were directly connected to the storm sewer lines east of the building. The floor drain lines were suspected to have been flow pathways for chlorinated hydrocarbons. Building 588 was formerly located adjacent to the northeastern edge of Building 410 and served as an industrial wastewater treatment plant. Building 588 was used to treat wastewater generated during paint stripping at Building 410. Two oil/water separators were associated with a wash rack area along the southern edge of Building 410.

Four hydrogeologic units are of interest at IR Site 9. These include the following:

- FWBZ
- Bay Sediment Unit (BSU)
- Second Water-Bearing Zone
- Yerba Buena Mud aquitard

The FWBZ is composed of artificial fill, which consists of silty fine-grained sands. The FWBZ is approximately 5 to 10 feet thick. The depth to water is approximately 5 feet bgs or approximately 9.5 feet above mean sea level elevation. The horizontal hydraulic gradient is approximately 0.001-foot per foot to the west (PRC Environmental Management, Inc. [PRC], 1997). Groundwater levels in the FWBZ are potentially impacted by tidal influences from the nearby Seaplane Lagoon, 1,200 feet to the west (PRC, 1997). Underground utility corridors and leaking sewer and water pipes may also affect groundwater levels. The general groundwater flow direction is towards the west and the Seaplane Lagoon. The pilot test and full-scale removal action were targeted the FWBZ between approximately 8 and 15 feet bgs.

The BSU may act as an impediment to vertical groundwater flow between the FWBZ and SWBZ; however, insufficient data exist to confirm this. The BSU consists of silts and clays. The thickness has been observed between 5 and 10 feet in the IR Site 9 vicinity. Northeast of the site, the BSU is absent along the former Alameda Island shoreline (present before the tidal flats were filled).

The SWBZ, beneath the site, consists of the Merritt Sand and the upper unit of the San Antonio Formation. Consequently, the SWBZ is composed of fine-grained sands and silts of the Merritt Sand, and interbedded sands, silts, and clays of the upper unit of the San Antonio Formation. The BSU separates the SWBZ from the FWBZ. In areas to the north and east of IR Site 9, where the BSU is absent, the FWBZ and SWBZ are in direct contact and the upper portion of the SWBZ and FWBZ act as one zone. The total thickness of the SWBZ is estimated to be between 80 and 100 feet.

The Yerba Buena Mud aquitard underlies the SWBZ, but has not been encountered by investigations in the IR Site 9 vicinity. Borings at Alameda Point show that the Yerba Buena Mud aquitard consists of silty clay to clay, and is approximately 35 feet thick. In the southeastern portion of Alameda Point, the Yerba Buena Mud is encountered at approximately 100 feet bgs, as discussed in Basewide Groundwater Monitoring Workplan (IT Corporation [IT], 2002).

Multiple investigations have been conducted at IR Site 9. These include remedial investigations (RIs), nature and extent investigations, plume delineation investigations, and pilot-scale testing of ISCO. Descriptions, results, and pertinent conclusions for these investigations are presented in the following:

- Draft Operable Unit-1 and Operable Unit-2 RI reports (Tetra Tech Environmental Management, Inc. [TtEMI], 1999a and 1999b)
- Engineering Evaluation/Cost Analysis (TtEMI, 2001a), the Data Gap Sampling Field Sampling Plan (TtEMI, 2001b)
- RI by James M. Montgomery (JMM) in 1991 (PRC & JMM, 1993)
- RIs by PRC and Montgomery Watson (MW) in 1994 (PRC & MW, 1994a and 1994b)
- RI by TtEMI in 1997 and 1998 (TtEMI, 1999c)
- Environmental Baseline Study in 1995 by IT (IT, 1998)
- Data Gap Sampling Investigation in 2001 and 2002 by TtEMI (TtEMI, 2002)
- Plume delineation investigation to obtain full-scale design-phase data in the Field Summary Report (Shaw, 2003).

The main contaminants of concern in the groundwater at Site 9 Shallow include cis-1,2-DCE and VC. However, concentrations of trimethylbenzene, benzene, and methyl tertiary-butyl ether were also detected.

3.0 Field Support Activities

Certain field support activities were conducted to implement and complete the full-scale ISCO application. The field support activities included the following:

- Submitting plans and notifications
- Drilling permitting
- Boring/well location staking
- Underground utility clearance
- Decontamination
- Field documentation
- Surveying
- Investigation-derived waste disposal

The field support activities are described in the following sections.

3.1 Submitting Plans and Notifications

Planning and agency notifications were key phases required to prepare for field activities. The Alameda County Public Works Agency, Water Resources Section, was notified of all planned drilling activities. The City of Alameda Fire Department Rescue Services and Hazardous Materials Storage divisions were also notified of the application activities and associated potential hazards.

3.2 Drilling Permitting

Drilling permits were obtained from the Alameda County Public Works Agency, Water Resources Section, and drilling and well construction activities were completed in substantive compliance with the requirements of the permits and the State of California, in accordance with the Work Plan (Shaw, 2003).

3.3 Boring/Well Location Staking

All proposed well borings and temporary direct-push injection point boring were marked by white paint. The ground markings also identified the locations by number for subsequent utility clearance.

3.4 Underground Utility Clearance

Underground Service Alert was notified of the drilling activities and responding service subscribers marked the locations of known utilities within the removal action area prior to intrusive activities being conducted. Additionally, each well and temporary injection point

location was cleared as appropriate following Shaw Health and Safety Procedure HS308. Each location was cleared by hand or using an air knife to a minimum of 5 feet bgs. If any obstructions were located, an alternate location was identified and cleared in the same manner. All suspected underground utilities, conduits, and structures were marked with appropriately colored marking paint.

3.5 Decontamination

Decontamination of non-disposable sampling equipment contacting samples or subsurface media was performed according to Standard Operating Procedure (SOP) 6.1, "Sampling Equipment and Well Material Decontamination" (IT, 2000). The decontamination was conducted to prevent the introduction of extraneous material into samples and to maintain sample integrity. All non-disposable sampling equipment that did not come into direct contact with the samples was decontaminated by washing with a non-phosphate detergent, rinsing with distilled water, and air-drying as per the Sampling and Analysis Plan.

Decontamination water and rinsate were collected in truck-mounted polyurethane containers. When the containers were full, the contents were transferred to a Baker tank located at Building 112 where it was stored pending sample collection for waste profiling and subsequent disposal.

3.6 Field Documentation

Field documentation was prepared daily and maintained on-site. Field documentation consisted of completing Daily Remedial Action Contract Contractor Reports, Field Activity Daily Logs, Daily Quality Control Reports, Equipment Calibration Logs, Request for Analysis and Chain of Custody Forms, Sample Collection Forms, and Equipment Inspection Logs.

Boring logs were prepared for each well boring. Borings were logged in accordance with ASTM International *Method D2488-00 Description and Identification of Soils, Visual-Manual Procedure* (ASTM International, 2000) and the Unified Soil Classification System. Boring logs are presented as Appendix A.

3.7 Surveying

Each monitoring well and temporary injection point location was surveyed under the supervision or direction of a State of California-Registered Land Surveyor. Ground surface elevations for each point were surveyed to the nearest 0.01-foot. The horizontal coordinates of each survey point were also surveyed to the nearest 0.1-foot and referenced to the North American Datum 1983, California State Plane Coordinate System Zone 3. Vertical elevations were based on the National Geodetic Vertical Datum of 1929, as adjusted by the National Geodetic Survey in June 1991, and converted to National Geodetic Vertical Datum of 1929. The horizontal and

vertical measurements were referenced to establish permanent control monuments. The survey data are stored in the project files.

3.8 Investigation-Derived Waste Disposal

The project investigation-derived waste streams consisted of soil cuttings, purge and development water, decontamination rinsate water, and personnel protective equipment generated during drilling and sampling activities. All investigation-derived waste was contained pending collection of samples for waste profiling and disposal.

Soil cuttings were contained in a roll-off bin. One discrete soil sample was collected from the roll-off bin, using an EnCore™ sampler, and used to profile the soil waste for VOCs using U.S. Environmental Protection Agency (EPA) Method 8260B for analysis. Additionally, one 4-point composite soil sample was collected from the bin to represent the waste stream. The composite sample was analyzed for the following:

- Total petroleum hydrocarbons measured as diesel and motor oil by EPA Method 8015B Modified
- Semivolatile organic compounds (SVOCs) by EPA Method 8270C
- California Code of Regulations Title 22 (CCR, 2002) Metals by EPA Methods 6010B/7000A

The analytical results were evaluated by the Shaw Transportation and Disposal Coordinator for waste profiling and disposal. The soil was transported and disposed at the Forward Landfill in Manteca, California, a non-hazardous waste facility. Results can be found in Appendix B.

Equipment decontamination fluids and purge and development water were combined and stored in a 2,100-gallon Baker tank located behind Building 112 (Shaw field office). A sample was collected and analyzed for the following:

- Total petroleum hydrocarbons measured as diesel and motor oil by EPA Method 8015B Modified
- Semivolatile organic compounds by EPA Method 8270C
- Volatile organic compounds by EPA Method 8260B

The analytical results were evaluated by the Shaw Transportation and Disposal Coordinator for waste profiling and disposal. Results can be found in Appendix B.

Personal protective equipment was bagged and disposed of as municipal refuse. No personal protective equipment disposal sampling was required.

4.0 In Situ Chemical Oxidation Full-Scale Treatment Activities

This section describes the main ISCO full-scale treatment activities conducted at the IR Site 9 Intermediate removal action area, including monitoring well installation and development, baseline groundwater sampling, chemical oxidant reagent injection (through temporary injection points), and post-oxidant injection groundwater sampling. The ISCO application used a chelated iron as a catalyst and a hydrogen peroxide solution as the oxidant. The ISCO process did not require low pH conditions for the oxidation reactions, allowing the approach to be effective in neutral conditions (pH approximately 7). The modified Fenton's approach also used a relatively dilute concentration of hydrogen peroxide (approximately 12 percent), which reduced or eliminated the potential for significant increases through exothermic reactions (i.e., heat generation and temperature increases).

The ISCO full-scale injection activities were conducted between January 24, 2006 and May 26, 2006. In-Situ Oxidative Technologies, Inc. (ISOTEC) was subcontracted to perform the ISCO full-scale injections with oversight provided by Shaw personnel. The main objective of the oxidant injections was to achieve mass reduction of groundwater contaminant concentrations to below their respective MCLs or to levels that are technically or economically practicable. The main COCs at IR Site 9 Shallow are cis-1,2-DCE and VC. Additionally, benzene, trimethylbenzene, and methyl tertiary-butyl ether have also been detected.

The IR Site 9 Shallow full-scale removal action application was conducted in an area roughly bound by West Oriskany Avenue to the north, the eastern side of Building 410 to the west, West Ticonderoga Avenue to the south, and to the eastern fence line of the Site 9 Shallow fencing to the east (see Figure 3).

The removal action consisted of the injection of catalyst (chelated iron complex) and oxidant (hydrogen peroxide) at a pre-determined injection pattern through a series of temporary injection points, which were within the interpreted plume area (Figure 5, "IR Site 9 Shallow Temporary Injection Point Locations"). The injection points consisted of an 8-foot long specially designed section of screen deployed through a 1.25-inch diameter direct-push rod that were advanced into the subsurface to the targeted injection interval.

The full-scale application consisted of three field injection events. The first injection event was conducted between January 24 and January 28, 2006. The second injection event was conducted between April 3, 2006 and April 7, 2006. The third injection event was conducted between May 23, 2006 and May 26, 2006. Over the three injection events, 150 temporary injection points were planned. Of these, 138 temporary injection point locations were used for injection of a total of 26,277 gallons of reagent (catalyst plus oxidant) into the subsurface (see Figure 5). ISOTEC

was unable to inject reagent in 12 locations due to refusal while drilling or an elevated injection pressure. Following use, the open hole from each temporary injection point was abandoned by grouting. The injection point locations were based upon a 20-foot radius of influence (ROI), which was determined from the results of the pilot test. However, closer spacing (12-foot ROI) was used in an area near well F9SMW04, where concentrations significantly exceeded their respective MCLs.

The removal action application consisted of sampling six new monitoring wells (F9SMW01 through F9SMW06, one existing monitoring well drilled during the Site 9 Intermediate investigation (9IF-MWS01), three existing monitoring wells (P-9-MWS01, P-9-MWS02, P-9-MWS04) used during the original pilot test, four existing Site 9 wells (MW410-1 to MW410-4), and eight of the DVE wells (DVE-3, DVE-9, DVE-10, DVE-15A, DVE-17, DVE-19, DVE-20, and DVE-23) (see Figure 4).

Baseline groundwater samples were collected prior to conducting the ISCO application and analyzed for VOCs, SVOCs, dissolved metals, and hexavalent chromium.

During the removal action, performance monitoring and safety monitoring was conducted. Performance monitoring consisted of field measurements and analytical sample analysis to obtain information related to subsurface characteristics, reagent distribution, and contaminant reduction. Field monitoring of the groundwater for hydrogen peroxide levels and ferrous iron levels using colorimetric test kits, and general water quality parameters (pH, temperature, conductivity, oxidation-reduction potential, and dissolved oxygen) using a down-hole YSI 556 multiprobe system occurred during baseline sampling, oxidant injection, and the post-oxidant injection sampling. Safety monitoring consisted of periodic air monitoring using a photoionization detector and explosimeter prior to, during, and following the injection activities.

Groundwater samples which were collected 1 to 2 weeks following each injection event (post-oxidant injection samples) were analyzed for VOCs, SVOCs, dissolved metals, and hexavalent chromium. However since petroleum hydrocarbon-impacted soils were observed during borehole clearance activities in the vicinity of well F9SMW04, it was recommended (and conquered) that groundwater samples would be analyzed for total petroleum hydrocarbons measured as extractables (TPH-E) starting with the second post injection sampling round (April 2006). The data collected following each of the oxidant injection events was compared to the baseline results to determine the amount of mass reduction of COCs.

4.1 Full-Scale Removal Action Well Installation and Development

Six monitoring wells were constructed at the Site 9 Shallow full-scale removal action area from October 30, 2003 to November 7, 2003 (see Figure 4). The monitoring well locations were selected based on the results of previous sampling efforts (IT, 2002), cone penetrometer testing,

hydropunch groundwater sampling, and the ISCO pilot test. The monitoring wells were screened at the approximate 8 to 15 foot depth interval. The screen intervals were selected in relation to the IR Site 9 Shallow lithology and hydrogeology. This included evaluation of the site-specific cone penetrometer test results.

The monitoring wells were installed using hollow-stem auger drilling techniques per SOP 8.1, "Monitoring Well Installation," (IT, 2000). During drilling activities, 8-inch inside diameter hollow-stem augers were used to drill the well borings. Soil cuttings were collected from the auger flights and lithologic information was recorded. Once the total depth was reached, the well screen, sand pack, bentonite seal, and concrete surface seal were installed in general accordance with the specifications and procedures identified in the Work Plan (Shaw, 2003) and SOP 8.1.

The wells were constructed of 2-inch-diameter, Schedule 40, polyvinyl chloride casing. Each well had 10 feet of 0.020-inch machine slotted polyvinyl chloride screen. Blank well casing was attached to screen sections by flush-jointed threads. The annular space outside of each well screen was filled with #2/12 grade silica sand. The sand pack extended from the bottom of the borehole to approximately 2 feet above the top of the screen. A seal consisting of 3/8-inch diameter coated bentonite chips was placed above the top of the sand pack to approximately 6 feet bgs. The bentonite above the water table was hydrated with potable water. The bentonite was allowed to set for a minimum of 1 hour to allow for hydration. The remainder of the borehole was filled to the surface with concrete. The surface completion consisted of a 12-inch diameter traffic-rated street box set in the concrete. Boring and well construction diagrams were generated during field activities and are presented as Appendix A.

Five of the six new monitoring wells were developed between November 4 and 5, 2003 in accordance with Section 4.3.2 of the Work Plan (Shaw, 2003). During development of well F9SMW04 on November 10, 2003, approximately 4-feet of floating product was encountered. At that time, development activities associated with Site 9 Shallow were curtailed.

Well development was performed to remove formation and filter pack materials from the wells and to increase hydraulic communication between the wells and the formation. Wells were developed using a bailer, vented surge block, and submersible pump. During well development, pH, specific conductance, turbidity, dissolved oxygen, and temperature readings were periodically recorded. Development was considered complete when these indicator parameters stabilized and the extracted water appeared clear. All equipment (i.e., surge block, bailer, submersible pump) was decontaminated prior to developing each well. Well development logs generated during field activities are contained in the project files. Water generated during well development activities was contained in a holding tank located at Building 112 and then added to

the Building 397 system for treatment. The purge water was sampled and analyzed for subsequent disposal as discussed in Section 3.8.

4.2 Baseline Groundwater Sampling

Prior to initiating the ISCO injection event, groundwater samples for analysis of baseline conditions were collected on December 20. 2003 using low-flow sampling methods in accordance with SOP 9.1, "Groundwater Sampling," (IT, 2000). Groundwater samples for analysis of baseline conditions were collected from a total of 22 wells consisting of six new monitoring wells (F9SMW01 through F9SMW06, one existing monitoring well drilled during the Site 9 Intermediate investigation (9IF-MWS01), three existing monitoring wells (P-9-MWS01, P-9-MWS02, P-9-MWS04) used during the original pilot test, four existing Site 9 wells (MW410-1 to MW410-4), and eight of the DVE wells (DVE-3, DVE-9, DVE-10, DVE-15A, DVE-17, DVE-19, DVE-20, and DVE-23) (see Figure 4). The baseline samples were analyzed for VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, hexavalent chromium by EPA Method 7196A, and dissolved metals by EPA Method 6010B (Table 1, "Collected Site 9 Shallow Full-Scale Removal Action Groundwater Samples and Analytical Program"). For monitoring purposes during the field application, groundwater samples were collected and tested for the following parameters:

- pH
- Temperature
- Specific conductivity
- Oxidation-reduction potential
- Dissolved oxygen
- Hydrogen peroxide (colorimetric field test kit)
- Ferrous iron (colorimetric field test kit)

Field data collected during purging and groundwater sampling activities is summarized in Table 2, "Site 9 Shallow Full-Scale Removal Action Field-Measured Parameters." Detected VOC results for the baseline groundwater sample analyses are presented in Table 3, "Site 9 Shallow Detected Baseline and Post-Injection Groundwater Results, Volatile Organic Compounds, Full-Scale Removal Action" and Figure 6, "IR Site 9 Shallow Detected Volatile Groundwater Baseline Sampling Results". A complete listing of all the analytical results is provided in Appendix B.

4.3 Chemical Oxidant Reagent Injection

The Site 9 Shallow full-scale injection targeted the FWBZ between approximately 8 and 15 feet bgs. The full-scale application consisted of three field injection events. The first injection event was conducted between January 24 and January 28, 2006. The second injection event was

conducted between April 3 and April 7, 2006. The third injection event was conducted between May 23 and May 26, 2006. Details of the chemical oxidant injection equipment methods, results, and conclusions are provided in ISOTEC's *Full-Scale In-Situ Chemical Oxidation Report for Installation Restoration Site 9 Shallow* (Appendix C).

4.4 Post-Oxidant Injection Sampling

Post-oxidant injection groundwater samples were collected 1 to 2 weeks following completion of each injection event. Post-oxidant injection groundwater sampling was performed following each injection event as follows:

- Post-Oxidant Injection I – sampled February 3 to 7, 2006 (following the first injection event)
- Post-Oxidant Injection II – sampled April 18 to 20, 2006 (following the second injection event)
- Post-Oxidant Injection III – sampled June 7 to 9, 2006 (following the third injection event)

The groundwater samples were collected and analyzed using the same procedures and analytical methods used for the baseline groundwater sampling (Appendix A, Section 4.2.1 [Shaw, 2003]). However during the first ISCO injection event, indications of potential petroleum-hydrocarbon-impacted soils were observed during borehole clearance operations in the vicinity of well F9SMW04. Due to these observations, and the fact that approximately 4 feet of floating product was found in well F9SMW04 during well development activities, Shaw recommended (and the Navy concurred) that the groundwater samples should also be analyzed for TPH-E. This was initiated during the post second injection sampling event.

These sample results were used to evaluate contaminant concentration changes and evaluate the effect of the oxidant injection. Post-oxidant injection groundwater samples were collected from the six new monitoring wells (F9SMW01 through F9SMW06), one existing monitoring well drilled during the Site 9 Intermediate investigation (9IF-MWS01), three existing pilot test monitoring wells (P-9-MWS01, P-9-MWS02, P-9-MWS04), four existing monitoring wells (MW410-1 to MW410-4), and eight DVE wells (DVE-3, DVE-9, DVE-10, DVE-15A, DVE-17, DVE-19, DVE-20, and DVE-23) (see Figure 4). Table 3 compares the baseline and post-oxidant injection detected volatile analytical results for groundwater. Table 4, "IR Site 9 Shallow Detected Post-Injection Groundwater Sample TPH-E Results" compares the post-oxidant injection detected TPH-E analytical results for groundwater. Figure 7, "IR Site 9 Shallow Detected Volatile Groundwater Sampling Results" presents box plots of the detected groundwater volatile analytical results. Appendix B contains a complete listing of all analytical results.

5.0 Conclusions and Recommendations

The objective of the full-scale ISCO application at Site 9 Shallow was to achieve mass reduction of contaminants within the saturated zone in order to reduce dissolved-phase contaminant concentrations in the groundwater below their MCLs or to levels that are technically or economically practicable. The effectiveness of the removal action to reduce the contaminant mass was evaluated by observing the dissolved-phase contaminant concentrations within the treatment area. This is because the total mass reduction is reflected in reduced dissolved-phase concentrations. The primary COCs were 1,2-DCE and VC; therefore, the subsequent discussions will focus on these two COCs. Additional detailed discussion can be found in Appendix C.

5.1 Removal Action Conceptual Model Changes

Based on historical data and the results of the pilot test, the full-scale removal action was designed to achieve mass reduction of VOCs in the saturated zone. However, a variety of site conditions and assumptions changed from the original site conceptual model. These changes may have affected the results of the removal action. The following are several key observations made during the removal action:

- Reagent volumes and injection location spacing were based on the pilot test results. This did not consider TPH-E contamination in the subsurface.
- During the installation of the full-scale monitoring wells, significant product was found in well F9SMW04. Product was also found in monitoring wells and piezometers in the immediate vicinity of well P9SMW04. Additionally, indications of potential petroleum hydrocarbon impacted soils were observed during pre-injection hand-augering activities in the vicinity of well F9SMW04 and P-9-MWS04.
- Injection events were not identical. Reagent was not distributed uniformly across the treatment area during each event because surface impediments (DVE piping) prevented access to certain areas. The DVE piping was removed prior to the third injection event which allowed full-access to the area near well F9SMW04 where product was found.
- Based on the analytical results from the first post injection event, the location of the injection points in the vicinity of well F9SMW04 was changed from a 20-foot ROI design to a 12.5-foot ROI design. However, the amount of reagent injected into each point remained constant. This resulted in injecting twice the planned reagent volume into the same treatment area.

5.2 Cis-1,2-Dichloroethene Results

Baseline cis-1,2 DCE concentrations ranged from nondetect (ND) in seven wells to 60 micrograms per liter (μg/L) in DVE-17. Following the first injection event, groundwater

concentrations of cis-1,2-DCE ranged from ND in nine wells to 23 μg/L in monitoring well F9SMW04. Five of the seven monitoring wells with baseline cis-1,2-DCE concentrations above the MCL of 6 μg/L (wells F9SMW03, DVE-15A, DVE-17, DVE-19, and DVE-20) had contaminant concentration reductions to below the MCL. The most significant concentration reduction was observed in well DVE-17, which decreased from a baseline concentration of 60 μg/L to a post injection concentration of 5.4 μg/L, a 91 percent reduction. DVE-17 is located to the south of the original full-scale treatment area. The next highest baseline concentration (43 μg/L) was detected in well F9SMW04 (the product well located within the original treatment area). The concentration was reduced 47 percent, to 23 μg/L.

Following the second injection event, groundwater concentrations of cis-1,2-DCE ranged from ND in eight wells to 32 μg/L in monitoring well F9SMW04. Cis-1,2-dichloroethene concentrations above the MCL were observed in the samples collected from monitoring wells F9SMW03, F9SMW04, DVE-19, and DVE-23, which contained cis-1,2-DCE concentrations of 8.2 μg/L, 32 μg/L, 8.5 μg/L, and 16 μg/L, respectively.

Although the post-second injection analytical data indicated continued effectiveness of the ISOTEC process, the increase in dissolved cis-1,2-DCE concentrations at F9SNMW04 and DVE-23 from the post-first injection event raised questions. As a result, ISTOEC and Shaw evaluated the cis-1,2-DCE and TPH-E dissolved concentration changes from post-first injection to post-second injection. Specifically, the dissolved concentrations at F9SMW04 were compared since this well contained approximately 4 feet of product the previous year. When comparing the post-first injection TPH-E concentrations to the post-second injection TPH-E concentrations it became clear that significant TPH-E mass was present in the adsorbed phase in the immediate vicinity of well F9SMW04. Based on ISOTEC's experience at other TPH sites, it was recommended to reduce the spacing of the injection locations from 40-foot centers (20-foot ROI) to 25-foot centers (12.5-foot ROI), while still injecting the same reagent volume. A reduction in injection location spacing and an increase in reagent volume per cubic-foot is ISOTEC's typical approach when designing an ISCO remediation program for a site with a significant contaminant mass. It was felt that this approach would continue to treat the TPH, as well as, reduce the cis-1,2-DCE dissolved concentrations present in the vicinity of well F9SMW04. In addition, since use of the DVE system was completed, it was recommended that the product recovery system piping runs in the vicinity of wells F9SMW04 and P-9-MWS04 be removed to allow for more complete injection coverage.

Following the third injection event, groundwater concentrations of cis-1,2-DCE ranged from ND in seven wells to 15 μg/L in monitoring well P-9-MWS04. Cis-1,2-dichloroethene concentrations above the MCL were observed in the samples collected from monitoring wells F9SMW03, F9SMW04, P-9-MWS04, and DVE-23, which contained cis-1,2-DCE concentrations of 7 μg/L, 13 μg/L, 15 μg/L, and 10 μg/L, respectively.

5.3 Vinyl Chloride Results

Baseline VC concentrations ranged from ND in eleven wells to 14 µg/L in DVE-19. Following the first injection event, groundwater concentrations of VC ranged from ND in 13 wells to 7.8 µg/L in monitoring well P-9-MWS04. Five of the eight monitoring wells with baseline VC concentrations above the MCL of 0.5 µg/L (MW410-2, DVE-15A, DVE-17, DVE-19, and DVE-20) had contaminant concentration reductions to below the MCL. The most significant concentration reduction was observed in well DVE-17, which decreased from a baseline concentration of 14 µg/L to a post injection concentration of ND, a 98 percent reduction. DVE-17 is located to the south of the original full scale treatment area.

Following the second injection event, groundwater concentrations of VC ranged from ND in 14 wells to 5.2 µg/L in monitoring well F9SMW03. VC concentrations above the MCL were observed in the samples collected from monitoring wells F9SMW03, F9SMW04, F9SMW05, P-9-MWS04, DVE-19, and DVE-20, which contained VC concentrations of 5.2 µg/L, 0.56 µg/L, 1.8 µg/L, 1.1 µg/L, 1.2 µg/L, and 3.4 µg/L, respectively.

Following the third injection event, groundwater concentrations of VC ranged from ND in 16 wells to 6.9 µg/L in monitoring well F9SMW03. VC concentrations above the MCL were observed in the samples collected from monitoring wells F9SMW03, P-9-MWS01, MW410-2, DVE-19, and DVE-20, which contained VC concentrations of 6.9 µg/L, 0.53 µg/L, 1.5 µg/L, 0.59 µg/L, and 4.2 µg/L, respectively.

5.4 Analytical Summary

During baseline sampling seven wells had cis-1.2-DCE concentrations above the MCL of 6 µg/L. Following the third injection event, only 3 wells (DVE-23, F9SMW04, and P-9-MWS04) had concentrations exceeding the MCL. It should be noted that all three wells are located at or close to the area where the majority of the floating product and TPH mass was detected.

During baseline sampling nine wells had VC concentrations above the MCL of 0.5 µg/L. After the third injection event, five wells (9IF-MWS01, DVE-19, DVE-20, F9SMW03, and F-9-MWS01) exceeded the MCL.

5.5 Mass Reduction Effectiveness

The effectiveness of the modified ISCO process to reduce contaminant mass can be evaluated by observing the dissolved phase contaminant concentrations within treatment area monitoring wells during the remediation program. This is because total mass reduction is reflected in reduced dissolved-phase concentrations. However, the ISOTEC process promotes contaminant desorption as well as dissolved-phase oxidation. Therefore, if sufficient contaminant mass is

present in the adsorbed phase prior to treatment, more mass may be transferred to the dissolved-phase than can be treated during one injection event. This can result in a temporary increase in dissolved-phase contaminant concentrations following injection activities. Increases in dissolved-phase contaminant concentrations were observed in several of the sampled monitoring wells at various periods during the removal action. This does not, however, reflect an increase in total mass. The post-injection groundwater concentrations should decrease over time, as groundwater flow, re-sorption to soil, dispersion and dilution produce equilibration between total mass and dissolved mass within the saturated zone.

Of the seven monitoring wells with baseline cis-1,2-DCE groundwater concentrations above the MCL of 6 μg/L, four were reduced to below the MCL following the third injection event (DVE-15A, DVE-17, DVE-19 and DVE-20). Only wells DVE-23, F9SMW04, and P-9-MSS04 remained above the MCL. Four of the nine wells with baseline VC concentrations above the MCL of 0.5 μg/L were also reduced to below the MCL following injection activities (P-9-MWS04, DVE-3, DVE-15A and DVE-17). Only wells 9IF-MWS01, DVE-19, DVE-20, F9SMW03, and F-9-MWS01 exceeded the MCL.

5.6 Recommendations

Over time the site conditions should return to equilibrium between soil mass and corresponding groundwater mass. Therefore, it is recommended that additional groundwater monitoring be conducted without injection activities to allow the monitoring wells that exhibit elevated contaminant concentrations to decrease. The dissolved concentrations above MCLs in the few remaining monitoring wells should decline over time. A decision regarding the need for a fourth injection event should be made after reviewing the additional groundwater sampling data.

6.0 References

ASTM International, 2000, *Method D2488-00 Description and Identification of Soils, Visual-Manual Procedure*, West Conshohocken, Pennsylvania.

California Code of Regulations, 2002, Title 22, *Social Security, Division 4 Environmental Health, Chapter 15 Domestic Water Quality and Monitoring Regulations, Article 4 Primary Standards-Inorganic Chemicals/Article 5.5-Organic Chemicals/Article 160-Secondary Drinking Water Standards.*

IT Corporation, 1998, *Environmental Baseline Studies, Data Evaluation Summaries, Alameda Point, Alameda, California*, prepared for the Navy, Western Division Naval Facilities Engineering Command, San Bruno, California, December.

IT Corporation, 2000, *IT Standard Quality Procedures and Standard Operating Procedures Manual*, Revision 2, Concord, California.

IT Corporation, 2002, *Workplan for Basewide Groundwater Monitoring, Alameda Point, Alameda, California*, Concord, California.

PRC Environmental Management, Inc. and James M. Montgomery, 1993, *Data Summary Report RI/FS Phases I and 2A*, prepared for the Navy, Western Division Naval Facilities Engineering Command, San Bruno, California, August.

PRC Environmental Management, Inc. (PRC), 1997, *Tidal Influence Study Letter Report, NAS Alameda, California*, June.

PRC Environmental Management, Inc. and Montgomery Watson, 1994a, *Follow-on Field Sampling Plan, Remedial Investigation/Feasibility Study, Phase 2A, NAS Alameda*, prepared for the Navy, Western Division Naval Facilities Engineering Command, San Bruno, California, July.

PRC Environmental Management, Inc. and Montgomery Watson, 1994b, *Follow-on Field Sampling Plan, Remedial Investigation/Feasibility Study, Phases 2B and 3, NAS Alameda*, prepared for the Navy, Western Division Naval Facilities Engineering Command, San Bruno, California, August.

Shaw Environmental, Inc., 2003, *Final Work Plan, Full-Scale In-Situ Chemical Oxidation Pilot Testing at Installation Restoration Sites 9 & 16, Alameda Point, Alameda, California*, Concord, California, December 22.

Tetra Tech Environmental Management, Inc., 1999a, *Draft Operable Unit-1 Remedial Investigation Report, Alameda Point, Alameda, California*, San Bruno, California, January.

Tetra Tech Environmental Management, Inc., 1999b, *Final Operable Unit-2 Remedial Investigation Report, Alameda Point, Alameda, California*, San Bruno, California, July.

Tetra Tech Environmental Management, Inc., 1999c, *Draft OU-2 Remedial Investigation Report, Alameda Point, Alameda, California*, San Bruno, California, June.

Tetra Tech Environmental Management, Inc., 2001a, *Installation Restoration Sites 9, 11, 16, and 21 Removal Actions for Dissolved Phase Groundwater Contaminants, Engineering Evaluation and Cost Analysis, Alameda Point, Alameda. California*, DS.0386.15580, January 5.

Tetra Tech Environmental Management, Inc., 2001b, *Final Field Sampling Plan, Supplemental Remedial Investigation, Data Gap Sampling for Operable Units 1 and 2, Alameda point, Alameda, California,* December 28.

Tetra Tech Environmental Management, Inc., 2002, *Supplemental Remedial Investigation, Data Gap Sampling for Operable Units 1 and 2, Alameda Point, Alameda, California*, San Bruno, California, July.

Figures

IMAGE	X-REF	OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
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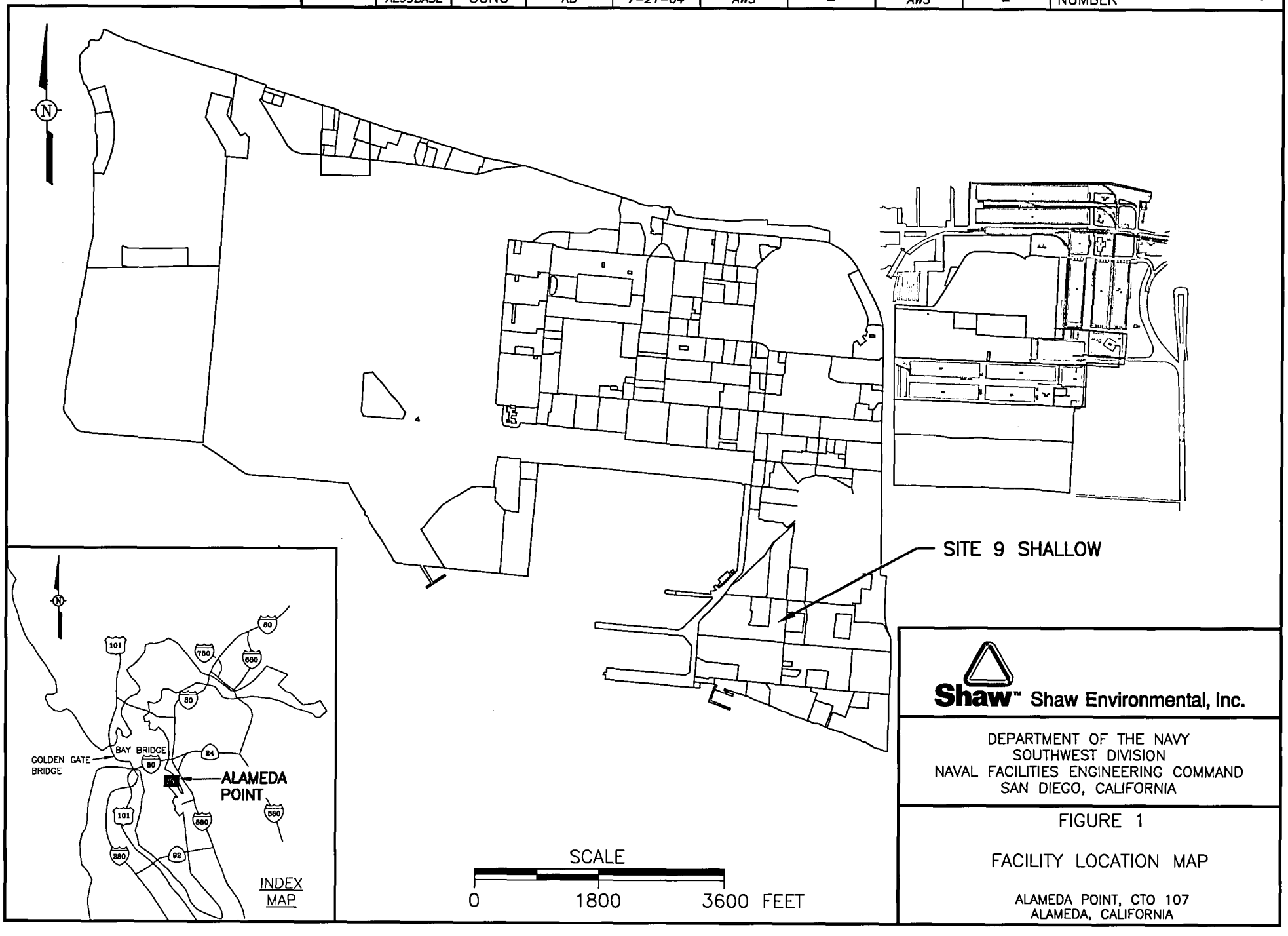

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DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA

FIGURE 1

FACILITY LOCATION MAP

ALAMEDA POINT, CTO 107
ALAMEDA, CALIFORNIA

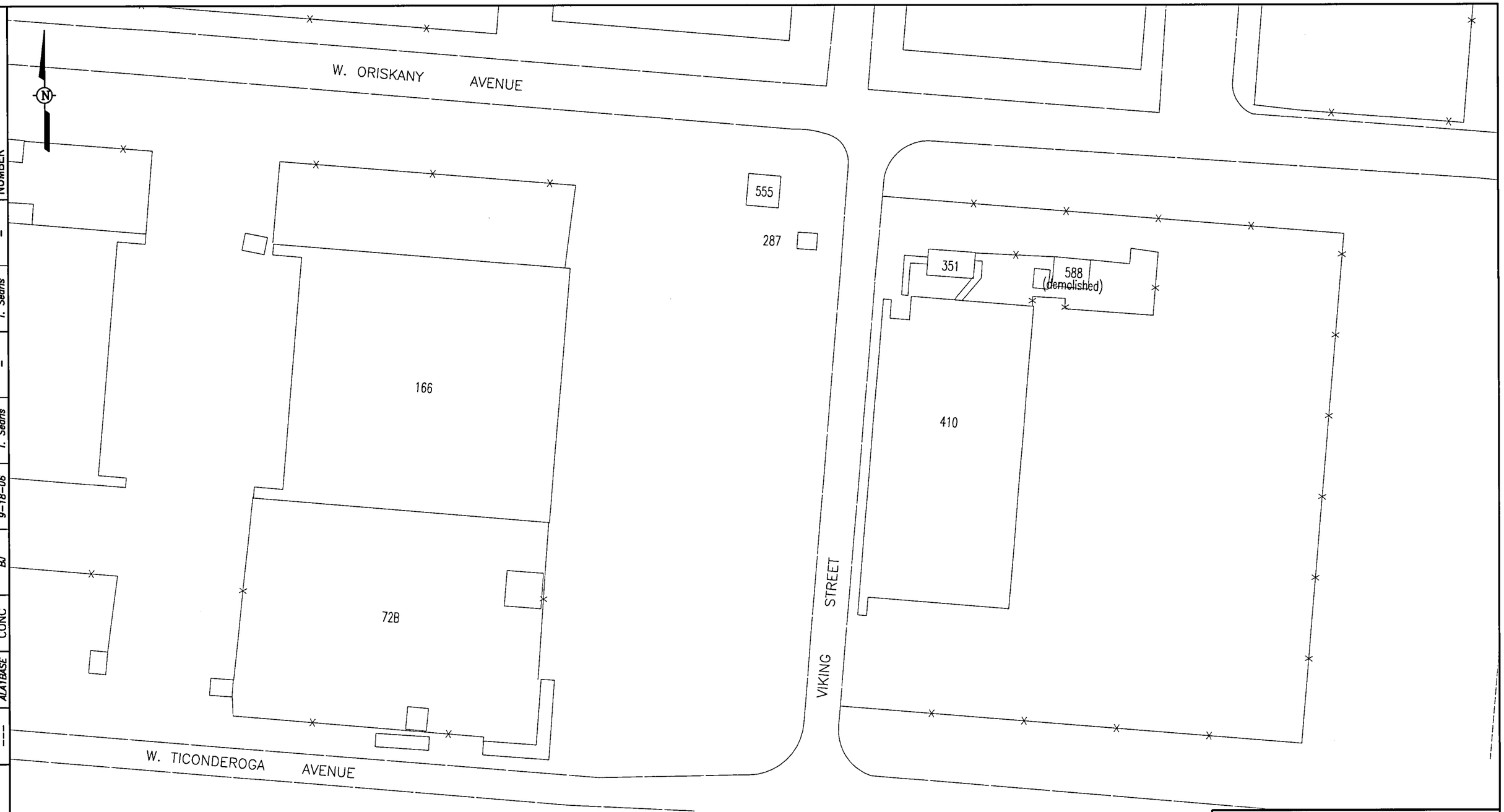

IMAGE	X-REF	OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
---	ALA1BASE	CONC	BJ	9-18-06	T. Searls	-	T. Searls	-	844918-D23

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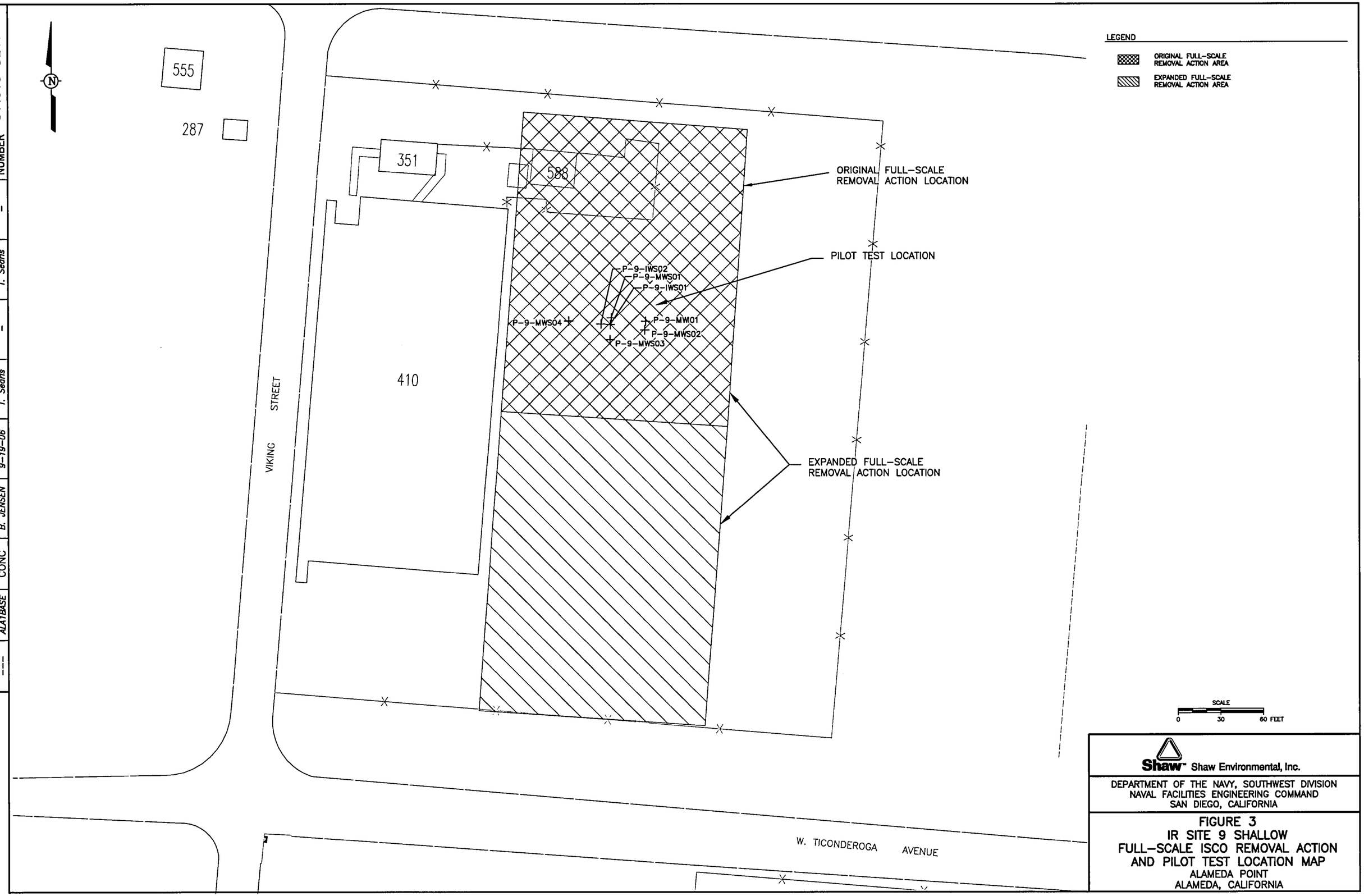
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA

FIGURE 2

INSTALLATION RESTORATION SITE 9
LOCATION MAP

ALAMEDA POINT ALAMEDA, CALIFORNIA


LEGEND
ORIGINAL FULL-SCALE REMOVAL ACTION AREA
EXPANDED FULL-SCALE REMOVAL ACTION AREA
555
287
351
588
410
VIKING STREET
W. TICONDEROGA AVENUE
ORIGINAL FULL-SCALE REMOVAL ACTION LOCATION
PILOT TEST LOCATION
EXPANDED FULL-SCALE REMOVAL ACTION LOCATION
P-9-IWS02
P-9-MWS01
P-9-IWS01
P-9-MWS04
P-9-MW01
P-9-MWS02
P-9-MWS03
SCALE
0 30 60 FEET
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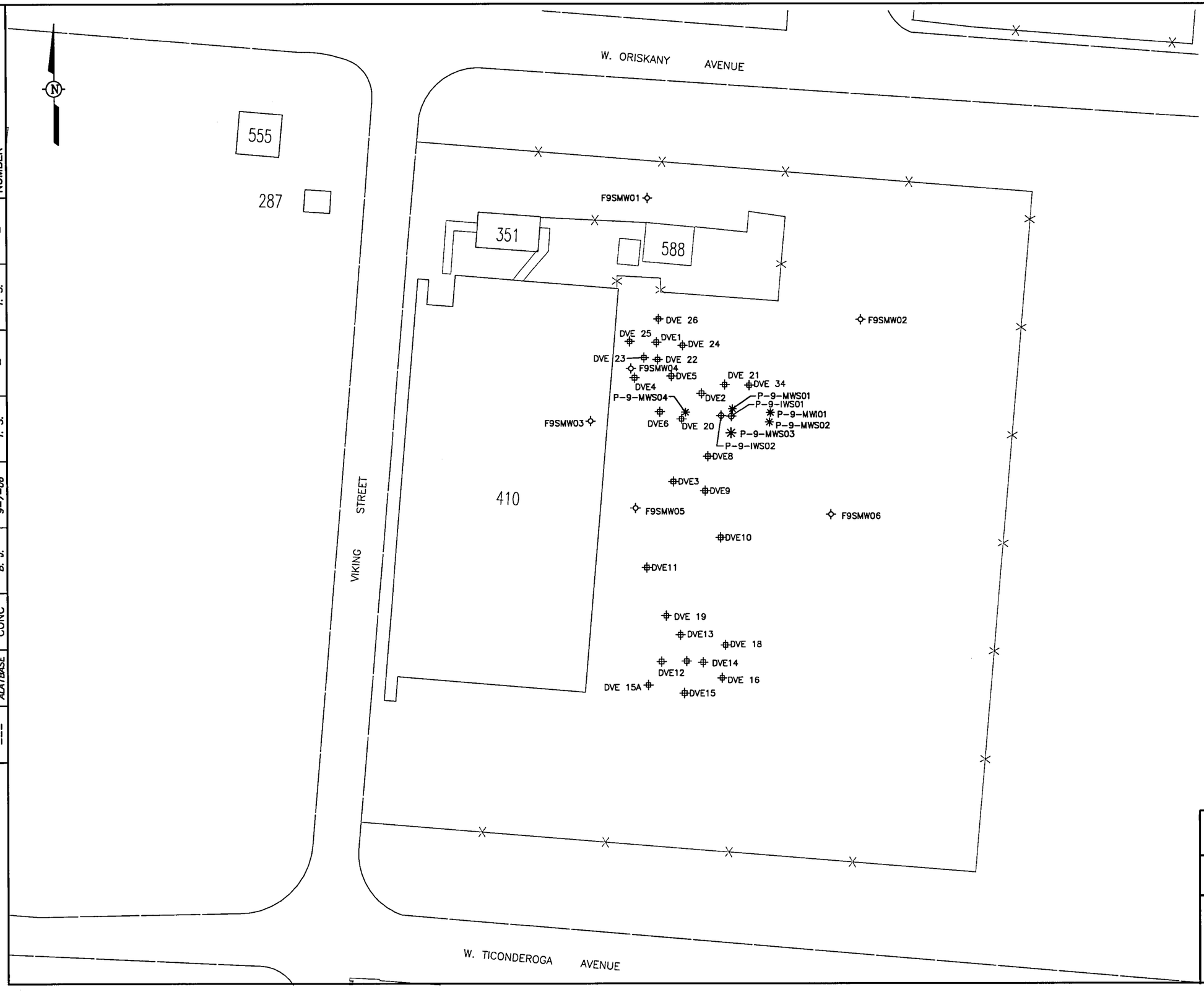
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA
FIGURE 3
IR SITE 9 SHALLOW
FULL-SCALE ISCO REMOVAL ACTION
AND PILOT TEST LOCATION MAP
ALAMEDA POINT
ALAMEDA, CALIFORNIA
DRAWING NUMBER 844918-D241
APPROVED BY T. Searls -
CHECKED BY T. Searls -
DRAWN BY B. JENSEN 9-19-06
OFFICE CONC
X-REF ALA1BASE
IMAGE ---



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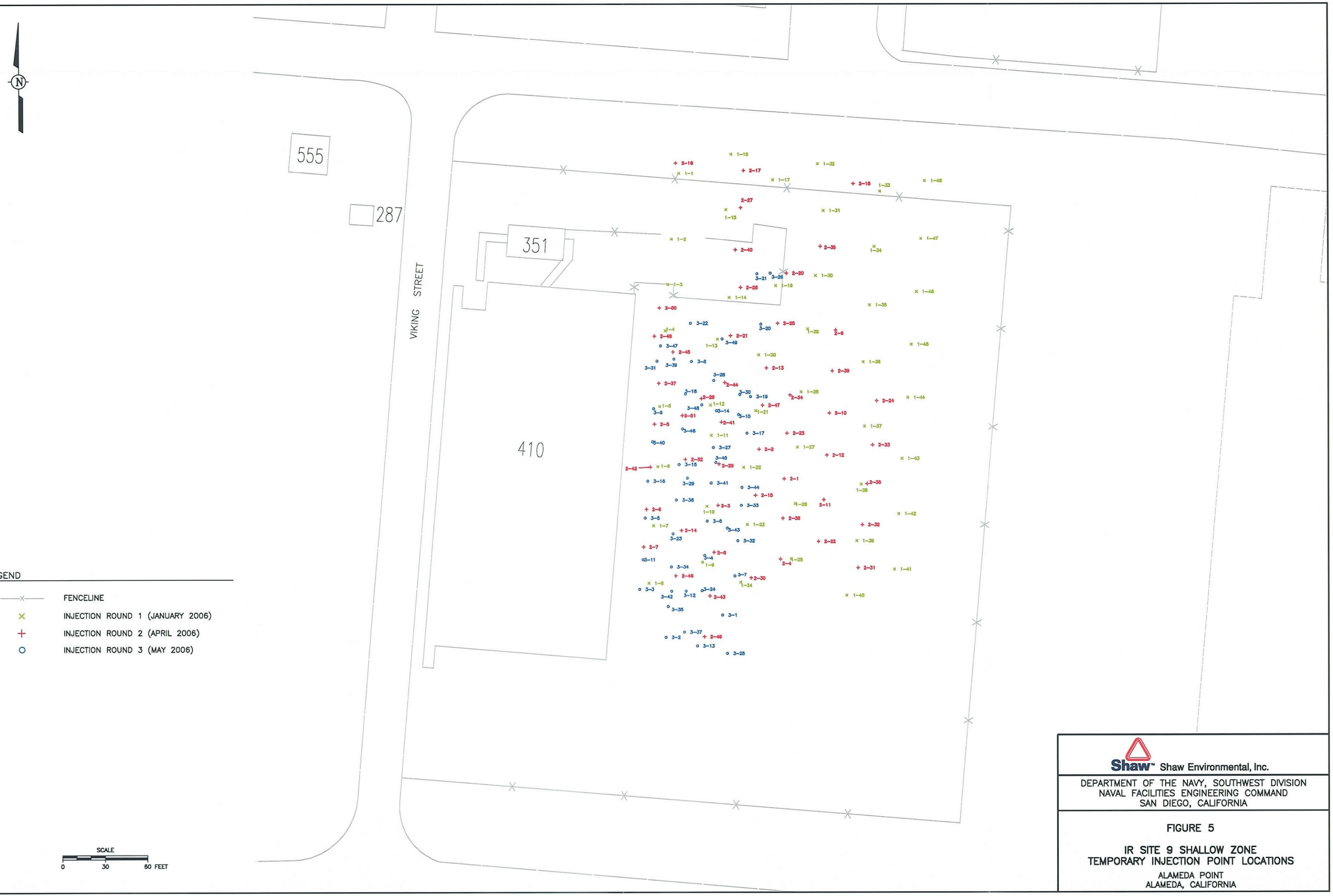
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA

FIGURE 4

IR SITE 9 SHALLOW
MONITORING WELL NETWORK
ALAMEDA POINT
ALAMEDA, CALIFORNIA

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	OFFICE	X-REF	IMAGE
844918-D240	T. S. -	T. S. -	B. J. 9-7-06	CONC	ALA1BASE	---


555
287
351
410
VIKING STREET
LEGEND
FENCELINE
INJECTION ROUND 1 (JANUARY 2006)
INJECTION ROUND 2 (APRIL 2006)
INJECTION ROUND 3 (MAY 2006)
SCALE
0
30
60 FEET
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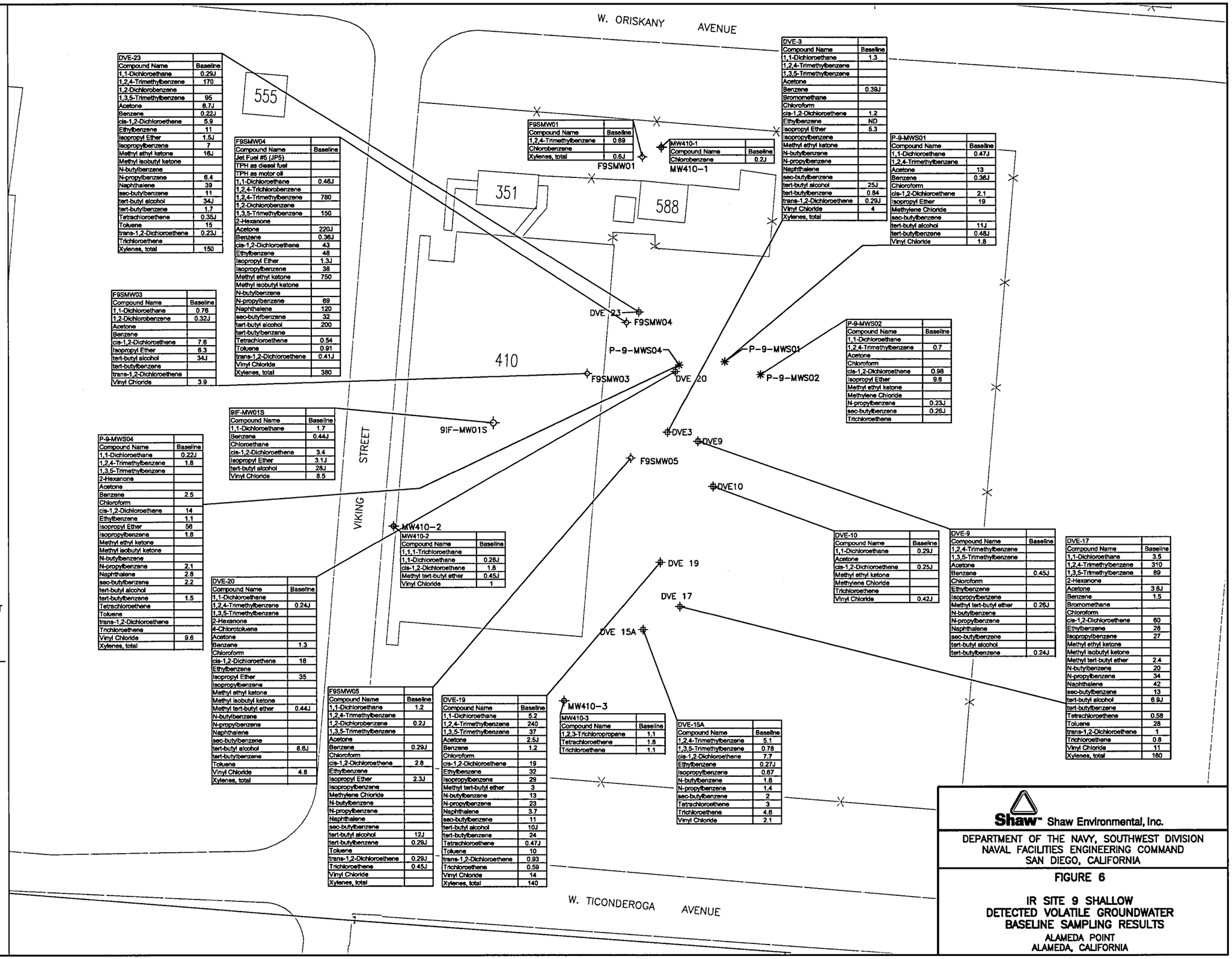
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA
FIGURE 5
IR SITE 9 SHALLOW ZONE
TEMPORARY INJECTION POINT LOCATIONS
ALAMEDA POINT
ALAMEDA, CALIFORNIA
IMAGE ---
X-REF ALA1BASE
OFFICE CONC
DRAWN BY B. JENSEN 9-19-06
CHECKED BY T. Searls -
APPROVED BY T. Searls -
DRAWING NUMBER 844918-D244



DVE-23	
Compound Name	Baseline
1,1-Dichloroethane	0.29J
1,2,4-Trimethylbenzene	170
1,2-Dichlorobenzene	
1,3,5-Trimethylbenzene	95
Acetone	8.7J
Benzene	0.22J
cis-1,2-Dichloroethene	5.9
Ethylbenzene	11
Isopropyl Ether	1.5J
Isopropylbenzene	7
Methyl ethyl ketone	16J
Methyl isobutyl ketone	
N-butylbenzene	
N-propylbenzene	6.4
Naphthalene	39
sec-butylbenzene	11
tert-butyl alcohol	34J
tert-butylbenzene	1.7
Tetrachloroethene	0.35J
Toluene	15
trans-1,2-Dichloroethene	0.23J
Trichloroethene	
Xylenes, total	150

F9SMW04	
Compound Name	Baseline
Jet Fuel #5 (JP5)	
TPH as diesel fuel	
TPH as motor oil	
1,1-Dichloroethane	0.46J
1,2,4-Trichlorobenzene	
1,2,4-Trimethylbenzene	780
1,2-Dichlorobenzene	
1,3,5-Trimethylbenzene	150
2-Hexanone	
Acetone	220J
Benzene	0.36J
cis-1,2-Dichloroethene	43
Ethylbenzene	48
Isopropyl Ether	1.3J
Isopropylbenzene	38
Methyl ethyl ketone	750
Methyl isobutyl ketone	
N-butylbenzene	
N-propylbenzene	69
Naphthalene	120
sec-butylbenzene	32
tert-butyl alcohol	200
tert-butylbenzene	
Tetrachloroethene	0.54
Toluene	0.91
trans-1,2-Dichloroethene	0.41J
Vinyl Chloride	
Xylenes, total	380

F9SMW03	
Compound Name	Baseline
1,1-Dichloroethane	0.76
1,2-Dichlorobenzene	0.32J
Acetone	
Benzene	
cis-1,2-Dichloroethene	7.6
Isopropyl Ether	6.3
tert-butyl alcohol	34J
tert-butylbenzene	
trans-1,2-Dichloroethene	
Vinyl Chloride	3.9

9IF-MW01S	
Compound Name	Baseline
1,1-Dichloroethane	1.7
Benzene	0.44J
Chloroethane	
cis-1,2-Dichloroethene	3.4
Isopropyl Ether	3.1J
tert-butyl alcohol	28J
Vinyl Chloride	8.5

P-9-MWS04	
Compound Name	Baseline
1,1-Dichloroethane	0.22J
1,2,4-Trimethylbenzene	1.8
1,3,5-Trimethylbenzene	
2-Hexanone	
Acetone	
Benzene	2.5
Chloroform	
cis-1,2-Dichloroethene	14
Ethylbenzene	1.1
Isopropyl Ether	56
Isopropylbenzene	1.8
Methyl ethyl ketone	
Methyl isobutyl ketone	
N-butylbenzene	
N-propylbenzene	2.1
Naphthalene	2.8
sec-butylbenzene	2.2
tert-butyl alcohol	
tert-butylbenzene	1.5
Tetrachloroethene	
Toluene	
trans-1,2-Dichloroethene	
Trichloroethene	
Vinyl Chloride	9.6
Xylenes, total	

MW410-2	
Compound Name	Baseline
1,1,1-Trichloroethane	
1,1-Dichloroethane	0.26J
cis-1,2-Dichloroethene	1.8
Methyl tert-butyl ether	0.45J
Vinyl Chloride	1

DVE-20	
Compound Name	Baseline
1,1-Dichloroethane	
1,2,4-Trimethylbenzene	0.24J
1,3,5-Trimethylbenzene	
2-Hexanone	
4-Chlorotoluene	
Acetone	
Benzene	1.3
Chloroform	
cis-1,2-Dichloroethene	18
Ethylbenzene	
Isopropyl Ether	35
Isopropylbenzene	
Methyl ethyl ketone	
Methyl isobutyl ketone	
Methyl tert-butyl ether	0.44J
N-butylbenzene	
N-propylbenzene	
Naphthalene	
sec-butylbenzene	
tert-butyl alcohol	8.6J
tert-butylbenzene	
Toluene	
Vinyl Chloride	4.6
Xylenes, total	

F9SMW05	
Compound Name	Baseline
1,1-Dichloroethane	1.2
1,2,4-Trimethylbenzene	
1,2-Dichlorobenzene	0.2J
1,3,5-Trimethylbenzene	
Acetone	
Benzene	0.29J
Chloroform	
cis-1,2-Dichloroethene	2.8
Ethylbenzene	
Isopropyl Ether	2.3J
Isopropylbenzene	
Methylene Chloride	
N-butylbenzene	
N-propylbenzene	
Naphthalene	
sec-butylbenzene	
tert-butyl alcohol	12J
tert-butylbenzene	0.29J
Toluene	
trans-1,2-Dichloroethene	0.29J
Trichloroethene	0.45J
Vinyl Chloride	
Xylenes, total	

DVE-19	
Compound Name	Baseline
1,1-Dichloroethane	5.2
1,2,4-Trimethylbenzene	240
1,3,5-Trimethylbenzene	37
Acetone	2.5J
Benzene	1.2
Chloroform	
cis-1,2-Dichloroethene	19
Ethylbenzene	32
Isopropylbenzene	29
Methyl tert-butyl ether	3
N-butylbenzene	13
N-propylbenzene	23
Naphthalene	3.7
sec-butylbenzene	11
tert-butyl alcohol	10J
tert-butylbenzene	24
Tetrachloroethene	0.47J
Toluene	10
trans-1,2-Dichloroethene	0.93
Trichloroethene	0.59
Vinyl Chloride	14
Xylenes, total	140

MW410-3	
Compound Name	Baseline
1,2,3-Trichloropropane	1.1
Tetrachloroethene	1.8
Trichloroethene	1.1

DVE-15A	
Compound Name	Baseline
1,2,4-Trimethylbenzene	5.1
1,3,5-Trimethylbenzene	0.78
cis-1,2-Dichloroethene	7.7
Ethylbenzene	0.27J
Isopropylbenzene	0.67
N-butylbenzene	1.8
N-propylbenzene	1.4
sec-butylbenzene	2
Tetrachloroethene	3
Trichloroethene	4.6
Vinyl Chloride	2.1

F9SMW01	
Compound Name	Baseline
1,2,4-Trimethylbenzene	0.69
Chlorobenzene	
Xylenes, total	0.6J

MW410-1	
Compound Name	Baseline
Chlorobenzene	0.2J

DVE-3	
Compound Name	Baseline
1,1-Dichloroethane	1.3
1,2,4-Trimethylbenzene	
1,3,5-Trimethylbenzene	
Acetone	
Benzene	0.39J
Bromomethane	
Chloroform	
cis-1,2-Dichloroethene	1.2
Ethylbenzene	ND
Isopropyl Ether	5.3
Isopropylbenzene	
Methyl ethyl ketone	
N-butylbenzene	
N-propylbenzene	
Naphthalene	
sec-butylbenzene	
tert-butyl alcohol	25J
tert-butylbenzene	0.84
trans-1,2-Dichloroethene	0.29J
Vinyl Chloride	4
Xylenes, total	

P-9-MWS01	
Compound Name	Baseline
1,1-Dichloroethane	0.47J
1,2,4-Trimethylbenzene	
Acetone	13
Benzene	0.36J
Chloroform	
cis-1,2-Dichloroethene	2.1
Isopropyl Ether	19
Methylene Chloride	
sec-butylbenzene	
tert-butyl alcohol	11J
tert-butylbenzene	0.48J
Vinyl Chloride	1.8

P-9-MWS02	
Compound Name	Baseline
1,1-Dichloroethane	
1,2,4-Trimethylbenzene	0.7
Acetone	
Chloroform	
cis-1,2-Dichloroethene	0.98
Isopropyl Ether	9.6
Methyl ethyl ketone	
Methylene Chloride	
N-propylbenzene	0.23J
sec-butylbenzene	0.26J
Trichloroethene	

DVE-10	
Compound Name	Baseline
1,1-Dichloroethane	0.29J
Acetone	
cis-1,2-Dichloroethene	0.25J
Methyl ethyl ketone	
Methylene Chloride	
Trichloroethene	
Vinyl Chloride	0.42J

DVE-9	
Compound Name	Baseline
1,2,4-Trimethylbenzene	
1,3,5-Trimethylbenzene	
Acetone	
Benzene	0.45J
Chloroform	
Ethylbenzene	
Isopropylbenzene	
Methyl tert-butyl ether	0.26J
N-butylbenzene	
N-propylbenzene	
Naphthalene	
sec-butylbenzene	
tert-butyl alcohol	
tert-butylbenzene	0.24J

DVE-17	
Compound Name	Baseline
1,1-Dichloroethane	3.5
1,2,4-Trimethylbenzene	310
1,3,5-Trimethylbenzene	89
2-Hexanone	
Acetone	3.8J
Benzene	1.5
Bromomethane	
Chloroform	
cis-1,2-Dichloroethene	60
Ethylbenzene	28
Isopropylbenzene	27
Methyl ethyl ketone	
Methyl isobutyl ketone	
Methyl tert-butyl ether	2.4
N-butylbenzene	20
N-propylbenzene	34
Naphthalene	42
sec-butylbenzene	13
tert-butyl alcohol	6.9J
tert-butylbenzene	
Tetrachloroethene	0.58
Toluene	28
trans-1,2-Dichloroethene	1
Trichloroethene	0.8
Vinyl Chloride	11
Xylenes, total	160

NOTES:
1. ALL UNITS ARE IN $\mu g/L$.
2. IF NO DATA BOX ASSOCIATED WITH A WELL LOCATION, THEN RESULTS WERE NON-DETECT FOR ALL APPLICABLE EVENTS.

LEGEND

P-9-MWS01	PILOT TEST MONITORING WELL
F9SMW01	FULL-SCALE MONITORING WELL
DVE1	DVE WELL

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	ALA1BASE	CONC	B. JENSEN 9-21-06	T. Searls	T. Searls	844918-D242

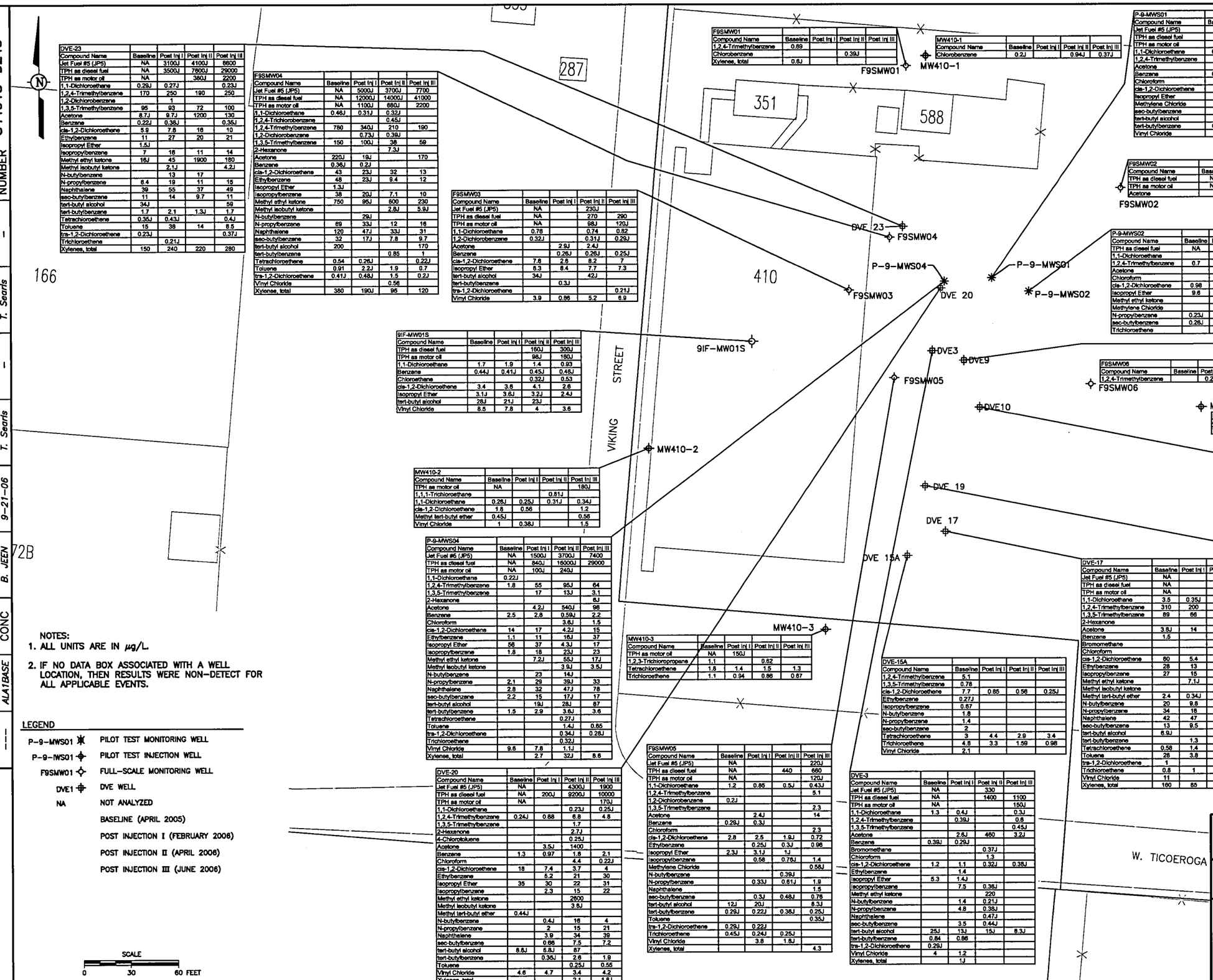
Shaw Shaw Environmental, Inc.

DEPARTMENT OF THE NAVY, SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA

FIGURE 6

IR SITE 9 SHALLOW
DETECTED VOLATILE GROUNDWATER
BASELINE SAMPLING RESULTS

ALAMEDA POINT
ALAMEDA, CALIFORNIA



DVE-23				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA	3100J	4100J	6600
TPH as diesel fuel	NA	3500J	7600J	29000
TPH as motor oil	NA		380J	2200
1,1-Dichloroethane	0.29J	0.27J		0.23J
1,2,4-Trimethylbenzene	170	250	190	250
1,2-Dichlorobenzene		1		
1,3,5-Trimethylbenzene	95	93	72	100
Acetone	8.7J	9.7J	1200	130
Benzene	0.22J	0.35J		0.35J
cis-1,2-Dichloroethene	5.9	7.8	16	10
Ethylbenzene	11	27	20	21
Isopropyl Ether	1.5J			
Isopropylbenzene	7	16	11	14
Methyl ethyl ketone	16J	45	1900	180
Methyl isobutyl ketone		2.1J		4.2J
N-butylbenzene		13	17	
N-propylbenzene	6.4	19	11	15
Naphthalene	39	55	37	49
sec-butylbenzene	11	14	9.7	11
tert-butyl alcohol	34J			59
tert-butylbenzene	1.7	2.1	1.3J	1.7
Tetrachloroethene	0.35J	0.43J		0.4J
Toluene	15	38	14	8.5
trs-1,2-Dichloroethene	0.23J			0.37J
Trichloroethene		0.21J		
Xylenes, total	150	240	220	280

F9SMW04				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA	5000J	3700J	7700
TPH as diesel fuel	NA	12000J	14000J	41000
TPH as motor oil	NA	1100J	880J	2200
1,1-Dichloroethane	0.46J	0.31J	0.32J	
1,2,4-Trichlorobenzene			0.45J	
1,2,4-Trimethylbenzene	780	340J	210	190
1,2-Dichlorobenzene		0.73J	0.39J	
1,3,5-Trimethylbenzene	150	100J	38	59
2-Hexanone			7.3J	
Acetone	220J	19J		170
Benzene	0.36J	0.2J		
cis-1,2-Dichloroethene	43	23J	32	13
Ethylbenzene	48	23J	9.4	12
Isopropyl Ether	1.3J			
Isopropylbenzene	38	20J	7.1	10
Methyl ethyl ketone	750	95J	600	230
Methyl isobutyl ketone			2.8J	5.9J
N-butylbenzene		29J		
N-propylbenzene	69	33J	12	16
Naphthalene	120	47J	33J	31
sec-butylbenzene	32	17J	7.8	9.7
tert-butyl alcohol	200			170
tert-butylbenzene			0.85	1
Tetrachloroethene	0.54	0.26J		0.22J
Toluene	0.91	2.2J	1.9	0.7
trs-1,2-Dichloroethene	0.41J	0.48J	1.5	0.2J
Vinyl Chloride			0.56	
Xylenes, total	380	190J	95	120

F9SMW03				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA		230J	
TPH as diesel fuel	NA		270	290
TPH as motor oil	NA		98J	120J
1,1-Dichloroethane	0.76		0.74	0.82
1,2-Dichlorobenzene	0.32J		0.31J	0.29J
Acetone		2.9J	2.4J	
Benzene		0.26J	0.26J	0.25J
cis-1,2-Dichloroethene	7.6	2.6	8.2	7
Isopropyl Ether	6.3	8.4	7.7	7.3
tert-butyl alcohol	34J		42J	
tert-butylbenzene		0.3J		
trs-1,2-Dichloroethene				0.21J
Vinyl Chloride	3.9	0.86	5.2	6.9

9IF-MW01S				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
TPH as diesel fuel			160J	300J
TPH as motor oil			98J	180J
1,1-Dichloroethane	1.7	1.9	1.4	0.93
Benzene	0.44J	0.41J	0.45J	0.46J
Chloroethane			0.32J	0.53
cis-1,2-Dichloroethene	3.4	3.6	4.1	2.6
Isopropyl Ether	3.1J	3.6J	3.2J	2.4J
tert-butyl alcohol	28J	21J	23J	
Vinyl Chloride	8.5	7.8	4	3.6

MW410-2				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
TPH as motor oil	NA			180J
1,1,1-Trichloroethane			0.81J	
1,1-Dichloroethene	0.26J	0.25J	0.31J	0.34J
cis-1,2-Dichloroethene	1.8	0.56		1.2
Methyl tert-butyl ether	0.45J			0.56
Vinyl Chloride	1	0.38J		1.5

P-9-MWS04				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA	1500J	3700J	7400
TPH as diesel fuel	NA	840J	16000J	29000
TPH as motor oil	NA	100J	240J	
1,1-Dichloroethane	0.22J			
1,2,4-Trimethylbenzene	1.8	55	95J	64
1,3,5-Trimethylbenzene		17	13J	3.1
2-Hexanone				6J
Acetone		4.2J	540J	98
Benzene	2.5	2.8	0.59J	2.2
Chloroform			3.6J	1.5
cis-1,2-Dichloroethene	14	17	4.2J	15
Ethylbenzene	1.1	11	16J	37
Isopropyl Ether	56	37	4.3J	17
Isopropylbenzene	1.8	18	23J	23
Methyl ethyl ketone		7.2J	55J	17J
Methyl isobutyl ketone			3.9J	3.5J
N-butylbenzene		23	14J	
N-propylbenzene	2.1	29	39J	33
Naphthalene	2.8	32	47J	78
sec-butylbenzene	2.2	15	17J	17
tert-butyl alcohol		19J	28J	87
tert-butylbenzene	1.5	2.9	3.6J	3.6
Tetrachloroethene			0.27J	
Toluene			1.4J	0.65
trs-1,2-Dichloroethene			0.34J	0.28J
Trichloroethene			0.32J	
Vinyl Chloride	9.6	7.8	1.1J	
Xylenes, total		2.7	32J	8.6

MW410-3				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
TPH as motor oil	NA	150J		
1,2,3-Trichloropropane	1.1		0.82	
Tetrachloroethene	1.8	1.4	1.5	1.3
Trichloroethene	1.1	0.94	0.86	0.67

DVE-20				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA		4300J	1900
TPH as diesel fuel	NA	200J	9200J	10000
TPH as motor oil	NA			170J
1,1-Dichloroethane			0.23J	0.25J
1,2,4-Trimethylbenzene	0.24J	0.88	6.8	4.8
1,3,5-Trimethylbenzene			1.7	
2-Hexanone			2.7J	
4-Chlorotoluene			0.25J	
Acetone		3.5J	1400	
Benzene	1.3	0.97	1.8	2.1
Chloroform			4.4	0.22J
cis-1,2-Dichloroethene	18	7.4	3.7	4
Ethylbenzene		5.2	21	30
Isopropyl Ether	35	30	22	31
Isopropylbenzene		2.3	15	22
Methyl ethyl ketone			2600	
Methyl isobutyl ketone			3.6J	
Methyl tert-butyl ether	0.44J			
N-butylbenzene		0.4J	16	4
N-propylbenzene		2	15	21
Naphthalene		3.9	34	39
sec-butylbenzene		0.66	7.5	7.2
tert-butyl alcohol	8.6J	5.8J	87	
tert-butylbenzene		0.35J	2.8	1.9
Toluene			0.25J	0.55
Vinyl Chloride	4.6	4.7	3.4	4.2
Xylenes, total			2.1	1.8J

F9SMW05				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA			220J
TPH as diesel fuel	NA		440	660
TPH as motor oil	NA			120J
1,1-Dichloroethane	1.2	0.85	0.5J	0.43J
1,2,4-Trimethylbenzene				5.1
1,2-Dichlorobenzene	0.2J			
1,3,5-Trimethylbenzene				2.3
Acetone		2.4J		14
Benzene	0.29J	0.3J		
Chloroform				2.3
cis-1,2-Dichloroethene	2.8	2.5	1.9J	0.72
Ethylbenzene		0.25J	0.3J	0.96
Isopropyl Ether	2.3J	3.1J	1J	
Isopropylbenzene		0.58	0.76J	1.4
Methylene Chloride				0.58J
N-butylbenzene			0.39J	
N-propylbenzene		0.33J	0.61J	1.9
Naphthalene				1.5
sec-butylbenzene		0.3J	0.48J	0.76
tert-butyl alcohol	12J	20J		8.3J
tert-butylbenzene	0.29J	0.22J	0.38J	0.25J
Toluene				0.35J
trs-1,2-Dichloroethene	0.29J	0.22J		
Trichloroethene	0.45J	0.24J	0.25J	
Vinyl Chloride		3.8	1.6J	
Xylenes, total				4.3

DVE-3				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA		330	
TPH as diesel fuel	NA		1400	1100
TPH as motor oil	NA			150J
1,1-Dichloroethane	1.3	0.4J		0.3J
1,2,4-Trimethylbenzene		0.39J		0.6
1,3,5-Trimethylbenzene				0.45J
Acetone		2.6J	460	3.2J
Benzene	0.39J	0.29J		
Bromomethane			0.37J	
Chloroform			1.3	
cis-1,2-Dichloroethene	1.2	1.1	0.32J	0.38J
Ethylbenzene		1.4		
Isopropyl Ether	5.3	1.4J		
Isopropylbenzene		7.5	0.36J	
Methyl ethyl ketone			220	
N-butylbenzene		1.4	0.21J	
N-propylbenzene		4.8	0.38J	
Naphthalene			0.47J	
sec-butylbenzene		3.5	0.44J	
tert-butyl alcohol	25J	13J	15J	8.3J
tert-butylbenzene	0.84	0.86		
trs-1,2-Dichloroethene	0.29J			
Vinyl Chloride	4	1.2		
Xylenes, total		1J		

DVE-15A				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
1,2,4-Trimethylbenzene	5.1			
1,3,5-Trimethylbenzene	0.78			
cis-1,2-Dichloroethene	7.7	0.85	0.56	0.25J
Ethylbenzene	0.27J			
Isopropylbenzene	0.67			
N-butylbenzene	1.6			
N-propylbenzene	1.4			
sec-butylbenzene	2			
Tetrachloroethene	3	4.4	2.9	3.4
Trichloroethene	4.6	3.3	1.59	0.98
Vinyl Chloride	2.1			

F9SMW01				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
1,2,4-Trimethylbenzene	0.69			
Chlorobenzene			0.39J	
Xylenes, total	0.6J			

MW410-1				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Chlorobenzene	0.2J		0.94J	0.37J

P-9-MWS01				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA		360	380
TPH as diesel fuel	NA		2400	2500
TPH as motor oil	NA		140J	120J
1,1-Dichloroethene	0.47J			
1,2,4-Trimethylbenzene				0.25J
Acetone	13	4.4J		27
Benzene	0.38J		0.23J	0.29J
Chloroform		0.53	0.33J	0.2J
cis-1,2-Dichloroethene	2.1	0.52	0.67J	0.81
Isopropyl Ether	19	7.3	2.5J	3.1J
Methylene Chloride				2.7
sec-butylbenzene				0.22J
tert-butyl alcohol	11J	7.1J	18J	27J
tert-butylbenzene	0.48J	0.46J	0.97J	0.73
Vinyl Chloride	1.8	0.71	0.48J	0.53

F9SMW02				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
TPH as diesel fuel	NA			140J
TPH as motor oil	NA			120J
Acetone			2.2J	

P-9-MWS02				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
TPH as diesel fuel	NA			130J
1,1-Dichloroethane		0.25J		
1,2,4-Trimethylbenzene	0.7			
Acetone			78J	
Chloroform			0.98J	
cis-1,2-Dichloroethene	0.98	0.87	0.24J	0.77
Isopropyl Ether	9.6	14	1.1J	1.7J
Methyl ethyl ketone			380J	5.8J
Methylene Chloride			25J	
N-propylbenzene	0.23J			
sec-butylbenzene	0.26J			
Trichloroethene			0.27J	

DVE-9				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA		630	200J
TPH as diesel fuel	NA		3800	830
TPH as motor oil	NA		110J	98J
1,2,4-Trimethylbenzene			1	0.58
1,3,5-Trimethylbenzene		0.58	0.52	1
Acetone		3J	3.9J	12
Benzene	0.45J			
Chloroform				6.4
Ethylbenzene			0.24J	
Isopropylbenzene		0.53	1.3	0.25J
Methyl tert-butyl ether	0.26J			
N-butylbenzene		0.3J	1.2	
N-propylbenzene		0.52	1.1	0.28J
Naphthalene			0.58	0.53
sec-butylbenzene		0.6	0.96	0.21J
tert-butyl alcohol			11J	
tert-butylbenzene	0.24J	0.34J	0.51	0.25J

F9SMW06				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
1,2,4-Trimethylbenzene		0.21J		

MW410-4				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
TPH as motor oil	NA	120J	320J	

DVE-10				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA		840	
TPH as diesel fuel	NA	110J		170J
1,1-Dichloroethane	0.29J	0.27J	0.43J	0.66
Acetone			89	
cis-1,2-Dichloroethene	0.25J		0.24J	0.64
Methyl ethyl ketone			1100	
Methylene Chloride			47	
Trichloroethene			0.29J	
Vinyl Chloride	0.42J			

DVE-17				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
Jet Fuel #5 (JP5)	NA		1100J	1100J
TPH as diesel fuel	NA		2700J	3700J
TPH as motor oil	NA			120J
1,1-Dichloroethane	3.5	0.35J		
1,2,4-Trimethylbenzene	310	200	30	180J
1,3,5-Trimethylbenzene	89	66	34	79J
2-Hexanone			3.1J	
Acetone	3.8J	14	710	11J
Benzene	1.5			
Bromomethane			0.29J	
Chloroform			1.6	
cis-1,2-Dichloroethene	60	5.4	0.53	0.86J
Ethylbenzene	28	13	1.5	6.8J
Isopropylbenzene	27	15	2.5	12
Methyl ethyl ketone		7.1J	270	
Methyl isobutyl ketone			1.3J	
Methyl tert-butyl ether	2.4	0.34J		
N-butylbenzene	20	9.8	7.6	
N-propylbenzene	34	18	1.7	13J
Naphthalene	42	47	12	47J
sec-butylbenzene	13	9.5	3.1	6.8J
tert-butyl alcohol	6.9J		10J	
tert-butylbenzene		1.3	0.55	
Tetrachloroethene	0.58	1.4	0.25J	0.5J
Toluene	26	3.8	0.79	0.35J
trs-1,2-Dichloroethene	1			
Trichloroethene	0.8	1		0.32J
Vinyl Chloride	11			
Xylenes, total	160	85	40	74

DVE-19				
Compound Name	Baseline	Post Inj I	Post Inj II	Post Inj III
TPH as diesel fuel	NA		180J	330
TPH as motor oil	NA			130J
1,1-Dichloroethane	5.2		2.2	1.5
1,2,4-Trimethylbenzene	240	26		
1,3,5-Trimethylbenzene	37	8.1		
Acetone	2.5J		3.1J	
Benzene	1.2	0.27J		
Chloroform				3.2
cis-1,2-Dichloroethene	19		8.5	2.5
Ethylbenzene	32	3.8		
Isopropylbenzene	29	2.7		
Methyl tert-butyl ether	3		2.6	0.77
N-butylbenzene	13			
N-propylbenzene	23	2.4		
Naphthalene	3.7	0.97		
sec-butylbenzene	11	1.8		
tert-butyl alcohol	10J			
tert-butylbenzene	24			
Tetrachloroethene	0.47J	0.29J		
Toluene	10	2		
trs-1,2-Dichloroethene	0.93			
Trichloroethene	0.59	0.61	0.61	
Vinyl Chloride	14	6	1.2	0.59
Xylenes, total	140	15		

NOTES:
1. ALL UNITS ARE IN $\mu g/L$.
2. IF NO DATA BOX ASSOCIATED WITH A WELL LOCATION, THEN RESULTS WERE NON-DETECT FOR ALL APPLICABLE EVENTS.

LEGEND

P-9-MWS01	PILOT TEST MONITORING WELL
P-9-IWS01	PILOT TEST INJECTION WELL
F9SMW01	FULL-SCALE MONITORING WELL
DVE1	DVE WELL
NA	NOT ANALYZED
	BASELINE (APRIL 2005)
	POST INJECTION I (FEBRUARY 2006)
	POST INJECTION II (APRIL 2006)
	POST INJECTION III (JUNE 2006)

SCALE
0 30 60 FEET

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
---	ALA1BASE	CONC	B. JEEN 9-21-06	T. Searls	T. Searls	844918-D243

Shaw Shaw Environmental, Inc.

DEPARTMENT OF THE NAVY, SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN DIEGO, CALIFORNIA

FIGURE 7

IR SITE 9 SHALLOW
DETECTED VOLATILE GROUNDWATER
SAMPLING RESULTS

ALAMEDA POINT
ALAMEDA, CALIFORNIA

Tables

Table 1: Collected Site 9 Shallow Full-Scale Removal Action Groundwater Samples and Analytical Program
Alameda Point, Alameda, California

Sample Location	Sample Identification	Sample Date	Sample Type	Sample Matrix	Sample Depth (feet bgs)	Phase	VOCs (8260B)	SVOCs (8270C)	Hexavalent Chromium (7196A)	Dissolved Metals (6010B)	TPH-E (8015D)	pH (9040B)
9IF-MW01S	9IF-MW01S-1152	12/27/05	NS	WG	5 - 15	Full Scale Baseline	X	X	X	X		
9IF-MW01S	9IF-MW01S-1177	02/07/06	NS	WG	5 - 15	Full Scale Post Inj I	X	X	X	X		
9IF-MW01S	9IF-MW01S-1201	04/20/06	NS1	WG	5 - 15	Full Scale Post Inj II	X	X	X	X	X	
9IF-MW01S	9IF-MW01S-1202	04/20/06	FD	WG	5 - 15	Full Scale Post Inj II	X					
9IF-MW01S	9IF-MW01S-1229	06/09/06	NS1	WG	5 - 15	Full Scale Post Inj III	X	X	X	X	X	X
9IF-MW01S	9IF-MW01S-1230	06/09/06	FD	WG	5 - 15	Full Scale Post Inj III	X					
DVE-10	DVE-10-1145	12/21/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
DVE-10	DVE-10-1170	02/06/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X	X	
DVE-10	DVE-10-1195	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
DVE-10	DVE-10-1222	06/08/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
DVE-15A	DVE-15A-1146	12/21/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
DVE-15A	DVE-15A-1171	02/06/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X	X	
DVE-15A	DVE-15A-1196	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
DVE-15A	DVE-15A-1223	06/09/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
DVE-17	DVE-17-1147	12/21/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
DVE-17	DVE-17-1172	02/06/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X		
DVE-17	DVE-17-1197	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
DVE-17	DVE-17-1224	06/09/06	NS1	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
DVE-17	DVE-17-1225	06/09/06	FD	WG	-	Full Scale Post Inj III	X					
DVE-19	DVE-19-1148	12/21/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
DVE-19	DVE-19-1173	02/07/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X		
DVE-19	DVE-19-1198	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
DVE-19	DVE-19-1226	06/09/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
DVE-20	DVE-20-1149	12/20/05	NS1	WG	-	Full Scale Baseline	X	X	X	X		
DVE-20	DVE-20-1150	12/20/05	FD	WG	-	Full Scale Baseline	X					
DVE-20	DVE-20-1174	02/07/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X	X	
DVE-20	DVE-20-1199	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
DVE-20	DVE-20-1227	06/07/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X

Table 1: Collected Site 9 Shallow Full-Scale Removal Action Groundwater Samples and Analytical Program
Alameda Point, Alameda, California

Sample Location	Sample Identification	Sample Date	Sample Type	Sample Matrix	Sample Depth (feet bgs)	Phase	VOCs (8260B)	SVOCs (8270C)	Hexavalent Chromium (7196A)	Dissolved Metals (6010B)	TPH-E (8015D)	pH (9040B)
DVE-23	DVE-23-1151	12/20/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
DVE-23	DVE-23-1175	02/07/06	NS1	WG	-	Full Scale Post Inj I	X	X	X	X	X	
DVE-23	DVE-23-1176	02/07/06	FD	WG	-	Full Scale Post Inj I	X					
DVE-23	DVE-23-1200	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
DVE-23	DVE-23-1228	06/08/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
DVE-3	DVE-3-1142	12/20/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
DVE-3	DVE-3-1168	02/06/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X		
DVE-3	DVE-3-1193	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
DVE-3	DVE-3-1220	06/08/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
DVE-9	DVE-9-1143	12/20/05	NS1	WG	-	Full Scale Baseline	X	X	X	X		
DVE-9	DVE-9-1144	12/20/05	FD	WG	-	Full Scale Baseline	X					
DVE-9	DVE-9-1169	02/07/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X		
DVE-9	DVE-9-1194	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
DVE-9	DVE-9-1221	06/07/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
F9SMW01	F9SMW01-1128	12/21/05	NS	WG	5 - 15	Full Scale Baseline	X	X	X	X		
F9SMW01	F9SMW01-1153	02/06/06	NS1	WG	5 - 15	Full Scale Post Inj I	X	X	X	X		
F9SMW01	F9SMW01-1154	02/06/06	FD	WG	5 - 15	Full Scale Post Inj I	X					
F9SMW01	F9SMW01-1178	04/19/06	NS	WG	5 - 15	Full Scale Post Inj II	X	X	X	X	X	
F9SMW01	F9SMW01-1205	06/08/06	NS	WG	5 - 15	Full Scale Post Inj III	X	X	X	X	X	X
F9SMW02	F9SMW02-1129	12/22/05	NS	WG	5 - 15	Full Scale Baseline	X	X	X	X		
F9SMW02	F9SMW02-1155	02/06/06	NS	WG	5 - 15	Full Scale Post Inj I	X	X	X	X	X	
F9SMW02	F9SMW02-1179	04/19/06	NS	WG	5 - 15	Full Scale Post Inj II	X	X	X	X	X	
F9SMW02	F9SMW02-1206	06/07/06	NS	WG	5 - 15	Full Scale Post Inj III	X	X	X	X	X	X
F9SMW03	F9SMW03-1130	12/27/05	NS	WG	5 - 15	Full Scale Baseline	X	X	X	X		
F9SMW03	F9SMW03-1156	02/03/06	NS	WG	5 - 15	Full Scale Post Inj I	X	X	X	X		
F9SMW03	F9SMW03-1180	04/20/06	NS1	WG	5 - 15	Full Scale Post Inj II	X	X	X	X	X	
F9SMW03	F9SMW03-1181	04/20/06	FD	WG	5 - 15	Full Scale Post Inj II	X					
F9SMW03	F9SMW03-1207	06/09/06	NS	WG	5 - 15	Full Scale Post Inj III	X	X	X	X	X	X

Table 1: Collected Site 9 Shallow Full-Scale Removal Action Groundwater Samples and Analytical Program
Alameda Point, Alameda, California

Sample Location	Sample Identification	Sample Date	Sample Type	Sample Matrix	Sample Depth (feet bgs)	Phase	VOCs (8260B)	SVOCs (8270C)	Hexavalent Chromium (7196A)	Dissolved Metals (6010B)	TPH-E (8015D)	pH (9040B)
F9SMW04	F9SMW04-1131	12/20/05	NS	WG	5 - 15	Full Scale Baseline	X	X	X	X		
F9SMW04	F9SMW04-1157	02/03/06	NS	WG	5 - 15	Full Scale Post Inj I	X	X	X	X	X	
F9SMW04	F9SMW04-1182	04/19/06	NS	WG	5 - 15	Full Scale Post Inj II	X	X	X	X	X	
F9SMW04	F9SMW04-1209	06/08/06	NS	WG	5 - 15	Full Scale Post Inj III	X	X	X	X	X	X
F9SMW05	F9SMW05-1132	12/21/05	NS1	WG	5 - 15	Full Scale Baseline	X	X	X	X		
F9SMW05	F9SMW05-1133	12/21/05	FD	WG	5 - 15	Full Scale Baseline	X					
F9SMW05	F9SMW05-1158	02/03/06	NS	WG	5 - 15	Full Scale Post Inj I	X	X	X	X		
F9SMW05	F9SMW05-1183	04/19/06	NS	WG	5 - 15	Full Scale Post Inj II	X	X	X	X	X	
F9SMW05	F9SMW05-1210	06/08/06	NS	WG	5 - 15	Full Scale Post Inj III	X	X	X	X	X	X
F9SMW06	F9SMW06-1134	12/21/05	NS	WG	5 - 13	Full Scale Baseline	X	X	X	X		
F9SMW06	F9SMW06-1159	02/03/06	NS	WG	5 - 13	Full Scale Post Inj I	X	X	X	X	X	
F9SMW06	F9SMW06-1184	04/18/06	NS	WG	5 - 13	Full Scale Post Inj II	X	X	X	X	X	
F9SMW06	F9SMW06-1211	06/09/06	NS	WG	5 - 13	Full Scale Post Inj III	X	X	X	X	X	X
MW410-1	MW410-1-1138	12/22/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
MW410-1	MW410-1-1163	02/03/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X	X	
MW410-1	MW410-1-1188	04/19/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
MW410-1	MW410-1-1216	06/08/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
MW410-2	MW410-2-1139	12/22/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
MW410-2	MW410-2-1164	02/03/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X		
MW410-2	MW410-2-1189	04/19/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
MW410-2	MW410-2-1217	06/09/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
MW410-3	MW410-3-1140	12/21/05	NS	WG	5 - 15	Full Scale Baseline	X	X	X	X		
MW410-3	MW410-3-1165	02/03/06	NS	WG	5 - 15	Full Scale Post Inj I	X	X	X	X	X	
MW410-3	MW410-3-1190	04/19/06	NS1	WG	5 - 15	Full Scale Post Inj II	X	X	X	X	X	
MW410-3	MW410-3-1191	04/19/06	FD	WG	5 - 15	Full Scale Post Inj II	X					
MW410-3	MW410-3-1218	06/09/06	NS	WG	5 - 15	Full Scale Post Inj III	X	X	X	X	X	X
MW410-4	MW410-4-1141	12/21/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
MW410-4	MW410-4-1166	02/06/06	NS1	WG	-	Full Scale Post Inj I	X	X	X	X	X	

Table 1: Collected Site 9 Shallow Full-Scale Removal Action Groundwater Samples and Analytical Program
Alameda Point, Alameda, California

Sample Location	Sample Identification	Sample Date	Sample Type	Sample Matrix	Sample Depth (feet bgs)	Phase	VOCs (8260B)	SVOCs (8270C)	Hexavalent Chromium (7196A)	Dissolved Metals (6010B)	TPH-E (8015D)	pH (9040B)
MW410-4	MW410-4-1167	02/06/06	FD	WG	-	Full Scale Post Inj I	X					
MW410-4	MW410-4-1192	04/20/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
MW410-4	MW410-4-1219	06/09/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
P-9-MWS01	P-9-MWS01-1135	12/20/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
P-9-MWS01	P-9-MWS01-1160	02/06/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X		
P-9-MWS01	P-9-MWS01-1185	04/19/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
P-9-MWS01	P-9-MWS01-1212	06/08/06	NS1	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
P-9-MWS01	P-9-MWS01-1213	06/08/06	FD	WG	-	Full Scale Post Inj III	X					
P-9-MWS02	P-9-MWS02-1136	12/20/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
P-9-MWS02	P-9-MWS02-1161	02/06/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X		
P-9-MWS02	P-9-MWS02-1186	04/19/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
P-9-MWS02	P-9-MWS02-1214	06/07/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X
P-9-MWS04	P-9-MWS04-1137	12/20/05	NS	WG	-	Full Scale Baseline	X	X	X	X		
P-9-MWS04	P-9-MWS04-1162	02/03/06	NS	WG	-	Full Scale Post Inj I	X	X	X	X	X	
P-9-MWS04	P-9-MWS04-1187	04/19/06	NS	WG	-	Full Scale Post Inj II	X	X	X	X	X	
P-9-MWS04	P-9-MWS04-1215	06/08/06	NS	WG	-	Full Scale Post Inj III	X	X	X	X	X	X

Notes:

X = analysis performed on sample. Blank indicates analysis not performed.

bgs	below ground surface
VOC	volatile organic compound
SVOC	semivolatile organic compound
TPH-E	total petroleum hydrocarbons - extractable
NS	Normal Sample
NS1	Normal Sample with Field Duplicate
FD	Field Duplicate
WG	groundwater
Post Inj	post injection event

Table 2: Site 9 Shallow Full-Scale Removal Action Field-Measured Parameters
Alameda Point, Alameda, California

Well Name	Date	Phase	Temperature (°C)	Specific Conductivity (mS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Ferrous Iron (mg/L)	Hydrogen peroxide (mg/L)
9IF-MW01S	12/27/05	Full Scale Baseline	16.78	1.99	7.41	5.2	0.34	-165.10	0.00	0.00
9IF-MW01S	02/07/06	Full Scale Post Inj I	15.96	2.28	7.12	0	0.00	-208.00	1.00	0.00
9IF-MW01S	04/20/06	Full Scale Post Inj II	15.50	2.39	7.29	2.5	1.95	-149.00	3.30	1.00
9IF-MW01S	06/09/06	Full Scale Post Inj III	16.24	2.11	8.76	5.9	7.68	-204.00	2.69	2.00
DVE-10	12/21/05	Full Scale Baseline	18.94	0.83	7.00	83.2	0.29	-111.60	8.00	0.00
DVE-10	02/06/06	Full Scale Post Inj I	17.12	0.88	6.82	53.5	5.12	8.00	0.20	0.00
DVE-10	04/20/06	Full Scale Post Inj II	17.29	1.01	6.81	20.1	2.98	-179.00	1.75	1.00
DVE-10	06/08/06	Full Scale Post Inj III	21.29	0.97	7.32	73.3	1.17	-123.00	2.12	100.00
DVE-15A	12/21/05	Full Scale Baseline	19.84	0.62	7.18	86.8	0.21	-83.10	1.00	0.00
DVE-15A	02/06/06	Full Scale Post Inj I	18.32	0.60	6.91	397	0.00	-120.00	0.80	0.00
DVE-15A	04/20/06	Full Scale Post Inj II	17.51	0.71	7.16	3.7	1.83	17.00	0.19	1.00
DVE-15A	06/09/06	Full Scale Post Inj III	19.88	0.57	6.62	16.4	13.05	61.00	0.22	2.00
DVE-17	12/21/05	Full Scale Baseline	20.07	0.74	6.97	144.2	0.22	-139.00	NM	NM
DVE-17	02/06/06	Full Scale Post Inj I	18.30	0.62	6.82	70.4	0.00	-202.00	8.00	0.00
DVE-17	04/20/06	Full Scale Post Inj II	18.32	1.21	6.30	20.8	19.99	321.00	0.51	100.00
DVE-17	06/09/06	Full Scale Post Inj III	20.75	1.11	6.89	0	1.29	-195.00	211.00	2.00
DVE-19	12/21/05	Full Scale Baseline	19.59	1.22	6.88	29.4	0.37	-117.60	5.00	0.00
DVE-19	02/07/06	Full Scale Post Inj I	18.56	1.44	6.83	62.9	1.02	-123.00	5.00	0.10
DVE-19	04/20/06	Full Scale Post Inj II	18.10	1.22	6.78	6.0	9.03	276.00	0.13	2.00
DVE-19	06/09/06	Full Scale Post Inj III	22.65	1.45	6.51	2.9	NM	89.00	0.35	5.00
DVE-20	12/20/05	Full Scale Baseline	20.24	6.02	7.38	NM	0.50	-177.70	4.00	0.00
DVE-20	02/07/06	Full Scale Post Inj I	18.04	5.79	7.27	0	0.00	-265.00	1.00	0.00
DVE-20	04/20/06	Full Scale Post Inj II	18.03	3.52	6.74	20.4	2.87	-245.00	2.09	NM
DVE-20	06/07/06	Full Scale Post Inj III	20.05	3.37	7.70	86.9	3.95	-228.00	2.29	100.00
DVE-23	12/20/05	Full Scale Baseline	18.58	2.38	7.24	28.5	0.39	-184.00	9.00	0.00
DVE-23	02/07/06	Full Scale Post Inj I	17.58	1.39	6.48	216	1.04	-188.00	10.00	0.00

Table 2: Site 9 Shallow Full-Scale Removal Action Field-Measured Parameters
Alameda Point, Alameda, California

Well Name	Date	Phase	Temperature (°C)	Specific Conductivity (mS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Ferrous Iron (mg/L)	Hydrogen peroxide (mg/L)
DVE-23	04/20/06	Full Scale Post Inj II	17.53	1.10	6.21	84.1	2.66	-187.00	2.94	1.00
DVE-23	06/08/06	Full Scale Post Inj III	20.16	1.30	7.35	111.0	5.17	-219.00	3.30	100.00
DVE-3	12/20/05	Full Scale Baseline	19.66	2.43	7.04	50	0.48	-171.90	22.50	0.00
DVE-3	02/06/06	Full Scale Post Inj I	17.58	2.15	6.97	72.1	0.00	-215.00	10.00	0.00
DVE-3	04/20/06	Full Scale Post Inj II	18.22	1.58	6.35	136	19.99	24.50	0.71	NM
DVE-3	06/08/06	Full Scale Post Inj III	21.57	1.45	6.75	147	5.56	63.00	0.15	NM
DVE-9	12/20/05	Full Scale Baseline	19.95	1.14	6.89	133.7	1.13	-105.50	10.00	0.00
DVE-9	02/07/06	Full Scale Post Inj I	17.83	1.44	6.94	48.5	2.08	-180.00	8.00	0.20
DVE-9	04/20/06	Full Scale Post Inj II	17.90	1.10	6.43	13.7	5.46	-125.00	1.80	1.00
DVE-9	06/07/06	Full Scale Post Inj III	21.13	1.75	5.61	163	10.67	-2.00	2.00	2.59
F9SMW01	12/21/05	Full Scale Baseline	18.49	1.37	7.58	0.1	1.03	-76.90	0.00	0.00
F9SMW01	02/06/06	Full Scale Post Inj I	16.73	0.88	7.41	48.3	1.56	-85.00	0.10	0.20
F9SMW01	04/19/06	Full Scale Post Inj II	16.45	0.91	7.84	18.3	7.23	133.00	0.00	2.00
F9SMW01	06/08/06	Full Scale Post Inj III	19.42	0.87	6.30	-10	11.61	22.00	0.24	1.00
F9SMW02	12/22/05	Full Scale Baseline	20.72	17.74	6.99	NM	0.57	-174.10	10.00	0.00
F9SMW02	02/06/06	Full Scale Post Inj I	19.97	17.40	6.75	151	1.36	-124.00	3.00	0.00
F9SMW02	04/19/06	Full Scale Post Inj II	19.47	17.40	7.08	237	1.82	-198.00	2.52	1.00
F9SMW02	06/07/06	Full Scale Post Inj III	20.32	16.20	7.33	980	6.66	-142.00	0.00	100.00
F9SMW03	12/27/05	Full Scale Baseline	16.86	2.82	7.26	1.3	1.16	-138.30	0.00	0.00
F9SMW03	02/03/06	Full Scale Post Inj I	18.44	2.55	6.92	35.4	0.00	-149.00	4.00	0.00
F9SMW03	04/20/06	Full Scale Post Inj II	15.60	3.88	7.31	4.4	2.29	-148.00	3.30	1.00
F9SMW03	06/09/06	Full Scale Post Inj III	16.13	3.53	8.39	247	12.01	-173.00	1.93	3.00
F9SMW04	12/20/05	Full Scale Baseline	20.02	1.29	6.69	84.8	0.34	-152.90	19.00	0.00
F9SMW04	02/03/06	Full Scale Post Inj I	16.74	0.74	6.29	105.0	0.00	-234.00	10.00	0.00
F9SMW04	04/19/06	Full Scale Post Inj II	17.21	0.92	6.11	78.1	3.44	-174.00	2.72	1.00
F9SMW04	06/08/06	Full Scale Post Inj III	21.21	1.64	7.19	69.1	7.89	-211.00	2.85	100.00

Table 2: Site 9 Shallow Full-Scale Removal Action Field-Measured Parameters
Alameda Point, Alameda, California

Well Name	Date	Phase	Temperature (°C)	Specific Conductivity (mS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Ferrous Iron (mg/L)	Hydrogen peroxide (mg/L)
F9SMW05	12/21/05	Full Scale Baseline	19.17	1.38	7.04	NM	0.15	-160.30	5.00	0.00
F9SMW05	02/03/06	Full Scale Post Inj I	17.69	2.02	7.03	17.1	0.00	-191.00	NM	NM
F9SMW05	04/19/06	Full Scale Post Inj II	17.68	1.28	6.89	91.4	5.06	-112.00	1.29	1.00
F9SMW05	06/08/06	Full Scale Post Inj III	20.48	1.25	6.33	-10	10.75	-65.00	0.84	3.00
F9SMW06	12/21/05	Full Scale Baseline	20.17	0.50	6.09	NM	1.02	49.80	0.40	0.00
F9SMW06	02/03/06	Full Scale Post Inj I	17.88	0.41	6.65	28.7	2.31	44.00	0.00	0.00
F9SMW06	04/18/06	Full Scale Post Inj II	18.58	0.64	6.66	0.5	4.31	275.00	0.08	100.00
F9SMW06	06/09/06	Full Scale Post Inj III	23.17	0.39	7.07	34.2	2.81	19.00	0.00	1.00
MW410-1	12/22/05	Full Scale Baseline	18.42	1.33	7.53	NM	1.11	-44.30	0.20	0.00
MW410-1	02/03/06	Full Scale Post Inj I	16.60	1.41	7.39	20.4	3.82	-11.00	0.00	0.00
MW410-1	04/19/06	Full Scale Post Inj II	15.87	1.00	7.86	-6.7	4.65	84.00	0.05	52.00
MW410-1	06/08/06	Full Scale Post Inj III	19.51	0.99	6.63	3.1	8.96	-42.00	0.23	1.00
MW410-2	12/22/05	Full Scale Baseline	17.57	0.63	7.32	NM	1.63	65.10	NM	NM
MW410-2	02/03/06	Full Scale Post Inj I	16.73	0.40	7.27	18.9	2.56	51.00	0.00	0.00
MW410-2	04/19/06	Full Scale Post Inj II	16.46	0.42	7.65	2.2	7.58	112.00	0.35	0.00
MW410-2	06/09/06	Full Scale Post Inj III	17.61	0.68	6.87	4	10.41	16.00	0.29	2.00
MW410-3	12/21/05	Full Scale Baseline	19.83	0.52	7.58	NM	1.93	1.55	0.00	0.00
MW410-3	02/03/06	Full Scale Post Inj I	18.27	0.46	7.43	16.6	1.86	23.00	0.00	0.10
MW410-3	04/19/06	Full Scale Post Inj II	18.05	0.70	7.56	-1.9	2.45	219.00	0.06	1.00
MW410-3	06/09/06	Full Scale Post Inj III	20.96	0.50	8.01	0	2.56	-70.00	0.02	1.00
MW410-4	12/21/05	Full Scale Baseline	20.51	0.40	8.16	NM	2.12	101.40	0.00	0.00
MW410-4	02/06/06	Full Scale Post Inj I	18.52	0.39	7.95	4.7	3.57	144.00	0.00	0.00
MW410-4	04/20/06	Full Scale Post Inj II	18.03	0.52	7.98	136.0	6.11	263.00	0.02	1.00
MW410-4	06/09/06	Full Scale Post Inj III	20.53	0.37	8.60	0	6.20	3.00	0.02	1.00
P-9-MWS01	12/20/05	Full Scale Baseline	20.21	4.59	7.21	NM	0.22	-200.00	10.00	0.00
P-9-MWS01	02/06/06	Full Scale Post Inj I	18.08	3.13	6.78	18.9	1.52	-198.00	10.00	0.00

Table 2: Site 9 Shallow Full-Scale Removal Action Field-Measured Parameters
Alameda Point, Alameda, California

Well Name	Date	Phase	Temperature (°C)	Specific Conductivity (mS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Ferrous Iron (mg/L)	Hydrogen peroxide (mg/L)
P-9-MWS01	04/19/06	Full Scale Post Inj II	18.69	3.07	6.90	18.6	1.68	-43.00	3.30	3.00
P-9-MWS01	06/08/06	Full Scale Post Inj III	20.78	3.30	7.03	3.3	1.22	-192.00	2.44	100.00
P-9-MWS02	12/20/05	Full Scale Baseline	20.91	2.94	7.33	NM	0.75	-105.50	0.90	0.00
P-9-MWS02	02/06/06	Full Scale Post Inj I	19.58	3.47	7.14	2.7	2.18	-118.00	0.60	0.00
P-9-MWS02	04/19/06	Full Scale Post Inj II	19.88	1.48	162.00	5.34	6.98	22.00	0.56	2.00
P-9-MWS02	06/07/06	Full Scale Post Inj III	21.88	1.89	7.28	72.2	9.52	95.00	0.00	2.00
P-9-MWS04	12/20/05	Full Scale Baseline	20.49	6.50	7.27	NM	0.37	-206.90	3.00	0.00
P-9-MWS04	02/03/06	Full Scale Post Inj I	18.93	5.79	7.09	25.1	1.89	-261.00	1.00	0.00
P-9-MWS04	04/19/06	Full Scale Post Inj II	17.97	2.64	6.70	10.1	1.33	-183.00	3.30	NM
P-9-MWS04	06/08/06	Full Scale Post Inj III	20.46	3.05	6.77	175	1.00	-220.00	2.00	100.00

Notes: Field parameter measurements were taken during well purging prior to collection of the groundwater sample.
Bolded results are outside expected range of parameter. Baseline dissolved oxygen levels should be below approximately 9 ppm.

°C	Degree Celcius
mS/cm	milliSiemens per centimeter
NTU	Nephelometric Turbidity Unit
ppm	parts per million
ORP	oxidation-reduction potential
mV	millivolts
mg/L	milligrams per liter
Post Inj	post injection event
NM	not measured

Table 3: Detected Baseline and Post-Injection Groundwater Sample Results, Volatile Organic Compounds, Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: 9IF-MW01S		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Benzene	1	µg/L	0.44 J	0.41 J	0.45 J	0.46 J
	SW8260B	tert-butyl alcohol		µg/L	28 J	21 J	23 J	50 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.32 J	0.53
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	1.7	1.9	1.4	0.93
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	3.4	3.6	4.1	2.6
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Isopropyl Ether		µg/L	3.1 J	3.6 J	3.2 J	2.4 J
	SW8260B	Vinyl Chloride	0.5	µg/L	8.5	7.8	4	3.6
Location: DVE-10								
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	89	10 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.29 J	0.27 J	0.43 J	0.66
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.25 J	0.5 U	0.24 J	0.64
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	1100	20 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	47	1 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.29 J	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.42 J	0.5 U	0.5 U	0.5 U
Location: DVE-15A								
VOCs	SW8260B	N-butylbenzene		µg/L	1.8	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	2	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	7.7	0.85	0.56	0.25 J
	SW8260B	Ethylbenzene	300	µg/L	0.27 J	0.5 U	0.5 U	0.5 U
	SW8260B	Isopropylbenzene		µg/L	0.67	0.5 U	0.5 U	0.5 U
	SW8260B	N-propylbenzene		µg/L	1.4	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	3	4.4	2.9	3.4
	SW8260B	Trichloroethene	5	µg/L	4.6	3.3	1.59	0.98
	SW8260B	1,2,4-Trimethylbenzene		µg/L	5.1	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.78	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	2.1	0.5 U	0.5 U	0.5 U
Location: DVE-17								
VOCs	SW8260B	Acetone		µg/L	3.8 J	14	710	11 J
	SW8260B	Benzene	1	µg/L	1.5	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.29 J	0.5 UJ
	SW8260B	tert-butyl alcohol		µg/L	6.9 J	50 U	10 J	50 U
	SW8260B	N-butylbenzene		µg/L	20	9.8	7.6	0.5 U
	SW8260B	sec-butylbenzene		µg/L	13	9.5	3.1	6.8 J
	SW8260B	tert-butylbenzene		µg/L	0.5 U	1.3	0.55	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	1.6	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	3.5	0.35 J	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	60	5.4	0.53	0.86 J
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	1	0.5 U	0.5 U	0.5 U

Table 3: Detected Baseline and Post-Injection Groundwater Sample Results, Volatile Organic Compounds, Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-17								
VOCs	SW8260B	Ethylbenzene	300	µg/L	28	13	1.5	6.8 J
	SW8260B	2-Hexanone		µg/L	20 U	20 U	3.1 J	20 U
	SW8260B	Isopropylbenzene		µg/L	27	15	2.5	12
	SW8260B	Methyl ethyl ketone		µg/L	20 U	7.1 J	270	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	1.3 J	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	2.4	0.34 J	0.5 U	0.5 U
	SW8260B	N-propylbenzene		µg/L	34	18	1.7	13 J
	SW8260B	Naphthalene		µg/L	42	47	12	47 J
	SW8260B	Tetrachloroethene	5	µg/L	0.58	1.4	0.25 J	0.5 J
	SW8260B	Toluene	150	µg/L	28	3.8	0.79	0.35 J
	SW8260B	Trichloroethene	5	µg/L	0.8	1	0.5 U	0.32 J
	SW8260B	1,2,4-Trimethylbenzene		µg/L	310	200	30	180 J
	SW8260B	1,3,5-Trimethylbenzene		µg/L	89	66	34	79 J
	SW8260B	Vinyl Chloride	0.5	µg/L	11	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	160	85	40	74
Location: DVE-19								
VOCs	SW8260B	Acetone		µg/L	2.5 J	10 U	3.1 J	10 U
	SW8260B	Benzene	1	µg/L	1.2	0.27 J	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	10 J	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	13	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	11	1.8	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	24	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	3.2
	SW8260B	1,1-Dichloroethane	5	µg/L	5.2	0.5 U	2.2	1.5
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	19	0.5 U	8.5	2.5
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.93	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	32	3.6	0.5 U	0.5 U
	SW8260B	Isopropylbenzene		µg/L	29	2.7	0.5 U	0.5 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	3	0.5 U	2.6	0.77
	SW8260B	N-propylbenzene		µg/L	23	2.4	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	3.7	0.97	0.5 U	0.5 UJ
	SW8260B	Tetrachloroethene	5	µg/L	0.47 J	0.29 J	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	10	2	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.59	0.61	0.61	0.5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	240	26	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	37	8.1	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	14	6	1.2	0.59
	SW8260B	Xylenes, total	1750	µg/L	140	15	2 U	2 U
Location: DVE-20								
VOCs	SW8260B	Acetone		µg/L	10 U	3.5 J	1400	10 U
	SW8260B	Benzene	1	µg/L	1.3	0.97	1.6	2.1

Table 3: Detected Baseline and Post-Injection Groundwater Sample Results, Volatile Organic Compounds, Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-20								
VOCs	SW8260B	tert-butyl alcohol		µg/L	8.6 J	5.8 J	87	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.4 J	16	4
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.66	7.5	7.2
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.35 J	2.6	1.9
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	4.4	0.22 J
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.25 J	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.23 J	0.25 J
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	18	7.4	3.7	4
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	5.2	21	30
	SW8260B	2-Hexanone		µg/L	20 U	20 U	2.7 J	20 U
	SW8260B	Isopropyl Ether		µg/L	35	30	22	31
	SW8260B	Isopropylbenzene		µg/L	0.5 U	2.3	15	22
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	2600	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	3.6 J	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.44 J	0.5 U	0.5 U	0.5 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	2	15	21
	SW8260B	Naphthalene		µg/L	0.5 U	3.9	34	39
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.25 J	0.55
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.24 J	0.88	6.8	4.8
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	1.7	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	4.6	4.7	3.4	4.2
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2.1	1.6 J
Location: DVE-23								
VOCs	SW8260B	Acetone		µg/L	8.7 J	9.7 J	1200	130
	SW8260B	Benzene	1	µg/L	0.22 J	0.38 J	2.5 U	0.35 J
	SW8260B	tert-butyl alcohol		µg/L	34 J	50 U	250 U	59
	SW8260B	N-butylbenzene		µg/L	0.5 U	13	17	0.5 U
	SW8260B	sec-butylbenzene		µg/L	11	14	9.7	11
	SW8260B	tert-butylbenzene		µg/L	1.7	2.1	1.3 J	1.7
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	1	2.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.29 J	0.27 J	2.5 U	0.23 J
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	5.9	7.8	16	10
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.23 J	0.5 U	2.5 U	0.37 J
	SW8260B	Ethylbenzene	300	µg/L	11	27	20	21
	SW8260B	Isopropyl Ether		µg/L	1.5 J	5 U	25 U	5 U
	SW8260B	Isopropylbenzene		µg/L	7	16	11	14
	SW8260B	Methyl ethyl ketone		µg/L	16 J	45	1900	180
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	2.1 J	100 U	4.2 J
	SW8260B	N-propylbenzene		µg/L	6.4	19	11	15
	SW8260B	Naphthalene		µg/L	39	55	37	49
	SW8260B	Tetrachloroethene	5	µg/L	0.35 J	0.43 J	2.5 U	0.4 J

Table 3: Detected Baseline and Post-Injection Groundwater Sample Results, Volatile Organic Compounds, Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-23								
VOCs	SW8260B	Toluene	150	µg/L	15	38	14	8.5
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.21 J	2.5 U	0.5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	170	250	190	250
	SW8260B	1,3,5-Trimethylbenzene		µg/L	95	93	72	100
	SW8260B	Xylenes, total	1750	µg/L	150	240	220	280
Location: DVE-3								
VOCs	SW8260B	Acetone		µg/L	10 U	2.6 J	460	3.2 J
	SW8260B	Benzene	1	µg/L	0.39 J	0.29 J	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.37 J	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	25 J	13 J	15 J	8.3 J
	SW8260B	N-butylbenzene		µg/L	0.5 U	1.4	0.21 J	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	3.5	0.44 J	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.84	0.86	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	1.3	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	1.3	0.4 J	0.5 U	0.3 J
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	1.2	1.1	0.32 J	0.38 J
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.29 J	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	1.4	0.5 U	0.5 U
	SW8260B	Isopropyl Ether		µg/L	5.3	1.4 J	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	7.5	0.36 J	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	220	20 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	4.8	0.38 J	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.47 J	0.5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.39 J	0.5 U	0.6
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.45 J
	SW8260B	Vinyl Chloride	0.5	µg/L	4	1.2	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	1 J	2 U	2 U
Location: DVE-9								
VOCs	SW8260B	Acetone		µg/L	10 U	3 J	3.9 J	12
	SW8260B	Benzene	1	µg/L	0.45 J	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	11 J	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.3 J	1.2	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.6	0.95	0.21 J
	SW8260B	tert-butylbenzene		µg/L	0.24 J	0.34 J	0.51	0.25 J
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	6.4
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.24 J	0.5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.53	1.3	0.25 J
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.26 J	0.5 U	0.5 U	0.5 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.52	1.1	0.28 J
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.58	0.53
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	1	0.58

Table 3: Detected Baseline and Post-Injection Groundwater Sample Results, Volatile Organic Compounds, Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-9								
VOCs	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.58	0.52	1
Location: F9SMW01		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.39 J	0.5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.69	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	0.6 J	2 U	2 U	2 U
Location: F9SMW02		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	2.2 J	10 U
Location: F9SMW03		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	10 UJ	2.9 J	2.4 J	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.26 J	0.26 J	0.25 J
	SW8260B	tert-butyl alcohol		µg/L	34 J	50 U	42 J	50 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.3 J	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.32 J	0.5 U	0.31 J	0.29 J
	SW8260B	1,1-Dichloroethane	5	µg/L	0.76	0.5 U	0.74	0.82
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	7.6	2.6	8.2	7
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.21 J
	SW8260B	Isopropyl Ether		µg/L	6.3	8.4	7.7	7.3
	SW8260B	Vinyl Chloride	0.5	µg/L	3.9	0.86	5.2	6.9
Location: F9SMW04		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	220 J	19 J	10 U	170
	SW8260B	Benzene	1	µg/L	0.36 J	0.2 J	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	200	50 U	50 U	170
	SW8260B	N-butylbenzene		µg/L	0.5 U	29 J	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	32	17 J	7.8	9.7
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.85	1
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.73 J	0.39 J	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.46 J	0.31 J	0.32 J	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	43	23 J	32	13
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.41 J	0.48 J	1.5	0.2 J
	SW8260B	Ethylbenzene	300	µg/L	48	23 J	9.4	12
	SW8260B	2-Hexanone		µg/L	20 U	20 U	7.3 J	20 U
	SW8260B	Isopropyl Ether		µg/L	1.3 J	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	38	20 J	7.1	10
	SW8260B	Methyl ethyl ketone		µg/L	750	95 J	600	230
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	2.8 J	5.9 J
	SW8260B	N-propylbenzene		µg/L	69	33 J	12	16
	SW8260B	Naphthalene		µg/L	120	47 J	33	31
	SW8260B	Tetrachloroethene	5	µg/L	0.54	0.26 J	0.5 U	0.22 J
	SW8260B	Toluene	150	µg/L	0.91	2.2 J	1.9	0.7
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.45 J	0.5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	780	340 J	210	190

Table 3: Detected Baseline and Post-Injection Groundwater Sample Results, Volatile Organic Compounds, Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW04		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	1,3,5-Trimethylbenzene		µg/L	150	100 J	38	59
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.56	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	380	190 J	95	120
Location: F9SMW05		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	10 U	2.4 J	10 U	14
	SW8260B	Benzene	1	µg/L	0.29 J	0.3 J	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	12 J	20 J	50 U	8.3 J
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.39 J	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.3 J	0.48 J	0.76
	SW8260B	tert-butylbenzene		µg/L	0.29 J	0.22 J	0.38 J	0.25 J
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	2.3
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.2 J	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	1.2	0.85	0.5 J	0.43 J
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	2.8	2.5	1.9 J	0.72
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.29 J	0.22 J	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.25 J	0.3 J	0.96
	SW8260B	Isopropyl Ether		µg/L	2.3 J	3.1 J	1 J	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.58	0.76 J	1.4
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	0.58 J
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.33 J	0.61 J	1.9
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	1.5
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.35 J
	SW8260B	Trichloroethene	5	µg/L	0.45 J	0.24 J	0.25 J	0.5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	5.1
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	2.3
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	3.8	1.8 J	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	4.3
Location: F9SMW06		**Depth: 5 - 13 feet bgs**						
VOCs	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.21 J	0.5 U	0.5 U
Location: MW410-1								
VOCs	SW8260B	Chlorobenzene	70	µg/L	0.2 J	0.5 U	0.94 J	0.37 J
Location: MW410-2								
VOCs	SW8260B	1,1-Dichloroethane	5	µg/L	0.26 J	0.25 J	0.31 J	0.34 J
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	1.8	0.56	0.5 U	1.2
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.45 J	0.5 U	0.5 U	0.56
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.81 J	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	1	0.38 J	0.5 U	1.5
Location: MW410-3		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Tetrachloroethene	5	µg/L	1.8	1.4	1.5	1.3
	SW8260B	Trichloroethene	5	µg/L	1.1	0.94	0.86	0.67
	SW8260B	1,2,3-Trichloropropane		µg/L	1.1	0.5 U	0.62	0.5 U

Table 3: Detected Baseline and Post-Injection Groundwater Sample Results, Volatile Organic Compounds, Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: P-9-MWS01								
VOCs	SW8260B	Acetone		µg/L	13	4.4 J	10 U	27
	SW8260B	Benzene	1	µg/L	0.36 J	0.5 U	0.23 J	0.29 J
	SW8260B	tert-butyl alcohol		µg/L	11 J	7.1 J	16 J	27 J
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.22 J
	SW8260B	tert-butylbenzene		µg/L	0.48 J	0.46 J	0.97 J	0.73
	SW8260B	Chloroform		µg/L	0.5 U	0.53	0.33 J	0.2 J
	SW8260B	1,1-Dichloroethane	5	µg/L	0.47 J	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	2.1	0.82	0.67 J	0.81
	SW8260B	Isopropyl Ether		µg/L	19	7.3	2.5 J	3.1 J
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	1 UJ	2.7
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.25 J
	SW8260B	Vinyl Chloride	0.5	µg/L	1.8	0.71	0.48 J	0.53
Location: P-9-MWS02								
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	78 J	10 U
	SW8260B	sec-butylbenzene		µg/L	0.26 J	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.98 J	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.25 J	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.98	0.87	0.24 J	0.77
	SW8260B	Isopropyl Ether		µg/L	9.6	14	1.1 J	1.7 J
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	360 J	5.8 J
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	25 J	1 U
	SW8260B	N-propylbenzene		µg/L	0.23 J	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.27 J	0.5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.7	0.5 U	0.5 U	0.5 U
Location: P-9-MWS04								
VOCs	SW8260B	Acetone		µg/L	10 U	4.2 J	540 J	98
	SW8260B	Benzene	1	µg/L	2.5	2.8	0.59 J	2.2
	SW8260B	tert-butyl alcohol		µg/L	50 U	19 J	28 J	87
	SW8260B	N-butylbenzene		µg/L	0.5 U	23	14 J	0.5 U
	SW8260B	sec-butylbenzene		µg/L	2.2	15	17 J	17
	SW8260B	tert-butylbenzene		µg/L	1.5	2.9	3.6 J	3.6
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	3.6 J	1.5
	SW8260B	1,1-Dichloroethane	5	µg/L	0.22 J	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	14	17	4.2 J	15
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.34 J	0.28 J
	SW8260B	Ethylbenzene	300	µg/L	1.1	11	16 J	37
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	6 J
	SW8260B	Isopropyl Ether		µg/L	56	37	4.3 J	17
	SW8260B	Isopropylbenzene		µg/L	1.8	18	23 J	23
	SW8260B	Methyl ethyl ketone		µg/L	20 U	7.2 J	55 J	17 J
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	3.9 J	3.5 J

Table 3: Detected Baseline and Post-Injection Groundwater Sample Results, Volatile Organic Compounds, Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: P-9-MWS04								
VOCs	SW8260B	N-propylbenzene		µg/L	2.1	29	39 J	33
	SW8260B	Naphthalene		µg/L	2.8	32	47 J	78
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.27 J	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	1.4 J	0.65
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.32 J	0.5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	1.8	55	95 J	64
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	17	13 J	3.1
	SW8260B	Vinyl Chloride	0.5	µg/L	9.6	7.8	1.1 J	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2.7	32 J	8.6

Notes:

Circled result indicates detected result exceeds associated MCL.

bgs below ground surface
MCL California maximum contaminant level (Title 22, California Code of Regulations, effective June 2003)
µg/L micrograms per liter
VOCs volatile organic compounds
U Not detected at or above the indicated reporting limit
J Estimated value
Post Inj post injection event

Table 4: Detected Post-Injection Groundwater Sample TPH-E Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: 9IF-MW01S			**Depth: 5 - 15 feet bgs**					
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			160 J	300 J
	M8015D	TPH as motor oil		µg/L			98 J	160 J
Location: DVE-10								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		110 J	190 U	170 J
	M8015D	Jet Fuel #5 (JP5)		µg/L		280 U	640	310 U
Location: DVE-17								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			2700 J	3700 J
	M8015D	Jet Fuel #5 (JP5)		µg/L			1100 J	1100 J
	M8015D	TPH as motor oil		µg/L			200 UJ	120 J
Location: DVE-19								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			180 J	330
	M8015D	TPH as motor oil		µg/L			200 U	130 J
Location: DVE-20								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		200 J	9200 J	10000
	M8015D	Jet Fuel #5 (JP5)		µg/L		280 UJ	4300 J	1900
	M8015D	TPH as motor oil		µg/L		190 UJ	190 UJ	170 J
Location: DVE-23								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		3500 J	7600 J	29000
	M8015D	Jet Fuel #5 (JP5)		µg/L		3100 J	4100 J	6600
	M8015D	TPH as motor oil		µg/L		190 UJ	380 J	2200
Location: DVE-3								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			1400	1100
	M8015D	Jet Fuel #5 (JP5)		µg/L			330	300 U
	M8015D	TPH as motor oil		µg/L			190 U	150 J
Location: DVE-9								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			3800	830
	M8015D	Jet Fuel #5 (JP5)		µg/L			630	200 J
	M8015D	TPH as motor oil		µg/L			110 J	98 J
Location: F9SMW02			**Depth: 5 - 15 feet bgs**					
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		190 UJ	190 UJ	140 J
	M8015D	TPH as motor oil		µg/L		190 UJ	190 UJ	120 J
Location: F9SMW03			**Depth: 5 - 15 feet bgs**					
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			270	290
	M8015D	Jet Fuel #5 (JP5)		µg/L			230 J	280 U
	M8015D	TPH as motor oil		µg/L			98 J	120 J
Location: F9SMW04			**Depth: 5 - 15 feet bgs**					
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		12000 J	14000 J	41000
	M8015D	Jet Fuel #5 (JP5)		µg/L		5000 J	3700 J	7700
	M8015D	TPH as motor oil		µg/L		1100 J	680 J	2200
Location: F9SMW05			**Depth: 5 - 15 feet bgs**					
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			440	660
	M8015D	Jet Fuel #5 (JP5)		µg/L			280 U	220 J

Table 4: Detected Post-Injection Groundwater Sample TPH-E Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW05			**Depth: 5 - 15 feet bgs**					
TPH Extractable	M8015D	TPH as motor oil		µg/L			190 U	120 J
Location: MW410-2								
TPH Extractable	M8015D	TPH as motor oil		µg/L			190 UJ	180 J
Location: MW410-3			**Depth: 5 - 15 feet bgs**					
TPH Extractable	M8015D	TPH as motor oil		µg/L		150 J	200 UJ	200 U
Location: MW410-4								
TPH Extractable	M8015D	TPH as motor oil		µg/L		120 J	320 J	210 U
Location: P-9-MWS01								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			2400	2500
	M8015D	Jet Fuel #5 (JP5)		µg/L			360	380
	M8015D	TPH as motor oil		µg/L			140 J	120 J
Location: P-9-MWS02								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			190 U	130 J
Location: P-9-MWS04								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		840 J	16000 J	29000
	M8015D	Jet Fuel #5 (JP5)		µg/L		1500 J	3700 J	7400
	M8015D	TPH as motor oil		µg/L		100 J	240 J	2000 U

Notes:

Circled result indicates detected result exceeds associated MCL.

bgs below ground surface
MCL California maximum contaminant level (Title 22, California Code of Regulations, effective June 2003)
µg/L micrograms per liter
VOCs volatile organic compounds
TPH-E total petroleum hydrocarbons - extractable
U Not detected at or above the indicated reporting limit
J Estimated value
Post Inj post injection event

Appendices A and B (On Compact Disc)

- Appendix A - Boring and Well Construction Diagrams
- Appendix B - Analytical Results

FINAL

Contract Information
Environmental Remedial Action
Contract Number N62474-98-D-2076
Contract Task Order 0107

FIELD SUMMARY REPORT FOR THE FULL-SCALE IN SITU CHEMICAL OXIDATION REMOVAL ACTION AT INSTALLATION RESTORATION SITE 9 SHALLOW

Alameda Point, Alameda, California

Document Control Number: 10080
Publishing Date: September 29, 2006

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- Appendix A – Boring Logs and Well Construction Diagrams
- Appendix B – Analytical Results

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ALAMEDA POINT
SSIC NO. 5090.3

APPENDIX A – BORING LOGS AND WELL CONSTRUCTION DIAGRAMS

FINAL
FIELD SUMMARY REPORT FOR THE
FULL SCALE IN SITU CHEMICAL OXIDATION
REMOVAL ACTION AT INSTALLATION RESTORATION
SITE 9 SHALLOW

DATED 29 SEPTEMBER 2006

Drilling Log

Monitoring Well **F9SMW01**

Project: Alameda CTO 107 | Owner: US Navy
Location: Alameda, CA | Proj. No.: 844918
Surface Elev.: FS=12.92 ft | Total Hole Depth: 15.3 ft. | North: 469262.93 ft. | East: 1481415.75 ft.
Top of Casing: 12.51 ft. | Water Level Initial: NA | Static: ▼ 5.7 ft. | Diameter: 8 in.
Screen: Dia: 2 in. | Length: 10 ft. | Type/Size: sch 40 PVC/slotted 0.020 in.
Casing: Dia: 2 in. | Length: 4.5 ft. | Type: sch 40 PVC
Fill Material: See Comments | Rig/Core: 8" Hollow Stem
Drill Co.: BC 2 | Method: Hollow Stem Auger
Driller: Diego Rivera | Log By: Jim Teo | Date: 10/30/03 | Permit #: W03-0952
Checked By: Gene Mullenmeister | License No.: Driller License C57# 686255

COMMENTS
Water ~3 gallons; #2/16 Sand ~3.5 bags (100 lb bags); Bentonite ~1 bag (60 lb bags)
FS = Finished Surface
Static Water Level: 11/4/03

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Soil Descriptions are Based on the USCS.
0							
2						SP SM	@ ~3 ft, Poorly graded sand with silt, olive brown (2.5Y 4/3), slightly moist, fine to medium grained, loose (90% sand; 10% silt)
4							
6							
8							
10						ML	@ ~10 ft, Sandy silt, Gley1 (2.5/N), wet/saturated, some fine sand, massive without aggregates, soft, slightly plastic (5% sand; 60% silt; 35% clay)
12							
14							@ ~15 ft, Silt, Gley1 (2.5/N), wet/saturated, with some fine sand, massive with some small (1-5 mm) shells, soft, slightly plastic (10% sand; 50% silt; 40% clay)
16							TD = 15.3 ft
18							
20							

Survey Datum: Horizontal: NAD 27, Vertical: NAVD 88

Note: Soil descriptions were generated from soil grab sample specimens collected from the veins of hollow stem auger flytes. As a result, the depths of all descriptions and soil horizon boundaries are approximate.

Drilling Log

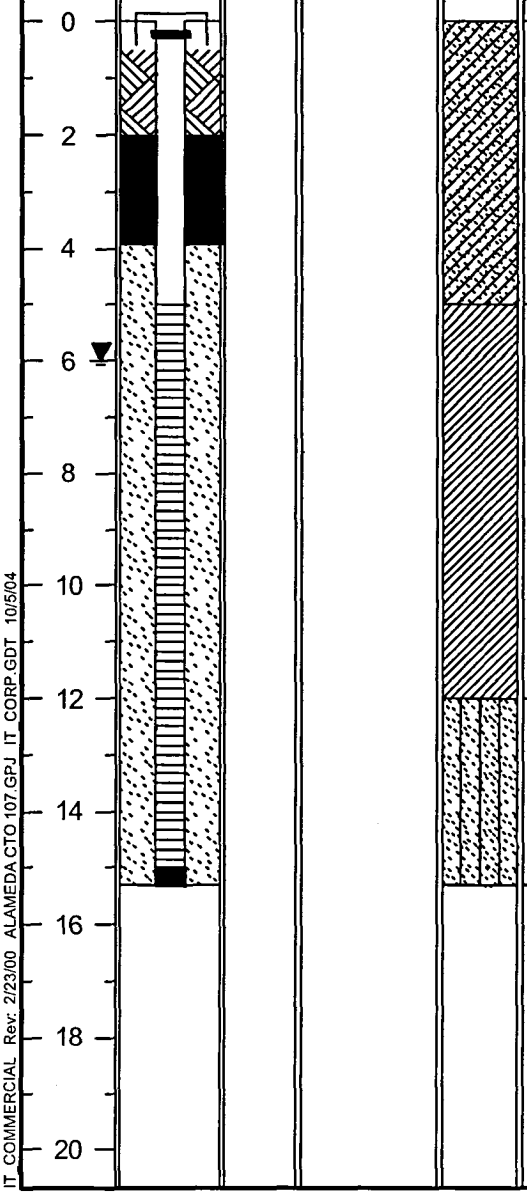
Monitoring Well **F9SMW02**

Project	Alameda CTO 107	Owner	US Navy		
Location	Alameda, CA			Proj. No.	844918
Surface Elev.	FS=12.85 ft	Total Hole Depth	15.3 ft.	North 469177.07 ft.	East 1481546.69 ft.
Top of Casing	12.43 ft.	Water Level Initial	NA	Static ▼ 6.0 ft.	Diameter 8 in.
Screen: Dia	2 in.	Length	10 ft.	Type/Size	sch 40 PVC/slotted 0.020 in.
Casing: Dia	2 in.	Length	4.5 ft.	Type	sch 40 PVC
Fill Material	See Comments			Rig/Core	8" Hollow Stem
Drill Co.	BC 2	Method	Hollow Stem Auger		
Driller	Diego Rivera	Log By	Jim Teo	Date 10/30/03	Permit # W03-0953
Checked By	Gene Mullenmeister	License No.	Driller License C57# 686255		

COMMENTS
Water ~3 gallons; #2/16 Sand ~3.5 bags (100 lb bags); Bentonite ~1 bag (60 lb bags)

FS = Finished Surface

Static Water Level: 11/5/03



Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure). Soil Descriptions are Based on the USCS.
0							
2						SC	@ ~2 ft, Clayey sand, olive brown (2.5Y 4/3), slightly moist, sand is fine grained with silty clay, Gley1 (4/10Y) aggregates interspersed, (~20-50 mm), loose sand, firm clay (5% gravel; 50% sand; 20% silt; 25% clay) @ ~2.5 ft, Concrete debris mixed with sand.
4							
6 ▼						CL	@ ~10 ft, Lean clay, Gley1 (4/N), moist to wet, soft, massive, no aggregates, plastic (30% silt; 70% clay)
8							
10							
12						SM	@ ~15 ft, Silty sand, Gley1 (4/N), wet/saturated, some small shells (~1-5 mm), slightly plastic, soft (60% sand; 25% silt; 15% clay)
14							
16							TD = 15.3 ft Survey Datum: Horizontal: NAD 27, Vertical: NAVD 88 Note: Soil descriptions were generated from soil grab sample specimens collected from the veins of hollow stem auger flytes. As a result, the depths of all descriptions and soil horizon boundaries are approximate.
18							
20							

Drilling Log

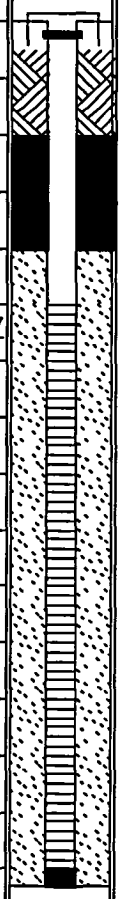
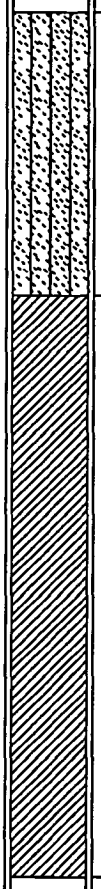
Monitoring Well **F9SMW03**

Project: Alameda CTO 107 | Owner: US Navy
Location: Alameda, CA | Proj. No.: 844918
Surface Elev.: FS=13.32 ft | Total Hole Depth: 15.3 ft. | North: 469098.85 ft. | East: 1481351.01 ft.
Top of Casing: 12.87 ft. | Water Level Initial: NA | Static: ▼ 5.6 ft. | Diameter: 8 in.
Screen: Dia: 2 in. | Length: 10 ft. | Type/Size: sch 40 PVC/slotted 0.020 in.
Casing: Dia: 2 in. | Length: 4.5 ft. | Type: sch 40 PVC
Fill Material: See Comments | Rig/Core: 8" Hollow Stem
Drill Co.: BC 2 | Method: Hollow Stem Auger
Driller: Diego Rivera | Log By: Jim Teo | Date: 10/30/03 | Permit #: W03-0954
Checked By: Gene Mullenmeister | License No.: Driller License C57# 686255

COMMENTS
Water ~3 gallons; #2/16 Sand ~4 bags (100 lb bags); Bentonite ~1 bag (60 lb bags)

FS = Finished Surface

Static Water Level: 11/20/03

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Soil Descriptions are Based on the USCS.
0							
2						SM	@ ~3 ft, Silty sand, olive brown (2.5Y 4/3), slightly moist, fine to medium grained with few shell fragments (1-10 mm), loose (85% sand; 10% silt; 5% clay)
4							
▼ 6							
8							
10						CL	@ ~10 ft, Lean clay, Gley1 (3/5GY), wet/saturated, soft, massive, no aggregates, few shell fragments (2-10 mm), very plastic (10% sand; 35% silt; 55% clay)
12							
14							@ ~15 ft, Lean clay, Gley1 (2.5/10GY), wet/saturated, soft, massive, few shell fragments (2-10 mm), plastic, (5% sand; 40% silt; 55% clay)
16							TD = 15.3 ft
18							Survey Datum: Horizontal: NAD 27, Vertical: NAVD 88
20							Note: Soil descriptions were generated from soil grab sample specimens collected from the veins of hollow stem auger flytes. As a result, the depths of all descriptions and soil horizon boundaries are approximate.

Drilling Log

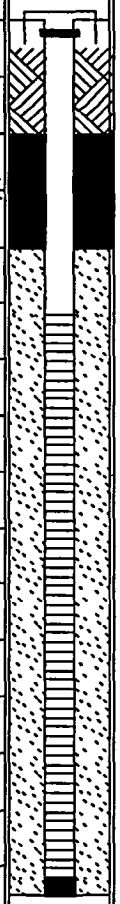
Monitoring Well **F9SMW04**

Project: Alameda CTO 107 | Owner: US Navy
Location: Alameda, CA | Proj. No.: 844918
Surface Elev.: FS=13.26 ft | Total Hole Depth: 15.5 ft. | North: 469154.26 ft. | East: 1481397.77 ft.
Top of Casing: 12.84 ft. | Water Level Initial: NA | Static: ▼ 3.1 ft. | Diameter: 8 in.
Screen: Dia: 2 in. | Length: 10 ft. | Type/Size: sch 40 PVC/slotted 0.020 in.
Casing: Dia: 2 in. | Length: 4.7 ft. | Type: sch 40 PVC
Fill Material: See Comments | Rig/Core: 8" Hollow Stem
Drill Co.: BC 2 | Method: Hollow Stem Auger
Driller: Diego Rivera | Log By: Jim Teo | Date: 11/7/03 | Permit #: W03-0955
Checked By: Gene Mullenmeister | License No.: Driller License C57# 686255

COMMENTS
Water ~__ gallons; #2/16 Sand ~3.25 bags (100 lb bags); Bentonite ~1 bag (50 lb bags)

FS = Finished Surface

Static Water Level: 11/20/03

Depth (ft.)	Well Completion	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Soil Descriptions are Based on the USCS.
0							
2							
4						SM	@ ~5 ft, Silty sand, Gley1 (4/10Y), moist, fine grained, strong chemical odor, loose (70% sand; 20% silt; 10% clay)
6							
8						CL	@ ~10 ft, Lean clay, Gley1 (3/5GY), wet/saturated, with some silt, massive, no aggregates, sticky, cohesive, firm, very plastic (20% silt; 80% clay)
10							
12							
14							@ ~15 ft, Lean clay, Gley1 (4/10Y), wet/saturated, massive, cohesive, no aggregates, firm, very plastic (30% silt; 70% clay)
16							TD = 15.5 ft Survey Datum: Horizontal: NAD 27, Vertical: NAVD 88 Note: Soil descriptions were generated from soil grab sample specimens collected from the veins of hollow stem auger flytes. As a result, the depths of all descriptions and soil horizon boundaries are approximate.
18							
20							

Drilling Log

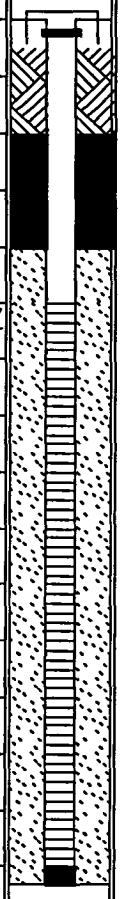
Monitoring Well **F9SMW05**

Project	Alameda CTO 107	Owner	US Navy		
Location	Alameda, CA			Proj. No.	844918
Surface Elev.	FS=13.46 ft	Total Hole Depth	15.3 ft.	North 469066.57 ft.	East 1481390.3 ft.
Top of Casing	13.09 ft.	Water Level Initial	NA	Static ▼ 5.4 ft.	Diameter 8 in.
Screen: Dia	2 in.	Length	10 ft.	Type/Size	sch 40 PVC/slotted 0.020 in.
Casing: Dia	2 in.	Length	4.5 ft.	Type	sch 40 PVC
Fill Material	See Comments			Rig/Core	8" Hollow Stem
Drill Co.	BC 2	Method	Hollow Stem Auger		
Driller	Diego Rivera	Log By	Jim Teo	Date 10/29/03	Permit # W03-0956
Checked By	Gene Mullenmeister	License No.	Driller License C57# 686255		

COMMENTS
Water ~3 gallons; #2/16 Sand ~4 bags (100 lb bags); Bentonite ~1 bag

FS = Finished Surface

Static Water Level: 11/20/03

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Soil Descriptions are Based on the USCS.
0							
2							@ ~3 ft, Silty sand, olive (5Y 4/3), slightly moist, fine grained with few interspersed clayey silt, Gley1 (3/5G) aggregates (~5-30 mm), trace evidence of shell fragments, loose (85% sand; 10% silt; 5% clay)
4							@ ~4 ft, Sedimentary marine rock, Gley1 (4/N), fragmented and scattered within soil. Rock sizes approximately 100 mm diameter, many shell fragments cemented within dark gray rock.
6							
8						SM	
10							@ ~10 ft, Silty sand, Gley1 (3/5GY), wet/saturated, fine to medium grained, loose with few shell fragments (2-20 mm diameter), loose (60% sand; 35% silt; 5% clay)
12							
14							@ ~15 ft, Silty sand, Gley1 (2.5/N), wet/saturated, fine grained, few small shells (1-10 mm diameter), odor, soft (50% sand; 40% silt; 10% clay)
16							TD = 15.3 ft Survey Datum: Horizontal: NAD 27, Vertical: NAVD 88 Note: Soil descriptions were generated from soil grab sample specimens collected from the veins of hollow stem auger flytes. As a result, the depths of all descriptions and soil horizon boundaries are approximate.
18							
20							

Drilling Log

Monitoring Well **F9SMW06**

Project	Alameda CTO 107	Owner	US Navy		
Location	Alameda, CA			Proj. No.	844918
Surface Elev.	FS=13.34 ft	Total Hole Depth	13.5 ft.	North	469066.2 ft.
East	1481496.71 ft.				
Top of Casing	12.79 ft.	Water Level Initial	NA	Static	▼ 4.5 ft.
Diameter	8 in.				
Screen: Dia	2 in.	Length	8.3 ft.	Type/Size	sch 40 PVC/slotted 0.020 in.
Casing: Dia	2 in.	Length	4.5 ft.	Type	sch 40 PVC
Fill Material	See Comments			Rig/Core	8" Hollow Stem
Drill Co.	BC 2	Method	Hollow Stem Auger		
Driller	Diego Rivera	Log By	Jim Teo	Date	10/30/03
Permit #	W03-0957				
Checked By	Gene Mullenmeister	License No.	Driller License C57# 686255		

COMMENTS
Water ~4 gallons; #2/16 Sand ~3.5 bags (100 lb bags); Bentonite ~1 bag (60 lb bags)

FS = Finished Surface

Static Water Level: 11/5/03

Depth (ft.)	Well Completion	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Soil Descriptions are Based on the USCS.
0							
2						SP	@ ~2 ft, Poorly graded sand, light olive brown (2.5Y 5/4), slightly moist, with gravel, loose, fine to medium grained, mixed with fractured marine sedimentary rock, sand-loose, rock-hard (40% rock; 55% sand; 5% silt) Stratified rock is gray, Gley1 (4/N), Iron oxide is dusky red (10R 3/4), cemented sand is yellowish brown (10YR 5/6), dominated by cemented dark gray matrix with shell fragments. Cemented sand and "iron oxide" pockets also common. Black veins (1-5 mm thick) also apparent, hard.
4						GP	@ ~4 ft, Poorly graded gravel, mostly dark gray, Gley1 (4/N) to Gley1 (3/N) and no presence of shells, however, white flakes, nodules ~1-5 mm long, are common. Gravel is composed mostly of consolidated rock as described above. Possible quartz grains also observed.
6							
8						GM	
10							
12							@ ~11 ft, Silty gravel, Gley1 (3/10Y), wet/saturated, hard volcanic rock with silt interspersed (75% rock; 20% silt; 5% clay)
14							TD = 13.5 ft Survey Datum: Horizontal: NAD 27, Vertical: NAVD 88 Note: Soil descriptions were generated from soil grab sample specimens collected from the veins of hollow stem auger flytes. As a result, the depths of all descriptions and soil horizon boundaries are approximate.
16							
18							
20							

N00236.002572
ALAMEDA POINT
SSIC NO. 5090.3

APPENDIX B – ANALYTICAL RESULTS

FINAL
FIELD SUMMARY REPORT FOR THE FULL SCALE IN SITU CHEMICAL OXIDATION REMOVAL ACTION AT INSTALLATION RESTORATION SITE 9 SHALLOW

DATED 29 SEPTEMBER 2006

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: 9IF-MW01S			**Depth: 5 - 15 feet bgs**					
VOCs	SW8260B	Acetone		µg/L	10 UJ	10 U	10 U	10 U
	SW8260B	Benzene	1	µg/L	0.44 J	0.41 J	0.45 J	0.46 J
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	28 J	21 J	23 J	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.32 J	0.53
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	1.7	1.9	1.4	0.93
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	3.4	3.6	4.1	2.6
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	3.1 J	3.6 J	3.2 J	2.4 J
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj I.. Jun 2006
Location: 9IF-MW01S		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	8.5	7.8	4	3.6
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.7 U	9.6 UJ	9.9 UJ	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Anthracene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.7 U	9.6 UJ	9.9 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.7 U	9.6 UJ	9.9 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.7 U	9.6 UJ	9.9 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.7 U	9.6 UJ	9.9 U	9.4 U
	SW8270C	Benzoic acid		µg/L	48 U	48 UJ	50 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	20 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.7 U	9.6 UJ	9.9 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.7 U	9.6 UJ	9.9 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.7 U	9.6 UJ	9.9 UJ	9.4 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	20 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.7 U	9.6 U	9.9 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: 9IF-MW01S		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	Diethylphthalate		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	48 U	50 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.7 U	9.6 U	9.9 UJ	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Fluorene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Isophorone		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 UJ	48 U	50 UJ	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.7 U	9.6 UJ	9.9 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.7 U	9.6 U	9.9 UJ	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	48 U	48 U	50 U	47 U
	SW8270C	3-Nitroaniline		µg/L	48 U	48 U	50 U	47 U
	SW8270C	4-Nitroaniline		µg/L	48 U	48 U	50 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.7 UJ	9.6 U	9.9 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	48 U	48 UJ	50 UJ	47 UJ
	SW8270C	Pentachlorophenol	1	µg/L	48 U	48 UJ	50 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Phenol		µg/L	9.7 U	9.6 UJ	9.9 UJ	9.4 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	Pyrene		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.7 U	9.6 UJ	9.9 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	48 U	50 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.7 U	9.6 U	9.9 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			160 J	300 J
	M8015D	Jet Fuel #5 (JP5)		µg/L			290 UJ	280 UJ
	M8015D	TPH as motor oil		µg/L			98 J	160 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: 9IF-MW01S		**Depth: 5 - 15 feet bgs**						
Metals	SW6010B	Arsenic - Filtered	50	µg/L	25.1	30.1 U	31.4 J	18.9 U
	SW6010B	Barium - Filtered	1000	µg/L	71.6	95.6	116	83.3
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	1770	2470	4810	7020
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	473	636	1100	1160
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	56.5	64.5	62.8	55.4
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	6.95 J	10 U	10 U	10 U
	SW6010B	Calcium - Filtered		µg/L	19000	24800	51000	56800
	SW6010B	Magnesium - Filtered		µg/L	14000	18500	30800	30500
	SW6010B	Potassium - Filtered		µg/L	25900 J	27800 J	32700 J	18400
	SW6010B	Sodium - Filtered		µg/L	373000	421000	457000	391000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 U	0.02 U
pH	SW9040B	pH						7.5
Location: DVE-10								
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	89	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-10								
VOCs	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 UJ	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.29 J	0.27 J	0.43 J	0.66
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.25 J	0.5 U	0.24 J	0.64
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	1100	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	47	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.29 J	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.42 J	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.4 U	9.4 U	9.6 UJ	9.9 U
	SW8270C	Acenaphthylene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Anthracene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj Jun 2006
Location: DVE-10								
SVOCs	SW8270C	Benzo(a)anthracene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzoic acid		µg/L	47 U	47 U	48 U	50 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Chloronaphthalene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Chlorophenol		µg/L	9.4 U	9.4 U	9.6 UJ	9.9 U
	SW8270C	Chrysene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Dibenzofuran		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.4 U	9.4 UJ	9.6 UJ	9.9 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Diethylphthalate		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Dimethylphthalate		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	47 U	48 U	50 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.4 U	9.4 U	9.6 UJ	9.9 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Fluoranthene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Fluorene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Hexachlorobutadiene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Hexachloroethane		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Isophorone		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Methylnaphthalene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Methylphenol		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	4-Methylphenol		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	47 U	48 UJ	50 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.4 U	9.4 U	9.6 U	9.9 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-10								
SVOCs	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.4 U	9.4 U	9.6 UJ	9.9 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Naphthalene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Nitroaniline		µg/L	47 U	47 U	48 U	50 U
	SW8270C	3-Nitroaniline		µg/L	47 U	47 U	48 U	50 U
	SW8270C	4-Nitroaniline		µg/L	47 U	47 U	48 U	50 U
	SW8270C	Nitrobenzene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Nitrophenol		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	4-Nitrophenol		µg/L	47 U	47 UJ	48 UJ	50 U
	SW8270C	Pentachlorophenol	1	µg/L	47 U	47 U	48 UJ	50 U
	SW8270C	Phenanthrene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Phenol		µg/L	9.4 U	9.4 U	9.6 UJ	9.9 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	Pyrene		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.4 U	9.4 UJ	9.6 UJ	9.9 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	47 U	48 U	50 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.4 U	9.4 U	9.6 U	9.9 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		110 J	190 U	170 J
	M8015D	Jet Fuel #5 (JP5)		µg/L		280 U	640	310 U
	M8015D	TPH as motor oil		µg/L		190 U	190 U	200 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	13.6	10 U	22.7 J	11 U
	SW6010B	Barium - Filtered	1000	µg/L	300	233	301	290
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	15.2	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	9.99	5 U
	SW6010B	Iron - Filtered	300	µg/L	6210	197	10800	3960
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	951	203	2170	905 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	8.02 J	40 U
	SW6010B	Nickel - Filtered	100	µg/L	4.04 J	10 U	22.1	16.6
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	8.3 J
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	5.45 J	10 U	10 U	7.83 J
	SW6010B	Calcium - Filtered		µg/L	106000	108000	118000	117000
	SW6010B	Magnesium - Filtered		µg/L	15600	14800	15700	12700

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Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj III Jun 2006
Location: DVE-10								
Metals	SW6010B	Potassium - Filtered		µg/L	22500	19400 J	30300 J	16900 J
	SW6010B	Sodium - Filtered		µg/L	52800	48500	88600	60900
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 UJ	0.02 U	0.02 U	0.02 U
pH	SW9040B	pH						7.08
Location: DVE-15A								
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	10 U	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	1.8	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	2	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	7.7	0.85	0.56	0.25 J
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.27 J	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.67	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-15A								
VOCs	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	1.4	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	3	4.4	2.9	3.4
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	4.6	3.3	1.59	0.98
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	5.1	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.78	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	2.1	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.5 U	9.4 U	9.7 UJ	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Anthracene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzoic acid		µg/L	47 U	47 U	48 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.5 U	9.4 U	9.7 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.5 U	9.4 U	9.7 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sca Post Inj I Jun 2006
Location: DVE-15A								
SVOCs	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.5 U	9.4 UJ	9.7 UJ	9.4 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	47 U	48 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.5 U	9.4 U	9.7 UJ	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Fluorene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Isophorone		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	47 U	48 UJ	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.5 U	9.4 U	9.7 UJ	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	47 U	47 U	48 U	47 U
	SW8270C	3-Nitroaniline		µg/L	47 U	47 U	48 U	47 U
	SW8270C	4-Nitroaniline		µg/L	47 U	47 U	48 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	47 U	47 UJ	48 UJ	47 UJ
	SW8270C	Pentachlorophenol	1	µg/L	47 U	47 U	48 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Phenol		µg/L	9.5 U	9.4 U	9.7 UJ	9.4 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	Pyrene		µg/L	9.5 U	9.4 U	9.7 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.5 U	9.4 UJ	9.7 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	47 U	48 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.5 U	9.4 U	9.7 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-15A								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		190 U	190 U	190 U
	M8015D	Jet Fuel #5 (JP5)		µg/L		280 U	280 U	280 U
	M8015D	TPH as motor oil		µg/L		190 U	190 U	190 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	24	10 U	19.7 J	10 U
	SW6010B	Barium - Filtered	1000	µg/L	43.4	55.2	61.7	68.2
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	402	559	159	100 U
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	472	367	247	14.5
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	2.76 J	10 U	10 U	10 U
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	5.84 J
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	10 U	10 U	7.29 J
	SW6010B	Calcium - Filtered		µg/L	68500	73800	68900	66500
	SW6010B	Magnesium - Filtered		µg/L	7770	8080	7800	7410
	SW6010B	Potassium - Filtered		µg/L	15800	11400 J	13200 J	13400 J
	SW6010B	Sodium - Filtered		µg/L	46300	27700	35600	32400
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 UJ	0.02 U	0.02 U	0.02 UJ
pH	SW9040B	pH						7.49
Location: DVE-17								
VOCs	SW8260B	Acetone		µg/L	3.8 J	14	710	11 J
	SW8260B	Benzene	1	µg/L	1.5	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.29 J	0.5 UJ
	SW8260B	tert-butyl alcohol		µg/L	6.9 J	50 U	10 J	50 U
	SW8260B	N-butylbenzene		µg/L	20	9.8	7.6	0.5 U
	SW8260B	sec-butylbenzene		µg/L	13	9.5	3.1	6.8 J
	SW8260B	tert-butylbenzene		µg/L	0.5 U	1.3	0.55	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	1.6	0.5 U

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Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: DVE-17								
VOCs	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	3.5	0.35 J	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	60	5.4	0.53	0.86 J
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	1	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	28	13	1.5	6.8 J
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	3.1 J	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	27	15	2.5	12
	SW8260B	Methyl ethyl ketone		µg/L	20 U	7.1 J	270	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	1.3 J	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	2.4	0.34 J	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	34	18	1.7	13 J
	SW8260B	Naphthalene		µg/L	42	47	12	47 J
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.58	1.4	0.25 J	0.5 J
	SW8260B	Toluene	150	µg/L	28	3.8	0.79	0.35 J
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.8	1	0.5 U	0.32 J
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	310	200	30	180 J
	SW8260B	1,3,5-Trimethylbenzene		µg/L	89	66	34	79 J

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-17								
VOCs	SW8260B	Vinyl Chloride	0.5	µg/L	11	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	160	85	40	74
SVOCs	SW8270C	Acenaphthene		µg/L	9.4 U	9.4 U	9.6 UJ	10 U
	SW8270C	Acenaphthylene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Anthracene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Benzo(a)anthracene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Benzoic acid		µg/L	47 U	47 U	48 U	50 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	2-Chloronaphthalene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	2-Chlorophenol		µg/L	9.4 U	9.4 U	9.6 UJ	10 U
	SW8270C	Chrysene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Dibenzofuran		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.4 U	9.4 UJ	9.6 UJ	10 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Diethylphthalate		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	2,4-Dimethylphenol		µg/L	6.8 J	6.3 J	9.6 U	10 U
	SW8270C	Dimethylphthalate		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	47 U	48 U	50 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.4 U	9.4 U	9.6 UJ	10 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Fluoranthene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Fluorene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Hexachlorobutadiene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Hexachloroethane		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Isophorone		µg/L	9.4 U	9.4 U	9.6 U	10 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sca Post Inj I Jun 2006
Location: DVE-17								
SVOCs	SW8270C	2-Methylnaphthalene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	2-Methylphenol		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	4-Methylphenol		µg/L	9.4 U	190	9.6 U	10 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	47 U	48 UJ	50 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.4 U	9.4 U	9.6 UJ	10 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Naphthalene		µg/L	27	20	9.6 U	10 U
	SW8270C	2-Nitroaniline		µg/L	47 U	47 U	48 U	50 U
	SW8270C	3-Nitroaniline		µg/L	47 U	47 U	48 U	50 U
	SW8270C	4-Nitroaniline		µg/L	47 U	47 U	48 U	50 U
	SW8270C	Nitrobenzene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	2-Nitrophenol		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	4-Nitrophenol		µg/L	47 U	47 UJ	48 UJ	50 UJ
	SW8270C	Pentachlorophenol	1	µg/L	47 U	47 U	48 UJ	50 U
	SW8270C	Phenanthrene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Phenol		µg/L	9.4 U	9.4 U	9.6 UJ	10 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	Pyrene		µg/L	9.4 U	9.4 U	9.6 U	10 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.4 U	9.4 UJ	9.6 UJ	10 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	47 U	48 U	50 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.4 U	9.4 U	9.6 U	10 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			2700 J	3700 J
	M8015D	Jet Fuel #5 (JP5)		µg/L			1100 J	1100 J
	M8015D	TPH as motor oil		µg/L			200 UJ	120 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	38.9	38.2	39.5 J	19.1 U
	SW6010B	Barium - Filtered	1000	µg/L	150	147	23.1	230
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	10.5	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	8.03	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	15.4	4.98 J
	SW6010B	Iron - Filtered	300	µg/L	7710	8530	272	7590
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	953	791	969	1100
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	30.3 J	40 U
	SW6010B	Nickel - Filtered	100	µg/L	6.64 J	10 U	28.7	8.03 J
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	14.3 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-17								
Metals	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	141	5.89 J
	SW6010B	Zinc - Filtered	5000	µg/L	5.8 J	10 U	10 U	10 U
	SW6010B	Calcium - Filtered		µg/L	75700	58800	125000	113000
	SW6010B	Magnesium - Filtered		µg/L	19200	13300	31500	25300
	SW6010B	Potassium - Filtered		µg/L	22000	15100 J	80600 J	22900 J
	SW6010B	Sodium - Filtered		µg/L	60000	33100	47200	48100
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 U	0.02 UJ
pH	SW9040B	pH						6.81
Location: DVE-19								
VOCs	SW8260B	Acetone		µg/L	2.5 J	10 U	3.1 J	10 U
	SW8260B	Benzene	1	µg/L	1.2	0.27 J	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	10 J	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	13	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	11	1.8	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	24	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	3.2
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	5.2	0.5 U	2.2	1.5
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	19	0.5 U	8.5	2.5
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.93	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	32	3.6	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sca Post Inj I Jun 2006
Location: DVE-19								
VOCs	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	29	2.7	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	3	0.5 U	2.6	0.77
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	23	2.4	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	3.7	0.97	0.5 U	0.5 UJ
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.47 J	0.29 J	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	10	2	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.59	0.61	0.61	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	240	26	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	37	8.1	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	14	6	1.2	0.59
	SW8260B	Xylenes, total	1750	µg/L	140	15	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.5 U	9.6 UJ	9.5 UJ	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Anthracene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzoic acid		µg/L	47 U	48 U	47 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.5 U	9.6 UJ	9.5 UJ	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-19								
SVOCs	SW8270C	Chrysene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.5 U	9.6 UJ	9.5 UJ	9.4 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	5.6 J	9.6 U	9.5 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	48 U	47 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.5 U	9.6 U	9.5 UJ	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Fluorene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Isophorone		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	48 U	47 UJ	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.5 U	9.6 UJ	9.5 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.5 U	9.6 U	9.5 UJ	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	47 U	48 U	47 U	47 U
	SW8270C	3-Nitroaniline		µg/L	47 U	48 U	47 U	47 U
	SW8270C	4-Nitroaniline		µg/L	47 U	48 U	47 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	47 U	48 UJ	47 UJ	47 UJ
	SW8270C	Pentachlorophenol	1	µg/L	47 U	48 UJ	47 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Phenol		µg/L	9.5 U	9.6 UJ	9.5 UJ	9.4 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.5 U	9.6 U	9.5 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: DVE-19								
SVOCs	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	Pyrene		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.5 U	9.6 UJ	9.5 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	48 U	47 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.5 U	9.6 U	9.5 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			180 J	330
	M8015D	Jet Fuel #5 (JP5)		µg/L			290 U	280 U
	M8015D	TPH as motor oil		µg/L			200 U	130 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	32.6	31.9 U	10 UJ	10 U
	SW6010B	Barium - Filtered	1000	µg/L	229	215	221	296
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2.26 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	23.4
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	223
	SW6010B	Iron - Filtered	300	µg/L	6210	4280	100 U	655
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	1480	1530	505	876
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	46.7
	SW6010B	Nickel - Filtered	100	µg/L	8.23 J	8.37 J	7.22 J	46.4
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	13.6
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	7.01 J
	SW6010B	Zinc - Filtered	5000	µg/L	7.96 J	10 U	10 U	32.5
	SW6010B	Calcium - Filtered		µg/L	112000	117000	107000	105000
	SW6010B	Magnesium - Filtered		µg/L	38700	39900	36400	40600
	SW6010B	Potassium - Filtered		µg/L	27600	24400 J	26600 J	31300 J
	SW6010B	Sodium - Filtered		µg/L	11800	98900	98900	135000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 U	0.02 UJ
pH	SW9040B	pH						7.36
Location: DVE-20								
VOCs	SW8260B	Acetone		µg/L	10 U	3.5 J	1400	10 U
	SW8260B	Benzene	1	µg/L	1.3	0.97	1.6	2.1
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	tert-butyl alcohol		µg/L	8.6 J	5.8 J	87	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.4 J	16	4
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.66	7.5	7.2

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-20								
VOCs	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.35 J	2.6	1.9
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	4.4	0.22 J
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.25 J	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.23 J	0.25 J
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	18	7.4	3.7	4
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	5.2	21	30
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	2.7 J	20 U
	SW8260B	Isopropyl Ether		µg/L	35	30	22	31
	SW8260B	Isopropylbenzene		µg/L	0.5 U	2.3	15	22
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	2600	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	3.6 J	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.44 J	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	2	15	21
	SW8260B	Naphthalene		µg/L	0.5 U	3.9	34	39
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.25 J	0.55
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-20								
VOCs	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.24 J	0.88	6.8	4.8
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	1.7	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	4.6	4.7	3.4	4.2
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2.1	1.6 J
SVOCs	SW8270C	Acenaphthene		µg/L	9.6 U	9.6 UJ	9.5 UJ	19 U
	SW8270C	Acenaphthylene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Anthracene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Benzo(a)anthracene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Benzoic acid		µg/L	48 U	48 U	47 U	94 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	38 U
	SW8270C	4-Chloroaniline		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	2-Chloronaphthalene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	2-Chlorophenol		µg/L	9.6 U	9.6 UJ	9.5 UJ	19 U
	SW8270C	Chrysene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Dibenzofuran		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.6 U	9.6 UJ	9.5 UJ	19 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	38 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Diethylphthalate		µg/L	9.6 U	9.6 U	16	45
	SW8270C	2,4-Dimethylphenol		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Dimethylphthalate		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	48 U	47 U	94 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.6 U	9.6 U	9.5 UJ	19 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Fluoranthene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Fluorene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.6 U	9.6 U	9.5 U	19 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-20								
SVOCs	SW8270C	Hexachlorobutadiene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Hexachloroethane		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Isophorone		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	2-Methylnaphthalene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	2-Methylphenol		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	4-Methylphenol		µg/L	9.6 U	9.6 U	120	22
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	48 U	47 UJ	94 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.6 U	9.6 UJ	9.5 U	19 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.6 U	9.6 U	9.5 UJ	19 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Naphthalene		µg/L	9.6 U	9.6 U	32	32
	SW8270C	2-Nitroaniline		µg/L	48 U	48 U	47 U	94 U
	SW8270C	3-Nitroaniline		µg/L	48 U	48 U	47 U	94 U
	SW8270C	4-Nitroaniline		µg/L	48 U	48 U	47 U	94 U
	SW8270C	Nitrobenzene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	2-Nitrophenol		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	4-Nitrophenol		µg/L	48 U	48 UJ	47 UJ	94 U
	SW8270C	Pentachlorophenol	1	µg/L	48 U	48 UJ	47 UJ	94 U
	SW8270C	Phenanthrene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Phenol		µg/L	9.6 U	9.6 UJ	9.5 UJ	19 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	Pyrene		µg/L	9.6 U	9.6 U	9.5 U	19 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.6 U	9.6 UJ	9.5 UJ	19 UJ
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	48 U	47 U	94 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.6 U	9.6 U	9.5 U	19 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		200 J	9200 J	10000
	M8015D	Jet Fuel #5 (JP5)		µg/L		280 UJ	4300 J	1900
	M8015D	TPH as motor oil		µg/L		190 UJ	190 UJ	170 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	8.92 J	11.9 U	16.1 J	15.2 U
	SW6010B	Barium - Filtered	1000	µg/L	51.2	171	283	208
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	6.7	3.37 J
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	78.5	17.1
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	3060	8170	90400	26400
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	12.5	5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sca Post Inj Ii Jun 2006
Location: DVE-20								
Metals	SW6010B	Manganese - Filtered	50	µg/L	893	707	2450	1360
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	29.7	31.3	181	119
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	52.3	34.8
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	10 U	64	16.8
	SW6010B	Calcium - Filtered		µg/L	52000	59600	51500	39400
	SW6010B	Magnesium - Filtered		µg/L	92500	79600	48200	45700
	SW6010B	Potassium - Filtered		µg/L	52900 J	38700 J	54600 J	31400 J
	SW6010B	Sodium - Filtered		µg/L	1190000 J	1080000	749000	848000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 U	0.02 U
pH	SW9040B	pH						7.05
Location: DVE-23								
VOCs	SW8260B	Acetone		µg/L	8.7 J	9.7 J	1200	130
	SW8260B	Benzene	1	µg/L	0.22 J	0.38 J	2.5 U	0.35 J
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	34 J	50 U	250 U	59
	SW8260B	N-butylbenzene		µg/L	0.5 U	13	17	0.5 U
	SW8260B	sec-butylbenzene		µg/L	11	14	9.7	11
	SW8260B	tert-butylbenzene		µg/L	1.7	2.1	1.3 J	1.7
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	10 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	1	2.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.29 J	0.27 J	2.5 U	0.23 J
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	5.9	7.8	16	10
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.23 J	0.5 U	2.5 U	0.37 J

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-23								
VOCs	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	11	27	20	21
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	100 U	20 U
	SW8260B	Isopropyl Ether		µg/L	1.5 J	5 U	25 U	5 U
	SW8260B	Isopropylbenzene		µg/L	7	16	11	14
	SW8260B	Methyl ethyl ketone		µg/L	16 J	45	1900	180
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	2.1 J	100 U	4.2 J
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	5 U	1 U
	SW8260B	N-propylbenzene		µg/L	6.4	19	11	15
	SW8260B	Naphthalene		µg/L	39	55	37	49
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	25 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	25 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.35 J	0.43 J	2.5 U	0.4 J
	SW8260B	Toluene	150	µg/L	15	38	14	8.5
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.21 J	2.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	25 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	170	250	190	250
	SW8260B	1,3,5-Trimethylbenzene		µg/L	95	93	72	100
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	2.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	150	240	220	280
SVOCs	SW8270C	Acenaphthene		µg/L	9.5 U	9.8 UJ	9.6 UJ	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Anthracene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.5 U	9.8 UJ	9.6 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.5 UJ	9.8 UJ	9.6 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.5 UJ	9.8 UJ	9.6 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.5 UJ	9.8 UJ	9.6 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.5 UJ	9.8 UJ	9.6 U	9.4 U
	SW8270C	Benzoic acid		µg/L	47 U	49 UJ	48 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.5 U	9.8 UJ	9.6 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.5 U	9.8 U	9.6 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-23								
SVOCs	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	20 UJ	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.5 U	9.8 UJ	9.6 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.5 U	9.8 UJ	9.6 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.5 U	9.8 UJ	9.6 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.5 UJ	9.8 UJ	9.6 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.5 U	9.8 UJ	9.6 UJ	9.4 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	20 UJ	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.5 U	9.8 U	8.3 J	12
	SW8270C	Dimethylphthalate		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	49 U	48 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.5 U	9.8 U	9.6 UJ	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Fluorene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.5 U	9.8 UJ	9.6 U	9.4 U
	SW8270C	Isophorone		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.5 U	9.8 U	9.6 U	7.5 J
	SW8270C	2-Methylphenol		µg/L	9.5 U	9.8 U	9.6 U	12
	SW8270C	4-Methylphenol		µg/L	17	270	310	490
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	49 U	48 UJ	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.5 U	9.8 UJ	9.6 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.5 U	9.8 U	9.6 UJ	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Naphthalene		µg/L	22	9.8 U	23	43
	SW8270C	2-Nitroaniline		µg/L	47 U	49 U	48 U	47 U
	SW8270C	3-Nitroaniline		µg/L	47 U	49 U	48 U	47 U
	SW8270C	4-Nitroaniline		µg/L	47 U	49 U	48 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.5 U	9.8 U	9.6 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-23								
SVOCs	SW8270C	4-Nitrophenol		µg/L	47 U	49 UJ	48 UJ	47 U
	SW8270C	Pentachlorophenol	1	µg/L	47 U	49 UJ	48 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Phenol		µg/L	9.5 U	12 J	39 J	87
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
	SW8270C	Pyrene		µg/L	9.5 U	9.8 UJ	9.6 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.5 U	9.8 UJ	9.6 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	49 U	48 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.5 U	9.8 U	9.6 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		3500 J	7600 J	29000
	M8015D	Jet Fuel #5 (JP5)		µg/L		3100 J	4100 J	6600
	M8015D	TPH as motor oil		µg/L		190 UJ	380 J	2200
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	21.7	39.2 U	41.1 J	78.6
	SW6010B	Barium - Filtered	1000	µg/L	71.7	107	67.9	138
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	7.16	7.49	9.74
	SW6010B	Cobalt - Filtered		µg/L	2.86 J	12.1	6.58	5 U
	SW6010B	Copper - Filtered	1000	µg/L	2.4 J	5 U	21.6	5 U
	SW6010B	Iron - Filtered	300	µg/L	5370	22100	21500	37100
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	791	891	1100	1470 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	24 J	40 U
	SW6010B	Nickel - Filtered	100	µg/L	22.7	13.3	8.24 J	11.9
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10.3	16.2	11.1	11.8
	SW6010B	Zinc - Filtered	5000	µg/L	9.87 J	5.24 J	10 U	7 J
	SW6010B	Calcium - Filtered		µg/L	79900	81100	87100	142000
	SW6010B	Magnesium - Filtered		µg/L	26400	12300	13700	15100
	SW6010B	Potassium - Filtered		µg/L	28900 J	30200 J	31400 J	21100 J
	SW6010B	Sodium - Filtered		µg/L	386000 J	113000	109000	59000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 U	0.02 U
pH	SW9040B	pH						6.26
Location: DVE-3								
VOCs	SW8260B	Acetone		µg/L	10 U	2.6 J	460	3.2 J
	SW8260B	Benzene	1	µg/L	0.39 J	0.29 J	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-3								
VOCs	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.37 J	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	25 J	13 J	15 J	8.3 J
	SW8260B	N-butylbenzene		µg/L	0.5 U	1.4	0.21 J	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	3.5	0.44 J	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.84	0.86	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	1.3	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	1.3	0.4 J	0.5 U	0.3 J
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	1.2	1.1	0.32 J	0.38 J
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.29 J	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	1.4	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5.3	1.4 J	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	7.5	0.36 J	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	220	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	4.8	0.38 J	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.47 J	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

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Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-3								
VOCs	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.39 J	0.5 U	0.6
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.45 J
	SW8260B	Vinyl Chloride	0.5	µg/L	4	1.2	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	1 J	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.7 U	9.5 U	9.6 UJ	9.9 U
	SW8270C	Acenaphthylene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Anthracene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Benzo(a)anthracene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Benzoic acid		µg/L	48 U	47 U	48 U	50 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	2-Chloronaphthalene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	2-Chlorophenol		µg/L	9.7 U	9.5 U	9.6 UJ	9.9 U
	SW8270C	Chrysene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Dibenzofuran		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.7 U	9.5 UJ	9.6 UJ	9.9 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Diethylphthalate		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Dimethylphthalate		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	47 U	48 U	50 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scal Post Inj III Jun 2006
Location: DVE-3								
SVOCs	SW8270C	2,4-Dinitrotoluene		µg/L	9.7 U	9.5 U	9.6 UJ	9.9 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Fluoranthene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Fluorene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Hexachlorobutadiene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.7 U	9.5 UJ	9.6 U	9.9 U
	SW8270C	Hexachloroethane		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Isophorone		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	2-Methylnaphthalene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	2-Methylphenol		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	4-Methylphenol		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	47 U	48 UJ	50 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.7 U	9.5 U	9.6 UJ	9.9 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Naphthalene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	2-Nitroaniline		µg/L	48 U	47 U	48 U	50 U
	SW8270C	3-Nitroaniline		µg/L	48 U	47 U	48 U	50 U
	SW8270C	4-Nitroaniline		µg/L	48 U	47 U	48 U	50 U
	SW8270C	Nitrobenzene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	2-Nitrophenol		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	4-Nitrophenol		µg/L	48 U	47 UJ	48 UJ	50 U
	SW8270C	Pentachlorophenol	1	µg/L	48 U	47 U	48 UJ	50 U
	SW8270C	Phenanthrene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Phenol		µg/L	9.7 U	9.5 U	9.6 UJ	9.9 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	Pyrene		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.7 U	9.5 UJ	9.6 UJ	9.9 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	47 U	48 U	50 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.7 U	9.5 U	9.6 U	9.9 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			1400	1100
	M8015D	Jet Fuel #5 (JP5)		µg/L			330	300 U
	M8015D	TPH as motor oil		µg/L			190 U	150 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	31.1	13.1	28.2 J	10 U
	SW6010B	Barium - Filtered	1000	µg/L	331	267	112	163
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-3								
Metals	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	17.6	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	3.26 J	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	15.3	5.1
	SW6010B	Iron - Filtered	300	µg/L	16600	13500	100 U	60.1 J
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	3320	3690	1500	2330 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	42.3	23	21.8	17.1
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	12 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	85.3	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	6.51 J	10 U	10 U	8.8 J
	SW6010B	Calcium - Filtered		µg/L	118000	140000	160000	145000
	SW6010B	Magnesium - Filtered		µg/L	57900	60300	54600	51200
	SW6010B	Potassium - Filtered		µg/L	25400 J	19700 J	101000 J	24600 J
	SW6010B	Sodium - Filtered		µg/L	304000 J	183000	98800	83100
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 U	0.02 U
pH	SW9040B	pH						6.6
Location: DVE-9								
VOCs	SW8260B	Acetone		µg/L	10 U	3 J	3.9 J	12
	SW8260B	Benzene	1	µg/L	0.45 J	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	11 J	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.3 J	1.2	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.6	0.95	0.21 J
	SW8260B	tert-butylbenzene		µg/L	0.24 J	0.34 J	0.51	0.25 J
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	6.4
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: DVE-9								
VOCs	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.24 J	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.53	1.3	0.25 J
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.26 J	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.52	1.1	0.28 J
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.58	0.53
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	1	0.58
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.58	0.52	1
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.4 U	9.7 UJ	9.7 UJ	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Anthracene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U

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Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: DVE-9								
SVOCs	SW8270C	Benzo(k)fluoranthene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Benzoic acid		µg/L	47 U	48 U	48 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	34	19 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.4 U	9.7 UJ	9.7 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.4 U	9.7 UJ	9.7 UJ	9.4 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	48 U	48 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.4 U	9.7 U	9.7 UJ	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Fluorene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Isophorone		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	48 U	48 UJ	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.4 U	9.7 UJ	9.7 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.4 U	9.7 U	9.7 UJ	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc[illegible] Post Inj [illegible] Jun 2006
Location: DVE-9								
SVOCs	SW8270C	2-Nitroaniline		µg/L	47 U	48 U	48 U	47 U
	SW8270C	3-Nitroaniline		µg/L	47 U	48 U	48 U	47 U
	SW8270C	4-Nitroaniline		µg/L	47 U	48 U	48 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	47 U	48 UJ	48 UJ	47 U
	SW8270C	Pentachlorophenol	1	µg/L	47 U	48 UJ	48 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Phenol		µg/L	9.4 U	9.7 UJ	9.7 UJ	9.4 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	Pyrene		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.4 U	9.7 UJ	9.7 UJ	9.4 UJ
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	48 U	48 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.4 U	9.7 U	9.7 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			3800	830
	M8015D	Jet Fuel #5 (JP5)		µg/L			630	200 J
	M8015D	TPH as motor oil		µg/L			110 J	98 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	21.3	25.3 U	27.8 J	10 U
	SW6010B	Barium - Filtered	1000	µg/L	215	195	274	152
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	5.91
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	2.99 J
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	148
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	488
	SW6010B	Iron - Filtered	300	µg/L	13800	8940	9860	82300
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	17.7
	SW6010B	Manganese - Filtered	50	µg/L	2770	2820	3150	4800
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	2.93 J	10 U	10 U	566
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	26.4
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	10 U	10 U	253
	SW6010B	Calcium - Filtered		µg/L	84600	108000	137000	138000
	SW6010B	Magnesium - Filtered		µg/L	40200	33900	29000	42700
	SW6010B	Potassium - Filtered		µg/L	17200 J	27900 J	25700 J	45300 J
	SW6010B	Sodium - Filtered		µg/L	105000 J	119000	64500	194000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 U	0.02 U
pH	SW9040B	pH						6.61

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW01			**Depth: 5 - 15 feet bgs**					
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	10 U	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.39 J	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW01		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.69	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	0.6 J	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Anthracene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Benzoic acid		µg/L	49 U	48 U	48 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	20 U	19 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.8 U	9.6 U	9.6 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.8 U	9.6 UJ	9.6 UJ	9.4 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	20 U	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.8 U	9.6 U	9.6 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW01		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	Diethylphthalate		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	49 U	48 U	48 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Fluorene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Isophorone		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	49 U	48 U	48 U	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	49 U	48 U	48 U	47 U
	SW8270C	3-Nitroaniline		µg/L	49 U	48 U	48 U	47 U
	SW8270C	4-Nitroaniline		µg/L	49 U	48 U	48 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	49 U	48 UJ	48 UJ	47 U
	SW8270C	Pentachlorophenol	1	µg/L	49 U	48 U	48 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Phenol		µg/L	9.8 U	9.6 U	9.6 UJ	9.4 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	Pyrene		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.8 U	9.6 UJ	9.6 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	49 U	48 U	48 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.8 U	9.6 U	9.6 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			190 UJ	190 U
	M8015D	Jet Fuel #5 (JP5)		µg/L			280 UJ	280 U
	M8015D	TPH as motor oil		µg/L			190 UJ	190 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scal Post Inj II Jun 2006
Location: F9SMW01		**Depth: 5 - 15 feet bgs**						
Metals	SW6010B	Arsenic - Filtered	50	µg/L	12.6	10 U	10 U	12.9
	SW6010B	Barium - Filtered	1000	µg/L	82.6	61	48.4	61.9
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	3.47 J
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	104	79.1 J	41.2 J	51.2 J
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	146	110	55.6	88.6 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	10 U	10 U	6.7 J
	SW6010B	Calcium - Filtered		µg/L	28300	21800	22200	23900
	SW6010B	Magnesium - Filtered		µg/L	13800	10900	9580	10500
	SW6010B	Potassium - Filtered		µg/L	28100	18800 J	16900	13000 J
	SW6010B	Sodium - Filtered		µg/L	203000	154000	119000	144000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 U	0.02 UJ
pH	SW9040B	pH						7.76
Location: F9SMW02		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	2.2 J	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW02		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Acenaphthylene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Anthracene		µg/L	9.7 U	10 U	9.6 U	9.9 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: F9SMW02		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	Benzo(a)anthracene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Benzoic acid		µg/L	48 U	50 U	48 U	50 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	12 J	20 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2-Chloronaphthalene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2-Chlorophenol		µg/L	9.7 U	10 U	9.6 UJ	9.9 U
	SW8270C	Chrysene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Dibenzofuran		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.7 U	10 UJ	9.6 UJ	9.9 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	20 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Diethylphthalate		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Dimethylphthalate		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	50 U	48 U	50 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Fluoranthene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Fluorene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Hexachlorobutadiene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.7 U	10 UJ	9.6 U	9.9 U
	SW8270C	Hexachloroethane		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Isophorone		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2-Methylnaphthalene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2-Methylphenol		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	4-Methylphenol		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	50 U	48 U	50 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.7 U	10 U	9.6 U	9.9 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW02		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Naphthalene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2-Nitroaniline		µg/L	48 U	50 U	48 U	50 U
	SW8270C	3-Nitroaniline		µg/L	48 U	50 U	48 U	50 U
	SW8270C	4-Nitroaniline		µg/L	48 U	50 U	48 U	50 U
	SW8270C	Nitrobenzene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	2-Nitrophenol		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	4-Nitrophenol		µg/L	48 U	50 UJ	48 UJ	50 U
	SW8270C	Pentachlorophenol	1	µg/L	48 U	50 U	48 UJ	50 U
	SW8270C	Phenanthrene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Phenol		µg/L	9.7 U	10 U	9.6 UJ	9.9 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	Pyrene		µg/L	9.7 U	10 U	9.6 U	9.9 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.7 U	10 UJ	9.6 UJ	9.9 UJ
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	50 U	48 U	50 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.7 U	10 U	9.6 U	9.9 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		190 UJ	190 UJ	140 J
	M8015D	Jet Fuel #5 (JP5)		µg/L		290 UJ	290 UJ	300 U
	M8015D	TPH as motor oil		µg/L		190 UJ	190 UJ	120 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	8.59 J	10.1 U	10 U	10 U
	SW6010B	Barium - Filtered	1000	µg/L	89.1	71.8	70.6	86.9
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	3.15 J	3.19 J	2.96 J	3.59 J
	SW6010B	Cobalt - Filtered		µg/L	5 U	5.96	5 U	3.37 J
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	12800	4540	12000	16600
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	582	571	480	460
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	9.47 J
	SW6010B	Nickel - Filtered	100	µg/L	3.37 J	8.11 J	3.53 J	10 U
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Calcium - Filtered		µg/L	137000	156000	158000	181000
	SW6010B	Magnesium - Filtered		µg/L	352000	374000	373000	437000

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Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: F9SMW02		**Depth: 5 - 15 feet bgs**						
Metals	SW6010B	Potassium - Filtered		µg/L	105000	127000 J	89000	129000 J
	SW6010B	Sodium - Filtered		µg/L	3210000	2760000	3480000	3480000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 U	0.02 U
pH	SW9040B	pH						7.07
Location: F9SMW03		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	10 UJ	2.9 J	2.4 J	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.26 J	0.26 J	0.25 J
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	tert-butyl alcohol		µg/L	34 J	50 U	42 J	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.3 J	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.32 J	0.5 U	0.31 J	0.29 J
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.76	0.5 U	0.74	0.82
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	7.6	2.6	8.2	7
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.21 J
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	6.3	8.4	7.7	7.3
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW03		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	3.9	0.86	5.2	6.9
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.8 U	9.4 U	9.7 UJ	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Anthracene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Benzoic acid		µg/L	10 J	47 U	48 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	20 U	19 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.8 U	9.4 U	9.7 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.8 U	9.4 U	9.7 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc[illegible] Post Inj [illegible] Jun 2006
Location: F9SMW03		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.8 U	9.4 UJ	9.7 UJ	9.4 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	20 U	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	49 U	47 U	48 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.8 U	9.4 U	9.7 UJ	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Fluorene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Isophorone		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	49 UJ	47 U	48 UJ	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.8 U	9.4 U	9.7 UJ	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	49 U	47 U	48 U	47 U
	SW8270C	3-Nitroaniline		µg/L	49 U	47 U	48 U	47 U
	SW8270C	4-Nitroaniline		µg/L	49 U	47 U	48 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.8 UJ	9.4 U	9.7 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	49 U	47 UJ	48 UJ	47 UJ
	SW8270C	Pentachlorophenol	1	µg/L	49 U	47 U	48 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Phenol		µg/L	9.8 U	9.4 U	9.7 UJ	9.4 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	Pyrene		µg/L	9.8 U	9.4 U	9.7 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.8 U	9.4 UJ	9.7 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	49 U	47 U	48 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.8 U	9.4 U	9.7 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW03		**Depth: 5 - 15 feet bgs**						
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			270	290
	M8015D	Jet Fuel #5 (JP5)		µg/L			230 J	280 U
	M8015D	TPH as motor oil		µg/L			98 J	120 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	31.1	13.4	38 J	29.6
	SW6010B	Barium - Filtered	1000	µg/L	67.1	121	93.2	96
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	27	3.08 J	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	3680	6680	5580	5540
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	460	1810	697	727
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	74	243	85	85.2
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	33.7	10 U	5.79 J
	SW6010B	Calcium - Filtered		µg/L	43900	96500	66400	66100
	SW6010B	Magnesium - Filtered		µg/L	32500	63600	49700	50100
	SW6010B	Potassium - Filtered		µg/L	39700 J	31500 J	43600 J	24300 J
	SW6010B	Sodium - Filtered		µg/L	551000	417000	690000	692000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 U	0.02 U
pH	SW9040B	pH						7.62
Location: F9SMW04		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	220 J	19 J	10 U	170
	SW8260B	Benzene	1	µg/L	0.36 J	0.2 J	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	200	50 U	50 U	170
	SW8260B	N-butylbenzene		µg/L	0.5 U	29 J	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	32	17 J	7.8	9.7
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.85	1
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: F9SMW04		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.73 J	0.39 J	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.46 J	0.31 J	0.32 J	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	43	23 J	32	13
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.41 J	0.48 J	1.5	0.2 J
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	48	23 J	9.4	12
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	7.3 J	20 U
	SW8260B	Isopropyl Ether		µg/L	1.3 J	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	38	20 J	7.1	10
	SW8260B	Methyl ethyl ketone		µg/L	750	95 J	600	230
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	2.8 J	5.9 J
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 UJ	1 U
	SW8260B	N-propylbenzene		µg/L	69	33 J	12	16
	SW8260B	Naphthalene		µg/L	120	47 J	33	31
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.54	0.26 J	0.5 U	0.22 J
	SW8260B	Toluene	150	µg/L	0.91	2.2 J	1.9	0.7
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.45 J	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	780	340 J	210	190
	SW8260B	1,3,5-Trimethylbenzene		µg/L	150	100 J	38	59

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW04		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.56	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	380	190 J	95	120
SVOCs	SW8270C	Acenaphthene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Anthracene		µg/L	9.5 UJ	9.4 U	9.4 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	Benzoic acid		µg/L	47 U	47 U	47 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.5 U	9.4 UJ	9.4 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 UJ	19 UJ	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.5 U	9.4 U	9.4 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.5 UJ	9.4 U	9.4 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.5 UJ	9.4 U	9.4 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.5 U	9.4 UJ	9.4 UJ	9.4 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 UJ	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.5 U	9.4 U	12	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	26	9.4 U	9.4 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	47 U	47 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.5 UJ	9.4 U	9.4 U	9.4 U
	SW8270C	Fluorene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.5 UJ	9.4 U	9.4 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	Isophorone		µg/L	9.5 U	9.4 U	9.4 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: F9SMW04		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	2-Methylnaphthalene		µg/L	16	7.7 J	9.4 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	330	430	390	500
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 UJ	47 U	47 U	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.5 UJ	9.4 U	9.4 U	9.4 U
	SW8270C	Naphthalene		µg/L	81	33	13	14
	SW8270C	2-Nitroaniline		µg/L	47 U	47 U	47 U	47 U
	SW8270C	3-Nitroaniline		µg/L	47 U	47 U	47 U	47 U
	SW8270C	4-Nitroaniline		µg/L	47 U	47 U	47 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	47 U	47 UJ	47 UJ	47 U
	SW8270C	Pentachlorophenol	1	µg/L	47 UJ	47 U	47 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.5 UJ	9.4 U	9.4 U	9.4 U
	SW8270C	Phenol		µg/L	9.5 U	35	49 UJ	60
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.5 UJ	9.4 U	9.4 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
	SW8270C	Pyrene		µg/L	9.5 UJ	9.4 UJ	9.4 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.5 U	9.4 UJ	9.4 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	47 U	47 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.5 U	9.4 U	9.4 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		12000 J	14000 J	41000
	M8015D	Jet Fuel #5 (JP5)		µg/L		5000 J	3700 J	7700
	M8015D	TPH as motor oil		µg/L		1100 J	680 J	2200
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	148 J
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	40.4	30.8	32.2 U	81.2
	SW6010B	Barium - Filtered	1000	µg/L	84.4	68.3	54.4	191
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	3.52 J	9.54	14.4	13.5
	SW6010B	Cobalt - Filtered		µg/L	5 U	16.9	23.1	185
	SW6010B	Copper - Filtered	1000	µg/L	3.22 J	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	11200	24900	31800	82900
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	7.41
	SW6010B	Manganese - Filtered	50	µg/L	930	1050	1190	2270 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	8.49 J
	SW6010B	Nickel - Filtered	100	µg/L	7.23 J	11.2	14.4	913
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW04		**Depth: 5 - 15 feet bgs**						
Metals	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	6.84 J	16.2	25.7	250
	SW6010B	Zinc - Filtered	5000	µg/L	7.32 J	15.3	10 U	64.8 J
	SW6010B	Calcium - Filtered		µg/L	107000	112000	108000	236000
	SW6010B	Magnesium - Filtered		µg/L	12200	8300	10600	19300
	SW6010B	Potassium - Filtered		µg/L	17500 J	20000 J	24500	24200 J
	SW6010B	Sodium - Filtered		µg/L	95500 J	38300	47600	79100
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 UJ	0.02 U
pH	SW9040B	pH						6.17
Location: F9SMW05		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	10 U	2.4 J	10 U	14
	SW8260B	Benzene	1	µg/L	0.29 J	0.3 J	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	12 J	20 J	50 U	8.3 J
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.39 J	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.3 J	0.48 J	0.76
	SW8260B	tert-butylbenzene		µg/L	0.29 J	0.22 J	0.38 J	0.25 J
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	2.3
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.2 J	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	1.2	0.85	0.5 J	0.43 J
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	2.8	2.5	1.9 J	0.72
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.29 J	0.22 J	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.25 J	0.3 J	0.96
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: F9SMW05		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Isopropyl Ether		µg/L	2.3 J	3.1 J	1 J	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.58	0.76 J	1.4
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	0.58 J
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.33 J	0.61 J	1.9
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	1.5
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.35 J
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.45 J	0.24 J	0.25 J	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	5.1
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	2.3
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	3.8	1.8 J	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	4.3
SVOCs	SW8270C	Acenaphthene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Anthracene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Benzoic acid		µg/L	48 U	47 U	47 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.7 U	9.5 U	9.5 UJ	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW05		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	Chrysene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.7 U	9.5 UJ	9.5 UJ	9.4 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	47 U	47 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Fluorene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Isophorone		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	47 U	47 U	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	48 U	47 U	47 U	47 U
	SW8270C	3-Nitroaniline		µg/L	48 U	47 U	47 U	47 U
	SW8270C	4-Nitroaniline		µg/L	48 U	47 U	47 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	48 U	47 UJ	47 UJ	47 U
	SW8270C	Pentachlorophenol	1	µg/L	48 U	47 U	47 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Phenol		µg/L	9.7 U	9.5 U	9.5 UJ	9.4 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.7 U	9.5 U	9.5 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj III Jun 2006
Location: F9SMW05		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	Pyrene		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.7 U	9.5 UJ	9.5 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	47 U	47 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.7 U	9.5 U	9.5 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			440	660
	M8015D	Jet Fuel #5 (JP5)		µg/L			280 U	220 J
	M8015D	TPH as motor oil		µg/L			190 U	120 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	23.9	24.2	18.1 U	10 U
	SW6010B	Barium - Filtered	1000	µg/L	191	198	135	162
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	25.7
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	60.6
	SW6010B	Iron - Filtered	300	µg/L	5500	3630	1250	9190
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	11.9
	SW6010B	Manganese - Filtered	50	µg/L	2300	1860	1430	1650 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	10.1 J
	SW6010B	Nickel - Filtered	100	µg/L	18.8	48.8	17.9	76.1
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	14.8
	SW6010B	Zinc - Filtered	5000	µg/L	5.01 J	7.67 J	7.93 J	62.3 J
	SW6010B	Calcium - Filtered		µg/L	134000	110000	106000	110000
	SW6010B	Magnesium - Filtered		µg/L	26600	33800	29300	26500
	SW6010B	Potassium - Filtered		µg/L	26900	36200 J	14300	21300 J
	SW6010B	Sodium - Filtered		µg/L	129000	268000	135000	96700
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 UJ	0.02 U
pH	SW9040B	pH						6.97
Location: F9SMW06		**Depth: 5 - 13 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	10 U	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW06		**Depth: 5 - 13 feet bgs**						
VOCs	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: F9SMW06		**Depth: 5 - 13 feet bgs**						
VOCs	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.21 J	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Acenaphthylene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Anthracene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Benzo(a)anthracene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Benzoic acid		µg/L	48 U	47 U	47 U	50 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2-Chloronaphthalene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2-Chlorophenol		µg/L	9.6 U	9.5 U	9.5 UJ	10 U
	SW8270C	Chrysene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Dibenzofuran		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.6 U	9.5 UJ	9.5 UJ	10 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Diethylphthalate		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Dimethylphthalate		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	47 U	47 U	50 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Fluoranthene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Fluorene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.6 U	9.5 U	9.5 U	10 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: F9SMW06		**Depth: 5 - 13 feet bgs**						
SVOCs	SW8270C	Hexachlorobutadiene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Hexachloroethane		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Isophorone		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2-Methylnaphthalene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2-Methylphenol		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	4-Methylphenol		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	47 U	47 U	50 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Naphthalene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2-Nitroaniline		µg/L	48 U	47 U	47 U	50 U
	SW8270C	3-Nitroaniline		µg/L	48 U	47 U	47 U	50 U
	SW8270C	4-Nitroaniline		µg/L	48 U	47 U	47 U	50 U
	SW8270C	Nitrobenzene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	2-Nitrophenol		µg/L	9.6 U	9.5 U	9.5 UJ	10 U
	SW8270C	4-Nitrophenol		µg/L	48 U	47 UJ	47 U	50 UJ
	SW8270C	Pentachlorophenol	1	µg/L	48 U	47 U	47 UJ	50 U
	SW8270C	Phenanthrene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Phenol		µg/L	9.6 U	9.5 U	9.5 UJ	10 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	Pyrene		µg/L	9.6 U	9.5 U	9.5 U	10 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.6 U	9.5 UJ	9.5 UJ	10 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	47 U	47 U	50 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.6 U	9.5 U	9.5 U	10 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		190 UJ	190 U	210 U
	M8015D	Jet Fuel #5 (JP5)		µg/L		280 UJ	290 U	310 U
	M8015D	TPH as motor oil		µg/L		190 UJ	190 U	210 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Barium - Filtered	1000	µg/L	75.8	46.9	58.2	46.3
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	9.4
	SW6010B	Iron - Filtered	300	µg/L	278	100 U	100 U	100 U
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj III Jun 2006
Location: F9SMW06		**Depth: 5 - 13 feet bgs**						
Metals	SW6010B	Manganese - Filtered	50	µg/L	748	26.8	8.65 J	65.6
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	6.37 J
	SW6010B	Nickel - Filtered	100	µg/L	10 U	10 U	10 U	6.79 J
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	9.76 J	8.22 J	21.4
	SW6010B	Calcium - Filtered		µg/L	50300	42800	52500	39300
	SW6010B	Magnesium - Filtered		µg/L	15500	12700	17000	12400
	SW6010B	Potassium - Filtered		µg/L	7790	5720 J	7130 J	5910 J
	SW6010B	Sodium - Filtered		µg/L	36700	33800	43500	30600
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 UJ	0.02 U	0.02 U	0.02 U
pH	SW9040B	pH						7.25
Location: MW410-1								
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	10 U	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.2 J	0.5 U	0.94 J	0.37 J
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: MW410-1								
VOCs	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Anthracene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Benzoic acid		µg/L	47 U	50 U	47 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.5 U	9.9 U	9.5 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sca Post Inj III Jun 2006
Location: MW410-1								
SVOCs	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	15 J	20 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.5 U	9.9 U	9.5 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.5 U	9.9 UJ	9.5 UJ	9.4 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	20 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	50 U	47 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Fluorene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Isophorone		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	50 U	47 U	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	47 U	50 U	47 U	47 U
	SW8270C	3-Nitroaniline		µg/L	47 U	50 U	47 U	47 U
	SW8270C	4-Nitroaniline		µg/L	47 U	50 U	47 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.5 U	9.9 U	9.5 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: MW410-1								
SVOCs	SW8270C	4-Nitrophenol		µg/L	47 U	50 UJ	47 UJ	47 U
	SW8270C	Pentachlorophenol	1	µg/L	47 U	50 U	47 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Phenol		µg/L	9.5 U	9.9 U	9.5 UJ	9.4 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	Pyrene		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.5 U	9.9 UJ	9.5 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	50 U	47 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.5 U	9.9 U	9.5 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		190 UJ	190 U	190 U
	M8015D	Jet Fuel #5 (JP5)		µg/L		280 UJ	280 U	280 U
	M8015D	TPH as motor oil		µg/L		190 UJ	190 U	190 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	7.3 J	10 U	10 U	13.8
	SW6010B	Barium - Filtered	1000	µg/L	56.5	53.3	40.2	62.9
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	4.63 J	4.96 J	11.2	12.5
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	5 U
	SW6010B	Copper - Filtered	1000	µg/L	3.72 J	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	86.1 J	52.4 J	77 J	75.6 J
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	130	133	93.2	112 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	6.9 J	6.68 J	10 U	10 U
	SW6010B	Calcium - Filtered		µg/L	22200	23100	20300	29300
	SW6010B	Magnesium - Filtered		µg/L	12700	12800	10100	14100
	SW6010B	Potassium - Filtered		µg/L	25700	23000 J	17200	14600 J
	SW6010B	Sodium - Filtered		µg/L	203000	188000	140000	152000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 UJ	0.02 UJ
pH	SW9040B	pH						7.65
Location: MW410-2								
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	10 U	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj Jun 2006
Location: MW410-2								
VOCs	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.26 J	0.25 J	0.31 J	0.34 J
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	1.8	0.56	0.5 U	1.2
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.45 J	0.5 U	0.5 U	0.56
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: MW410-2								
VOCs	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.81 J	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	1	0.38 J	0.5 U	1.5
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Anthracene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Benzo(a)anthracene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Benzoic acid		µg/L	47 U	48 U	47 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.4 U	9.6 U	9.4 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.4 U	9.6 UJ	9.4 UJ	9.4 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	48 U	47 U	47 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj I... Jun 2006
Location: MW410-2								
SVOCs	SW8270C	2,4-Dinitrotoluene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Fluorene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Isophorone		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	48 U	47 U	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	47 U	48 U	47 U	47 U
	SW8270C	3-Nitroaniline		µg/L	47 U	48 U	47 U	47 U
	SW8270C	4-Nitroaniline		µg/L	47 U	48 U	47 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	47 U	48 UJ	47 UJ	47 UJ
	SW8270C	Pentachlorophenol	1	µg/L	47 U	48 U	47 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Phenol		µg/L	9.4 U	9.6 U	9.4 UJ	9.4 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	Pyrene		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.4 U	9.6 UJ	9.4 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	48 U	47 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.4 U	9.6 U	9.4 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			190 UJ	190 U
	M8015D	Jet Fuel #5 (JP5)		µg/L			280 UJ	280 U
	M8015D	TPH as motor oil		µg/L			190 UJ	180 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	5.9 J	11	10 U	10 U
	SW6010B	Barium - Filtered	1000	µg/L	152	105	76.4	152
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: MW410-2								
Metals	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	10.2	4.03 J	11.9
	SW6010B	Iron - Filtered	300	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	72.9	45.6	10 U	36.1
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	4.05 J	10 U	10 U	7.65 J
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	5.44 J	14.2	10 U	5.53 J
	SW6010B	Calcium - Filtered		µg/L	48500	38400	27600	48000
	SW6010B	Magnesium - Filtered		µg/L	22700	17500	13900	22500
	SW6010B	Potassium - Filtered		µg/L	18500	15100 J	12500	18900 J
	SW6010B	Sodium - Filtered		µg/L	55200	45500	39300	54200
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 U	0.02 U
pH	SW9040B	pH						7.78
Location: MW410-3		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	10 U	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U

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Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj Jun 2006
Location: MW410-3		**Depth: 5 - 15 feet bgs**						
VOCs	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	1.8	1.4	1.5	1.3
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	1.1	0.94	0.86	0.67
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	1.1	0.5 U	0.62	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Acenaphthylene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Anthracene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzo(a)anthracene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U

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Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: MW410-3		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	Benzo(k)fluoranthene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Benzoic acid		µg/L	48 U	47 U	48 U	50 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Chloronaphthalene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Chlorophenol		µg/L	9.6 U	9.4 U	9.6 UJ	9.9 U
	SW8270C	Chrysene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Dibenzofuran		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.6 U	9.4 UJ	9.6 UJ	9.9 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Diethylphthalate		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Dimethylphthalate		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	47 U	48 U	50 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Fluoranthene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Fluorene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Hexachlorobutadiene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Hexachloroethane		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Isophorone		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Methylnaphthalene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Methylphenol		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	4-Methylphenol		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	47 U	48 U	50 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Naphthalene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U

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Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj III Jun 2006
Location: MW410-3		**Depth: 5 - 15 feet bgs**						
SVOCs	SW8270C	2-Nitroaniline		µg/L	48 U	47 U	48 U	50 U
	SW8270C	3-Nitroaniline		µg/L	48 U	47 U	48 U	50 U
	SW8270C	4-Nitroaniline		µg/L	48 U	47 U	48 U	50 U
	SW8270C	Nitrobenzene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	2-Nitrophenol		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	4-Nitrophenol		µg/L	48 U	47 UJ	48 UJ	50 UJ
	SW8270C	Pentachlorophenol	1	µg/L	48 U	47 U	48 UJ	50 U
	SW8270C	Phenanthrene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Phenol		µg/L	9.6 U	9.4 U	9.6 UJ	9.9 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	Pyrene		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.6 U	9.4 UJ	9.6 UJ	9.9 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	47 U	48 U	50 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.6 U	9.4 U	9.6 U	9.9 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		190 U	200 UJ	200 U
	M8015D	Jet Fuel #5 (JP5)		µg/L		290 U	290 UJ	310 U
	M8015D	TPH as motor oil		µg/L		150 J	200 UJ	200 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	5.15 J	10 U	10 U	10 U
	SW6010B	Barium - Filtered	1000	µg/L	130	132	133	138
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	7.64 J	25.8	19.2	31.6
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	6.05 J
	SW6010B	Nickel - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	10 U	10 U
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	10.3	10 U	10 U
	SW6010B	Calcium - Filtered		µg/L	43100	42900	45900	42200
	SW6010B	Magnesium - Filtered		µg/L	18200	18000	19700	17600
	SW6010B	Potassium - Filtered		µg/L	19100	18800 J	19800	20000 J
	SW6010B	Sodium - Filtered		µg/L	33700	38600	40900	40100
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 U	0.02 UJ
pH	SW9040B	pH						7.82

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: MW410-4								
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	10 U	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	1 U	1 U
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj III Jun 2006
Location: MW410-4								
VOCs	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.6 U	9.7 U	9.7 UJ	10 U
	SW8270C	Acenaphthylene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Anthracene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Benzo(a)anthracene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Benzoic acid		µg/L	48 U	48 U	48 U	51 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	2-Chloronaphthalene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	2-Chlorophenol		µg/L	9.6 U	9.7 U	9.7 UJ	10 U
	SW8270C	Chrysene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Dibenzofuran		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.6 U	9.7 UJ	9.7 UJ	10 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.6 U	9.7 U	9.7 U	10 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: MW410-4								
SVOCs	SW8270C	Diethylphthalate		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Dimethylphthalate		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	48 U	48 U	51 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.6 U	9.7 U	9.7 UJ	10 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Fluoranthene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Fluorene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Hexachlorobutadiene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Hexachloroethane		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Isophorone		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	2-Methylnaphthalene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	2-Methylphenol		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	4-Methylphenol		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	48 U	48 UJ	51 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.6 U	9.7 U	9.7 UJ	10 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Naphthalene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	2-Nitroaniline		µg/L	48 U	48 U	48 U	51 U
	SW8270C	3-Nitroaniline		µg/L	48 U	48 U	48 U	51 U
	SW8270C	4-Nitroaniline		µg/L	48 U	48 U	48 U	51 U
	SW8270C	Nitrobenzene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	2-Nitrophenol		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	4-Nitrophenol		µg/L	48 U	48 UJ	48 UJ	51 UJ
	SW8270C	Pentachlorophenol	1	µg/L	48 U	48 U	48 UJ	51 U
	SW8270C	Phenanthrene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Phenol		µg/L	9.6 U	9.7 U	9.7 UJ	10 UJ
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	Pyrene		µg/L	9.6 U	9.7 U	9.7 U	10 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.6 U	9.7 UJ	9.7 UJ	10 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	48 U	48 U	51 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.6 U	9.7 U	9.7 U	10 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		190 UJ	190 UJ	210 U
	M8015D	Jet Fuel #5 (JP5)		µg/L		280 UJ	280 UJ	320 U
	M8015D	TPH as motor oil		µg/L		120 J	320 J	210 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj I Jun 2006
Location: MW410-4								
Metals	SW6010B	Arsenic - Filtered	50	µg/L	11.9	10 U	13.1 J	10 U
	SW6010B	Barium - Filtered	1000	µg/L	44.6	45	43.5	52.7
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	3.95 J	3.48 J	8.18
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	5 U	5 U
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Iron - Filtered	300	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	11.5	11.2	9.38 J	9.15 J
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Calcium - Filtered		µg/L	23300	23900	26400	27600
	SW6010B	Magnesium - Filtered		µg/L	6050	6350	7120	7700
	SW6010B	Potassium - Filtered		µg/L	7640	8230 J	7960 J	10700
	SW6010B	Sodium - Filtered		µg/L	45900	53000	47400	45200
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 UJ	0.02 UJ	0.02 U	0.0078 J
pH	SW9040B	pH						8.06
Location: P-9-MWS01								
VOCs	SW8260B	Acetone		µg/L	13	4.4 J	10 U	27
	SW8260B	Benzene	1	µg/L	0.36 J	0.5 U	0.23 J	0.29 J
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	11 J	7.1 J	16 J	27 J
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.22 J
	SW8260B	tert-butylbenzene		µg/L	0.48 J	0.46 J	0.97 J	0.73
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.53	0.33 J	0.2 J
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: P-9-MWS01								
VOCs	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.47 J	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	2.1	0.82	0.67 J	0.81
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	19	7.3	2.5 J	3.1 J
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	1 UJ	2.7
	SW8260B	N-propylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.25 J
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	1.8	0.71	0.48 J	0.53
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Acenaphthylene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Anthracene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj III Jun 2006
Location: P-9-MWS01								
SVOCs	SW8270C	Benzo(a)anthracene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Benzoic acid		µg/L	48 U	48 U	47 U	47 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	19 U
	SW8270C	4-Chloroaniline		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Chloronaphthalene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Chlorophenol		µg/L	9.6 U	9.6 U	9.5 UJ	9.4 U
	SW8270C	Chrysene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Dibenzofuran		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.6 U	9.6 UJ	9.5 UJ	9.4 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	19 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Diethylphthalate		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Dimethylphthalate		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	48 U	47 U	47 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Fluoranthene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Fluorene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Hexachlorobutadiene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.6 U	9.6 UJ	9.5 U	9.4 U
	SW8270C	Hexachloroethane		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Isophorone		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Methylnaphthalene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Methylphenol		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	4-Methylphenol		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	48 U	47 U	47 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.6 U	9.6 U	9.5 U	9.4 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: P-9-MWS01								
SVOCs	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Naphthalene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Nitroaniline		µg/L	48 U	48 U	47 U	47 U
	SW8270C	3-Nitroaniline		µg/L	48 U	48 U	47 U	47 U
	SW8270C	4-Nitroaniline		µg/L	48 U	48 U	47 U	47 U
	SW8270C	Nitrobenzene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	2-Nitrophenol		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	4-Nitrophenol		µg/L	48 U	48 UJ	47 UJ	47 U
	SW8270C	Pentachlorophenol	1	µg/L	48 U	48 U	47 UJ	47 U
	SW8270C	Phenanthrene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Phenol		µg/L	9.6 U	9.6 U	9.5 UJ	9.4 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	Pyrene		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.6 U	9.6 UJ	9.5 UJ	9.4 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	48 U	47 U	47 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.6 U	9.6 U	9.5 U	9.4 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			2400	2500
	M8015D	Jet Fuel #5 (JP5)		µg/L			360	380
	M8015D	TPH as motor oil		µg/L			140 J	120 J
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	20.9	10 U	10 U	11.6 U
	SW6010B	Barium - Filtered	1000	µg/L	115	104	106	55.4
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2.78	2.58
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Cobalt - Filtered		µg/L	10.5	25.5	17.5	20.9
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	60.9	73.3
	SW6010B	Iron - Filtered	300	µg/L	14500	15000	9570	25700
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	10.2	6.82
	SW6010B	Manganese - Filtered	50	µg/L	1780	3980	7910	3890 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	374	205	95.7	145
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	11.1	10 U	10 U	6.47 J
	SW6010B	Zinc - Filtered	5000	µg/L	9.72 J	57.9	345	382 J
	SW6010B	Calcium - Filtered		µg/L	84400	123000	226000	140000
	SW6010B	Magnesium - Filtered		µg/L	67100	66900	89400	56800

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Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj III Jun 2006
Location: P-9-MWS01								
Metals	SW6010B	Potassium - Filtered		µg/L	46800 J	46100 J	92600	59100 J
	SW6010B	Sodium - Filtered		µg/L	700000 J	414000	309000	309000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 U	0.02 U
pH	SW9040B	pH						6.78
Location: P-9-MWS02								
VOCs	SW8260B	Acetone		µg/L	10 U	10 U	78 J	10 U
	SW8260B	Benzene	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 UJ
	SW8260B	tert-butyl alcohol		µg/L	50 U	50 U	50 U	50 U
	SW8260B	N-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	sec-butylbenzene		µg/L	0.26 J	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	0.98 J	0.5 U
	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.5 U	0.25 J	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	0.98	0.87	0.24 J	0.77
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Isopropyl Ether		µg/L	9.6	14	1.1 J	1.7 J
	SW8260B	Isopropylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methyl ethyl ketone		µg/L	20 U	20 U	360 J	5.8 J
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	20 U	20 U
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: P-9-MWS02								
VOCs	SW8260B	Methylene Chloride	5	µg/L	1 U	1 UJ	25 J	1 U
	SW8260B	N-propylbenzene		µg/L	0.23 J	0.5 U	0.5 U	0.5 U
	SW8260B	Naphthalene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.27 J	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	0.7	0.5 U	0.5 U	0.5 U
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Vinyl Chloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2 U	2 U	2 U
SVOCs	SW8270C	Acenaphthene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Acenaphthylene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Anthracene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(a)anthracene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzoic acid		µg/L	47 U	48 U	48 U	49 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Chloronaphthalene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Chlorophenol		µg/L	9.5 U	9.6 U	9.6 UJ	9.8 U
	SW8270C	Chrysene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Dibenzofuran		µg/L	9.5 U	9.6 U	9.6 U	9.8 U

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Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc: Post Inj III Jun 2006
Location: P-9-MWS02								
SVOCs	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.5 U	9.6 UJ	9.6 UJ	9.8 UJ
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Diethylphthalate		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Dimethylphthalate		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2,4-Dinitrophenol		µg/L	47 U	48 U	48 U	49 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Fluoranthene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Fluorene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Hexachlorobutadiene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Hexachloroethane		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Isophorone		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Methylnaphthalene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Methylphenol		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	4-Methylphenol		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	47 U	48 U	48 U	49 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Naphthalene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Nitroaniline		µg/L	47 U	48 U	48 U	49 U
	SW8270C	3-Nitroaniline		µg/L	47 U	48 U	48 U	49 U
	SW8270C	4-Nitroaniline		µg/L	47 U	48 U	48 U	49 U
	SW8270C	Nitrobenzene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Nitrophenol		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	4-Nitrophenol		µg/L	47 U	48 UJ	48 UJ	49 U
	SW8270C	Pentachlorophenol	1	µg/L	47 U	48 U	48 UJ	49 U
	SW8270C	Phenanthrene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Phenol		µg/L	9.5 U	9.6 U	9.6 UJ	9.8 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	Pyrene		µg/L	9.5 U	9.6 U	9.6 U	9.8 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.5 U	9.6 UJ	9.6 UJ	9.8 UJ
	SW8270C	2,4,5-Trichlorophenol		µg/L	47 U	48 U	48 U	49 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.5 U	9.6 U	9.6 U	9.8 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: P-9-MWS02								
TPH Extractable	M8015D	TPH as diesel fuel		µg/L			190 U	130 J
	M8015D	Jet Fuel #5 (JP5)		µg/L			290 U	310 U
	M8015D	TPH as motor oil		µg/L			190 U	210 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	22.4	14.6	17.3 U	10 U
	SW6010B	Barium - Filtered	1000	µg/L	87	80.2	100	189
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	2 U	2.33 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	10.9	5 U
	SW6010B	Cobalt - Filtered		µg/L	2.83 J	5 U	6.27	32.6
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	29.3	92.2
	SW6010B	Iron - Filtered	300	µg/L	890	656	100 U	364
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	5 U	5 U
	SW6010B	Manganese - Filtered	50	µg/L	722	662	590	765
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	40 U
	SW6010B	Nickel - Filtered	100	µg/L	58	48.8	27.3	128
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	62.2	20.5
	SW6010B	Zinc - Filtered	5000	µg/L	56.4	43.1	111	162
	SW6010B	Calcium - Filtered		µg/L	36200	30600	49600	61800
	SW6010B	Magnesium - Filtered		µg/L	28100	28500	27700	38900
	SW6010B	Potassium - Filtered		µg/L	19400 J	17300 J	30400	23900 J
	SW6010B	Sodium - Filtered		µg/L	572000 J	624000	264000	370000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 UJ	0.02 U	0.02 U
pH	SW9040B	pH						7.28
Location: P-9-MWS04								
VOCs	SW8260B	Acetone		µg/L	10 U	4.2 J	540 J	98
	SW8260B	Benzene	1	µg/L	2.5	2.8	0.59 J	2.2
	SW8260B	Bromobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromodichloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromoform		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Bromomethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-butyl alcohol		µg/L	50 U	19 J	28 J	87
	SW8260B	N-butylbenzene		µg/L	0.5 U	23	14 J	0.5 U
	SW8260B	sec-butylbenzene		µg/L	2.2	15	17 J	17
	SW8260B	tert-butylbenzene		µg/L	1.5	2.9	3.6 J	3.6
	SW8260B	Carbon Tetrachloride	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chlorobenzene	70	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Chloroform		µg/L	0.5 U	0.5 U	3.6 J	1.5

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj III Jun 2006
Location: P-9-MWS04								
VOCs	SW8260B	Chloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	4-Chlorotoluene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromo-3-chloropropane	0.2	µg/L	2 U	2 U	2 U	2 U
	SW8260B	Dibromochloromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dibromoethane	0.05	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichlorobenzene	600	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichlorobenzene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,4-Dichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Dichlorodifluoromethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethane	5	µg/L	0.22 J	0.5 U	0.5 U	0.5 U
	SW8260B	1,2-Dichloroethane	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1-Dichloroethene	6	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	cis-1,2-Dichloroethene	6	µg/L	14	17	4.2 J	15
	SW8260B	trans-1,2-Dichloroethene	10	µg/L	0.5 U	0.5 U	0.34 J	0.28 J
	SW8260B	1,2-Dichloropropane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,3-Dichloropropene	0.5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Ethylbenzene	300	µg/L	1.1	11	16 J	37
	SW8260B	Hexachlorobutadiene		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	2-Hexanone		µg/L	20 U	20 U	20 U	6 J
	SW8260B	Isopropyl Ether		µg/L	56	37	4.3 J	17
	SW8260B	Isopropylbenzene		µg/L	1.8	18	23 J	23
	SW8260B	Methyl ethyl ketone		µg/L	20 U	7.2 J	55 J	17 J
	SW8260B	Methyl isobutyl ketone		µg/L	20 U	20 U	3.9 J	3.5 J
	SW8260B	Methyl tert-butyl ether	13	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Methylene Chloride	5	µg/L	1 U	1 U	1 UJ	1 U
	SW8260B	N-propylbenzene		µg/L	2.1	29	39 J	33
	SW8260B	Naphthalene		µg/L	2.8	32	47 J	78
	SW8260B	Styrene	100	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	tert-amyl methyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	tert-butyl ethyl ether		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,1,1,2-Tetrachloroethane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2,2-Tetrachloroethane	1	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Tetrachloroethene	5	µg/L	0.5 U	0.5 U	0.27 J	0.5 U
	SW8260B	Toluene	150	µg/L	0.5 U	0.5 U	1.4 J	0.65
	SW8260B	1,2,4-Trichlorobenzene	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,1-Trichloroethane	200	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichloroethane	5	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	Trichloroethene	5	µg/L	0.5 U	0.5 U	0.32 J	0.5 U
	SW8260B	Trichlorofluoromethane	150	µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,2,3-Trichloropropane		µg/L	0.5 U	0.5 U	0.5 U	0.5 U
	SW8260B	1,1,2-Trichlorotrifluoroethane		µg/L	5 U	5 U	5 U	5 U
	SW8260B	1,2,4-Trimethylbenzene		µg/L	1.8	55	95 J	64
	SW8260B	1,3,5-Trimethylbenzene		µg/L	0.5 U	17	13 J	3.1

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: P-9-MWS04								
VOCs	SW8260B	Vinyl Chloride	0.5	µg/L	9.6	7.8	1.1 J	0.5 U
	SW8260B	Xylenes, total	1750	µg/L	2 U	2.7	32 J	8.6
SVOCs	SW8270C	Acenaphthene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Acenaphthylene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Anthracene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(a)anthracene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(a)pyrene	0.2	µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(b)fluoranthene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(g,h,i)perylene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzo(k)fluoranthene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Benzoic acid		µg/L	48 U	48 U	48 U	49 U
	SW8270C	Benzyl butyl phthalate		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	bis(2-Chloroethoxy)methane		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	bis(2-Chloroethyl)ether		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	bis(2-chloroisopropyl) ether		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	bis(2-Ethylhexyl)phthalate	4	µg/L	19 U	19 U	19 U	20 U
	SW8270C	4-Chloroaniline		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Chloronaphthalene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Chlorophenol		µg/L	9.6 U	9.6 U	9.6 UJ	9.8 U
	SW8270C	Chrysene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Di-n-butyl phthalate		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Di-n-octyl phthalate		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Dibenz(a,h)anthracene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Dibenzofuran		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	1,2-Dichlorobenzene	600	µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	1,3-Dichlorobenzene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	1,4-Dichlorobenzene	5	µg/L	9.6 U	9.6 UJ	9.6 UJ	9.8 U
	SW8270C	3,3'-Dichlorobenzidine		µg/L	19 U	19 U	19 U	20 U
	SW8270C	2,4-Dichlorophenol		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Diethylphthalate		µg/L	9.6 U	9.6 U	23	9.8 U
	SW8270C	2,4-Dimethylphenol		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Dimethylphthalate		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	2,4-Dinitrophenol		µg/L	48 U	48 UJ	48 U	49 U
	SW8270C	2,4-Dinitrotoluene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	2,6-Dinitrotoluene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Fluoranthene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Fluorene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Hexachlorobenzene	1	µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Hexachlorobutadiene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Hexachlorocyclopentadiene	50	µg/L	9.6 U	9.6 UJ	9.6 U	9.8 U
	SW8270C	Hexachloroethane		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Indeno(1,2,3-c,d)pyrene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Isophorone		µg/L	9.6 U	9.6 U	9.6 U	9.8 U

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Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Sc Post Inj III Jun 2006
Location: P-9-MWS04								
SVOCs	SW8270C	2-Methylnaphthalene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Methylphenol		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	4-Methylphenol		µg/L	9.6 U	9.6 U	21	9.8 U
	SW8270C	4,6-dinitro-2-methylphenol		µg/L	48 U	48 U	48 U	49 U
	SW8270C	4-Chloro-3-methylphenol		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	N-Nitrosodi-n-propylamine		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	N-Nitrosodimethylamine		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	N-Nitrosodiphenylamine		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Naphthalene		µg/L	5.6 J	9.6 U	20	46
	SW8270C	2-Nitroaniline		µg/L	48 U	48 U	48 U	49 U
	SW8270C	3-Nitroaniline		µg/L	48 U	48 U	48 U	49 U
	SW8270C	4-Nitroaniline		µg/L	48 U	48 U	48 U	49 U
	SW8270C	Nitrobenzene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	2-Nitrophenol		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	4-Nitrophenol		µg/L	48 U	48 UJ	48 UJ	49 U
	SW8270C	Pentachlorophenol	1	µg/L	48 U	48 U	48 UJ	49 U
	SW8270C	Phenanthrene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Phenol		µg/L	9.6 U	9.6 U	9.6 UJ	9.8 U
	SW8270C	4-Bromophenylphenyl ether		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	4-Chlorophenylphenyl ether		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	Pyrene		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
	SW8270C	1,2,4-Trichlorobenzene	5	µg/L	9.6 U	9.6 UJ	9.6 UJ	9.8 U
	SW8270C	2,4,5-Trichlorophenol		µg/L	48 U	48 U	48 U	49 U
	SW8270C	2,4,6-Trichlorophenol		µg/L	9.6 U	9.6 U	9.6 U	9.8 U
TPH Extractable	M8015D	TPH as diesel fuel		µg/L		840 J	16000 J	29000
	M8015D	Jet Fuel #5 (JP5)		µg/L		1500 J	3700 J	7400
	M8015D	TPH as motor oil		µg/L		100 J	240 J	2000 U
Metals	SW6010B	Aluminum - Filtered	1000	µg/L	200 U	200 U	200 U	200 U
	SW6010B	Antimony - Filtered	6	µg/L	100 U	100 U	100 U	100 U
	SW6010B	Arsenic - Filtered	50	µg/L	14.6	10 U	20.9 U	12.7 U
	SW6010B	Barium - Filtered	1000	µg/L	144	121	161	195
	SW6010B	Beryllium - Filtered	4	µg/L	2 U	2 U	2 U	2 U
	SW6010B	Cadmium - Filtered	5	µg/L	2 U	2 U	5.38	2 U
	SW6010B	Chromium - Filtered	50	µg/L	5 U	5 U	4.8 J	5.59
	SW6010B	Cobalt - Filtered		µg/L	5 U	5 U	256	127
	SW6010B	Copper - Filtered	1000	µg/L	5 U	5 U	39.1	5 U
	SW6010B	Iron - Filtered	300	µg/L	3560	1150	78800	74000
	SW6010B	Lead - Filtered	15	µg/L	5 U	5 U	136	55.2
	SW6010B	Manganese - Filtered	50	µg/L	904	863	5070	3960 J
	SW6010B	Molybdenum - Filtered		µg/L	40 U	40 U	40 U	7.39 J
	SW6010B	Nickel - Filtered	100	µg/L	20	21.7	630	850
	SW6010B	Selenium - Filtered	50	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Silver - Filtered	100	µg/L	10 U	10 U	10 U	10 U

Appendix B - Table 1: Baseline and Post-Injection Groundwater Sample Results
Site 9 Shallow Full-Scale Removal Action, Alameda Point, Alameda, California

Analytical Method Group	Analytical Method	Analyte	MCL	Units	Full Scale Baseline Dec 2005	Full Scale Post Inj I Feb 2006	Full Scale Post Inj II Apr 2006	Full Scale Post Inj III Jun 2006
Location: P-9-MWS04								
Metals	SW6010B	Thallium - Filtered	2	µg/L	10 U	10 U	10 U	10 U
	SW6010B	Vanadium - Filtered		µg/L	10 U	10 U	88	152
	SW6010B	Zinc - Filtered	5000	µg/L	10 U	6.71 J	397	77.3 J
	SW6010B	Calcium - Filtered		µg/L	53800	53700	157000	146000
	SW6010B	Magnesium - Filtered		µg/L	92700	82900	64300	75800
	SW6010B	Potassium - Filtered		µg/L	54000 J	41400 J	93900	48500 J
	SW6010B	Sodium - Filtered		µg/L	1210000 J	1100000	317000	420000
Metals	SW7196A	Chromium VI	0.05	mg/L	0.02 U	0.02 U	0.02 U	0.02 U
pH	SW9040B	pH						6.58

Notes:
bgs below ground surface
MCL California maximum contaminant level (Title 22, California Code of Regulations, effective June 2003)
µg/L micrograms per liter
mg/L milligrams per liter
VOCs volatile organic compounds
SVOCs semivolatile organic compounds
TPH-E total petroleum hydrocarbons - extractable
U Not detected at or above the indicated reporting limit
J Estimated value
Post Inj post injection event

Appendix C
In-Situ Oxidative Technologies, Inc.
Draft Full-Scale In-Situ Chemical Oxidation Report for Installation Restoration Site 9 Shallow

FULL-SCALE IN-SITU CHEMICAL OXIDATION REPORT

INSTALLATION RESTORATION SITE 9 SHALLOW
ALAMEDA POINT
ALAMEDA, CALIFORNIA

AUGUST 2006

PREPARED FOR

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ISOTEC PROJECT NO. 900087

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1.0 INTRODUCTION

In-Situ Oxidative Technologies, Inc. (ISOTEC) was retained by Shaw Environmental & Infrastructure, Inc. (Shaw) to conduct a full-scale in-situ chemical oxidation remediation program associated with soil and groundwater contamination at Installation Restoration (IR) Site 9 Shallow, Alameda Point, Alameda, California (**Figure 1**). The primary contaminants of concern (COCs) at IR Site 9 Shallow are cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC).

This remediation program report contains details of ISOTEC's field activities associated with the injection of ISOTEC reagents. Reagents were injected in order to treat contaminants through the use of in-situ chemical oxidation. The field activities occurred during three full-scale injection events over a period of four months: January 24, 2006, to January 28, 2006; April 3, 2006, to April 7, 2006; May 23, 2006, to May 26, 2006.

1.1 FULL-SCALE REMEDIATION PROGRAM OBJECTIVES

The primary objective of the remediation program at IR Site 9 Shallow was to achieve mass reduction within the saturated zone in order to reduce groundwater contaminant concentrations to below their respective State Maximum Contaminant Levels (MCLs) through in-situ chemical oxidation. The MCLs for the primary COCs are 6 micrograms per liter (µg/l) for cis-1,2-DCE and 0.5 µg/l for VC. The specific objective of the program was chlorinated solvent mass reduction (**Figure 2**).

1.2 REMEDIATION PROGRAM DESIGN

The target treatment zone at IR Site 9 Shallow was the first water-bearing (shallow) zone (FWBZ) present at depths from 8 to 15 feet below ground surface (bgs).

Direct-push injection screens installed at specific injection locations across the treatment area were to be utilized to introduce ISOTEC reagents into the subsurface at IR Site 9 Shallow over the course of three injection events. The direct-push injection screens were to target the FWBZ. The number and spacing of the injection locations was based upon a 20-foot radius of influence (ROI) for the FWBZ.

ISOTEC planned on conducting three separate full-scale injection events to effectively conduct full-scale treatment at the site. The injection locations were to be shifted laterally from event to event to ensure complete reagent coverage across the site.

2.0 TECHNOLOGY OVERVIEW

The ISOTEC process is an in-situ remedial technology that destroys organic contamination using Fenton's reagent-based oxidation chemistry. Fenton's chemistry was first documented by H.J.H. Fenton in 1894. It is characterized by the combination of soluble iron with low concentrations of hydrogen peroxide to produce hydroxyl radicals ($OH^{\bullet}$). These hydroxyl radicals are very powerful and short-lived oxidizers. Similar to the reaction of other oxidizers, the hydroxyl radicals attack the carbon double bonds of the chlorinated hydrocarbon molecule. Under certain conditions reductive species can also be formed by Fenton's chemistry. This gives Fenton's reagent two separate pathways to attack a wide range of contaminants. The summary equation for Fenton's chemistry is shown below.

$$Fe^{+2} + H_2O_2 \rightarrow Fe^{+3} + OH^- + OH^{\bullet}$$

Where H_2O_2 is hydrogen peroxide, Fe^{+2} is ferrous iron, Fe^{+3} is ferric iron, $OH^{\bullet}$ is hydroxyl free radical and OH^- is hydroxide ion.

Iron is used to catalyze the reaction. Maintaining iron in solution is important for the process to be successful in an in-situ application. To eliminate the necessity of performing the reaction under low pH conditions, as is the case with traditional Fenton's chemistry, complexed iron is used in in-situ applications via the ISOTEC process. The hydrogen peroxide and dissolved iron solutions are injected through a site-specific delivery system providing sufficient distribution to selectively treat the area of concern. Reaction time is very fast, with oxidation capacity of the reagent being used up in a matter of a few days. Hydrogen peroxide breaks down into water and oxygen and the iron catalyst is oxidized and precipitates out of solution. It is important to note that the concentration of hydrogen peroxide will be relatively dilute, generally less than 17%, which eliminates the potential for significant exothermic reactions that are associated with higher concentrations of hydrogen peroxide. Experience with this process using low hydrogen peroxide concentrations and complexed iron has resulted in less than a 25° F temperature increase in field applications.

Fenton-based oxidation processes have been shown to effectively treat a wide range of contaminants including hard-to-treat compounds such as chlorinated solvents, petroleum hydrocarbons, gasoline additives including benzene, toluene, ethylbenzene and xylene (BTEX), and pesticides. Hydroxyl radicals and reductive species generated by the Fenton-based reagent will treat nearly all contaminants with carbon/carbon double bonds (i.e., dichloroethene and tetrachloroethene) and single bonded contaminants with extractable hydrogen (i.e., trichloroethane).

The stoichiometric relationship between trichloroethene (TCE) oxidation and hydrogen peroxide consumption can be predicted from the oxidative reaction:

$$C_2Cl_3H + 3H_2O_2 \rightarrow 2CO_2 + 2H_2O + 3Cl^- + 3H^+$$

Where C_2Cl_3H is TCE, H_2O_2 is hydrogen peroxide, CO_2 is carbon dioxide, Cl^- is chloride ion, and H^+ is hydrogen ion. Hydrogen peroxide not consumed in the above reaction will continue to oxidize the groundwater contaminants and will naturally degrade along with the contaminant to oxygen and water.

The ISOTEC process consists of injecting stabilized hydrogen peroxide and complexed iron catalysts into contaminated aquifers or vadose zones. As compared to conventional Fenton's Reagent which requires acidic conditions (pH $\leq$ 3) the ISOTEC process is effective at neutral (pH = 7) conditions. This is an important consideration in full-scale application since acidifying an aquifer is typically impractical. ISOTEC's oxidation method utilizes a site-specific delivery system(s) designed to treat organic contaminants within an area of concern. ISOTEC oxidants and catalysts generate hydroxyl radicals, which react with the organic contaminants within the subsurface producing innocuous by-products such as carbon dioxide and water (and chloride ions if chlorinated compounds are being treated).

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3.0 ISOTEC FULL-SCALE REMEDIATION PROGRAM

The full-scale remediation program consisted of injecting ISOTEC reagents into the subsurface in order to treat chlorinated solvent contaminated soil and groundwater. ISOTEC utilized 150 direct-push injection screens to introduce reagent into the subsurface over three field injection events. The injection activities were completed over a four-month period from January 24, 2006 through May 26, 2006.

3.1 ISOTEC PROCESS FIELD METHODS

ISOTEC technicians prepared stabilized 12% hydrogen peroxide from 50% hydrogen peroxide. The 50% hydrogen peroxide was delivered to a staging area and stored on-site in a 2,100-gallon double-walled polyethylene tank. The 50% hydrogen peroxide was transferred into 300-gallon polyethylene tanks with an air-operated diaphragm pump and diluted with on-site city water to the desired concentration. The technicians wore proper personal protective equipment and used appropriate safety procedures during the transfer. Iron catalyst was also mixed in 300-gallon polyethylene tanks using on-site city water, dry ISOTEC chemicals, and an electric mixing motor with attached mixing blade.

The injections were accomplished using air-operated diaphragm pumps, flow meters, polyvinyl chloride (PVC) flexible tubing and steel wellhead assemblies. The wellhead assemblies, with pressure gauges and relief valves, were attached to the direct-push injection rods. The wellhead assemblies were attached with PVC tubing to an air-operated diaphragm pump and from the pump to either the peroxide, catalyst or water tanks with PVC tubing. The peroxide, catalyst and water were injected through the PVC tubing using the pump.

The injection process was similar for each location. First, water was injected, followed by 12% stabilized hydrogen peroxide (oxidizer), a water flush, ISOTEC's patented chelated iron catalyst (catalyst), and a final water flush. The injection pressures and rates varied slightly on a location-by-location basis.

3.2 FIELD MONITORING

Field monitoring was conducted at the IR Site 9 Shallow monitoring wells during each injection event. Groundwater measurements were obtained from these monitoring wells prior to the first injection event (baseline) and after the completion of each injection event. The groundwater in the monitoring wells was measured for temperature, conductivity, dissolved oxygen (DO), pH and oxidation-reduction potential (ORP), iron, and hydrogen peroxide. Temperature, conductivity, DO, pH and ORP were measured using a down-hole YSI 556 multiprobe system. Hydrogen peroxide and iron were measured in the field using colorimetric test kits. Baseline field monitoring data is presented in **Table 1**. Field monitoring data for the first, second and third injection events are presented in **Tables 3, 5,** and **7** and discussed in **Sections 3.3.1.1, 3.3.2.1** and **3.3.3.1** below.

3.3 ISOTEC FIELD ACTIVITIES

Reagents were injected into the subsurface using temporary direct-push injection screens installed at specific injection locations across the treatment area. The remediation program consisted of three separate injection events: January 24, 2006, to January 28, 2006; April 3, 2006, to April 7, 2006; May 23, 2006, to May 26, 2006.

The direct-push injection screens targeted the FWBZ. The number and spacing of the injection screen locations was based upon a 20-foot ROI, with the exception of several locations in the immediate vicinity of monitoring wells F9SMW04 and P-9-MWS04. The spacing of these locations varied due to surface impediments associated with a product recovery system during in place during the first injection event. The product recovery system was removed during the second injection event. The injection location spacing was reduced to a 12.5-foot ROI for the third injection event in an attempt to address the presence of TPH in the adsorbed phase as well as continue to reduce dissolved cis-1,2-DCE concentrations.

Injection volumes, pressures and rates varied on a location-by-location basis during each injection event due to elevated injection pressure, direct-push refusal and/or surfacing and annular surfacing. Surfacing is described as the escape of ISOTEC reagents, groundwater and/or gas to the ground surface. Annular surfacing is the escape of ISOTEC reagents, groundwater and/or gas along the annulus of a monitoring well. Several injection locations did not receive reagents due to elevated injection pressure, refusal and/or surfacing during each of the three injection events. The injected reagent volumes, pressures and rates are discussed below and presented in **Tables 2, 4,** and **6**.

It is important to note that the injection pumps were immediately shut off once surfacing or annular surfacing was identified. This resulted in only minor amounts of liquid escaping to the surface. The small amount of liquid that surfaced was easily contained on-site using absorbent and removed.

3.3.1 First Injection Event

The initial round of ISOTEC's Fenton-based reagent injections was conducted at IR Site 9 Shallow from January 24, 2006, through January 28, 2006. The injected reagent volumes are discussed below and presented in **Table 2.**

During the first injection event, ISOTEC setup at 48 injection locations across the treatment area (**Figure 3**). Between 15 and 400 gallons of reagent were injected at each of 44 injection locations. The remaining four injection locations did not received reagent due to refusal or elevated injection pressure. Pressures at the injection locations ranged from 0 to 30 pounds per square inch (psi) and the injection rates ranged from 2 to 4 gallons per minute (gpm) during injection activities. Total injected reagent volume, pressures and rates varied slightly on a location-by-location basis due to subsurface conditions, annular surfacing and surfacing.

ISOTEC injected a total of 8,742 gallons of reagents at 44 injection locations during the first injection event.

3.3.1.1 First Event Field Monitoring Data

ISOTEC conducted field monitoring activities during the first injection event at IR Site 9 Shallow wells F9SMW01, F9SMW02, F9SMW04, P-9-MWS02, MW410-4, DVE-10, DVE-12, DVE-18 and DVE-26. The field monitoring parameters included temperature, conductivity, DO, pH, ORP, iron and hydrogen peroxide. Baseline and post-first event field monitoring data are presented in **Tables 1** and **3,** respectively.

A comparison of the baseline field monitoring data and the first event field monitoring data indicates groundwater pH remained relatively stable while changes in groundwater temperature, conductivity, DO and ORP were observed in several of the monitoring wells. A groundwater temperature increase was observed in DVE-26 which increased from 16.89 degrees Celcius (degrees C) during the baseline monitoring to 27.89 degrees C following the first injection event. The largest groundwater conductivity change was observed in monitoring well F9SMW02, which decreased from 14.400 microsiemens per centimeter (µS/cm) to 9.252 µS/cm. The maximum groundwater DO concentration increase was observed in DVE-26, which increased from 0.25 milligrams per liter (mg/l) to 35.15 mg/l. The largest groundwater ORP concentrations changes were observed in monitoring wells DVE-26, which increased from -119.5 millivolts (mV) to 331.8 mV, and F9SMW02, which increased from -135.6 mV to 296.3 mV.

Iron concentrations during the baseline field monitoring ranged from 0.0 mg/l to >10 mg/l. Following the first injection event iron concentrations were at 0.0 mg/l in the sampled wells. Hydrogen peroxide concentrations ranged from 0.0 mg/l to 1.0 mg/l in the monitoring wells during the baseline monitoring. Following the first injection event, hydrogen peroxide concentrations ranged from 0.0 mg/l to >10 mg/l (DVE-26).

3.3.2 Second Injection Event

The second round of ISOTEC's Fenton-based reagent injections was conducted at IR Site 9 Shallow from April 3, 2006, through April 7, 2006. The injected reagent volumes are discussed below and presented in **Table 4.**

During the second injection event, ISOTEC setup at 52 injection locations (**Figure 3**). Between 115 and 235 gallons of reagent were injected at each of 47 injection locations. The remaining five injection locations did not received reagent due to refusal or elevated injection pressure. Pressures at the injection locations ranged from 0 to 30 psi and the injection rates ranged from 2 to 4 gpm during injection activities. Total injected reagent volume, pressures and rates varied slightly on a location-by-location basis due to subsurface conditions, annular surfacing and surfacing.

ISOTEC injected a total of 9,045 gallons of reagents at 47 injection locations during the second injection event.

3.3.2.1 Second Event Field Monitoring Data

ISOTEC conducted field monitoring activities following the second injection event at IR Site 9 Shallow wells F9SMW01, F9SMW02, F9SMW04, P-9-MWS02, MW410-4, DVE-10, DVE-12, DVE-18 and DVE-26. The field monitoring parameters included temperature, conductivity, DO, pH, ORP, iron and hydrogen peroxide. Baseline and post-second event field monitoring data are presented in **Tables 1** and **5,** respectively.

A comparison of the baseline field monitoring data and the second event field monitoring data indicates groundwater temperature and pH remained relatively stable while changes in groundwater conductivity, DO and ORP were observed in several of the monitoring wells. The maximum groundwater conductivity change was observed in monitoring well F9SMW02, which decreased from 14.400 µS/cm to 7.353 µS/cm. A groundwater DO concentration increase was observed in DVE-26, which increased from 0.25 mg/l to 44.53 mg/l. The largest groundwater ORP concentration change was observed in monitoring well DVE-26, which increased from -119.5 mV to 323.3 mV.

Iron concentrations in the monitoring wells were 0.0 mg/l following the second injection event, while hydrogen peroxide concentrations ranged from 0.0 mg/l to >10,000 mg/l (DVE-26).

3.3.3 Third Injection Event

The third round of ISOTEC's Fenton-based reagent injections was conducted at IR Site 9 Shallow from May 23, 2006, through May 26, 2006. The injected reagent volumes are discussed below and presented in **Table 6.**

During the third injection event, ISOTEC setup at 50 injection locations (**Figure 3**). Between 30 and 300 gallons of reagent were injected into each of 47 injection locations within the treatment area during the third injection event. The remaining three injection locations did not receive reagent due refusal or elevated injection pressure. Pressures at the injection locations ranged from 0 to 30 psi and the injection rates ranged from 2 to 4 gpm during injection activities. Total injected reagent volume, pressures and rates varied slightly on a location-by-location basis due to subsurface conditions, annular surfacing and surfacing.

ISOTEC injected a total of 8,490 gallons of reagents through 47 injection point locations during the third injection event.

3.3.3.1 Third Event Field Monitoring Data

ISOTEC conducted field monitoring activities following the third injection event at IR Site 9 Shallow wells F9SMW01, F9SMW02, F9SMW04, P-9-MWS02, MW410-4, DVE-10, DVE-12, DVE-18 and DVE-26. The field monitoring parameters included temperature, conductivity, DO, pH, ORP, iron and hydrogen peroxide. Baseline and post-third event field monitoring data is presented in **Tables 1** and **7,** respectively.

A comparison of the baseline field monitoring data and the third event field monitoring data indicates groundwater temperature, conductivity and pH remained relatively stable while changes in DO and ORP were observed in several of the monitoring wells. The largest DO concentration increase was observed in DVE-18, which increased from 0.27 mg/l to 45.34 mg/l. A groundwater ORP concentration change was observed in monitoring well DVE-18, which increased from -149.9 mV to 350.5 mV.

Iron concentrations in the monitoring wells were 0.0 mg/l following the third injection event. Hydrogen peroxide concentrations ranged from 0.0 mg/l to >1,000 mg/l (F9SMW04).

3.4 ISOTEC Process Field Activities Summary

The full-scale remediation program consisted of injecting ISOTEC reagents into the subsurface using direct-push injection screens at multiple locations across the treatment area to treat the entire groundwater plume. ISOTEC reagents targeted the FWBZ at the site.

ISOTEC utilized 138 injection locations to inject reagent into the subsurface over three injection events. A total of 26,277 gallons of reagents were injected into the subsurface across the treatment area. ISOTEC was unable to inject reagents into 12 injection screens due to refusal or elevated injection pressure.

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4.0 ANALYTICAL RESULTS

Shaw collected groundwater samples from IR Site 9 Shallow monitoring wells prior to injection (baseline), after the first injection event (post-first), after the second injection event (post-second) and after the third injection event (post-third). Sample events, wells sampled and the sample collection dates are shown below:

TABLE 8
RECORD OF GROUNDWATER SAMPLING

Sample Event	Monitoring Wells Sampled	Collection Dates
Baseline	F9SMW01 through F9SMW06, P-9-MWS01, P-9-MWS02, P-9-MWS04, MW410-1 through MW410-4, DVE-3, DVE-9, DVE-10, DVE-15A, DVE-17, DVE-19, DVE-20, DVE-23	December 2005
Post-first	F9SMW01 through F9SMW06, P-9-MWS01, P-9-MWS02, P-9-MWS04, MW410-1 through MW410-4, DVE-3, DVE-9, DVE-10, DVE-15A, DVE-17, DVE-19, DVE-20, DVE-23	February 2006
Post-second	F9SMW01 through F9SMW06, P-9-MWS01, P-9-MWS02, P-9-MWS04, MW410-1 through MW410-4, DVE-3, DVE-9, DVE-10, DVE-15A, DVE-17, DVE-19, DVE-20, DVE-23	April 2006
Post-third	F9SMW01 through F9SMW06, P-9-MWS01, P-9-MWS02, P-9-MWS04, MW410-1 through MW410-4, DVE-3, DVE-9, DVE-10, DVE-15A, DVE-17, DVE-19, DVE-20, DVE-23	June 2006

The groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA method 8260b. The primary COCs at IR Site 9 Shallow are cis-1,2-DCE and VC. Therefore, the subsequent discussions are focused on these two compounds.

The groundwater analytical data is presented in **Section 4.1** and compares baseline cis-1,2-DCE and VC analytical results to subsequent sampling event analytical data.

4.1 GROUNDWATER

Shaw collected groundwater samples from 21 monitoring wells during each of the four sampling events; baseline, post-first, post-second and post-third. The wells sampled and collection dates are listed in **Table 8**.

In the subsequent sections, when discussing analytical data, ISOTEC will refer to a groundwater sample collected from an individual well by the well name. The cis-1,2-DCE monitoring well groundwater analytical data are presented in **Table 9**, with percent reduction calculations for each injection event. Groundwater cis-1,2-DCE concentration maps are also included in **Figures 4** through **Figure 7**. The VC monitoring well groundwater analytical data are presented in **Table 10,** with percent reduction calculations for each injection event. Groundwater VC concentration maps are also included in **Figures 8** through **Figure 11**.

4.1.1 Cis-1,2-Dichloroethene

Baseline, post-first, post-second and post-third injection groundwater samples were collected from the IR Site 9 Shallow monitoring wells and analyzed for cis-1,2-DCE by EPA method 8260b.

Baseline cis-1,2-DCE concentrations ranged from non-detect (ND) in seven wells to 60 micrograms per liter (µg/l) in DVE-17 (**Table 9** and **Figure 4**).

Post-first injection concentrations ranged from ND in nine wells to 23 µg/l in F9SMW04. The most significant concentration reduction was observed in monitoring well DVE-19, which was reduced from a baseline concentration of 19 µg/l to ND, a 99% reduction. The most significant concentration increase was observed in DVE-23, which increased from a baseline concentration of 5.9 µg/l to 7.8 µg/l (**Figure 5**).

Post-second injection concentrations ranged from ND in eight wells to 32 µg/l in F9SMW04. The most significant reduction was observed in DVE-17, which decreased from a baseline concentration of 60 µg/l to 0.53 µg/l, a 99% reduction. The most significant increase was observed in DVE-23, which increased from a baseline concentration of 5.9 µg/l to 16 µg/l (**Figure 6**).

Post-third injection concentrations ranged from ND in seven wells to 15 µg/l in P-9-MWS04. The most significant reduction was observed in DVE-17, which decreased from a baseline concentration of 60 µg/l to 0.86 µg/l, a 99% reduction. The most significant increase was observed in well DVE-10, which increased from a baseline concentration of ND to 0.64 µg/l (**Figure 7**).

4.1.2 Vinyl Chloride

Baseline, post-first, post-second and post-third injection groundwater samples were collected from IR Site 9 Shallow wells and analyzed for VC by EPA method 8260b.

Baseline VC concentrations ranged from ND in 11 wells to 14 µg/l in DVE-19 (**Table 10** and **Figure 8**).

Post-first injection concentrations ranged from ND in 13 wells to 7.8 µg/l in P-9-MWS04. The most significant concentration reduction was observed in DVE-17, which decreased from a baseline concentration of 11 µg/l to ND, a 98% reduction. The most

significant concentration increase was observed in F9SMW05, which increased from a baseline concentration of ND to 3.8 µg/l (**Figure 9**).

Post-second injection concentrations ranged from ND in 14 wells to 5.2 µg/l in F9SMW03. The most significant concentration reduction was observed in DVE-17, which decreased from a baseline concentration of 11 µg/l to ND, a 98% reduction. The most significant concentration increase was observed in well F9SMW05, which increased from a baseline concentration of ND to 1.8 µg/l (**Figure 10**).

Post-third injection concentrations ranged from ND in 16 wells to 6.9 µg/l in F9SMW03. The most significant concentration reduction was observed in DVE-17, which decreased from a baseline concentration of 11 µg/l to ND, a 98% reduction. The most significant concentration increase was observed in well F9SMW03, which increased from a baseline concentration of 3.9 µg/l to 6.9 µg/l (**Figure 11**).

4.2 Analytical Results Summary

During the baseline sampling event, seven monitoring wells had cis-1,2-DCE concentrations above the MCL of 6 µg/l. Following the third injection event, only three of the sampled monitoring wells had cis-1,2-DCE concentrations above the MCL. The maximum baseline cis-1,2-DCE was 60 µg/l. Following the third injection event, the maximum concentration was 15 µg/l, a 75% reduction.

During the baseline sampling event, nine monitoring wells had VC concentrations above the MCL of 0.5 µg/l. Following the third injection event, only five of the sampled monitoring wells had VC concentrations above the MCL. The maximum reported VC concentration was reduced from 14 µg/l at baseline to 6.9 µg/l following the third injection event, a 51% reduction in the maximum concentration.

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5.0 CONCLUSIONS

The objective of the full-scale in-situ chemical oxidation remediation program was to achieve contaminant mass reduction within the target treatment interval for the FWBZ at IR Site 9 Shallow in order to reduce chlorinated solvent concentrations in groundwater to below their respective State Maximum Contaminant Levels. The treatment interval at IR Site 9 Shallow was from 9 to 15 feet bgs.

5.1 MASS REDUCTION EFFECTIVENESS

The effectiveness of the ISOTEC process to reduce contaminant mass can be evaluated by observing the dissolved phase contaminant concentrations within treatment area monitoring wells during the remediation program. This is because total mass reduction is reflected in reduced dissolved phase concentrations. However, the ISOTEC process promotes contaminant desorption as well as dissolved phase oxidation. Therefore, if sufficient contaminant mass is present in the adsorbed phase prior to treatment, more mass may be transferred to the dissolved phase than can be treated during one injection event. This can result in a temporary increase in dissolved-phase contaminant concentrations following injection activities. Increases in dissolved phase contaminant concentrations were observed in several of the sampled monitoring wells at various periods during the pilot test (**Tables 9** and **10**). This does not, however, reflect an increase in total mass. The post-injection groundwater concentrations should decrease over time, as groundwater flow, re-sorption to soil, dispersion and dilution produce equilibration between total mass and dissolved mass within the saturated zone.

Due to the fact that dissolved contaminant concentrations in individual monitoring wells have fluctuated from sampling event to sampling event, calculating an average dissolved concentration for the monitoring wells is an effective tool in evaluating the remediation effectiveness. The average post-third cis-1,2-DCE concentration at the site showed a marked decrease relative to baseline. The average concentration decreased from 8.9 µg/l at baseline to 2.8 µg/l following the third injection event, a 68% decrease (**Table 9**). The average VC concentration at the site also showed a decrease relative to the average baseline concentration. The concentration decreased from 2.6 µg/l at baseline to 0.8 µg/l following the third injection event, a 68% reduction (**Table 10**). These average reductions and reductions observed in individual monitoring wells indicate significant mass reduction.

Of the seven monitoring wells with baseline cis-1,2-DCE groundwater concentrations above the MCL of 6 µg/l, four were reduced to below the MCL following the third injection event (DVE-15A, DVE-17, DVE-19 and DVE-20). Four of the nine wells with baseline VC concentrations above the MCL of 0.5 µg/l were also reduced to below the MCL following injection activities (P-9-MWS04, DVE-3, DVE-15A and DVE-17).

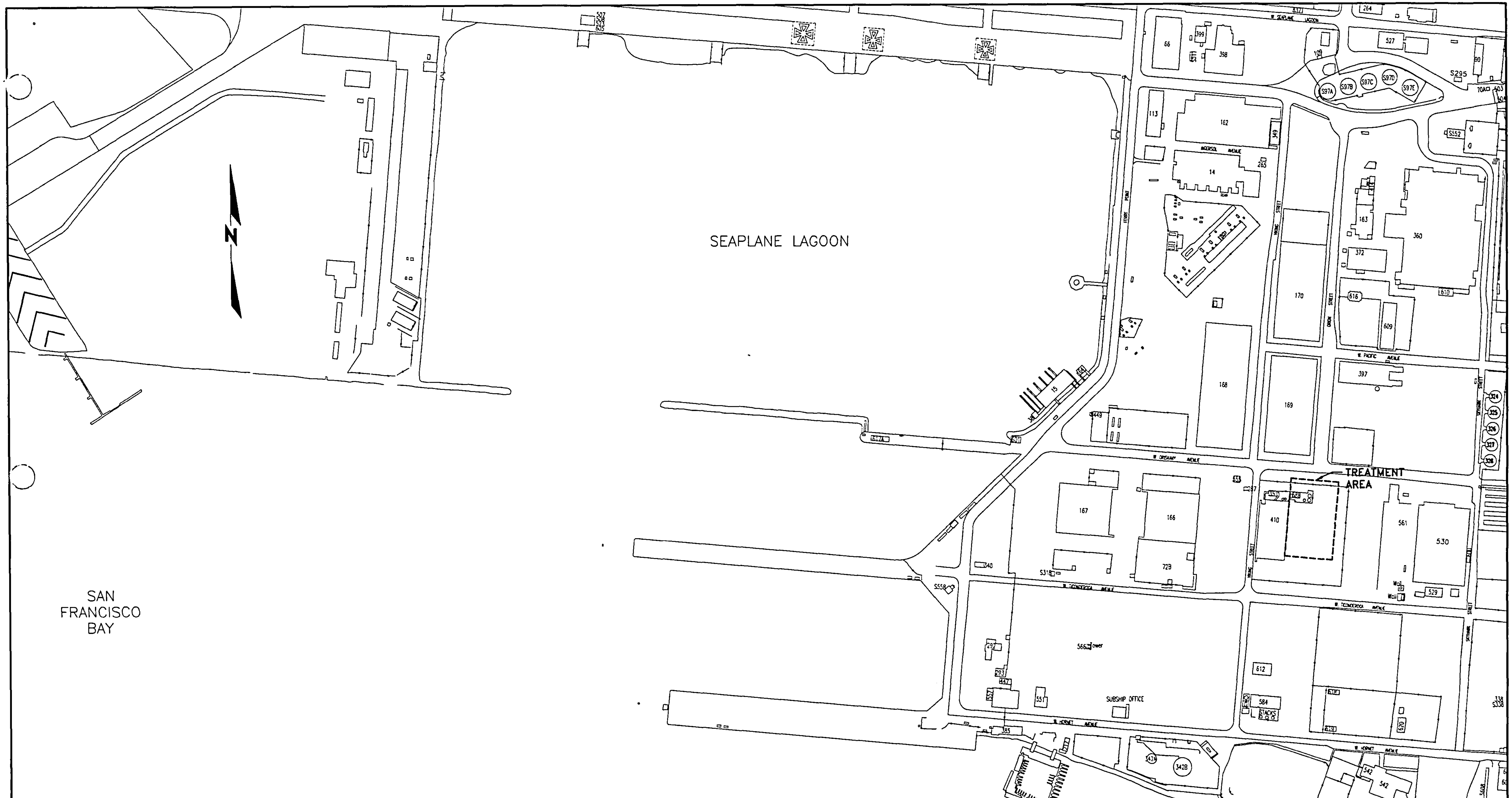
A summary of cis-1,2-DCE and VC groundwater concentration reductions is shown below:

TABLE 11
CIS-1,2-DCE AND VC GROUNDWATER CONCENTRATION REDUCTION SUMMARY

Sample Event	Cis-1,2-DCE		VC	
	No. of Wells Above MCL (MCL - 6 µg/l)	Maximum Concentration (µg/l)	No. of Wells Above MCL (MCL - 0.5 µg/l)	Maximum Concentration (µg/l)
Baseline	7	60	9	14
Post-Third	4	15	5	6.9

5.2 RECOMMENDATIONS

Post-injection cis-1,2-DCE groundwater concentrations may decrease over time, as groundwater flow, re-sorption to soil, dispersion and dilution produce equilibration between total mass and dissolved mass within the saturated zone. ISOTEC recommends that additional groundwater sampling be conducted over the next several quarters to monitor for equilibration of dissolved phase contaminant concentrations. A fourth injection event could be initiated, if deemed necessary, after reviewing the additional sampling data.



Alameda Point
Alameda, California

SCALE
0 200 400 FEET

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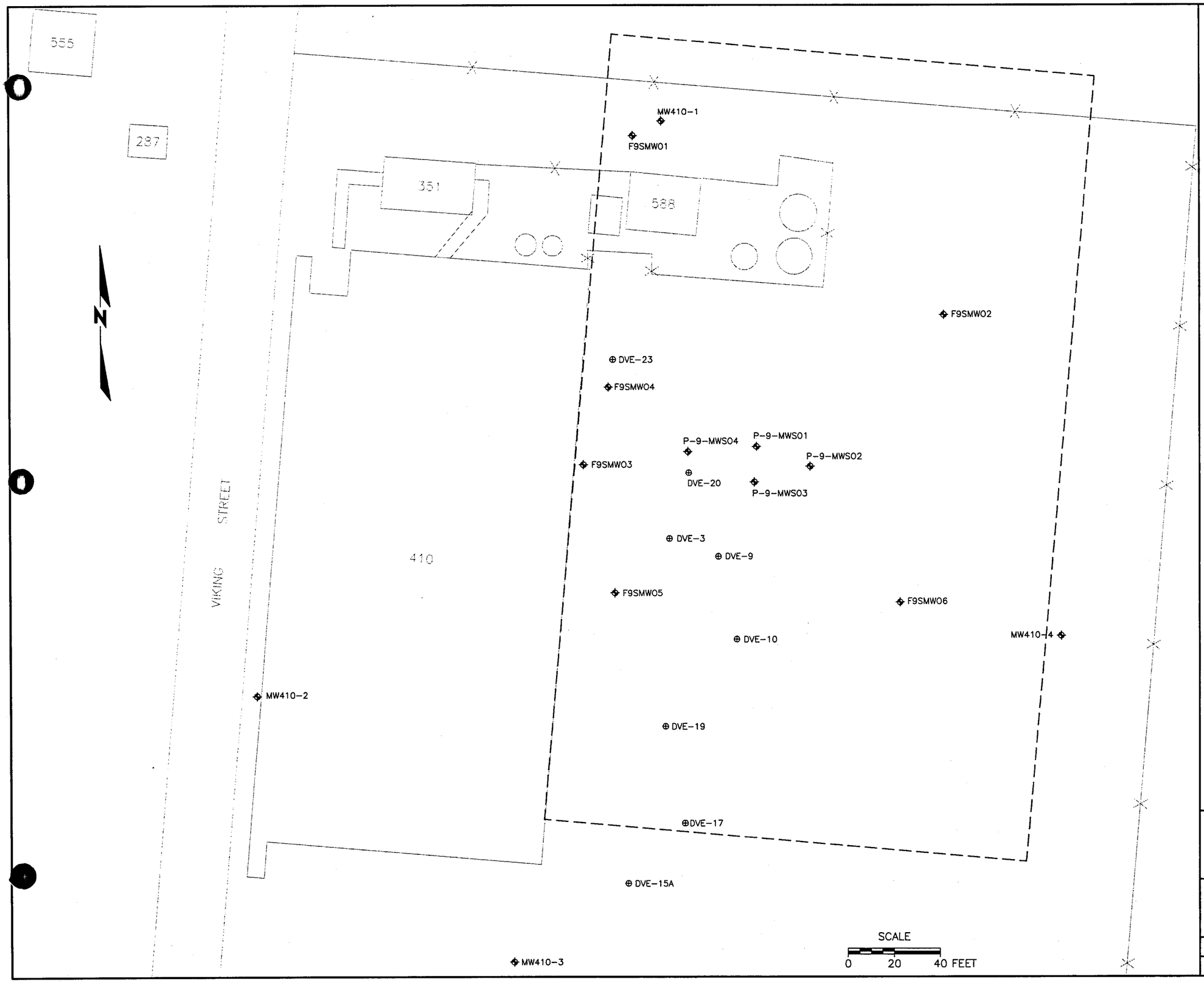
Site Location Map IR Site 9 Shallow Alameda Point Alameda, California	FIGURE 1
DATE: 5/18/06	SCALE: 1" = 400'
DRAWN BY: KH	CHECKED BY: TE
PROJECT	900087



LEGEND

--- TREATMENT AREA BOUNDARY

GROUNDWATER MONITORING WELL

DVE WELL

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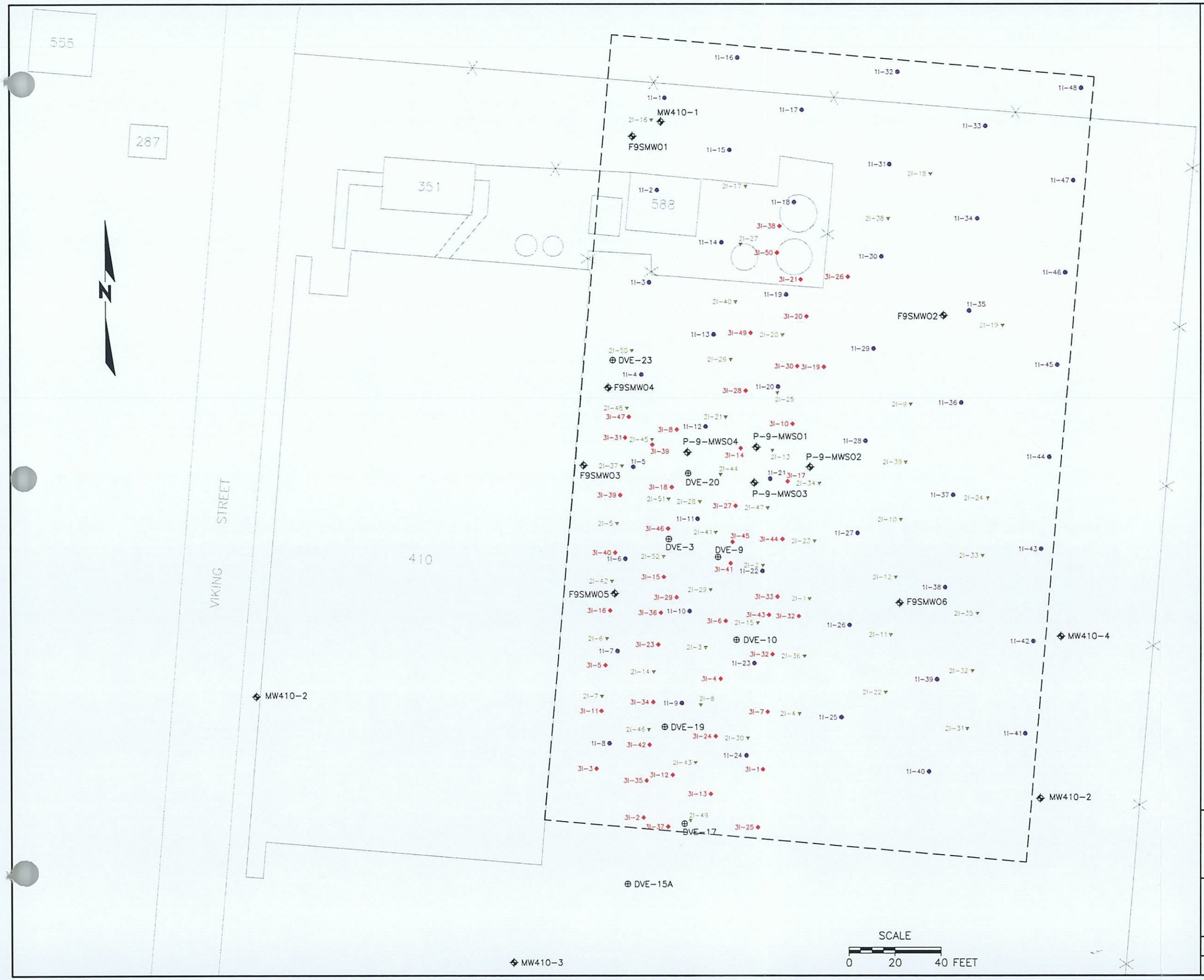
Site Plan IR Site 9 Shallow Alameda Point Alameda, California		FIGURE 2
DATE: 5/18/06	SCALE: 1" = 40'	PROJECT 900087
DRAWN BY: KH	CHECKED BY: TE	



LEGEND

- --- TREATMENT AREA BOUNDARY
- GROUNDWATER MONITORING WELL
- DVE WELL
- FIRST EVENT INJECTION LOCATION
- SECOND EVENT INJECTION LOCATION
- THIRD EVENT INJECTION LOCATION

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Injection Location Map IR Site 9 Shallow Alameda Point Alameda, California		FIGURE 3
DATE: 5/18/06	SCALE: 1" = 40'	PROJECT
DRAWN BY: KH	CHECKED BY: TE	900087

LEGEND

- GROUNDWATER MONITORING WELL
- DVE WELL
- 18 CIS-1,2-DICHLOROETHENE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- 20 PLUME CONTOUR

CIS-1,2-DICHLOROETHENE CONCENTRATION SCALE

- >40 ug/L
- 20 - 40 ug/ L
- 6 - 20 ug/ L

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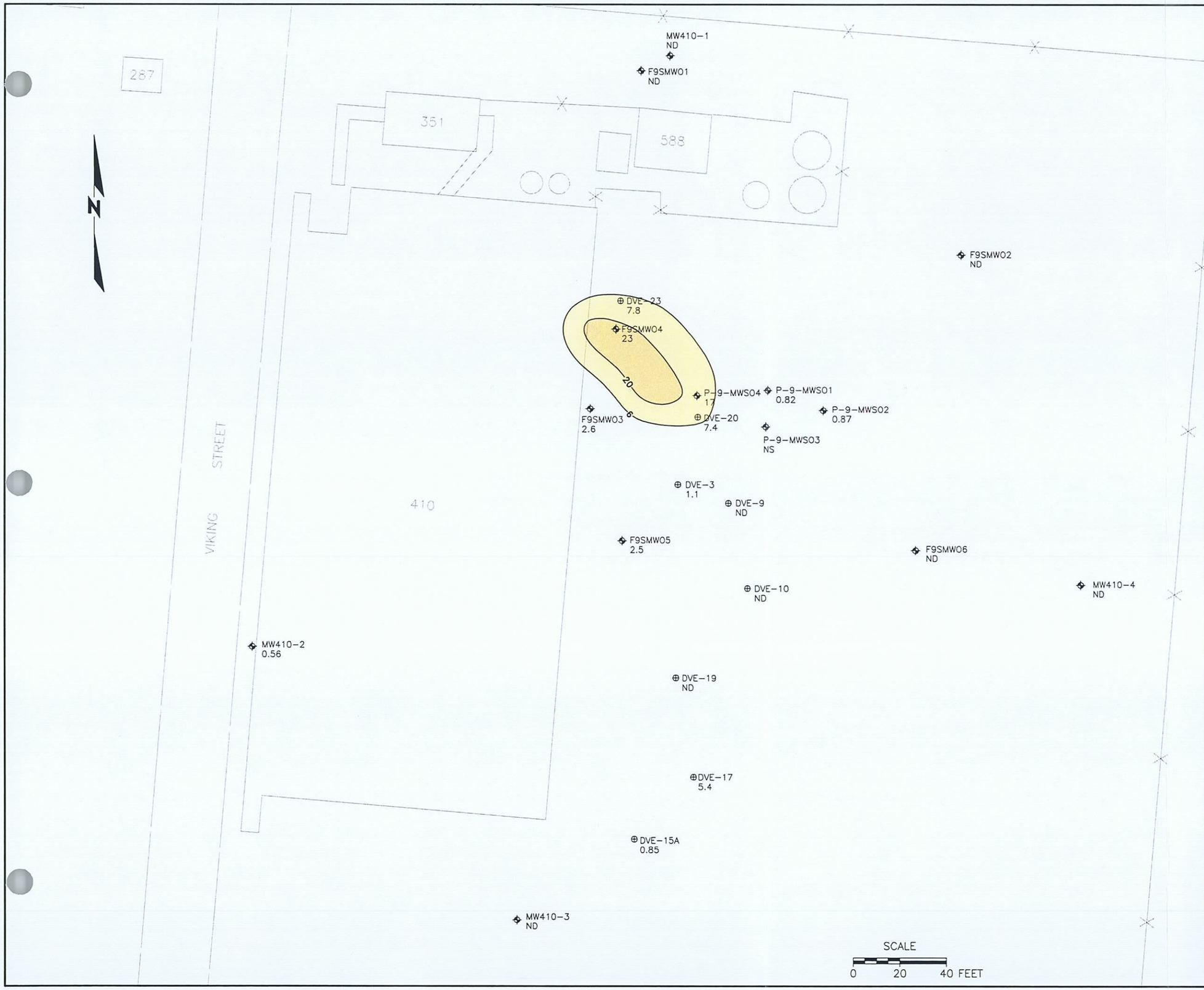
Cis-1,2-Dichloroethene Concentrations Baseline - December 2005 IR Site 9 Shallow Alameda Point Alameda, California		FIGURE 4
DATE: 7/12/06	SCALE: 1" = 40'	PROJECT
DRAWN BY: KH	CHECKED BY: TE	900087



LEGEND

- GROUNDWATER MONITORING WELL
- DVE WELL
- 23 CIS-1,2-DICHLOROETHENE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- 20 PLUME CONTOUR

CIS-1,2-DICHLOROETHENE CONCENTRATION SCALE

- >40 ug/ L
- 20 - 40 ug/ L
- 6 - 20 ug/ L

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Cis-1,2-Dichloroethene Concentrations
Post First Injection - February 2006
IR Site 9 Shallow
Alameda Point
Alameda, California

FIGURE 5

DATE: 7/12/06	SCALE: 1" = 40'	PROJECT 900087
DRAWN BY: KH	CHECKED BY: TE	

LEGEND

- GROUNDWATER MONITORING WELL
- DVE WELL
- 32 CIS-1,2-DICHLOROETHENE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- 20 PLUME CONTOUR

CIS-1,2-DICHLOROETHENE CONCENTRATION SCALE

- >40 ug/ L
- 20 - 40 ug/ L
- 6 - 20 ug/ L

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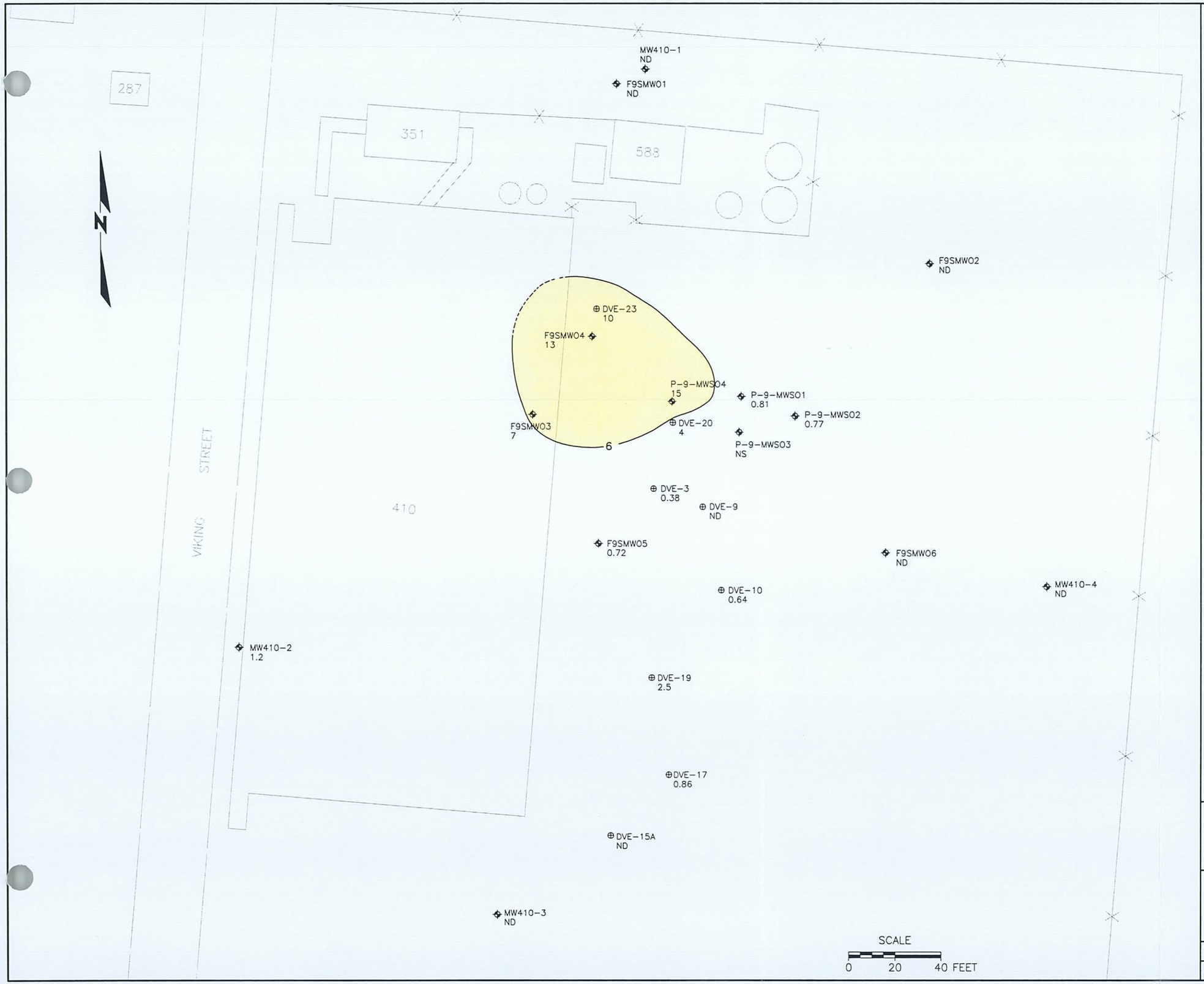
Cis-1,2-Dichloroethene Concentrations Post Second Injection IR Site 9 Shallow Alameda Point Alameda, California		FIGURE 6
DATE: 7/12/06	SCALE: 1" = 40'	PROJECT 900087
DRAWN BY: KH	CHECKED BY: TE	



LEGEND

- GROUNDWATER MONITORING WELL
- DVE WELL
- 13 CIS-1,2-DICHLOROETHENE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- 20 PLUME CONTOUR

CIS-1,2-DICHLOROETHENE CONCENTRATION SCALE

- >40 ug/L
- 20 – 40 ug/L
- 6 – 20 ug/ L

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Cis-1,2-Dichloroethene Concentrations Post Third Injection IR Site 9 Shallow Alameda Point Alameda, California		FIGURE 7
DATE: 7/12/06	SCALE: 1" = 40'	PROJECT
DRAWN BY: KH	CHECKED BY: TE	900087

LEGEND

- GROUNDWATER MONITORING WELL
- DVE WELL
- 4 VINYL CHLORIDE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- 5 PLUME CONTOUR

VINYL CHLORIDE CONCENTRATION SCALE

- >10 ug/L
- 5 – 10 ug/ L
- 0.5 – 5 ug/ L

NOTES

Monitoring well MW410-2 was not included in the isoconcentration map due to its location outside the treatment area.

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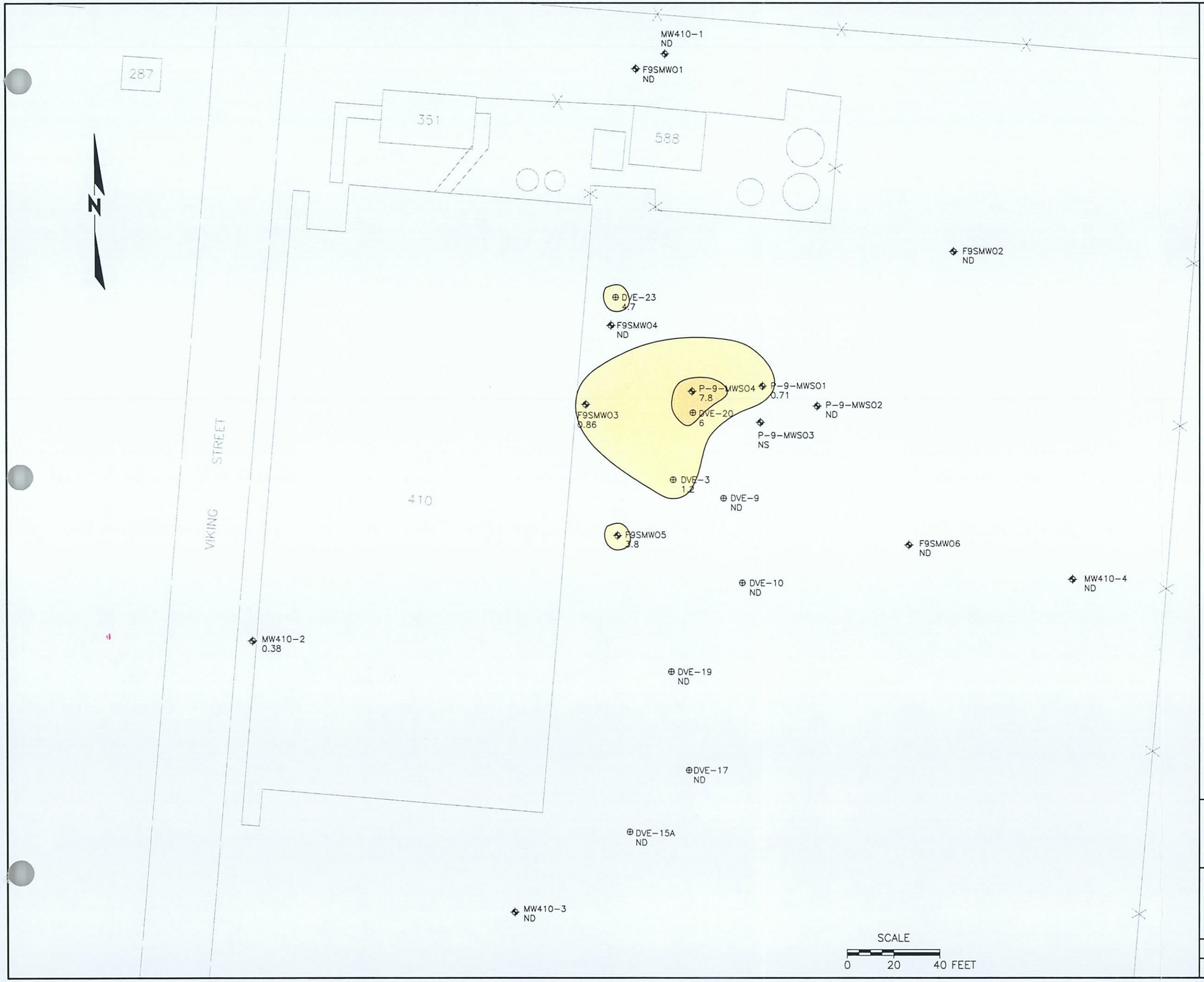
Vinyl Chloride Concentrations
Baseline – December 2005
IR Site 9 Shallow
Alameda Point
Alameda, California

FIGURE 8

DATE: 7/12/06	SCALE: 1" = 40'	PROJECT 900087
DRAWN BY: TE	CHECKED BY: SH	



LEGEND

- GROUNDWATER MONITORING WELL
- DVE WELL
- 4 VINYL CHLORIDE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- 5 PLUME CONTOUR

VINYL CHLORIDE CONCENTRATION SCALE

- >10 ug/ L
- 5 – 10 ug/ L
- 0.5 – 5 ug/ L

NOTES

Monitoring well MW410-2 was not included in the isoconcentration map due to its location outside the treatment area.

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Vinyl Chloride Concentrations
Post First Injection – February 2006
IR Site 9 Shallow
Alameda Point
Alameda, California

FIGURE 9

DATE: 7/12/06	SCALE: 1" = 40'	PROJECT
DRAWN BY: KH	CHECKED BY: TE	900087

LEGEND

- GROUNDWATER MONITORING WELL
- DVE WELL
- 4 VINYL CHLORIDE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- 5 PLUME CONTOUR

VINYL CHLORIDE CONCENTRATION SCALE

- >10 ug/ L
- 5 – 10 ug/ L
- 0.5 – 5 ug/ L

NOTES

Monitoring well MW410-2 was not included in the isoconcentration map due to its location outside the treatment area.

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Vinyl Chloride Concentrations Post Second Injection IR Site 9 Shallow Alameda Point Alameda, California		FIGURE 10
DATE: 7/12/06	SCALE: 1" = 40'	PROJECT
DRAWN BY: KH	CHECKED BY: TE	900087

LEGEND

- GROUNDWATER MONITORING WELL
- DVE WELL
- 4.2 VINYL CHLORIDE CONCENTRATION IN MICROGRAMS PER LITER (ug/L)
- ND NOT DETECTED
- NS NOT SAMPLED
- 5 PLUME CONTOUR

VINYL CHLORIDE CONCENTRATION SCALE

- >10 ug/L
- 5 – 10 ug/ L
- 0.5 – 5 ug/ L

NOTES

Monitoring well MW410–2 was not included in the isoconcentration map due to its location outside the treatment area.

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Vinyl Chloride Concentrations
Post Third Injection
IR Site 9 Shallow
Alameda Point
Alameda, California

FIGURE 11

DATE: 7/12/06 | SCALE: 1" = 40' | PROJECT 900087

DRAWN BY: TE | CHECKED BY: SH

Table 1
BASELINE FIELD MONITORING DATA

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Well	Date	Sample Time	Temperature (deg C)	Conductivity (us/cm)	DO (mg/l)	pH	ORP (mV)	Iron (mg/l)	Hydrogen Peroxide (mg/l)
F9SMW01	1/23/2006	2:51	17.55	1.101	0.96	7.69	-18.5	0.3	0
F9SMW02	1/23/2006	2:45	20.47	14.400	0.44	6.86	-135.6	10	0
F9SMW04	1/23/2006	3:04	18.05	0.967	0.20	6.55	-177.8	>10.0	0
P-9-MWS02	1/23/2006	2:41	20.64	2.848	0.14	7.46	-130.5	1	0
MW410-4	1/23/2006	3:10	20.17	0.375	2.06	8.25	-33.3	0	0
DVE-10	1/23/2006	2:31	17.84	0.797	0.61	7.23	38.1	0	0
DVE-12	1/23/2006	2:19	19.19	0.851	0.63	7.16	-9.5	4	1
DVD-18	1/23/2006	2:25	19.94	1.401	0.27	7.70	-149.9	0	0
DVE-26	1/23/2006	2:58	16.89	0.450	0.25	6.75	-119.5	>10.0	0

Table 2
FIRST INJECTION EVENT REAGENT INJECTION LOG

IR Site 9 Shallow
Alameda Point
Alameda, California

DATE	INJECTION POINT	REAGENT TOTAL PER POINT			REAGENT TOTAL PER DAY		
		12% H_2O_2	Catalyst	Total	12% H_2O_2	Catalyst	Total
Jan 24	1I-44S-A	200	200	400	700	400	1,100
	1I-33S-A	200	200	400			
	1I-23S-A	15	0	15			
	1I-37S-A	20	0	20			
	1I-39S-A	185	0	185			
	1I-25S-A	80	0	80			
Jan 25	1I-1S	-	-	-	900	900	1,600
	1I-2S	100	100	200			
	1I-15S	100	100	200			
	1I-16S	100	100	200			
	1I-17S	100	100	200			
	1I-25S	100	100	200			
	1I-26S	-	-	-			
	1I-40S	100	100	200			
	1I-41S	100	100	200			
	1I-42S	100	100	200			
	1I-44S	100	100	200			
Jan 26	1I-11S	100	100	200	1,092	900	1,992
	1I-14S	95	0	95			
	1I-20S	20	0	20			
	1I-27S	200	200	400			
	1I-28S	100	100	200			
	1I-29S	100	100	200			
	1I-30S	100	100	200			
	1I-31S	100	100	200			
	1I-45S	27	0	27			
	1I-46S	150	100	250			
	1I-48S	100	100	200			
Jan 27	1I-3S	45	100	145	1,132	1,325	2,457
	1I-5S	57	100	157			
	1I-7S	-	-	-			
	1I-8S	100	100	200			
	1I-9S	100	100	200			
	1I-10S	100	100	200			
	1I-13S	35	100	135			
	1I-19S	100	100	200			
	1I-21S	210	225	435			
	1I-24S	110	100	210			
	1I-33S	100	100	200			
	1I-35S	75	100	175			
	1I-38S	-	-	-			
	1I-47S	100	100	200			

Table 2
FIRST INJECTION EVENT REAGENT INJECTION LOG

IR Site 9 Shallow
Alameda Point
Alameda, California

DATE	INJECTION POINT	REAGENT TOTAL PER POINT			REAGENT TOTAL PER DAY		
		12% H_2O_2	Catalyst	Total	12% H_2O_2	Catalyst	Total
Jan 28	1I-6S	100	100	200	743	650	1,393
	1I-12S	38	100	138			
	1I-22S	135	100	235			
	1I-23S	200	150	350			
	1I-37S	135	100	235			
	1I-39S	135	100	235			
FIRST EVENT TOTALS					4,567	4,175	8,742

Table 3
POST-FIRST INJECTION EVENT FIELD MONITORING DATA

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Well	Date	Sample Time	Temperature (deg C)	Conductivity (us/cm)	DO (mg/l)	pH	ORP (mV)	Iron (mg/l)	Hydrogen Peroxide (mg/l)
F9SMW01	1/28/2006	2:44	20.89	2.955	1.43	7.53	-94.2	0	0
F9SMW02	1/28/2006	3:30	18.34	9.252	1.75	6.79	296.3	0	0
F9SMW04	1/28/2006	3:41	17.70	0.761	0.42	6.49	-130.7	0	4
P-9-MWS02	1/28/2006	2:56	17.94	1.154	0.72	7.79	92.0	0	0
MW410-4	1/28/2006	3:36	19.19	0.335	3.87	8.28	215.7	0	4
DVE-10	1/28/2006	3:10	17.52	0.708	4.37	7.15	40.5	0	0
DVE-12	1/28/2006	3:05	18.74	0.770	1.92	7.24	38.6	0	0
DVD-18	1/28/2006	3:18	18.46	0.627	0.37	7.45	67.9	0	0
DVE-26	1/28/2006	3:24	27.89	2.412	35.15	5.62	331.8	0	>10

Table 4
SECOND INJECTION EVENT REAGENT INJECTION LOG

IR Site 9 Shallow
Alameda Point
Alameda, California

DATE	INJECTION POINT	REAGENT TOTAL PER POINT			REAGENT TOTAL PER DAY		
		12% H_2O_2	Catalyst	Total	12% H_2O_2	Catalyst	Total
Apr 3	2I-1S	-	-	-	600	600	1,200
	2I-2S	100	100	200			
	2I-3S	100	100	200			
	2I-4S	100	100	200			
	2I-5S	100	100	200			
	2I-6S	-	-	-			
	2I-7S	100	100	200			
	2I-8S	100	100	200			
Apr 4	2I-9S	45	100	145	930	1,100	2,030
	2I-10S	100	100	200			
	2I-11S	-	-	-			
	2I-12S	100	100	200			
	2I-13S	35	100	135			
	2I-14S	-	-	-			
	2I-15S	100	100	200			
	2I-16S	100	100	200			
	2I-17S	100	100	200			
	2I-18S	100	100	200			
	2I-19S	100	100	200			
	2I-20S	100	100	200			
	2I-21S	50	100	150			
Apr 5	2I-22S	100	100	200	1,150	1,200	2,350
	2I-23S	100	100	200			
	2I-24S	100	100	200			
	2I-25S	50	100	150			
	2I-26S	100	100	200			
	2I-27S	100	100	200			
	2I-28S	100	100	200			
	2I-29S	100	100	200			
	2I-30S	100	100	200			
	2I-31S	100	100	200			
	2I-32S	100	100	200			
	2I-33S	100	100	200			
Apr 6	2I-34S	100	100	200	1,075	1,200	2,275
	2I-35S	-	-	-			
	2I-36S	100	100	200			
	2I-37S	100	100	200			
	2I-38S	60	100	160			
	2I-39S	15	100	115			
	2I-40S	100	100	200			
	2I-41S	100	100	200			
	2I-42S	100	100	200			
	2I-43S	100	100	200			
	2I-44S	100	100	200			
	2I-45S	100	100	200			
	2I-46S	100	100	200			

Table 4
SECOND INJECTION EVENT REAGENT INJECTION LOG

IR Site 9 Shallow
Alameda Point
Alameda, California

DATE	INJECTION POINT	REAGENT TOTAL PER POINT			REAGENT TOTAL PER DAY		
		12% H_2O_2	Catalyst	Total	12% H_2O_2	Catalyst	Total
Apr 7	2I-47S	135	100	235	590	600	1,190
	2I-48S	30	100	130			
	2I-49S	135	100	235			
	2I-50S	100	100	200			
	2I-51S	100	100	200			
	2I-52S	90	100	190			
SECOND EVENT TOTALS					4,345	4,700	9,045

Table 5
POST-SECOND INJECTION EVENT FIELD MONITORING DATA

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Well	Date	Sample Time	Temperature (deg C)	Conductivity (us/cm)	DO (mg/l)	pH	ORP (mV)	Iron (mg/l)	Hydrogen Peroxide (mg/l)
F9SMW01	4/7/2006	11:55	17.98	2.843	10.52	7.52	-90.1	0	0
F9SMW02	4/7/2006	1:06	17.56	7.353	1.99	7.13	134.3	0	0
F9SMW04	4/7/2006	12:31	16.50	0.617	1.76	6.55	-96.6	0	>1,000
P-9-MWS02	4/7/2006	12:26	19.49	1.396	34.99	7.30	261.8	0	>1,000
MW410-4	4/7/2006	1:11	18.85	0.767	5.89	7.43	243.8	0	0
DVE-10	4/7/2006	12:22	17.30	0.868	1.74	7.14	122.8	0	0
DVE-12	4/7/2006	12:09	17.95	0.566	8.91	7.18	100.8	0	0
DVD-18	4/7/2006	12:13	17.91	0.437	1.70	7.30	93.4	0	0
DVE-26	4/7/2006	12:39	21.31	1.283	44.53	5.79	323.3	0	>10,000

Table 6
THIRD INJECTION EVENT REAGENT INJECTION LOG

IR Site 9 Shallow
Alameda Point
Alameda, California

DATE	INJECTION POINT	REAGENT TOTAL PER POINT			REAGENT TOTAL PER DAY		
		12% H_2O_2	Catalyst	Total	12% H_2O_2	Catalyst	Total
May 23	3I-1S	100	100	200	1,160	1,000	2,160
	3I-2S	100	100	200			
	3I-3S	100	100	200			
	3I-4S	100	100	200			
	3I-5S	100	100	200			
	3I-6S	-	-	-			
	3I-7S	100	100	200			
	3I-8S	100	0	100			
	3I-9S	60	0	60			
	3I-10S	100	100	200			
	3I-11S	100	100	200			
	3I-12S	100	100	200			
	3I-13S	100	100	200			
May 24	3I-14S	100	100	200	1,110	940	2,050
	3I-15S	100	100	200			
	3I-16S	100	100	200			
	3I-17S	100	100	200			
	3I-18S	100	40	140			
	3I-19S	100	100	200			
	3I-20S	50	0	50			
	3I-21S	60	0	60			
	3I-22S	100	100	200			
	3I-23S	100	100	200			
	3I-24S	100	100	200			
	3I-25S	100	100	200			
May 25	3I-26S	100	100	200	1,430	1,400	2,830
	3I-27S	30	0	30			
	3I-28S	100	100	200			
	3I-29S	100	100	200			
	3I-30S	100	100	200			
	3I-31S	100	100	200			
	3I-32S	100	100	200			
	3I-33S	-	-	-			
	3I-34S	100	100	200			
	3I-35S	100	100	200			
	3I-36S	100	100	200			
	3I-37S	100	100	200			
	3I-38S	100	100	200			
	3I-39S	100	100	200			
	3I-40S	100	100	200			
	3I-41S	100	100	200			

Table 6
THIRD INJECTION EVENT REAGENT INJECTION LOG

IR Site 9 Shallow
Alameda Point
Alameda, California

DATE	INJECTION POINT	REAGENT TOTAL PER POINT			REAGENT TOTAL PER DAY		
		12% H_2O_2	Catalyst	Total	12% H_2O_2	Catalyst	Total
May 26	3I-42S	100	100	200	840	610	1,450
	3I-43S	-	-	-			
	3I-44S	150	150	300			
	3I-45S	100	10	110			
	3I-46S	100	100	200			
	3I-47S	150	150	300			
	3I-48S	100	100	200			
	3I-49S	40	0	40			
	3I-50S	100	0	100			
THIRD EVENT TOTALS					4,540	3,950	8,490

Table 7
POST-THIRD INJECTION EVENT FIELD MONITORING DATA

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Well	Date	Sample Time	Temperature (deg C)	Conductivity (us/cm)	DO (mg/l)	pH	ORP (mV)	Iron (mg/l)	Hydrogen Peroxide (mg/l)
F9SMW01	5/26/2006	1:27	21.09	2.931	1.12	7.67	-111.0	0	0
F9SMW02	5/26/2006	1:33	19.93	11.103	1.65	6.85	350.4	0	0
F9SMW04	5/26/2006	1:12	19.95	1.066	14.87	6.15	32.4	0	>1,000
P-9-MWS02	5/26/2006	1:19	19.85	1.316	1.35	7.85	56.4	0	0
MW410-4	5/26/2006	1:25	20.61	0.689	0.88	8.44	263.8	0	0
DVE-10	5/26/2006	1:02	20.42	0.866	1.25	7.08	108.0	0	0
DVE-12	5/26/2006	12:50	20.28	0.572	23.97	7.16	111.5	0	0
DVD-18	5/26/2006	1:07	19.94	2.094	45.34	5.52	350.5	0	0
DVE-26	5/26/2006	1:15	20.33	0.618	0.72	7.49	23.5	0	0

Table 9
CIS-1,2-DICHLOROETHENE GROUNDWATER CONCENTRATIONS WITH PERCENTAGE REDUCTIONS

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Wells	Baseline Dec 2005 (µg/L)	Post 1st Feb 2006 (µg/L)	Baseline vs Post 1st (% Reduction)	Post 2nd Apr 2006 (µg/L)	Baseline vs Post 2nd (% Reduction)	Post 3rd Jun 2006 (µg/L)	Baseline vs Post 3rd (% Reduction)
F9SMW01	0.25	0.25	0%	0.25	0%	0.25	0%
F9SMW02	0.25	0.25	0%	0.25	0%	0.25	0%
F9SMW03	**7.6**	2.6	66%	**8.2**	-8%	**7**	8%
F9SMW04	**43**	**23**	47%	**32**	26%	**13**	70%
F9SMW05	2.8	2.5	11%	1.9	32%	0.72	74%
F9SMW06	0.25	0.25	0%	0.25	0%	0.25	0%
P-9-MWS01	2.1	0.82	61%	0.67	68%	0.81	61%
P-9-MWS02	0.98	0.87	11%	0.24	76%	0.77	21%
P-9-MWS04	**14**	**17**	-21%	4.2	70%	**15**	-7%
MW410-1	0.25	0.25	0%	0.25	0%	0.25	0%
MW410-2	1.8	0.56	69%	0.25	86%	1.2	33%
MW410-3	0.25	0.25	0%	0.25	0%	0.25	0%
MW410-4	0.25	0.25	0%	0.25	0%	0.25	0%
DVE-3	1.2	1.1	8%	0.32	73%	0.38	68%
DVE-9	0.25	0.25	0%	0.25	0%	0.25	0%
DVE-10	0.25	0.25	0%	0.24	4%	0.64	-156%
DVE-15A	**7.7**	0.85	89%	0.56	93%	0.25	97%
DVE-17	**60**	5.4	91%	0.53	99%	0.86	99%
DVE-19	**19**	0.25	99%	**8.5**	55%	2.5	87%
DVE-20	**18**	**7.4**	59%	3.7	79%	4	78%
DVE-23	5.9	**7.8**	-32%	**16**	-171%	**10**	-69%

NOTES

µg/L micrograms per liter

NA Not applicable

0.25 Non-detect - value shown in blue is 1/2 of reporting limit

12 Concentration exceeds Maximum Contaminant Level (MCL)
cis-1,2-Dichloroethene MCL = 6 µg/L

Table 10
VINYL CHLORIDE GROUNDWATER CONCENTRATIONS WITH PERCENTAGE REDUCTIONS

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Wells	Baseline Dec 2005 (µg/L)	Post 1st Feb 2006 (µg/L)	Baseline vs Post 1st (% Reduction)	Post 2nd Apr 2006 (µg/L)	Baseline vs Post 2nd (% Reduction)	Post 3rd Jun 2006 (µg/L)	Baseline vs Post 3rd (% Reduction)
F9SMW01	0.25	0.25	0%	0.25	0%	0.25	0%
F9SMW02	0.25	0.25	0%	0.25	0%	0.25	0%
F9SMW03	**3.9**	**0.86**	78%	**5.2**	-33%	**6.9**	-77%
F9SMW04	0.25	0.25	0%	**0.56**	-124%	0.25	0%
F9SMW05	0.25	**3.8**	-1420%	**1.8**	-620%	0.25	0%
F9SMW06	0.25	0.25	0%	0.25	0%	0.25	0%
P-9-MWS01	**1.8**	**0.71**	61%	0.48	73%	**0.53**	71%
P-9-MWS02	0.25	0.25	0%	0.25	0%	0.25	0%
P-9-MWS04	**9.6**	**7.8**	19%	**1.1**	89%	0.25	97%
MW410-1	0.25	0.25	0%	0.25	0%	0.25	0%
MW410-2	**1**	0.38	62%	0.25	75%	**1.5**	-50%
MW410-3	0.25	0.25	0%	0.25	0%	0.25	0%
MW410-4	0.25	0.25	0%	0.25	0%	0.25	0%
DVE-3	**4**	**1.2**	70%	0.25	94%	0.25	94%
DVE-9	0.25	0.25	0%	0.25	0%	0.25	0%
DVE-10	0.42	0.25	40%	0.25	40%	0.25	40%
DVE-15A	**2.1**	0.25	88%	0.25	88%	0.25	88%
DVE-17	**11**	0.25	98%	0.25	98%	0.25	98%
DVE-19	**14**	**6**	57%	**1.2**	91%	**0.59**	96%
DVE-20	**4.6**	**4.7**	-2%	**3.4**	26%	**4.2**	9%
DVE-23	0.25	0.25	0%	0.25	0%	0.25	0%

NOTES

µg/L micrograms per liter

NA Not applicable

0.25 Non-detect - value shown in blue is 1/2 of reporting limit

1 Concentration exceeds Maximum Contaminant Level (MCL)
Vinyl Chloride MCL = 0.5 µg/L

Table 11 A
TPH-D GROUNDWATER CONCENTRATIONS WITH PERCENTAGE REDUCTIONS

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Wells	Baseline Dec 2005 (µg/L)	Post 1st Feb 2006 (µg/L)	Post 2nd Apr 2006 (µg/L)	Post 1st vs Post 2nd (% Reduction)	Post 3rd Jun 2006 (µg/L)	Post 1st vs Post 3rd (% Reduction)
F9SMW01			95	NA	95	NA
F9SMW02			95	NA	140	NA
F9SMW03			270	NA	290	NA
F9SMW04		12000	14000	-	41000	-
F9SMW05			440	NA	660	NA
F9SMW06			95	NA	95	NA
P-9-MWS01			2400	NA	2500	NA
P-9-MWS02			95	NA	130	NA
P-9-MWS04		840	16000	-	29000	-
MW410-1			95	NA	95	NA
MW410-2			95	NA	95	NA
MW410-3			95	NA	95	NA
MW410-4			95	NA	95	NA
DVE-3			1400	NA	1100	NA
DVE-9			3800	NA	830	NA
DVE-10		110	95	14%	170	-
DVE-15A			95	NA	95	NA
DVE-17			2700	NA	3700	NA
DVE-19			180	NA	330	NA
DVE-20		200	9200	-	10000	-
DVE-23		3500	7600	-	29000	-
Average		3,330	2,807	16%	5,691	-

NOTES

µg/L micrograms per liter

NA Not applicable

95 Non-detect - value shown in blue is 1/2 of reporting limit

Table 11 B
TPH-MO GROUNDWATER CONCENTRATIONS WITH PERCENTAGE REDUCTIONS

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Wells	Baseline Dec 2005 (µg/L)	Post 1st Feb 2006 (µg/L)	Post 2nd Apr 2006 (µg/L)	Post 1st vs Post 2nd (% Reduction)	Post 3rd Jun 2006 (µg/L)	Post 1st vs Post 3rd (% Reduction)
F9SMW01			100	NA	95	NA
F9SMW02		95	95	-	120	-
F9SMW03			98	NA	120	NA
F9SMW04		1100	680	38%	2200	-
F9SMW05			95	NA	120	NA
F9SMW06			100	NA	95	NA
P-9-MWS01			140	NA	120	NA
P-9-MWS02			100	NA	100	NA
P-9-MWS04		100	240	-	100	-
MW410-1			95	NA	95	NA
MW410-2			100	NA	180	NA
MW410-3		150	100	33%	100	33%
MW410-4		120	320	-	105	13%
DVE-3			95	NA	150	NA
DVE-9			110	NA	98	NA
DVE-10			100	NA	95	NA
DVE-15A			100	NA	95	NA
DVE-17			100	NA	120	NA
DVE-19			100	NA	130	NA
DVE-20		95	95	-	170	-
DVE-23		95	380	-	2200	-
Average		251	159	37%	315	-

NOTES

µg/L micrograms per liter

NA Not applicable

95 Non-detect - value shown in blue is 1/2 of reporting limit

Table 11C
JET FUEL #5 (JP5) GROUNDWATER CONCENTRATIONS WITH PERCENTAGE REDUCTIONS

IR Site 9 Shallow
Alameda Point
Alameda, California

Monitoring Wells	Baseline Dec 2005 (µg/L)	Post 1st Feb 2006 (µg/L)	Post 2nd Apr 2006 (µg/L)	Post 1st vs Post 2nd (% Reduction)	Post 3rd Jun 2006 (µg/L)	Post 1st vs Post 3rd (% Reduction)
F9SMW01		140	140	-	150	-
F9SMW02			140	NA	150	NA
F9SMW03			230	NA	140	NA
F9SMW04		5000	3700	26%	7700	-
F9SMW05			140	NA	220	NA
F9SMW06			140	NA	140	NA
P-9-MWS01			360	NA	380	NA
P-9-MWS02			140	NA	140	NA
P-9-MWS04		1500	3700	-	7400	-
MW410-1			140	NA	140	NA
MW410-2			140	NA	140	NA
MW410-3			140	NA	140	NA
MW410-4			140	NA	140	NA
DVE-3			330	NA	150	NA
DVE-9			630	NA	200	NA
DVE-10		140	640	-	155	-
DVE-15A			140	NA	155	NA
DVE-17			1100	NA	1100	NA
DVE-19			140	NA	155	NA
DVE-20		140	4300	-	1900	-
DVE-23		3100	4100	-	6600	-
Average		1,670	982	41%	1,305	22%

NOTES

µg/L micrograms per liter

NA Not applicable

140 Non-detect - value shown in blue is 1/2 of reporting limit

Appendix D
Laboratory Data Quality Assessment

Laboratory Data Quality Assessment

The data quality assessment for the *Field Summary Report for the Full-Scale In Situ Removal Action at Installation Restoration Site 9 Shallow* describes the findings of the data review and validation and is provided to document the quality of the data used in the Site 9 Shallow removal Action.

Sampling and analysis activities for Installation Restoration Site 9 shallow are presented in Appendix A of *Draft Final Work Plan, Chemical Oxidation Pilot Testing for Removal Actions at Installation Restoration Sites 9, 11/21, and 16, Alameda Point, Alameda, California* (Revision 1, June 7, 2002):

- *Draft Final Sampling and Analysis Plan (Field Sampling Plan/Quality Assurance Project Plan), Chemical Oxidation Pilot Testing for Removal Actions at Installation Restoration Sites 9, 11/21, and 16, Alameda Point, Alameda, California* (SAP/QAPP, Revision 1, June 2, 2002)

The overall quality control and quality assurance protocols are also presented in the above SAP/QAPP.

All groundwater samples collected for the full scale baseline, full scale post injection I, II and III sampling events were shipped to EMAX Laboratories, Inc. located in Torrance, California for analyses. EMAX laboratory is State of California-certified and has successfully completed the Naval Facilities Engineering Service Center's Laboratory Evaluation Program.

Shaw project chemists performed Level III data review for some data from the full scale baseline, and all data from the post injection I, II and II sampling events, while Laboratory Data Consultants, Inc. located in Carlsbad California manually performed Level III data review for the remaining data from the full scale baseline sampling event. Table 1 summarizes sample delivery groups (SDG), sample numbers, sampling dates, extraction and analytical methods, data review level and reviewers for these sampling events. The review was performed in accordance with the guidelines and control criteria specified in the following documents:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, (USEPA, 1999)
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, (USEPA, 2002)
- USEPA Test Methods for Evaluating Solid Waste, SW-846 Physical/Chemical Methods (USEPA, 1996)

- Project specific QAPP and SAP.

The following quality control (QC) elements were included in the Level III data review:

- Laboratory Method Blanks
- Continuing Calibration Blanks (metals only)
- Sample Holding Times
- Surrogate Recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries (LCS/LCSD)
- Matrix Spike/Matrix Spike Duplicate Recoveries (MS/MSD)
- Relative Percent Differences (RPD)
- Initial Calibrations
- Continuing Calibrations
- ICP Serial Dilution (metals only)
- Field Blanks
- Field Duplicate

One full data package (Level IV) was submitted for samples collected for the full scale baseline sampling event. Laboratory Data Consultants performed Level IV data validation on these results presented on Table 1. In addition to the above Level III reviewed elements, the Level IV data validation includes an inspection of the following QC elements:

- Internal Standard Recoveries
- Instrument Tuning and System Performance
- Analyte Identification
- Analyte Quantitation

The following sections present a discussion of the third party and Shaw data review findings. Data were reviewed in terms of precision, accuracy, representativeness, comparability, and completeness (PARCC). The PARCC parameters were evaluated for the analytical data as follows:

- Accuracy is demonstrated by recovery of target analytes from fortified blank and sample matrices, LCS/LCSD and MS/MSD, respectively. The recovery of target analytes from fortified samples is compared to acceptance criteria. When these criteria are not met, the data are flagged as appropriate.

- Precision is expressed as RPD between the results of replicate sample analyses: sample duplicates, LCSDs and MSDs. When analyte RPDs exceed the acceptance criteria, the data are flagged as appropriate.

- Representativeness of the samples submitted for analysis is ensured by adherence to standard sampling techniques and protocols.

- Comparability of sample results is ensured through the use of approved sampling and analysis methods.
- Completeness is expressed as a ratio of number of usable data to all analytical data.

The following sections provide a discussion of the data review and validation. Table 2 presents definition of data qualification flags and reason codes applied to the sample results. Table 3 summarizes qualified data.

Laboratory Method Blank (Reason Code B1): All field sample results were evaluated with respect to the laboratory method blank prepared and analyzed for each analytical batch. Based on the review, arsenic and nickel were observed at trace concentrations in two laboratory method blanks. As a result of the blank contamination, seven sample result for arsenic and one sample result for nickel were qualified as not detected (U) at their reported values. The data usability was not affected due to the laboratory blank contamination.

Continuing Calibration Blank (Reason Code B2): After an initial calibration and before a continuing calibration for metals analyses, a continuing calibration blank is analyzed to ensure that the instrument is free of target analytes. Trace concentrations of arsenic, cadmium, molybdenum, nickel, silver, cobalt, copper, chromium, lead, selenium, and zinc were noted in continuing calibration blanks. Sample results for these analytes were qualified as not detected (U) when the sample concentrations were less than or equal to five times their corresponding blank levels. There is no impact on the data usability.

Sample Holding Time (Reason Code H): Sample holding times were evaluated by comparing the sample collection dates to the sample extraction and analysis dates. Extraction and analysis holding times were reviewed for all samples to determine the validity of analytical results. Holding time violations were noted for USEPA Method 7196A. Hexavalent chromium in 23 samples was analyzed one to three hours outside the 24-hour holding time requirement. In all cases, the holding time exceedance was minor and resulted in detected and not-detected results in the affected samples qualified as estimated (J/UJ). Holding time requirements were met for all other analyses.

Surrogate Recovery (Reason Code S): Surrogate standards are organic compounds added to field and laboratory QC samples for organic analysis to evaluate matrix effect and method performance on an individual sample basis. Surrogate recovery outliers were noted for 11 VOC samples and 21 diesel samples. In the affected VOC samples, recoveries for surrogate standard bromofluorobenzene and/or toluene –d8 were reported between 131 percent and 165 percent, exceeding the 130 percent upper control limit. The elevated recoveries led to qualification of detected results as estimated (J) in the affected samples. The high recoveries had no impact on the not detected results.

Low surrogate recoveries for diesel samples were also observed. Recoveries for surrogate standard hexacosane and/or bromobenzene ranged from 24 percent (only one sample) to 68 percent. The majority of the surrogate recoveries fell in the 60 percent range, which are below the 70 percent lower control limit. Sample results for diesel, motor oil and JP-5 were qualified as estimated (J/UJ) in the affected samples. The surrogate recovery exceedances were minor and did not affect the data usability.

Laboratory Control Sample/Laboratory Control Sample Duplicate (Reason Code L): The LCS is an aliquot of analyte-free sample matrix spiked with target analytes and is prepared with each analytical batch for each analysis. The recovery of target analytes from the LCS analysis is a measurement of method performance in an interference-free sample matrix. Low LCS and LCSD recoveries were noted for a few SVOCs in a several analytical QC batches. The affected analytes included 1,2,4-trichlorobenzene, 1,4-dichlorobenzene, 2-chlorophenol, 4-chloro-3-methylphenol, 4-nitrophenol, acenaphthene, pentachlorophenol, phenol and n-nitrosodi-n-propylamine. LCS recoveries for these analytes ranged from 65 percent to 69 percent. As a result of the low recoveries, concentrations for these analytes in all associated samples were qualified as estimated (J/UJ). There is no impact on the data usability due to the LCS and LCSD recovery outliers.

Matrix Spike/Matrix Spike Duplicate (Reason Code M): The MS and MSD samples are a portion of a field sample spiked with target analytes, and are prepared with each analytical batch. The MS/MSD results are used to evaluate any bias introduced to the method due to matrix interference, and to measure accuracy and precision for each analytical batch. MS/MSD recovery outliers were noted for potassium, manganese and sodium in three analytical QC batches. The reported MS/MSD recoveries for potassium exceeded the 130 percent upper control limit; while MS/MSD recoveries for manganese and sodium fell below the 70 percent lower control limit. Qualification was applied to analyte concentrations as estimated (J) in all samples associated with these non-compliant batches. The data usability was not affected because of the MS/MSD recovery outliers. LCS and LCSD recoveries for potassium, manganese and sodium in these batches met the accuracy requirement.

Initial Calibrations (Reason Code G2): Instrument calibration is performed for each analysis according to the USEPA method requirements. The linear analytical range is established for each method by analysis of standards prepared at increasing concentrations that cover the expected sample concentrations. The acceptability of the initial calibration is determined by calculation of a percent relative standard deviation (RSD) or correlation coefficient. For data review purposes, the acceptable relative response factor (RRF) for all analytes is greater than or equal to 0.05. The observed RRFs for acetone and tert-butyl alcohol were between 0.011 and 0.033. These analytes were not detected and their PQLs in all samples associated with the non-compliant initial calibrations were qualified as estimated (UJ). The data usability was not

affected because of the initial calibration outlier. Except where noted above for USEPA Method 8260B, initial calibration requirements were met for all other methods.

Continuing Calibrations (Reason Code C1 and Reason Code G3): Following initial calibrations and routinely during sample analysis, the stability of analytical systems is monitored by analysis of continuing calibration standards at concentrations near the mid-point of the linear range. Based on the review, non-compliant continuing calibrations were noted for USEPA Methods 8260B, 8270C and 6010B. The reported RRFs for acetone and tert butyl alcohol were less than the 0.05 acceptable limit. Percent recoveries were below their respective lower control limits for methylene chloride, dichlorodifuloromehane, bromomethane, naphthalene, 2-nitrophenol, 4-nitrophenol, 2,4-dinitrophenol, hexachlorocyclopentadiene, 4,6-dinitro-2-methylphenol, benzoic acid and potassium. Results for these analytes in all associated samples were qualified as estimated (J/UJ). In all cases, the deviations from the acceptance criteria were small and the data usability was not affected.

ICP Serial Dilution (Reason Code A): When an analyte concentration is greater than 50 times the Instrument Detection Limit (IDL), a serial dilution is performed at a five fold dilution. Results of the ICP serial dilution are used to determine if interference is present due to sample matrix. The review indicated that percent differences for potassium, arsenic, and zinc were reported between 14 percent and 33 percent, exceeding the 10 percent control limit. Detected results for these analytes in the affected samples were qualified as estimated (J). The data usability is not affected because of the ICP serial dilution outliers.

Internal Standard Recoveries (Reason Code I): Internal standard recoveries are checked to ensure that GC/MS sensitivity and response are stable. Based on the review, internal standard recovery deficiencies were noted for five SVOC samples. Internal standards phenanthrene-d10, chrysene-d12 and perylene-d12 in one sample, perylene-d12 in two samples, and chrysene-d12 and perylene-d12 in two samples were recovered slightly below the acceptable 50 percent control limit. Results for analytes associated with these internal standards were qualified as estimated (UJ) in the affected samples. Because the degree of exceedances was small, the data usability was not affected.

Instrument Tuning and System Performance: Gas chromatograph/mass spectrometer (GC/MS) instrument performance checks are conducted to ensure mass resolution, identification. The ion abundance criteria were met for bromofluorobenzene for all VOC analyses and for decafluorotriphenylphosphine for SVOC analyses. The samples were also evaluated for reconstructed ion chromatogram baseline shifts, extraneous peaks and peak tailing. No system degradation was noted.

Sample Identification: Quantitation reports and chromatograms were examined to minimize the number of erroneous identification of compounds, either false positives or false negatives. The Level IV data validation indicated that all peaks were correctly identified as target analytes or QC analytes. Target compound retention times were compared to the daily standard and were found to be acceptable.

Sample Quantitation: Quantitaion reports, chromatograms and sample preparation/extraction logs were reviewed to confirm the reported values. Recalculations were performed on samples and QC samples to verify that the laboratory reported results were reproducible. Based on the Level IV data validation, no calculation errors or discrepancies were identified.

Trip Blank (Reason Code K1): A total of 21 trip blanks were collected for the full scale baseline, and full scale post injection I through III sampling events. All trip blanks were shipped with VOC samples. No VOCs were detected in any trip blanks. The trip blank results indicated acceptable sample shipping and storage procedures.

Field Duplicate: Field duplicate samples are collected at a minimum rate of 10 percent of the total number of groundwater samples. Field duplicate samples are evaluated by calculating the RPD between the sample and its duplicate. The RPD is calculated using the following equation.

$$RPD = |(S-D)/[(S+D)/2]| * 100$$

where:

S = sample result

D = duplicate result

Acceptable precision control criteria are established at less than 35 percent for water samples. The RPD is calculated between pairs of field duplicate samples when both results are reported above the PQL.

The following duplicate samples were collected for the full scale baseline, and full scale post injection I through III sampling events:

Sampling Event	SDG	Primary Sample ID	Duplicate ID
Baseline	05L166	DVE-20-1149	DVE-20-1150
	05L166	DVE-9-1143	DVE-9-1144
	05L179	F9SMW05-1132	F9SMW05-1133

Sampling Event	SDG	Primary Sample ID	Duplicate ID
Post Injection 1	06B042	F9SMW01-1153	F9SMW01-1154
	05B042	MW410-4-1166	MW410-4-1167
	05B053	DVE-23-1175	DVE-23-1176
Post Injection II	06D150	MW410-3-1190	MW410-3-1191
	06D161	9IF-MW01S-1201	9IF-MW01S-1202
	06D161	F9SMW03-1180	F9SMW03-1181
Post Injection III	06F116	P-9-MWS01-1212	P-9-MWS01-1213
	06F133	9IF-MW01S-1229	9IF-MW01S-1230
	06F133	DVE-17-1224	DVE-17-1225

All above primary and duplicate samples were analyzed for VOCs. Results of the primary and the duplicate results are presented on Table 4. As shown on the table, RPDs for all analytes met the acceptance criteria, indicating acceptable sampling and analytical precision.

Based on the above third party review and Shaw's internal data review, there were no significant, systematic problems identified with the performance of the USEPA Method 8260B, 8270C, 8015E, 6010B and 7196A. Although some results were qualified as not detected or estimated due to laboratory blank contamination, holding time violations, surrogate, matrix spike, calibration, ICP serial dilution and internal standard deficiencies, the data usability was not affected. All data are usable for project decisions. Overall, the data are of good technical quality and meet project objectives.

Tables

Table 1: Summary of Samples Collected, Sample Date, Preparation Method, Analysis Method, and Data Review Level
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
05L166	DVE-20-1149	12/20/2005	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
05L166	DVE-20-1149	12/20/2005	EMXT	NS1	NONE	SW7196A	III	SHAW
05L166	DVE-20-1149	12/20/2005	EMXT	NS1	SW5030B	SW8260B	III	SHAW
05L166	DVE-20-1149	12/20/2005	EMXT	NS1	SW3520C	SW8270C	III	SHAW
05L166	DVE-20-1150	12/20/2005	EMXT	FD	SW5030B	SW8260B	III	SHAW
05L166	DVE-23-1151	12/20/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L166	DVE-23-1151	12/20/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L166	DVE-23-1151	12/20/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L166	DVE-23-1151	12/20/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L166	DVE-3-1142	12/20/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L166	DVE-3-1142	12/20/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L166	DVE-3-1142	12/20/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L166	DVE-3-1142	12/20/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L166	DVE-9-1143	12/20/2005	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
05L166	DVE-9-1143	12/20/2005	EMXT	NS1	NONE	SW7196A	III	SHAW
05L166	DVE-9-1143	12/20/2005	EMXT	NS1	SW5030B	SW8260B	III	SHAW
05L166	DVE-9-1143	12/20/2005	EMXT	NS1	SW3520C	SW8270C	III	SHAW
05L166	DVE-9-1144	12/20/2005	EMXT	FD	SW5030B	SW8260B	III	SHAW
05L166	F9SMW04-1131	12/20/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L166	F9SMW04-1131	12/20/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L166	F9SMW04-1131	12/20/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L166	F9SMW04-1131	12/20/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L166	P-9-MWS01-1135	12/20/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L166	P-9-MWS01-1135	12/20/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L166	P-9-MWS01-1135	12/20/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L166	P-9-MWS01-1135	12/20/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L166	P-9-MWS02-1136	12/20/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L166	P-9-MWS02-1136	12/20/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L166	P-9-MWS02-1136	12/20/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L166	P-9-MWS02-1136	12/20/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L166	P-9-MWS04-1137	12/20/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L166	P-9-MWS04-1137	12/20/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L166	P-9-MWS04-1137	12/20/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L166	P-9-MWS04-1137	12/20/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L166	TB1-2085	12/20/2005	EMXT	TB	SW5030B	SW8260B	III	SHAW
05L166	TB2-2086	12/20/2005	EMXT	TB	SW5030B	SW8260B	III	SHAW
05L179	DVE-10-1145	12/21/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L179	DVE-10-1145	12/21/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L179	DVE-10-1145	12/21/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L179	DVE-10-1145	12/21/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L179	DVE-15A-1146	12/21/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L179	DVE-15A-1146	12/21/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L179	DVE-15A-1146	12/21/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L179	DVE-15A-1146	12/21/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L179	DVE-17-1147	12/21/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L179	DVE-17-1147	12/21/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L179	DVE-17-1147	12/21/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L179	DVE-17-1147	12/21/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L179	DVE-19-1148	12/21/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW

Table 1: Summary of Samples Collected, Sample Date, Preparation Method, Analysis Method, and Data Review Level
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
05L179	DVE-19-1148	12/21/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L179	DVE-19-1148	12/21/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L179	DVE-19-1148	12/21/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L179	F9SMW01-1128	12/21/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L179	F9SMW01-1128	12/21/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L179	F9SMW01-1128	12/21/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L179	F9SMW01-1128	12/21/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L179	F9SMW05-1132	12/21/2005	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
05L179	F9SMW05-1132	12/21/2005	EMXT	NS1	NONE	SW7196A	III	SHAW
05L179	F9SMW05-1132	12/21/2005	EMXT	NS1	SW5030B	SW8260B	III	SHAW
05L179	F9SMW05-1132	12/21/2005	EMXT	NS1	SW3520C	SW8270C	III	SHAW
05L179	F9SMW05-1133	12/21/2005	EMXT	FD	SW5030B	SW8260B	III	SHAW
05L179	F9SMW06-1134	12/21/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L179	F9SMW06-1134	12/21/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L179	F9SMW06-1134	12/21/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L179	F9SMW06-1134	12/21/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L179	MW410-3-1140	12/21/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L179	MW410-3-1140	12/21/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L179	MW410-3-1140	12/21/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L179	MW410-3-1140	12/21/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L179	MW410-4-1141	12/21/2005	EMXT	NS	FLDFLT	SW6010B	III	SHAW
05L179	MW410-4-1141	12/21/2005	EMXT	NS	NONE	SW7196A	III	SHAW
05L179	MW410-4-1141	12/21/2005	EMXT	NS	SW5030B	SW8260B	III	SHAW
05L179	MW410-4-1141	12/21/2005	EMXT	NS	SW3520C	SW8270C	III	SHAW
05L179	TB1-2087	12/21/2005	EMXT	TB	SW5030B	SW8260B	III	SHAW
05L179	TB2-2088	12/21/2005	EMXT	TB	SW5030B	SW8260B	III	SHAW
05L183	F9SMW02-1129	12/22/2005	EMXT	NS	FLDFLT	SW6010B	III	LDC
05L183	F9SMW02-1129	12/22/2005	EMXT	NS	NONE	SW7196A	III	LDC
05L183	F9SMW02-1129	12/22/2005	EMXT	NS	SW5030B	SW8260B	III	LDC
05L183	F9SMW02-1129	12/22/2005	EMXT	NS	SW3520C	SW8270C	III	LDC
05L183	MW410-1-1138	12/22/2005	EMXT	NS	FLDFLT	SW6010B	III	LDC
05L183	MW410-1-1138	12/22/2005	EMXT	NS	NONE	SW7196A	III	LDC
05L183	MW410-1-1138	12/22/2005	EMXT	NS	SW5030B	SW8260B	III	LDC
05L183	MW410-1-1138	12/22/2005	EMXT	NS	SW3520C	SW8270C	III	LDC
05L183	MW410-2-1139	12/22/2005	EMXT	NS	FLDFLT	SW6010B	III	LDC
05L183	MW410-2-1139	12/22/2005	EMXT	NS	NONE	SW7196A	III	LDC
05L183	MW410-2-1139	12/22/2005	EMXT	NS	SW5030B	SW8260B	III	LDC
05L183	MW410-2-1139	12/22/2005	EMXT	NS	SW3520C	SW8270C	III	LDC
05L191	9IF-MW01S-1152	12/27/2005	EMXT	NS	FLDFLT	SW6010B	IV	LDC
05L191	9IF-MW01S-1152	12/27/2005	EMXT	NS	NONE	SW7196A	IV	LDC
05L191	9IF-MW01S-1152	12/27/2005	EMXT	NS	SW5030B	SW8260B	IV	LDC
05L191	9IF-MW01S-1152	12/27/2005	EMXT	NS	SW3520C	SW8270C	IV	LDC
05L191	F9SMW03-1130	12/27/2005	EMXT	NS	FLDFLT	SW6010B	IV	LDC
05L191	F9SMW03-1130	12/27/2005	EMXT	NS	NONE	SW7196A	IV	LDC
05L191	F9SMW03-1130	12/27/2005	EMXT	NS	SW5030B	SW8260B	IV	LDC
05L191	F9SMW03-1130	12/27/2005	EMXT	NS	SW3520C	SW8270C	IV	LDC
06B035	F9SMW03-1156	2/3/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B035	F9SMW03-1156	2/3/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B035	F9SMW03-1156	2/3/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW

Table 1: Summary of Samples Collected, Sample Date, Preparation Method, Analysis Method, and Data Review Level
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
06B035	F9SMW03-1156	2/3/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B035	F9SMW04-1157	2/3/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B035	F9SMW04-1157	2/3/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B035	F9SMW04-1157	2/3/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B035	F9SMW04-1157	2/3/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B035	F9SMW05-1158	2/3/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B035	F9SMW05-1158	2/3/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B035	F9SMW05-1158	2/3/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B035	F9SMW05-1158	2/3/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B035	F9SMW06-1159	2/3/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B035	F9SMW06-1159	2/3/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B035	F9SMW06-1159	2/3/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B035	F9SMW06-1159	2/3/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B035	MW410-1-1163	2/3/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B035	MW410-1-1163	2/3/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B035	MW410-1-1163	2/3/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B035	MW410-1-1163	2/3/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B035	MW410-2-1164	2/3/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B035	MW410-2-1164	2/3/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B035	MW410-2-1164	2/3/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B035	MW410-2-1164	2/3/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B035	MW410-3-1165	2/3/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B035	MW410-3-1165	2/3/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B035	MW410-3-1165	2/3/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B035	MW410-3-1165	2/3/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B035	P-9-MWS04-1162	2/3/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B035	P-9-MWS04-1162	2/3/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B035	P-9-MWS04-1162	2/3/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B035	P-9-MWS04-1162	2/3/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B035	TB1-2095	2/3/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06B035	TB2-2096	2/3/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06B036	F9SMW04-1157	2/3/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06B036	F9SMW06-1159	2/3/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06B036	MW410-1-1163	2/3/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06B036	MW410-3-1165	2/3/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06B036	P-9-MWS04-1162	2/3/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06B042	DVE-10-1170	2/6/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B042	DVE-10-1170	2/6/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B042	DVE-10-1170	2/6/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B042	DVE-10-1170	2/6/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B042	DVE-15A-1171	2/6/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B042	DVE-15A-1171	2/6/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B042	DVE-15A-1171	2/6/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B042	DVE-15A-1171	2/6/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B042	DVE-17-1172	2/6/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B042	DVE-17-1172	2/6/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B042	DVE-17-1172	2/6/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B042	DVE-17-1172	2/6/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B042	DVE-3-1168	2/6/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW

Table 1: Summary of Samples Collected, Sample Date, Preparation Method, Analysis Method, and Data Review Level
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
06B042	DVE-3-1168	2/6/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B042	DVE-3-1168	2/6/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B042	DVE-3-1168	2/6/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B042	F9SMW01-1153	2/6/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06B042	F9SMW01-1153	2/6/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06B042	F9SMW01-1153	2/6/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06B042	F9SMW01-1153	2/6/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06B042	F9SMW01-1154	2/6/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06B042	F9SMW02-1155	2/6/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B042	F9SMW02-1155	2/6/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B042	F9SMW02-1155	2/6/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B042	F9SMW02-1155	2/6/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B042	MW410-4-1166	2/6/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06B042	MW410-4-1166	2/6/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06B042	MW410-4-1166	2/6/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06B042	MW410-4-1166	2/6/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06B042	MW410-4-1167	2/6/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06B042	P-9-MWS01-1160	2/6/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B042	P-9-MWS01-1160	2/6/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B042	P-9-MWS01-1160	2/6/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B042	P-9-MWS01-1160	2/6/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B042	P-9-MWS02-1161	2/6/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B042	P-9-MWS02-1161	2/6/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B042	P-9-MWS02-1161	2/6/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B042	P-9-MWS02-1161	2/6/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B042	TB1-2097	2/6/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06B042	TB2-2098	2/6/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06B043	DVE-10-1170	2/6/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06B043	DVE-15A-1171	2/6/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06B043	F9SMW02-1155	2/6/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06B043	MW410-4-1166	2/6/2006	EMXT	NS1	SW3520C	M8015D	III	SHAW
06B053	9IF-MW01S-1177	2/7/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B053	9IF-MW01S-1177	2/7/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B053	9IF-MW01S-1177	2/7/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B053	9IF-MW01S-1177	2/7/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B053	DVE-19-1173	2/7/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B053	DVE-19-1173	2/7/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B053	DVE-19-1173	2/7/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B053	DVE-19-1173	2/7/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B053	DVE-20-1174	2/7/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06B053	DVE-20-1174	2/7/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B053	DVE-20-1174	2/7/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B053	DVE-20-1174	2/7/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B053	DVE-23-1175	2/7/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06B053	DVE-23-1175	2/7/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06B053	DVE-23-1175	2/7/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06B053	DVE-23-1175	2/7/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06B053	DVE-23-1176	2/7/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06B053	DVE-9-1169	2/7/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW

Table 1: Summary of Samples Collected, Sample Date, Preparation Method, Analysis Method, and Data Review Level
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
06B053	DVE-9-1169	2/7/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06B053	DVE-9-1169	2/7/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06B053	DVE-9-1169	2/7/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06B053	TB1-2099	2/7/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06B053	TB2-2100	2/7/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06B053A	DVE-23-1175	2/7/2006	EMXT	NS1	SW3520C	M8015D	III	SHAW
06B055	DVE-20-1174	2/7/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D140	F9SMW06-1184	4/18/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D140	F9SMW06-1184	4/18/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D140	F9SMW06-1184	4/18/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D140	F9SMW06-1184	4/18/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D140	TB1-2105	4/18/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06D140A	F9SMW06-1184	4/18/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150	F9SMW01-1178	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	F9SMW01-1178	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	F9SMW01-1178	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D150	F9SMW01-1178	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	F9SMW02-1179	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	F9SMW02-1179	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	F9SMW02-1179	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D150	F9SMW02-1179	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	F9SMW04-1182	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	F9SMW04-1182	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	F9SMW04-1182	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D150	F9SMW04-1182	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	F9SMW05-1183	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	F9SMW05-1183	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	F9SMW05-1183	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D150	F9SMW05-1183	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	MW410-1-1188	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	MW410-1-1188	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	MW410-1-1188	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D150	MW410-1-1188	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	MW410-2-1189	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	MW410-2-1189	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	MW410-2-1189	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D150	MW410-2-1189	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	MW410-3-1190	4/19/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06D150	MW410-3-1190	4/19/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06D150	MW410-3-1190	4/19/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06D150	MW410-3-1190	4/19/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06D150	MW410-3-1191	4/19/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06D150	P-9-MWS01-1185	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	P-9-MWS01-1185	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	P-9-MWS01-1185	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D150	P-9-MWS01-1185	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	P-9-MWS02-1186	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	P-9-MWS02-1186	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	P-9-MWS02-1186	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW

Table 1: Summary of Samples Collected, Sample Date, Preparation Method, Analysis Method, and Data Review Level
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
06D150	P-9-MWS02-1186	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	P-9-MWS04-1187	4/19/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D150	P-9-MWS04-1187	4/19/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D150	P-9-MWS04-1187	4/19/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D150	P-9-MWS04-1187	4/19/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D150	TB1-2107	4/19/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06D150	TB2-2108	4/19/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06D150A	F9SMW01-1178	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150A	F9SMW02-1179	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150A	F9SMW04-1182	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150A	F9SMW05-1183	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150A	MW410-1-1188	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150A	MW410-2-1189	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150A	MW410-3-1190	4/19/2006	EMXT	NS1	SW3520C	M8015D	III	SHAW
06D150A	P-9-MWS01-1185	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150A	P-9-MWS02-1186	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D150A	P-9-MWS04-1187	4/19/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161	9IF-MW01S-1201	4/20/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06D161	9IF-MW01S-1201	4/20/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06D161	9IF-MW01S-1201	4/20/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06D161	9IF-MW01S-1201	4/20/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06D161	9IF-MW01S-1202	4/20/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06D161	DVE-10-1195	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	DVE-10-1195	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	DVE-10-1195	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D161	DVE-10-1195	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	DVE-15A-1196	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	DVE-15A-1196	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	DVE-15A-1196	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D161	DVE-15A-1196	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	DVE-17-1197	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	DVE-17-1197	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	DVE-17-1197	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D161	DVE-17-1197	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	DVE-19-1198	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	DVE-19-1198	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	DVE-19-1198	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D161	DVE-19-1198	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	DVE-20-1199	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	DVE-20-1199	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	DVE-20-1199	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D161	DVE-20-1199	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	DVE-23-1200	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	DVE-23-1200	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	DVE-23-1200	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D161	DVE-23-1200	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	DVE-3-1193	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	DVE-3-1193	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	DVE-3-1193	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW

Table 1: Summary of Samples Collected, Sample Date, Preparation Method, Analysis Method, and Data Review Level
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SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
06D161	DVE-3-1193	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	DVE-9-1194	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	DVE-9-1194	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	DVE-9-1194	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D161	DVE-9-1194	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	F9SMW03-1180	4/20/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06D161	F9SMW03-1180	4/20/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06D161	F9SMW03-1180	4/20/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06D161	F9SMW03-1180	4/20/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06D161	F9SMW03-1181	4/20/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06D161	MW410-4-1192	4/20/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06D161	MW410-4-1192	4/20/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06D161	MW410-4-1192	4/20/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06D161	MW410-4-1192	4/20/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06D161	TB1-2109	4/20/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06D161	TB2-2110	4/20/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06D161A	9IF-MW01S-1201	4/20/2006	EMXT	NS1	SW3520C	M8015D	III	SHAW
06D161A	DVE-10-1195	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161A	DVE-15A-1196	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161A	DVE-17-1197	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161A	DVE-19-1198	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161A	DVE-20-1199	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161A	DVE-23-1200	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161A	DVE-3-1193	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161A	DVE-9-1194	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06D161A	F9SMW03-1180	4/20/2006	EMXT	NS1	SW3520C	M8015D	III	SHAW
06D161A	MW410-4-1192	4/20/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F096	DVE-20-1227	6/7/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F096	DVE-20-1227	6/7/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F096	DVE-20-1227	6/7/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F096	DVE-20-1227	6/7/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F096	DVE-20-1227	6/7/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F096	DVE-9-1221	6/7/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F096	DVE-9-1221	6/7/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F096	DVE-9-1221	6/7/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F096	DVE-9-1221	6/7/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F096	DVE-9-1221	6/7/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F096	F9SMW02-1206	6/7/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F096	F9SMW02-1206	6/7/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F096	F9SMW02-1206	6/7/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F096	F9SMW02-1206	6/7/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F096	F9SMW02-1206	6/7/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F096	P-9-MWS02-1214	6/7/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F096	P-9-MWS02-1214	6/7/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F096	P-9-MWS02-1214	6/7/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F096	P-9-MWS02-1214	6/7/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F096	P-9-MWS02-1214	6/7/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F096	TB1-2120	6/7/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06F096	TB2-2121	6/7/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW

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SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
06F096A	DVE-20-1227	6/7/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F096A	DVE-9-1221	6/7/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F096A	F9SMW02-1206	6/7/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F096A	P-9-MWS02-1214	6/7/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F116	DVE-10-1222	6/8/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F116	DVE-10-1222	6/8/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F116	DVE-10-1222	6/8/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F116	DVE-10-1222	6/8/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F116	DVE-10-1222	6/8/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F116	DVE-23-1228	6/8/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F116	DVE-23-1228	6/8/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F116	DVE-23-1228	6/8/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F116	DVE-23-1228	6/8/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F116	DVE-23-1228	6/8/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F116	DVE-3-1220	6/8/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F116	DVE-3-1220	6/8/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F116	DVE-3-1220	6/8/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F116	DVE-3-1220	6/8/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F116	DVE-3-1220	6/8/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F116	F9SMW01-1205	6/8/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F116	F9SMW01-1205	6/8/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F116	F9SMW01-1205	6/8/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F116	F9SMW01-1205	6/8/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F116	F9SMW01-1205	6/8/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F116	F9SMW04-1209	6/8/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F116	F9SMW04-1209	6/8/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F116	F9SMW04-1209	6/8/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F116	F9SMW04-1209	6/8/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F116	F9SMW04-1209	6/8/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F116	F9SMW05-1210	6/8/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F116	F9SMW05-1210	6/8/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F116	F9SMW05-1210	6/8/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F116	F9SMW05-1210	6/8/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F116	F9SMW05-1210	6/8/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F116	MW410-1-1216	6/8/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F116	MW410-1-1216	6/8/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F116	MW410-1-1216	6/8/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F116	MW410-1-1216	6/8/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F116	MW410-1-1216	6/8/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F116	P-9-MWS01-1212	6/8/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06F116	P-9-MWS01-1212	6/8/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06F116	P-9-MWS01-1212	6/8/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06F116	P-9-MWS01-1212	6/8/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06F116	P-9-MWS01-1212	6/8/2006	EMXT	NS1	NONE	SW9040B	III	SHAW
06F116	P-9-MWS01-1213	6/8/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06F116	P-9-MWS04-1215	6/8/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F116	P-9-MWS04-1215	6/8/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F116	P-9-MWS04-1215	6/8/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F116	P-9-MWS04-1215	6/8/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW

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06F116	P-9-MWS04-1215	6/8/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F116	TB1-2122	6/8/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06F116	TB2-2123	6/8/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06F116A	DVE-10-1222	6/8/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F116A	DVE-23-1228	6/8/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F116A	DVE-3-1220	6/8/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F116A	F9SMW01-1205	6/8/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F116A	F9SMW04-1209	6/8/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F116A	F9SMW05-1210	6/8/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F116A	MW410-1-1216	6/8/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F116A	P-9-MWS01-1212	6/8/2006	EMXT	NS1	SW3520C	M8015D	III	SHAW
06F116A	P-9-MWS04-1215	6/8/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F133	9IF-MW01S-1229	6/9/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06F133	9IF-MW01S-1229	6/9/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06F133	9IF-MW01S-1229	6/9/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06F133	9IF-MW01S-1229	6/9/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06F133	9IF-MW01S-1229	6/9/2006	EMXT	NS1	NONE	SW9040B	III	SHAW
06F133	9IF-MW01S-1230	6/9/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06F133	DVE-15A-1223	6/9/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F133	DVE-15A-1223	6/9/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F133	DVE-15A-1223	6/9/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F133	DVE-15A-1223	6/9/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F133	DVE-15A-1223	6/9/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F133	DVE-17-1224	6/9/2006	EMXT	NS1	FLDFLT	SW6010B	III	SHAW
06F133	DVE-17-1224	6/9/2006	EMXT	NS1	NONE	SW7196A	III	SHAW
06F133	DVE-17-1224	6/9/2006	EMXT	NS1	SW5030B	SW8260B	III	SHAW
06F133	DVE-17-1224	6/9/2006	EMXT	NS1	SW3520C	SW8270C	III	SHAW
06F133	DVE-17-1224	6/9/2006	EMXT	NS1	NONE	SW9040B	III	SHAW
06F133	DVE-17-1225	6/9/2006	EMXT	FD	SW5030B	SW8260B	III	SHAW
06F133	DVE-19-1226	6/9/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F133	DVE-19-1226	6/9/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F133	DVE-19-1226	6/9/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F133	DVE-19-1226	6/9/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F133	DVE-19-1226	6/9/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F133	F9SMW03-1207	6/9/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F133	F9SMW03-1207	6/9/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F133	F9SMW03-1207	6/9/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F133	F9SMW03-1207	6/9/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F133	F9SMW03-1207	6/9/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F133	F9SMW06-1211	6/9/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F133	F9SMW06-1211	6/9/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F133	F9SMW06-1211	6/9/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F133	F9SMW06-1211	6/9/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F133	F9SMW06-1211	6/9/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F133	MW410-2-1217	6/9/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F133	MW410-2-1217	6/9/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F133	MW410-2-1217	6/9/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F133	MW410-2-1217	6/9/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F133	MW410-2-1217	6/9/2006	EMXT	NS	NONE	SW9040B	III	SHAW

Table 1: Summary of Samples Collected, Sample Date, Preparation Method, Analysis Method, and Data Review Level
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Field Sample ID	Sample Date	Lab	Sample Type	Extraction Method	Analytical Method	Review Level	Reviewer
06F133	MW410-3-1218	6/9/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F133	MW410-3-1218	6/9/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F133	MW410-3-1218	6/9/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F133	MW410-3-1218	6/9/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F133	MW410-3-1218	6/9/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F133	MW410-4-1219	6/9/2006	EMXT	NS	FLDFLT	SW6010B	III	SHAW
06F133	MW410-4-1219	6/9/2006	EMXT	NS	NONE	SW7196A	III	SHAW
06F133	MW410-4-1219	6/9/2006	EMXT	NS	SW5030B	SW8260B	III	SHAW
06F133	MW410-4-1219	6/9/2006	EMXT	NS	SW3520C	SW8270C	III	SHAW
06F133	MW410-4-1219	6/9/2006	EMXT	NS	NONE	SW9040B	III	SHAW
06F133	TB1-2124	6/9/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06F133	TB2-2125	6/9/2006	EMXT	TB	SW5030B	SW8260B	III	SHAW
06F133A	9IF-MW01S-1229	6/9/2006	EMXT	NS1	SW3520C	M8015D	III	SHAW
06F133A	DVE-15A-1223	6/9/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F133A	DVE-17-1224	6/9/2006	EMXT	NS1	SW3520C	M8015D	III	SHAW
06F133A	DVE-19-1226	6/9/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F133A	F9SMW03-1207	6/9/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F133A	F9SMW06-1211	6/9/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F133A	MW410-2-1217	6/9/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F133A	MW410-3-1218	6/9/2006	EMXT	NS	SW3520C	M8015D	III	SHAW
06F133A	MW410-4-1219	6/9/2006	EMXT	NS	SW3520C	M8015D	III	SHAW

Notes:

SDG - Sample Delivery Group
EMXT - Emax Laboratories, Inc.
NS - Normal Sample
NS1 - Normal Sample with associated Field Duplicate sample.
(The normal sample was analyzed using multiple methods whereas the associated field duplicate was only analyzed for VOCs (SW8260B)).
FD - Field Duplicate sample
TB - Trip Blank sample
FLDFLT - Filtered
III - Samples received Level III data review.
IV - Samples received Level IV data validation.
LDC - Laboratory Data Consultants, Inc.

Table 2: DATA QUALIFICATION FLAGS AND REASON CODES

Data Qualifier Definitions For Organic Data Review

Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; associated numerical value is its approximate concentration with a high bias in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated value represents its approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis may be necessary to confirm or deny the presence of the analyte. Results are rejected and data are unusable for any purposes.

Data Qualifier Definitions For Inorganic Data Review

Qualifier	Definition
	No Qualifier indicates that the data are acceptable both qualitatively and quantitatively.
U	The analyte was analyzed for but was not detected above the level of the reported value. The reported value is the Instrument Detection Limit (IDL) for waters and the Method Detection Limit (MDL) for soils for all the analytes except Cyanide (CN) and Mercury (Hg). For CN and Hg, the reported value is the Contract Required Detection Limit (CRDL).
J	The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample. Results are estimated although the data are considered usable and may be used as appropriate to meet project objectives. Results are qualitatively acceptable and quantitatively uncertain.
J-	The analyte was positively identified; associated numerical value is its approximate concentration with a low bias in the sample.
J+	The analyte was positively identified; associated numerical value is its approximate concentration with a high bias in the sample.
UJ	The analyte was analyzed for but was not detected above the reported value. The reported value may not accurately or precisely represent the sample reporting limit.
R	The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis may be necessary to confirm or deny the presence of the analyte. Results are rejected and data are unusable for any purposes.

Table 2: DATA QUALIFICATION FLAGS AND REASON CODES

Reason Codes for Data Review and Validation

REASON CODE	DESCRIPTION
A	Serial dilution outside criteria (Level IV).
B1	Method blank contaminants above reporting limit.
B2	Calibration blank contaminants above reporting limit.
B2, Bias Flag "-"	Calibration blank indicates negative interference, false negatives may be present
C	Calibration outside control limits.
D1	Sample Duplicate RPD outside control limit.
D2	Matrix Duplicate RPD outside control limit
E	The sample results exceed the linear calibration range of the instrument.
F	Hydrocarbon pattern does not match hydrocarbon pattern in the standard.
G1	Initial calibration RSD outside control limit.
G2	Initial continuing calibration RRF outside control limit.
G3	Continuing calibration RRF outside control limit.
H	Holding time exceeded.
I	Internal standard recovery outside control limit.
K1	Equipment rinsate contamination.
K2	Field blank contamination
K3	Trip blank contamination
L	LCS outside control limits.
M	MS outside control limits.
O	Interference check sample outside acceptance criteria
P	Analyte qualified based on the professional judgement of the reviewer.
S	Surrogate recovery outside control limit.
T	Temperature outside acceptance criteria.
Tr	Value reported detected between the MDL and PQL
W	Pesticide breakdown outside criteria (Level IV).
X	Raised reporting limit due to matrix interference or high analyte concentration.
Y	Analyte was not confirmed by a second column.
Y1	Primary and Confirmation Sample Duplicate RPD outside control limit.

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code A								
SW6010B	06B035	F9SMW03-1156	Potassium	31500	2000	10000	µg/L	J
		F9SMW04-1157	Potassium	20000	100	500	µg/L	J
		F9SMW05-1158	Potassium	36200	100	500	µg/L	J
		F9SMW06-1159	Potassium	5720	100	500	µg/L	J
		MW410-1-1163	Potassium	23000	100	500	µg/L	J
		MW410-2-1164	Potassium	15100	100	500	µg/L	J
		MW410-3-1165	Potassium	18800	100	500	µg/L	J
		P-9-MWS04-1162	Potassium	41400	2000	10000	µg/L	J
	06B053	9IF-MW01S-1177	Potassium	27800	100	500	µg/L	J
		DVE-19-1173	Potassium	24400	100	500	µg/L	J
		DVE-20-1174	Potassium	38700	5000	25000	µg/L	J
		DVE-23-1175	Potassium	30200	100	500	µg/L	J
		DVE-9-1169	Potassium	27900	100	500	µg/L	J
	06D140	F9SMW06-1184	Potassium	7130	100	500	µg/L	J
	06D161	9IF-MW01S-1201	Arsenic	31.4	5	10	µg/L	J
			Potassium	32700	100	500	µg/L	J
		DVE-10-1195	Arsenic	22.7	5	10	µg/L	J
			Potassium	30300	100	500	µg/L	J
		DVE-15A-1196	Arsenic	19.7	5	10	µg/L	J
			Potassium	13200	100	500	µg/L	J
		DVE-17-1197	Arsenic	39.5	5	10	µg/L	J
			Potassium	80600	100	500	µg/L	J
		DVE-19-1198	Potassium	26600	100	500	µg/L	J
		DVE-20-1199	Arsenic	16.1	5	10	µg/L	J
			Potassium	54600	100	500	µg/L	J
		DVE-23-1200	Arsenic	41.1	5	10	µg/L	J
			Potassium	31400	100	500	µg/L	J
		DVE-3-1193	Arsenic	28.2	5	10	µg/L	J
			Potassium	101000	100	500	µg/L	J
		DVE-9-1194	Arsenic	27.8	5	10	µg/L	J
			Potassium	25700	100	500	µg/L	J
		F9SMW03-1180	Arsenic	38	5	10	µg/L	J
			Potassium	43600	100	500	µg/L	J
		MW410-4-1192	Arsenic	13.1	5	10	µg/L	J
			Potassium	7960	100	500	µg/L	J
	06F116	F9SMW04-1209	Zinc	64.8	5	10	µg/L	J
		F9SMW05-1210	Zinc	62.3	5	10	µg/L	J
		P-9-MWS01-1212	Zinc	382	5	10	µg/L	J
		P-9-MWS04-1215	Zinc	77.3	5	10	µg/L	J
Reason Code AB2								
SW6010B	06D161	DVE-19-1198	Arsenic	8.72	5	10	µg/L	UJ
Reason Code ACG								
SW6010B	06F096	DVE-20-1227	Potassium	31400	2000	10000	µg/L	J
		DVE-9-1221	Potassium	45300	2000	10000	µg/L	J
		F9SMW02-1206	Potassium	129000	2000	10000	µg/L	J
		P-9-MWS02-1214	Potassium	23900	2000	10000	µg/L	J
Reason Code ATr								
SW6010B	06F116	DVE-10-1222	Zinc	7.83	5	10	µg/L	J

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code ATr								
SW6010B	06F116	DVE-23-1228	Zinc	7	5	10	µg/L	J
		DVE-3-1220	Zinc	8.8	5	10	µg/L	J
		F9SMW01-1205	Zinc	6.7	5	10	µg/L	J
Reason Code B1								
SW6010B	06B053	9IF-MW01S-1177	Arsenic	30.1	5	10	µg/L	U
		DVE-19-1173	Arsenic	31.9	5	10	µg/L	U
		DVE-20-1174	Arsenic	11.9	5	10	µg/L	U
		DVE-23-1175	Arsenic	39.2	5	10	µg/L	U
		DVE-9-1169	Arsenic	25.3	5	10	µg/L	U
			Nickel	4.29	2.5	10	µg/L	U
	06F096	DVE-20-1227	Arsenic	15.2	5	10	µg/L	U
		F9SMW02-1206	Arsenic	5.16	5	10	µg/L	U
Reason Code B2								
SW6010B	06B035	F9SMW03-1156	Molybdenum	6.16	5	40	µg/L	U
		F9SMW04-1157	Cadmium	1.01	1	2	µg/L	U
			Molybdenum	5.12	5	40	µg/L	U
			Silver	3.26	3	10	µg/L	U
		MW410-1-1163	Arsenic	8.92	5	10	µg/L	U
		MW410-2-1164	Nickel	4.74	2.5	10	µg/L	U
		MW410-3-1165	Molybdenum	5.6	5	40	µg/L	U
		P-9-MWS04-1162	Arsenic	7.63	5	10	µg/L	U
	06B042	DVE-10-1170	Copper	2.32	2	5	µg/L	U
			Nickel	2.79	2.5	10	µg/L	U
		DVE-15A-1171	Arsenic	8.45	5	10	µg/L	U
		DVE-17-1172	Nickel	2.69	2.5	10	µg/L	U
		F9SMW01-1153	Molybdenum	6.38	5	40	µg/L	U
		F9SMW02-1155	Arsenic	10.1	5	10	µg/L	U
			Molybdenum	6.87	5	40	µg/L	U
		MW410-4-1166	Arsenic	7.11	5	10	µg/L	U
		P-9-MWS01-1160	Arsenic	6.84	5	10	µg/L	U
			Molybdenum	11.8	5	40	µg/L	U
		P-9-MWS02-1161	Cobalt	2.72	2.5	5	µg/L	U
			Molybdenum	7.84	5	40	µg/L	U
	06B053	9IF-MW01S-1177	Copper	2.17	2	5	µg/L	U
		DVE-19-1173	Chromium	3.18	2.5	5	µg/L	U
		DVE-20-1174	Chromium	2.77	2.5	5	µg/L	U
			Cobalt	2.56	2.5	5	µg/L	U
			Molybdenum	5.38	5	40	µg/L	U
		DVE-23-1175	Cadmium	1.18	1	2	µg/L	U
			Copper	2.1	2	5	µg/L	U
		DVE-9-1169	Molybdenum	6.53	5	40	µg/L	U
	06D140	F9SMW06-1184	Copper	2.39	2	5	µg/L	U
	06D150	F9SMW01-1178	Molybdenum	6.13	5	40	µg/L	U
		F9SMW02-1179	Arsenic	6.12	5	10	µg/L	U
			Cobalt	3.35	2.5	5	µg/L	U
			Molybdenum	5.37	5	40	µg/L	U
		F9SMW04-1182	Arsenic	32.2	5	10	µg/L	U
			Copper	3.76	2	5	µg/L	U

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code B2								
SW6010B	06D150	F9SMW04-1182	Molybdenum	6.46	5	40	µg/L	U
		F9SMW05-1183	Arsenic	18.1	5	10	µg/L	U
		MW410-1-1188	Arsenic	8.73	5	10	µg/L	U
			Molybdenum	5.82	5	40	µg/L	U
		MW410-3-1190	Molybdenum	10.6	5	40	µg/L	U
		P-9-MWS01-1185	Arsenic	7.32	5	10	µg/L	U
		P-9-MWS02-1186	Arsenic	17.3	5	10	µg/L	U
			Molybdenum	9.41	5	40	µg/L	U
		P-9-MWS04-1187	Arsenic	20.9	5	10	µg/L	U
			Molybdenum	7.62	5	40	µg/L	U
	06D161	DVE-10-1195	Zinc	5.66	5	10	µg/L	U
		DVE-17-1197	Selenium	14.3	5	10	µg/L	U
		DVE-20-1199	Molybdenum	7.13	5	40	µg/L	U
		DVE-23-1200	Lead	3.99	2.6	5	µg/L	U
		DVE-3-1193	Molybdenum	15.7	5	40	µg/L	U
			Selenium	12	5	10	µg/L	U
		DVE-9-1194	Molybdenum	5.1	5	40	µg/L	U
	06F096	F9SMW02-1206	Nickel	3.41	2.5	10	µg/L	U
		P-9-MWS02-1214	Cadmium	2.33	1	2	µg/L	U
	06F116	DVE-10-1222	Arsenic	11	5	10	µg/L	U
			Cobalt	3.87	2.5	5	µg/L	U
			Copper	2.53	2	5	µg/L	U
		DVE-23-1228	Cobalt	4.97	2.5	5	µg/L	U
		DVE-3-1220	Arsenic	9.66	5	10	µg/L	U
			Cobalt	3.23	2.5	5	µg/L	U
		F9SMW01-1205	Nickel	3.01	2.5	10	µg/L	U
		F9SMW04-1209	Copper	2.22	2	5	µg/L	U
		F9SMW05-1210	Arsenic	7.83	5	10	µg/L	U
			Cadmium	1.65	1	2	µg/L	U
		P-9-MWS01-1212	Arsenic	11.6	5	10	µg/L	U
		P-9-MWS04-1215	Arsenic	12.7	5	10	µg/L	U
			Copper	3.7	2	5	µg/L	U
	06F133	9IF-MW01S-1229	Arsenic	18.9	5	10	µg/L	U
		DVE-15A-1223	Arsenic	7.42	5	10	µg/L	U
		DVE-17-1224	Arsenic	19.1	5	10	µg/L	U
		DVE-19-1226	Arsenic	8.52	5	10	µg/L	U
			Cadmium	2.26	1	2	µg/L	U
		F9SMW03-1207	Cobalt	3.58	2.5	5	µg/L	U
		MW410-4-1219	Arsenic	9.24	5	10	µg/L	U
Reason Code C								
SW8260B	06B042	DVE-10-1170	Methylene Chloride	ND	0.5	1	µg/L	UJ
		DVE-15A-1171	Methylene Chloride	ND	0.5	1	µg/L	UJ
		DVE-17-1172	Methylene Chloride	ND	0.5	1	µg/L	UJ
		DVE-3-1168	Methylene Chloride	ND	0.5	1	µg/L	UJ
		F9SMW01-1153	Methylene Chloride	ND	0.5	1	µg/L	UJ
		F9SMW01-1154	Methylene Chloride	ND	0.5	1	µg/L	UJ
		F9SMW02-1155	Methylene Chloride	ND	0.5	1	µg/L	UJ
		MW410-4-1166	Methylene Chloride	ND	0.5	1	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code C								
SW8260B	06B042	MW410-4-1167	Methylene Chloride	ND	0.5	1	µg/L	UJ
		P-9-MWS01-1160	Methylene Chloride	ND	0.5	1	µg/L	UJ
		P-9-MWS02-1161	Methylene Chloride	ND	0.5	1	µg/L	UJ
		TB1-2097	Methylene Chloride	ND	0.5	1	µg/L	UJ
		TB2-2098	Methylene Chloride	ND	0.5	1	µg/L	UJ
	06D150	F9SMW04-1182	Methylene Chloride	ND	0.5	1	µg/L	UJ
		P-9-MWS01-1185	Methylene Chloride	ND	0.5	1	µg/L	UJ
		P-9-MWS04-1187	Methylene Chloride	ND	0.5	1	µg/L	UJ
	06D161	DVE-10-1195	Dichlorodifluoromethane	ND	0.5	0.5	µg/L	UJ
		TB2-2110	Dichlorodifluoromethane	ND	0.5	0.5	µg/L	UJ
	06F096	DVE-20-1227	Bromomethane	ND	0.2	0.5	µg/L	UJ
		DVE-9-1221	Bromomethane	ND	0.2	0.5	µg/L	UJ
		F9SMW02-1206	Bromomethane	ND	0.2	0.5	µg/L	UJ
		P-9-MWS02-1214	Bromomethane	ND	0.2	0.5	µg/L	UJ
		TB1-2120	Bromomethane	ND	0.2	0.5	µg/L	UJ
		TB2-2121	Bromomethane	ND	0.2	0.5	µg/L	UJ
	06F133	9IF-MW01S-1229	Naphthalene	ND	0.3	0.5	µg/L	UJ
		9IF-MW01S-1230	Bromomethane	ND	0.2	0.5	µg/L	UJ
		DVE-15A-1223	Naphthalene	ND	0.3	0.5	µg/L	UJ
		DVE-17-1224	Bromomethane	ND	0.2	0.5	µg/L	UJ
		DVE-17-1225	Bromomethane	ND	0.2	0.5	µg/L	UJ
		DVE-19-1226	Naphthalene	ND	0.3	0.5	µg/L	UJ
		F9SMW03-1207	Bromomethane	ND	0.2	0.5	µg/L	UJ
		F9SMW06-1211	Naphthalene	ND	0.3	0.5	µg/L	UJ
		MW410-2-1217	Bromomethane	ND	0.2	0.5	µg/L	UJ
		MW410-3-1218	Naphthalene	ND	0.3	0.5	µg/L	UJ
		MW410-4-1219	Naphthalene	ND	0.3	0.5	µg/L	UJ
		TB2-2125	Naphthalene	ND	0.3	0.5	µg/L	UJ
Reason Code C								
SW6010B	05L191	9IF-MW01S-1152	Potassium	25900	100	500	µg/L	J
		F9SMW03-1130	Potassium	39700	100	500	µg/L	J
Reason Code C								
SW8270C	05L191	9IF-MW01S-1152	2-Nitrophenol	ND	4.9	9.7	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.7	48	µg/L	UJ
		F9SMW03-1130	2-Nitrophenol	ND	4.9	9.8	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.8	49	µg/L	UJ
	06B035	P-9-MWS04-1162	2,4-Dinitrophenol	ND	9.6	48	µg/L	UJ
			Hexachlorocyclopentadiene	ND	4.8	9.6	µg/L	UJ
	06B042	DVE-3-1168	Hexachlorocyclopentadiene	ND	4.8	9.5	µg/L	UJ
		F9SMW02-1155	Hexachlorocyclopentadiene	ND	5	10	µg/L	UJ
		P-9-MWS01-1160	Hexachlorocyclopentadiene	ND	4.8	9.6	µg/L	UJ
	06B053	9IF-MW01S-1177	Benzoic acid	ND	4.8	48	µg/L	UJ
		DVE-23-1175	Benzoic acid	ND	4.9	49	µg/L	UJ
Reason Code CG								
SW6010B	06F116	DVE-10-1222	Potassium	16900	2000	10000	µg/L	J
		DVE-23-1228	Potassium	21100	2000	10000	µg/L	J
		DVE-3-1220	Potassium	24600	2000	10000	µg/L	J
		F9SMW01-1205	Potassium	13000	2000	10000	µg/L	J

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code CG								
SW6010B	06F116	F9SMW04-1209	Potassium	24200	2000	10000	µg/L	J
		F9SMW05-1210	Potassium	21300	2000	10000	µg/L	J
		MW410-1-1216	Potassium	14600	2000	10000	µg/L	J
		P-9-MWS01-1212	Potassium	59100	2000	10000	µg/L	J
		P-9-MWS04-1215	Potassium	48500	2000	10000	µg/L	J
	06F133	9IF-MW01S-1229	Potassium	18400	2000	10000	µg/L	J
		DVE-15A-1223	Potassium	13400	100	500	µg/L	J
		DVE-17-1224	Potassium	22900	2000	10000	µg/L	J
		DVE-19-1226	Potassium	31300	2000	10000	µg/L	J
		F9SMW03-1207	Potassium	24300	2000	10000	µg/L	J
		F9SMW06-1211	Potassium	5910	100	500	µg/L	J
		MW410-2-1217	Potassium	18900	100	500	µg/L	J
		MW410-3-1218	Potassium	20000	100	500	µg/L	J
		MW410-4-1219	Potassium	10700	100	500	µg/L	J
Reason Code CL								
SW8270C	06B035	F9SMW03-1156	4-Nitrophenol	ND	4.7	47	µg/L	UJ
		F9SMW04-1157	4-Nitrophenol	ND	4.7	47	µg/L	UJ
		F9SMW05-1158	4-Nitrophenol	ND	4.8	47	µg/L	UJ
		F9SMW06-1159	4-Nitrophenol	ND	4.8	47	µg/L	UJ
		MW410-1-1163	4-Nitrophenol	ND	4.9	50	µg/L	UJ
		MW410-2-1164	4-Nitrophenol	ND	4.8	48	µg/L	UJ
		MW410-3-1165	4-Nitrophenol	ND	4.7	47	µg/L	UJ
		P-9-MWS04-1162	4-Nitrophenol	ND	4.8	48	µg/L	UJ
	06B042	DVE-10-1170	4-Nitrophenol	ND	4.7	47	µg/L	UJ
		DVE-15A-1171	4-Nitrophenol	ND	4.7	47	µg/L	UJ
		DVE-17-1172	4-Nitrophenol	ND	4.7	47	µg/L	UJ
		DVE-3-1168	4-Nitrophenol	ND	4.8	47	µg/L	UJ
		F9SMW01-1153	4-Nitrophenol	ND	4.8	48	µg/L	UJ
		F9SMW02-1155	4-Nitrophenol	ND	5	50	µg/L	UJ
		MW410-4-1166	4-Nitrophenol	ND	4.9	48	µg/L	UJ
		P-9-MWS01-1160	4-Nitrophenol	ND	4.8	48	µg/L	UJ
		P-9-MWS02-1161	4-Nitrophenol	ND	4.8	48	µg/L	UJ
Reason Code G2G3								
SW8260B	05L191	9IF-MW01S-1152	Acetone	ND	2	10	µg/L	UJ
		F9SMW03-1130	Acetone	ND	2	10	µg/L	UJ
Reason Code G2G3Tr								
SW8260B	05L191	9IF-MW01S-1152	tert-butyl alcohol	28	5	50	µg/L	J
		F9SMW03-1130	tert-butyl alcohol	34	5	50	µg/L	J
Reason Code H								
SW7196A	05L179	DVE-10-1145	Chromium VI	ND	0.005	0.02	mg/L	UJ
		DVE-15A-1146	Chromium VI	ND	0.005	0.02	mg/L	UJ
		F9SMW06-1134	Chromium VI	ND	0.005	0.02	mg/L	UJ
		MW410-4-1141	Chromium VI	ND	0.005	0.02	mg/L	UJ
	06B035	F9SMW03-1156	Chromium VI	ND	0.005	0.02	mg/L	UJ
		F9SMW05-1158	Chromium VI	ND	0.005	0.02	mg/L	UJ
		MW410-1-1163	Chromium VI	ND	0.005	0.02	mg/L	UJ
	06B042	DVE-3-1168	Chromium VI	ND	0.005	0.02	mg/L	UJ
		MW410-4-1166	Chromium VI	ND	0.005	0.02	mg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code H								
SW7196A	06B042	P-9-MWS01-1160	Chromium VI	ND	0.005	0.02	mg/L	UJ
		P-9-MWS02-1161	Chromium VI	ND	0.005	0.02	mg/L	UJ
	06B053	9IF-MW01S-1177	Chromium VI	ND	0.005	0.02	mg/L	UJ
		DVE-23-1175	Chromium VI	ND	0.005	0.02	mg/L	UJ
		DVE-9-1169	Chromium VI	ND	0.005	0.02	mg/L	UJ
	06D150	F9SMW04-1182	Chromium VI	ND	0.005	0.02	mg/L	UJ
		F9SMW05-1183	Chromium VI	ND	0.005	0.02	mg/L	UJ
		MW410-1-1188	Chromium VI	ND	0.005	0.02	mg/L	UJ
	06F116	F9SMW01-1205	Chromium VI	ND	0.005	0.02	mg/L	UJ
		MW410-1-1216	Chromium VI	ND	0.005	0.02	mg/L	UJ
	06F133	DVE-15A-1223	Chromium VI	ND	0.005	0.02	mg/L	UJ
		DVE-17-1224	Chromium VI	ND	0.005	0.02	mg/L	UJ
		DVE-19-1226	Chromium VI	ND	0.005	0.02	mg/L	UJ
		MW410-3-1218	Chromium VI	ND	0.005	0.02	mg/L	UJ
Reason Code I								
SW8270C	05L166	DVE-23-1151	Benzo(a)pyrene	ND	4.8	9.5	µg/L	UJ
			Benzo(b)fluoranthene	ND	4.8	9.5	µg/L	UJ
			Benzo(g,h,i)perylene	ND	4.8	9.5	µg/L	UJ
			Benzo(k)fluoranthene	ND	4.8	9.5	µg/L	UJ
			Dibenz(a,h)anthracene	ND	4.8	9.5	µg/L	UJ
		F9SMW04-1131	3,3'-Dichlorobenzidine	ND	4.8	19	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.5	47	µg/L	UJ
			4-Bromophenylphenyl ether	ND	6.6	9.5	µg/L	UJ
			Anthracene	ND	4.8	9.5	µg/L	UJ
			Benzo(a)anthracene	ND	4.8	9.5	µg/L	UJ
			Benzo(a)pyrene	ND	4.8	9.5	µg/L	UJ
			Benzo(b)fluoranthene	ND	4.8	9.5	µg/L	UJ
			Benzo(g,h,i)perylene	ND	4.8	9.5	µg/L	UJ
			Benzo(k)fluoranthene	ND	4.8	9.5	µg/L	UJ
			bis(2-Ethylhexyl)phthalate	ND	9.5	19	µg/L	UJ
			Chrysene	ND	4.8	9.5	µg/L	UJ
			Di-n-butyl phthalate	ND	4.8	9.5	µg/L	UJ
			Di-n-octyl phthalate	ND	4.8	9.5	µg/L	UJ
			Dibenz(a,h)anthracene	ND	4.8	9.5	µg/L	UJ
			Fluoranthene	ND	4.8	9.5	µg/L	UJ
			Hexachlorobenzene	ND	5.7	9.5	µg/L	UJ
			Indeno(1,2,3-c,d)pyrene	ND	4.8	9.5	µg/L	UJ
			N-Nitrosodiphenylamine	ND	4.8	9.5	µg/L	UJ
			Pentachlorophenol	ND	9.5	47	µg/L	UJ
			Phenanthrene	ND	4.8	9.5	µg/L	UJ
			Pyrene	ND	4.8	9.5	µg/L	UJ
	06B035	F9SMW04-1157	Benzo(a)anthracene	ND	4.7	9.4	µg/L	UJ
			Benzo(a)pyrene	ND	4.7	9.4	µg/L	UJ
			Benzo(b)fluoranthene	ND	4.7	9.4	µg/L	UJ
			Benzo(g,h,i)perylene	ND	4.7	9.4	µg/L	UJ
			Benzo(k)fluoranthene	ND	4.7	9.4	µg/L	UJ
			Benzyl butyl phthalate	ND	4.7	9.4	µg/L	UJ
			bis(2-Ethylhexyl)phthalate	ND	9.4	19	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code I								
SW8270C	06B035	F9SMW04-1157	Chrysene	ND	4.7	9.4	µg/L	UJ
			Di-n-octyl phthalate	ND	4.7	9.4	µg/L	UJ
			Indeno(1,2,3-c,d)pyrene	ND	4.7	9.4	µg/L	UJ
			Pyrene	ND	4.7	9.4	µg/L	UJ
	06B053	9IF-MW01S-1177	Benzo(a)pyrene	ND	4.8	9.6	µg/L	UJ
			Benzo(b)fluoranthene	ND	4.8	9.6	µg/L	UJ
			Benzo(g,h,i)perylene	ND	4.8	9.6	µg/L	UJ
			Benzo(k)fluoranthene	ND	4.8	9.6	µg/L	UJ
			Dibenz(a,h)anthracene	ND	4.8	9.6	µg/L	UJ
		DVE-23-1175	3,3'-Dichlorobenzidine	ND	4.9	20	µg/L	UJ
			Benzo(a)anthracene	ND	4.9	9.8	µg/L	UJ
			Benzo(a)pyrene	ND	4.9	9.8	µg/L	UJ
			Benzo(b)fluoranthene	ND	4.9	9.8	µg/L	UJ
			Benzo(g,h,i)perylene	ND	4.9	9.8	µg/L	UJ
			Benzo(k)fluoranthene	ND	4.9	9.8	µg/L	UJ
			Benzyl butyl phthalate	ND	4.9	9.8	µg/L	UJ
			bis(2-Ethylhexyl)phthalate	ND	9.8	20	µg/L	UJ
			Chrysene	ND	4.9	9.8	µg/L	UJ
			Di-n-octyl phthalate	ND	4.9	9.8	µg/L	UJ
			Dibenz(a,h)anthracene	ND	4.9	9.8	µg/L	UJ
			Indeno(1,2,3-c,d)pyrene	ND	4.9	9.8	µg/L	UJ
			Pyrene	ND	4.9	9.8	µg/L	UJ
Reason Code L								
SW8270C	06B035	F9SMW03-1156	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
		F9SMW04-1157	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
		F9SMW05-1158	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
		F9SMW06-1159	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
		MW410-1-1163	1,2,4-Trichlorobenzene	ND	4.9	9.9	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.9	µg/L	UJ
		MW410-2-1164	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
		MW410-3-1165	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
		P-9-MWS04-1162	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
	06B042	DVE-10-1170	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
		DVE-15A-1171	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
		DVE-17-1172	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
		DVE-3-1168	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
		F9SMW01-1153	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code L								
SW8270C	06B042	F9SMW01-1153	1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
		F9SMW02-1155	1,2,4-Trichlorobenzene	ND	5	10	µg/L	UJ
			1,4-Dichlorobenzene	ND	5	10	µg/L	UJ
		MW410-4-1166	1,2,4-Trichlorobenzene	ND	4.9	9.7	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.7	µg/L	UJ
		P-9-MWS01-1160	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
		P-9-MWS02-1161	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
	06B053	9IF-MW01S-1177	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4-Chloro-3-methylphenol	ND	4.8	9.6	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Acenaphthene	ND	4.8	9.6	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		DVE-19-1173	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4-Chloro-3-methylphenol	ND	4.8	9.6	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Acenaphthene	ND	4.8	9.6	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		DVE-20-1174	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4-Chloro-3-methylphenol	ND	4.8	9.6	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Acenaphthene	ND	4.8	9.6	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		DVE-23-1175	1,2,4-Trichlorobenzene	ND	4.9	9.8	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.8	µg/L	UJ
			2-Chlorophenol	ND	4.9	9.8	µg/L	UJ
			4-Chloro-3-methylphenol	ND	4.9	9.8	µg/L	UJ
			4-Nitrophenol	ND	4.9	49	µg/L	UJ
			Acenaphthene	ND	4.9	9.8	µg/L	UJ
			Pentachlorophenol	ND	9.8	49	µg/L	UJ
			Phenol	12	4.9	9.8	µg/L	J
		DVE-9-1169	1,2,4-Trichlorobenzene	ND	4.9	9.7	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.7	µg/L	UJ
			2-Chlorophenol	ND	4.9	9.7	µg/L	UJ
			4-Chloro-3-methylphenol	ND	4.9	9.7	µg/L	UJ
			4-Nitrophenol	ND	4.9	48	µg/L	UJ
			Acenaphthene	ND	4.9	9.7	µg/L	UJ
			Pentachlorophenol	ND	9.7	48	µg/L	UJ
			Phenol	ND	4.9	9.7	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code L								
SW8270C	06D140	F9SMW06-1184	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.5	µg/L	UJ
			2-Nitrophenol	ND	4.8	9.5	µg/L	UJ
			Pentachlorophenol	ND	9.5	47	µg/L	UJ
			Phenol	ND	4.8	9.5	µg/L	UJ
	06D150	F9SMW01-1178	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		F9SMW02-1179	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		F9SMW04-1182	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
			2-Chlorophenol	ND	4.7	9.4	µg/L	UJ
			4-Nitrophenol	ND	4.7	47	µg/L	UJ
			Pentachlorophenol	ND	9.4	47	µg/L	UJ
			Phenol	49	4.7	9.4	µg/L	UJ
		F9SMW05-1183	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.5	µg/L	UJ
			4-Nitrophenol	ND	4.8	47	µg/L	UJ
			Pentachlorophenol	ND	9.5	47	µg/L	UJ
			Phenol	ND	4.8	9.5	µg/L	UJ
		MW410-1-1188	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.5	µg/L	UJ
			4-Nitrophenol	ND	4.8	47	µg/L	UJ
			Pentachlorophenol	ND	9.5	47	µg/L	UJ
			Phenol	ND	4.8	9.5	µg/L	UJ
		MW410-2-1189	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
			2-Chlorophenol	ND	4.7	9.4	µg/L	UJ
			4-Nitrophenol	ND	4.7	47	µg/L	UJ
			Pentachlorophenol	ND	9.4	47	µg/L	UJ
			Phenol	ND	4.7	9.4	µg/L	UJ
		MW410-3-1190	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		P-9-MWS01-1185	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code L								
SW8270C	06D150	P-9-MWS01-1185	1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.5	µg/L	UJ
			4-Nitrophenol	ND	4.8	47	µg/L	UJ
			Pentachlorophenol	ND	9.5	47	µg/L	UJ
			Phenol	ND	4.8	9.5	µg/L	UJ
		P-9-MWS02-1186	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		P-9-MWS04-1187	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
	06D161	9IF-MW01S-1201	1,2,4-Trichlorobenzene	ND	4.9	9.9	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.9	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.9	9.9	µg/L	UJ
			2-Chlorophenol	ND	4.9	9.9	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.9	50	µg/L	UJ
			4-Nitrophenol	ND	4.9	50	µg/L	UJ
			Acenaphthene	ND	4.9	9.9	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.9	9.9	µg/L	UJ
			Pentachlorophenol	ND	9.9	50	µg/L	UJ
			Phenol	ND	4.9	9.9	µg/L	UJ
		DVE-10-1195	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.6	48	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Acenaphthene	ND	4.8	9.6	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.8	9.6	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		DVE-15A-1196	1,2,4-Trichlorobenzene	ND	4.9	9.7	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.7	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.8	9.7	µg/L	UJ
			2-Chlorophenol	ND	4.9	9.7	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.7	48	µg/L	UJ
			4-Nitrophenol	ND	4.9	48	µg/L	UJ
			Acenaphthene	ND	4.9	9.7	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.9	9.7	µg/L	UJ
			Pentachlorophenol	ND	9.7	48	µg/L	UJ
			Phenol	ND	4.9	9.7	µg/L	UJ
		DVE-17-1197	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code L								
SW8270C	06D161	DVE-17-1197	2,4-Dinitrotoluene	ND	5.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.6	48	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Acenaphthene	ND	4.8	9.6	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.8	9.6	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		DVE-19-1198	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.7	9.5	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.5	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.5	47	µg/L	UJ
			4-Nitrophenol	ND	4.8	47	µg/L	UJ
			Acenaphthene	ND	4.8	9.5	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.8	9.5	µg/L	UJ
			Pentachlorophenol	ND	9.5	47	µg/L	UJ
			Phenol	ND	4.8	9.5	µg/L	UJ
		DVE-20-1199	1,2,4-Trichlorobenzene	ND	4.8	9.5	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.5	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.7	9.5	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.5	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.5	47	µg/L	UJ
			4-Nitrophenol	ND	4.8	47	µg/L	UJ
			Acenaphthene	ND	4.8	9.5	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.8	9.5	µg/L	UJ
			Pentachlorophenol	ND	9.5	47	µg/L	UJ
			Phenol	ND	4.8	9.5	µg/L	UJ
		DVE-23-1200	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.6	48	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Acenaphthene	ND	4.8	9.6	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.8	9.6	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	39	4.8	9.6	µg/L	J
		DVE-3-1193	1,2,4-Trichlorobenzene	ND	4.8	9.6	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.8	9.6	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.8	9.6	µg/L	UJ
			2-Chlorophenol	ND	4.8	9.6	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.6	48	µg/L	UJ
			4-Nitrophenol	ND	4.8	48	µg/L	UJ
			Acenaphthene	ND	4.8	9.6	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.8	9.6	µg/L	UJ
			Pentachlorophenol	ND	9.6	48	µg/L	UJ
			Phenol	ND	4.8	9.6	µg/L	UJ
		DVE-9-1194	1,2,4-Trichlorobenzene	ND	4.9	9.7	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code L								
SW8270C	06D161	DVE-9-1194	1,4-Dichlorobenzene	ND	4.9	9.7	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.8	9.7	µg/L	UJ
			2-Chlorophenol	ND	4.9	9.7	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.7	48	µg/L	UJ
			4-Nitrophenol	ND	4.9	48	µg/L	UJ
			Acenaphthene	ND	4.9	9.7	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.9	9.7	µg/L	UJ
			Pentachlorophenol	ND	9.7	48	µg/L	UJ
			Phenol	ND	4.9	9.7	µg/L	UJ
		F9SMW03-1180	1,2,4-Trichlorobenzene	ND	4.9	9.7	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.7	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.8	9.7	µg/L	UJ
			2-Chlorophenol	ND	4.9	9.7	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.7	48	µg/L	UJ
			4-Nitrophenol	ND	4.9	48	µg/L	UJ
			Acenaphthene	ND	4.9	9.7	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.9	9.7	µg/L	UJ
			Pentachlorophenol	ND	9.7	48	µg/L	UJ
			Phenol	ND	4.9	9.7	µg/L	UJ
		MW410-4-1192	1,2,4-Trichlorobenzene	ND	4.9	9.7	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.7	µg/L	UJ
			2,4-Dinitrotoluene	ND	5.8	9.7	µg/L	UJ
			2-Chlorophenol	ND	4.9	9.7	µg/L	UJ
			4,6-dinitro-2-methylphenol	ND	9.7	48	µg/L	UJ
			4-Nitrophenol	ND	4.9	48	µg/L	UJ
			Acenaphthene	ND	4.9	9.7	µg/L	UJ
			N-Nitrosodi-n-propylamine	ND	4.9	9.7	µg/L	UJ
			Pentachlorophenol	ND	9.7	48	µg/L	UJ
			Phenol	ND	4.9	9.7	µg/L	UJ
	06F096	DVE-20-1227	1,2,4-Trichlorobenzene	ND	9.4	19	µg/L	UJ
			1,4-Dichlorobenzene	ND	9.4	19	µg/L	UJ
		DVE-9-1221	1,2,4-Trichlorobenzene	ND	4.7	9.4	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
		F9SMW02-1206	1,2,4-Trichlorobenzene	ND	4.9	9.9	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.9	µg/L	UJ
		P-9-MWS02-1214	1,2,4-Trichlorobenzene	ND	4.9	9.8	µg/L	UJ
			1,4-Dichlorobenzene	ND	4.9	9.8	µg/L	UJ
	06F133	9IF-MW01S-1229	1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
			4-Nitrophenol	ND	4.7	47	µg/L	UJ
			Phenol	ND	4.7	9.4	µg/L	UJ
		DVE-15A-1223	1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
			4-Nitrophenol	ND	4.7	47	µg/L	UJ
			Phenol	ND	4.7	9.4	µg/L	UJ
		DVE-17-1224	1,4-Dichlorobenzene	ND	5	10	µg/L	UJ
			4-Nitrophenol	ND	5	50	µg/L	UJ
			Phenol	ND	5	10	µg/L	UJ
		DVE-19-1226	1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
			4-Nitrophenol	ND	4.7	47	µg/L	UJ
			Phenol	ND	4.7	9.4	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code L								
SW8270C	06F133	F9SMW03-1207	1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
			4-Nitrophenol	ND	4.7	47	µg/L	UJ
			Phenol	ND	4.7	9.4	µg/L	UJ
		F9SMW06-1211	1,4-Dichlorobenzene	ND	5	10	µg/L	UJ
			4-Nitrophenol	ND	5	50	µg/L	UJ
			Phenol	ND	5	10	µg/L	UJ
		MW410-2-1217	1,4-Dichlorobenzene	ND	4.7	9.4	µg/L	UJ
			4-Nitrophenol	ND	4.7	47	µg/L	UJ
			Phenol	ND	4.7	9.4	µg/L	UJ
		MW410-3-1218	1,4-Dichlorobenzene	ND	4.9	9.9	µg/L	UJ
			4-Nitrophenol	ND	4.9	50	µg/L	UJ
			Phenol	ND	4.9	9.9	µg/L	UJ
		MW410-4-1219	1,4-Dichlorobenzene	ND	5.1	10	µg/L	UJ
			4-Nitrophenol	ND	5.1	51	µg/L	UJ
			Phenol	ND	5.1	10	µg/L	UJ
Reason Code M								
SW6010B	05L166	DVE-20-1149	Potassium	52900	1000	5000	µg/L	J
			Sodium	1190000	5000	25000	µg/L	J
		DVE-23-1151	Potassium	28900	1000	5000	µg/L	J
			Sodium	386000	1000	5000	µg/L	J
		DVE-3-1142	Potassium	25400	1000	5000	µg/L	J
			Sodium	304000	1000	5000	µg/L	J
		DVE-9-1143	Potassium	17200	1000	5000	µg/L	J
			Sodium	105000	1000	5000	µg/L	J
		F9SMW04-1131	Potassium	17500	1000	5000	µg/L	J
			Sodium	95500	1000	5000	µg/L	J
		P-9-MWS01-1135	Potassium	46800	1000	5000	µg/L	J
			Sodium	700000	2000	10000	µg/L	J
		P-9-MWS02-1136	Potassium	19400	1000	5000	µg/L	J
			Sodium	572000	2000	10000	µg/L	J
		P-9-MWS04-1137	Potassium	54000	1000	5000	µg/L	J
			Sodium	1210000	5000	25000	µg/L	J
	06B042	DVE-10-1170	Potassium	19400	100	500	µg/L	J
		DVE-15A-1171	Potassium	11400	100	500	µg/L	J
		DVE-17-1172	Potassium	15100	100	500	µg/L	J
		DVE-3-1168	Potassium	19700	2000	10000	µg/L	J
		F9SMW01-1153	Potassium	18800	100	500	µg/L	J
		F9SMW02-1155	Potassium	127000	2000	10000	µg/L	J
		MW410-4-1166	Potassium	8230	100	500	µg/L	J
		P-9-MWS01-1160	Potassium	46100	2000	10000	µg/L	J
		P-9-MWS02-1161	Potassium	17300	2000	10000	µg/L	J
	06F116	DVE-10-1222	Manganese	905	3	10	µg/L	J
		DVE-23-1228	Manganese	1470	3	10	µg/L	J
		DVE-3-1220	Manganese	2330	3	10	µg/L	J
		F9SMW01-1205	Manganese	88.6	3	10	µg/L	J
		F9SMW04-1209	Manganese	2270	3	10	µg/L	J
		F9SMW05-1210	Manganese	1650	3	10	µg/L	J
		MW410-1-1216	Manganese	112	3	10	µg/L	J

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code M								
SW6010B	06F116	P-9-MWS01-1212	Manganese	3890	3	10	µg/L	J
		P-9-MWS04-1215	Manganese	3960	3	10	µg/L	J
Reason Code S								
SW8260B	06B035	F9SMW04-1157	1,1-Dichloroethane	0.31	0.2	0.5	µg/L	J
			1,2,4-Trimethylbenzene	340	2	5	µg/L	J
			1,2-Dichlorobenzene	0.73	0.2	0.5	µg/L	J
			1,3,5-Trimethylbenzene	100	2	5	µg/L	J
			Acetone	19	2	10	µg/L	J
			cis-1,2-Dichloroethene	23	0.2	0.5	µg/L	J
			Ethylbenzene	23	0.2	0.5	µg/L	J
			Isopropylbenzene	20	0.2	0.5	µg/L	J
			Methyl ethyl ketone	95	5	20	µg/L	J
			N-butylbenzene	29	0.2	0.5	µg/L	J
			N-propylbenzene	33	0.2	0.5	µg/L	J
			Naphthalene	47	3	5	µg/L	J
			sec-butylbenzene	17	0.2	0.5	µg/L	J
			Toluene	2.2	0.2	0.5	µg/L	J
			Xylenes, total	190	5	20	µg/L	J
	06D150	F9SMW05-1183	1,1-Dichloroethane	0.5	0.2	0.5	µg/L	J
			cis-1,2-Dichloroethene	1.9	0.2	0.5	µg/L	J
			Isopropylbenzene	0.76	0.2	0.5	µg/L	J
			N-propylbenzene	0.61	0.2	0.5	µg/L	J
			Vinyl Chloride	1.8	0.3	0.5	µg/L	J
		MW410-1-1188	Chlorobenzene	0.94	0.2	0.5	µg/L	J
		MW410-2-1189	1,1,1-Trichloroethane	0.81	0.2	0.5	µg/L	J
		P-9-MWS01-1185	cis-1,2-Dichloroethene	0.67	0.2	0.5	µg/L	J
			tert-butylbenzene	0.97	0.2	0.5	µg/L	J
		P-9-MWS02-1186	Acetone	78	2	10	µg/L	J
			Chloroform	0.98	0.2	0.5	µg/L	J
			Methyl ethyl ketone	360	50	200	µg/L	J
			Methylene Chloride	25	0.5	1	µg/L	J
		P-9-MWS04-1187	1,2,4-Trimethylbenzene	95	5	12	µg/L	J
			1,3,5-Trimethylbenzene	13	0.2	0.5	µg/L	J
			Acetone	540	50	250	µg/L	J
			Benzene	0.59	0.2	0.5	µg/L	J
			Chloroform	3.6	0.2	0.5	µg/L	J
			cis-1,2-Dichloroethene	4.2	0.2	0.5	µg/L	J
			Ethylbenzene	16	0.2	0.5	µg/L	J
			Isopropylbenzene	23	0.2	0.5	µg/L	J
			Methyl ethyl ketone	55	5	20	µg/L	J
			N-butylbenzene	14	0.2	0.5	µg/L	J
			N-propylbenzene	39	0.2	0.5	µg/L	J
			Naphthalene	47	0.3	0.5	µg/L	J
			sec-butylbenzene	17	0.2	0.5	µg/L	J
			tert-butylbenzene	3.6	0.2	0.5	µg/L	J
			Toluene	1.4	0.2	0.5	µg/L	J
			Vinyl Chloride	1.1	0.3	0.5	µg/L	J
			Xylenes, total	32	0.5	2	µg/L	J

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code S								
SW8260B	06F133	DVE-17-1224	1,2,4-Trimethylbenzene	180	1	2.5	µg/L	J
			1,3,5-Trimethylbenzene	79	1	2.5	µg/L	J
			Acetone	11	2	10	µg/L	J
			cis-1,2-Dichloroethene	0.86	0.2	0.5	µg/L	J
			Ethylbenzene	6.8	0.2	0.5	µg/L	J
			N-propylbenzene	13	0.2	0.5	µg/L	J
			Naphthalene	47	1.5	2.5	µg/L	J
			sec-butylbenzene	6.8	0.2	0.5	µg/L	J
			Tetrachloroethene	0.5	0.2	0.5	µg/L	J
		DVE-17-1225	1,2,4-Trimethylbenzene	190	1	2.5	µg/L	J
			1,3,5-Trimethylbenzene	77	1	2.5	µg/L	J
			Acetone	11	2	10	µg/L	J
			cis-1,2-Dichloroethene	0.88	0.2	0.5	µg/L	J
			Ethylbenzene	6.3	0.2	0.5	µg/L	J
			Isopropylbenzene	11	0.2	0.5	µg/L	J
			N-propylbenzene	12	0.2	0.5	µg/L	J
			Naphthalene	46	1.5	2.5	µg/L	J
			sec-butylbenzene	6.3	0.2	0.5	µg/L	J
			Xylenes, total	73	0.5	2	µg/L	J
Reason Code S								
M8015D	06B036	F9SMW04-1157	Jet Fuel #5 (JP5)	5000	190	290	µg/L	J
			TPH as diesel fuel	12000	96	190	µg/L	J
			TPH as motor oil	1100	96	190	µg/L	J
		F9SMW06-1159	Jet Fuel #5 (JP5)	ND	190	280	µg/L	UJ
			TPH as diesel fuel	ND	94	190	µg/L	UJ
			TPH as motor oil	ND	94	190	µg/L	UJ
		MW410-1-1163	Jet Fuel #5 (JP5)	ND	190	280	µg/L	UJ
			TPH as diesel fuel	ND	94	190	µg/L	UJ
			TPH as motor oil	ND	94	190	µg/L	UJ
		P-9-MWS04-1162	Jet Fuel #5 (JP5)	1500	190	290	µg/L	J
			TPH as diesel fuel	840	96	190	µg/L	J
	06B043	F9SMW02-1155	Jet Fuel #5 (JP5)	ND	190	290	µg/L	UJ
			TPH as diesel fuel	ND	97	190	µg/L	UJ
			TPH as motor oil	ND	97	190	µg/L	UJ
		MW410-4-1166	Jet Fuel #5 (JP5)	ND	190	280	µg/L	UJ
			TPH as diesel fuel	ND	94	190	µg/L	UJ
	06B053A	DVE-23-1175	Jet Fuel #5 (JP5)	3100	190	290	µg/L	J
			TPH as diesel fuel	3500	96	190	µg/L	J
			TPH as motor oil	ND	96	190	µg/L	UJ
	06B055	DVE-20-1174	Jet Fuel #5 (JP5)	ND	190	280	µg/L	UJ
			TPH as diesel fuel	200	94	190	µg/L	J
			TPH as motor oil	ND	94	190	µg/L	UJ
	06D150A	F9SMW01-1178	Jet Fuel #5 (JP5)	ND	190	280	µg/L	UJ
			TPH as diesel fuel	ND	95	190	µg/L	UJ
			TPH as motor oil	ND	95	190	µg/L	UJ
		F9SMW02-1179	Jet Fuel #5 (JP5)	ND	190	290	µg/L	UJ
			TPH as diesel fuel	ND	96	190	µg/L	UJ
			TPH as motor oil	ND	96	190	µg/L	UJ

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code S								
M8015D	06D150A	F9SMW04-1182	Jet Fuel #5 (JP5)	3700	190	280	µg/L	J
			TPH as diesel fuel	14000	94	190	µg/L	J
			TPH as motor oil	680	94	190	µg/L	J
		MW410-2-1189	Jet Fuel #5 (JP5)	ND	190	280	µg/L	UJ
			TPH as diesel fuel	ND	94	190	µg/L	UJ
			TPH as motor oil	ND	94	190	µg/L	UJ
		MW410-3-1190	Jet Fuel #5 (JP5)	ND	200	290	µg/L	UJ
			TPH as diesel fuel	ND	98	200	µg/L	UJ
			TPH as motor oil	ND	98	200	µg/L	UJ
		P-9-MWS04-1187	Jet Fuel #5 (JP5)	3700	190	280	µg/L	J
			TPH as diesel fuel	16000	95	190	µg/L	J
			TPH as motor oil	240	95	190	µg/L	J
	06D161A	9IF-MW01S-1201	Jet Fuel #5 (JP5)	ND	190	290	µg/L	UJ
		DVE-17-1197	Jet Fuel #5 (JP5)	1100	200	290	µg/L	J
			TPH as diesel fuel	2700	98	200	µg/L	J
			TPH as motor oil	ND	98	200	µg/L	UJ
		DVE-20-1199	Jet Fuel #5 (JP5)	4300	190	280	µg/L	J
			TPH as diesel fuel	9200	94	190	µg/L	J
			TPH as motor oil	ND	94	190	µg/L	UJ
		DVE-23-1200	Jet Fuel #5 (JP5)	4100	190	290	µg/L	J
			TPH as diesel fuel	7600	97	190	µg/L	J
			TPH as motor oil	380	97	190	µg/L	J
		MW410-4-1192	Jet Fuel #5 (JP5)	ND	190	280	µg/L	UJ
			TPH as diesel fuel	ND	95	190	µg/L	UJ
			TPH as motor oil	320	95	190	µg/L	J
	06F133A	9IF-MW01S-1229	Jet Fuel #5 (JP5)	ND	190	280	µg/L	UJ
			TPH as diesel fuel	300	94	190	µg/L	J
		DVE-17-1224	Jet Fuel #5 (JP5)	1100	200	300	µg/L	J
			TPH as diesel fuel	3700	99	200	µg/L	J
Reason Code STr								
SW8260B	06B035	F9SMW04-1157	Benzene	0.2	0.2	0.5	µg/L	J
			Tetrachloroethene	0.26	0.2	0.5	µg/L	J
			trans-1,2-Dichloroethene	0.48	0.2	0.5	µg/L	J
	06D150	F9SMW01-1178	Chlorobenzene	0.39	0.2	0.5	µg/L	J
		F9SMW02-1179	Acetone	2.2	2	10	µg/L	J
		F9SMW05-1183	Ethylbenzene	0.3	0.2	0.5	µg/L	J
			Isopropyl Ether	1	1	5	µg/L	J
			N-butylbenzene	0.39	0.2	0.5	µg/L	J
			sec-butylbenzene	0.48	0.2	0.5	µg/L	J
			tert-butylbenzene	0.38	0.2	0.5	µg/L	J
			Trichloroethene	0.25	0.2	0.5	µg/L	J
		MW410-2-1189	1,1-Dichloroethane	0.31	0.2	0.5	µg/L	J
		P-9-MWS01-1185	Benzene	0.23	0.2	0.5	µg/L	J
			Chloroform	0.33	0.2	0.5	µg/L	J
			Isopropyl Ether	2.5	1	5	µg/L	J
			tert-butyl alcohol	16	5	50	µg/L	J
			Vinyl Chloride	0.48	0.3	0.5	µg/L	J
		P-9-MWS02-1186	cis-1,2-Dichloroethene	0.24	0.2	0.5	µg/L	J

Table 3: Qualified Data
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

Analytical Method	SDG	Field Sample ID	Analyte	Result	MDL	PQL	Units	Qualifier
Reason Code STr								
SW8260B	06D150	P-9-MWS02-1186	Isopropyl Ether	1.1	1	5	µg/L	J
			Trichloroethene	0.27	0.2	0.5	µg/L	J
		P-9-MWS04-1187	Isopropyl Ether	4.3	1	5	µg/L	J
			Methyl isobutyl ketone	3.9	1	20	µg/L	J
			tert-butyl alcohol	28	5	50	µg/L	J
			Tetrachloroethene	0.27	0.2	0.5	µg/L	J
			trans-1,2-Dichloroethene	0.34	0.2	0.5	µg/L	J
			Trichloroethene	0.32	0.2	0.5	µg/L	J
	06F133	DVE-17-1224	Toluene	0.35	0.2	0.5	µg/L	J
			Trichloroethene	0.32	0.2	0.5	µg/L	J
		DVE-17-1225	Chloroform	0.22	0.2	0.5	µg/L	J
			Tetrachloroethene	0.44	0.2	0.5	µg/L	J
			Toluene	0.36	0.2	0.5	µg/L	J
			Trichloroethene	0.32	0.2	0.5	µg/L	J
Reason Code STr								
M8015D	06B036	P-9-MWS04-1162	TPH as motor oil	100	96	190	µg/L	J
	06B043	MW410-4-1166	TPH as motor oil	120	94	190	µg/L	J
	06D161A	9IF-MW01S-1201	TPH as diesel fuel	160	96	190	µg/L	J
			TPH as motor oil	98	96	190	µg/L	J
	06F133A	9IF-MW01S-1229	TPH as motor oil	160	94	190	µg/L	J
		DVE-17-1224	TPH as motor oil	120	99	200	µg/L	J

Notes:

ND - Non Detect
MDL - Method Detection Limit
PQL - Practical Quantitation Limit
µg/L - micrograms per liter
mg/L - milligrams per liter

See Table 2 for definitions of qualifiers and reason codes.

Table 4: Field Duplicate Summary
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Location ID	Sample Date	Analyte Name	Normal Sample ID	PQL	Result	Duplicate Sample ID	Result	Units	RPD %
SW8260B										
06D161	9IF-MW01S	4/20/2006	1,1-Dichloroethane	9IF-MW01S-1201	0.5	1.4	9IF-MW01S-1202	1.3	µg/L	7
06F133	9IF-MW01S	6/9/2006	1,1-Dichloroethane	9IF-MW01S-1229	0.5	0.93	9IF-MW01S-1230	1.1	µg/L	17
06D161	9IF-MW01S	4/20/2006	Benzene	9IF-MW01S-1201	0.5	0.45 J	9IF-MW01S-1202	0.46 J	µg/L	NC
06F133	9IF-MW01S	6/9/2006	Benzene	9IF-MW01S-1229	0.5	0.46 J	9IF-MW01S-1230	0.54	µg/L	NC
06D161	9IF-MW01S	4/20/2006	Chloroethane	9IF-MW01S-1201	0.5	0.32 J	9IF-MW01S-1202	0.36 J	µg/L	NC
06F133	9IF-MW01S	6/9/2006	Chloroethane	9IF-MW01S-1229	0.5	0.53	9IF-MW01S-1230	0.4 J	µg/L	NC
06D161	9IF-MW01S	4/20/2006	cis-1,2-Dichloroethene	9IF-MW01S-1201	0.5	4.1	9IF-MW01S-1202	4	µg/L	2
06F133	9IF-MW01S	6/9/2006	cis-1,2-Dichloroethene	9IF-MW01S-1229	0.5	2.6	9IF-MW01S-1230	3	µg/L	14
06D161	9IF-MW01S	4/20/2006	Isopropyl Ether	9IF-MW01S-1201	5	3.2 J	9IF-MW01S-1202	3.1 J	µg/L	NC
06F133	9IF-MW01S	6/9/2006	Isopropyl Ether	9IF-MW01S-1229	5	2.4 J	9IF-MW01S-1230	2.8 J	µg/L	NC
06D161	9IF-MW01S	4/20/2006	tert-butyl alcohol	9IF-MW01S-1201	50	23 J	9IF-MW01S-1202	22 J	µg/L	NC
06F133	9IF-MW01S	6/9/2006	trans-1,2-Dichloroethene	9IF-MW01S-1229	0.5	0.5 U	9IF-MW01S-1230	0.21 J	µg/L	NC
06D161	9IF-MW01S	4/20/2006	Vinyl Chloride	9IF-MW01S-1201	0.5	4	9IF-MW01S-1202	4	µg/L	0
06F133	9IF-MW01S	6/9/2006	Vinyl Chloride	9IF-MW01S-1229	0.5	3.6	9IF-MW01S-1230	3.5	µg/L	3
06F133	DVE-17	6/9/2006	1,2,4-Trimethylbenzene	DVE-17-1224	2.5	180 J	DVE-17-1225	190 J	µg/L	5
	DVE-17	6/9/2006	1,3,5-Trimethylbenzene	DVE-17-1224	2.5	79 J	DVE-17-1225	77 J	µg/L	3
	DVE-17	6/9/2006	Acetone	DVE-17-1224	10	11 J	DVE-17-1225	11 J	µg/L	0
	DVE-17	6/9/2006	Chloroform	DVE-17-1224	0.5	0.5 U	DVE-17-1225	0.22 J	µg/L	NC
	DVE-17	6/9/2006	cis-1,2-Dichloroethene	DVE-17-1224	0.5	0.86 J	DVE-17-1225	0.88 J	µg/L	2
	DVE-17	6/9/2006	Ethylbenzene	DVE-17-1224	0.5	6.8 J	DVE-17-1225	6.3 J	µg/L	8
	DVE-17	6/9/2006	Isopropylbenzene	DVE-17-1224	0.5	12	DVE-17-1225	11 J	µg/L	9
	DVE-17	6/9/2006	N-propylbenzene	DVE-17-1224	0.5	13 J	DVE-17-1225	12 J	µg/L	8
	DVE-17	6/9/2006	Naphthalene	DVE-17-1224	2.5	47 J	DVE-17-1225	46 J	µg/L	2
	DVE-17	6/9/2006	sec-butylbenzene	DVE-17-1224	0.5	6.8 J	DVE-17-1225	6.3 J	µg/L	8
	DVE-17	6/9/2006	Tetrachloroethene	DVE-17-1224	0.5	0.5 J	DVE-17-1225	0.44 J	µg/L	NC
	DVE-17	6/9/2006	Toluene	DVE-17-1224	0.5	0.35 J	DVE-17-1225	0.36 J	µg/L	NC
	DVE-17	6/9/2006	Trichloroethene	DVE-17-1224	0.5	0.32 J	DVE-17-1225	0.32 J	µg/L	NC
	DVE-17	6/9/2006	Xylenes, total	DVE-17-1224	2	74	DVE-17-1225	73 J	µg/L	1
05L166	DVE-20	12/20/2005	1,2,4-Trimethylbenzene	DVE-20-1149	0.5	0.24 J	DVE-20-1150	0.22 J	µg/L	NC

Table 4: Field Duplicate Summary
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Location ID	Sample Date	Analyte Name	Normal Sample ID	PQL	Result	Duplicate Sample ID	Result	Units	RPD %
SW8260B										
05L166	DVE-20	12/20/2005	Acetone	DVE-20-1149	10	10 U	DVE-20-1150	3.1 J	µg/L	NC
	DVE-20	12/20/2005	Benzene	DVE-20-1149	0.5	1.3	DVE-20-1150	1.4	µg/L	7
	DVE-20	12/20/2005	cis-1,2-Dichloroethene	DVE-20-1149	0.5	18	DVE-20-1150	20	µg/L	11
	DVE-20	12/20/2005	Isopropyl Ether	DVE-20-1149	5	35	DVE-20-1150	37	µg/L	6
	DVE-20	12/20/2005	Methyl tert-butyl ether	DVE-20-1149	0.5	0.44 J	DVE-20-1150	0.42 J	µg/L	NC
	DVE-20	12/20/2005	tert-butyl alcohol	DVE-20-1149	50	8.6 J	DVE-20-1150	7.5 J	µg/L	NC
	DVE-20	12/20/2005	Vinyl Chloride	DVE-20-1149	0.5	4.6	DVE-20-1150	5.1	µg/L	10
06B053	DVE-23	2/7/2006	1,1-Dichloroethane	DVE-23-1175	0.5	0.27 J	DVE-23-1176	0.41 J	µg/L	NC
	DVE-23	2/7/2006	1,2,4-Trimethylbenzene	DVE-23-1175	5	250	DVE-23-1176	270	µg/L	8
	DVE-23	2/7/2006	1,2-Dichlorobenzene	DVE-23-1175	0.5	1	DVE-23-1176	1	µg/L	0
	DVE-23	2/7/2006	1,3,5-Trimethylbenzene	DVE-23-1175	5	93	DVE-23-1176	110	µg/L	17
	DVE-23	2/7/2006	Acetone	DVE-23-1175	10	9.7 J	DVE-23-1176	13	µg/L	NC
	DVE-23	2/7/2006	Benzene	DVE-23-1175	0.5	0.38 J	DVE-23-1176	0.45 J	µg/L	NC
	DVE-23	2/7/2006	cis-1,2-Dichloroethene	DVE-23-1175	0.5	7.8	DVE-23-1176	8.8	µg/L	12
	DVE-23	2/7/2006	Ethylbenzene	DVE-23-1175	0.5	27	DVE-23-1176	28	µg/L	4
	DVE-23	2/7/2006	Isopropyl Ether	DVE-23-1175	5	5 U	DVE-23-1176	1.3 J	µg/L	NC
	DVE-23	2/7/2006	Isopropylbenzene	DVE-23-1175	0.5	16	DVE-23-1176	19	µg/L	17
	DVE-23	2/7/2006	Methyl ethyl ketone	DVE-23-1175	20	45	DVE-23-1176	45	µg/L	0
	DVE-23	2/7/2006	Methyl isobutyl ketone	DVE-23-1175	20	2.1 J	DVE-23-1176	2.2 J	µg/L	NC
	DVE-23	2/7/2006	N-butylbenzene	DVE-23-1175	0.5	13	DVE-23-1176	16	µg/L	21
	DVE-23	2/7/2006	N-propylbenzene	DVE-23-1175	0.5	19	DVE-23-1176	22	µg/L	15
	DVE-23	2/7/2006	Naphthalene	DVE-23-1175	5	55	DVE-23-1176	60	µg/L	9
	DVE-23	2/7/2006	sec-butylbenzene	DVE-23-1175	0.5	14	DVE-23-1176	15	µg/L	7
	DVE-23	2/7/2006	tert-butylbenzene	DVE-23-1175	0.5	2.1	DVE-23-1176	2.6	µg/L	21
	DVE-23	2/7/2006	Tetrachloroethene	DVE-23-1175	0.5	0.43 J	DVE-23-1176	0.44 J	µg/L	NC
	DVE-23	2/7/2006	Toluene	DVE-23-1175	0.5	38	DVE-23-1176	41	µg/L	8
	DVE-23	2/7/2006	trans-1,2-Dichloroethene	DVE-23-1175	0.5	0.5 U	DVE-23-1176	0.38 J	µg/L	NC
	DVE-23	2/7/2006	Trichloroethene	DVE-23-1175	0.5	0.21 J	DVE-23-1176	0.25 J	µg/L	NC
	DVE-23	2/7/2006	Xylenes, total	DVE-23-1175	20	240	DVE-23-1176	250	µg/L	4

Table 4: Field Duplicate Summary
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Location ID	Sample Date	Analyte Name	Normal Sample ID	PQL	Result	Duplicate Sample ID	Result	Units	RPD %
SW8260B										
05L166	DVE-9	12/20/2005	Benzene	DVE-9-1143	0.5	0.45 J	DVE-9-1144	0.38 J	µg/L	NC
	DVE-9	12/20/2005	Isopropylbenzene	DVE-9-1143	0.5	0.5 U	DVE-9-1144	0.22 J	µg/L	NC
	DVE-9	12/20/2005	Methyl tert-butyl ether	DVE-9-1143	0.5	0.26 J	DVE-9-1144	0.23 J	µg/L	NC
	DVE-9	12/20/2005	N-propylbenzene	DVE-9-1143	0.5	0.5 U	DVE-9-1144	0.25 J	µg/L	NC
	DVE-9	12/20/2005	tert-butylbenzene	DVE-9-1143	0.5	0.24 J	DVE-9-1144	0.3 J	µg/L	NC
06B042	F9SMW01	2/6/2006	Chlorobenzene	F9SMW01-1153	0.5	0.5 U	F9SMW01-1154	0.21 J	µg/L	NC
06D161	F9SMW03	4/20/2006	1,1-Dichloroethane	F9SMW03-1180	0.5	0.74	F9SMW03-1181	0.75	µg/L	1
	F9SMW03	4/20/2006	1,2-Dichlorobenzene	F9SMW03-1180	0.5	0.31 J	F9SMW03-1181	0.29 J	µg/L	NC
	F9SMW03	4/20/2006	Acetone	F9SMW03-1180	10	2.4 J	F9SMW03-1181	2.6 J	µg/L	NC
	F9SMW03	4/20/2006	Benzene	F9SMW03-1180	0.5	0.26 J	F9SMW03-1181	0.26 J	µg/L	NC
	F9SMW03	4/20/2006	cis-1,2-Dichloroethene	F9SMW03-1180	0.5	8.2	F9SMW03-1181	8	µg/L	2
	F9SMW03	4/20/2006	Isopropyl Ether	F9SMW03-1180	5	7.7	F9SMW03-1181	7.6	µg/L	1
	F9SMW03	4/20/2006	tert-butyl alcohol	F9SMW03-1180	50	42 J	F9SMW03-1181	41 J	µg/L	NC
	F9SMW03	4/20/2006	Vinyl Chloride	F9SMW03-1180	0.5	5.2	F9SMW03-1181	5.2	µg/L	0
05L179	F9SMW05	12/21/2005	1,1-Dichloroethane	F9SMW05-1132	0.5	1.2	F9SMW05-1133	0.91	µg/L	27
	F9SMW05	12/21/2005	1,2-Dichlorobenzene	F9SMW05-1132	0.5	0.2 J	F9SMW05-1133	0.5 U	µg/L	NC
	F9SMW05	12/21/2005	Benzene	F9SMW05-1132	0.5	0.29 J	F9SMW05-1133	0.23 J	µg/L	NC
	F9SMW05	12/21/2005	cis-1,2-Dichloroethene	F9SMW05-1132	0.5	2.8	F9SMW05-1133	2.9	µg/L	4
	F9SMW05	12/21/2005	Isopropyl Ether	F9SMW05-1132	5	2.3 J	F9SMW05-1133	1.5 J	µg/L	NC
	F9SMW05	12/21/2005	tert-butyl alcohol	F9SMW05-1132	50	12 J	F9SMW05-1133	9.6 J	µg/L	NC
	F9SMW05	12/21/2005	tert-butylbenzene	F9SMW05-1132	0.5	0.29 J	F9SMW05-1133	0.32 J	µg/L	NC
	F9SMW05	12/21/2005	trans-1,2-Dichloroethene	F9SMW05-1132	0.5	0.29 J	F9SMW05-1133	0.28 J	µg/L	NC
	F9SMW05	12/21/2005	Trichloroethene	F9SMW05-1132	0.5	0.45 J	F9SMW05-1133	0.45 J	µg/L	NC
06D150	MW410-3	4/19/2006	1,2,3-Trichloropropane	MW410-3-1190	0.5	0.62	MW410-3-1191	0.52	µg/L	18
	MW410-3	4/19/2006	Tetrachloroethene	MW410-3-1190	0.5	1.5	MW410-3-1191	1.5	µg/L	0
	MW410-3	4/19/2006	Trichloroethene	MW410-3-1190	0.5	0.86	MW410-3-1191	0.83	µg/L	4
06F116	P-9-MWS01	6/8/2006	1,2,4-Trimethylbenzene	P-9-MWS01-1212	0.5	0.25 J	P-9-MWS01-1213	0.23 J	µg/L	NC
	P-9-MWS01	6/8/2006	Acetone	P-9-MWS01-1212	10	27	P-9-MWS01-1213	21	µg/L	25
	P-9-MWS01	6/8/2006	Benzene	P-9-MWS01-1212	0.5	0.29 J	P-9-MWS01-1213	0.32 J	µg/L	NC

Table 4: Field Duplicate Summary
Site 9 Shallow
Alameda CTO-107, Alameda Point, Alameda, California

SDG	Location ID	Sample Date	Analyte Name	Normal Sample ID	PQL	Result	Duplicate Sample ID	Result	Units	RPD %
SW8260B										
06F116	P-9-MWS01	6/8/2006	Chloroform	P-9-MWS01-1212	0.5	0.2 J	P-9-MWS01-1213	0.21 J	µg/L	NC
	P-9-MWS01	6/8/2006	cis-1,2-Dichloroethene	P-9-MWS01-1212	0.5	0.81	P-9-MWS01-1213	0.85	µg/L	5
	P-9-MWS01	6/8/2006	Isopropyl Ether	P-9-MWS01-1212	5	3.1 J	P-9-MWS01-1213	3.2 J	µg/L	NC
	P-9-MWS01	6/8/2006	Methylene Chloride	P-9-MWS01-1212	1	2.7	P-9-MWS01-1213	2.8	µg/L	4
	P-9-MWS01	6/8/2006	sec-butylbenzene	P-9-MWS01-1212	0.5	0.22 J	P-9-MWS01-1213	0.24 J	µg/L	NC
	P-9-MWS01	6/8/2006	tert-butyl alcohol	P-9-MWS01-1212	50	27 J	P-9-MWS01-1213	28 J	µg/L	NC
	P-9-MWS01	6/8/2006	tert-butylbenzene	P-9-MWS01-1212	0.5	0.73	P-9-MWS01-1213	0.82	µg/L	12
	P-9-MWS01	6/8/2006	Vinyl Chloride	P-9-MWS01-1212	0.5	0.53	P-9-MWS01-1213	0.58	µg/L	9

Notes:

NS - Normal Sample
FD - Field Duplicate
µg/L - micrograms per liter
NC - not calculated
RPD - Relative Percent Difference = { (NS - FD) / ((NS + FD) / 2) } x 100
RPD is calculated and shown only when both NS and FD are detected above the Practical Quantitation Limit.

Field duplicate RPD goal is 35.

See Table 2 for definitions of qualifiers and reason codes.