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W. A. Craig, Inc.
Construction & Engineering

CORRECTIVE ACTION AND QUARTERLY GROUNDWATER MONITORING REPORT
Second Quarter 2004

PROJECT SITE:
Express Gas & Mart
2951 High Street
Oakland, California 94619

PREPARED FOR:
Mr. Aziz Kandahari
Himalaya Trading Company
2951 High Street
Oakland, California 94619

SUBMITTED TO:
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

PREPARED BY:
W.A. Craig, Inc.
6940 Tremont Road
Dixon, California 95620
A,B, & Haz Lic. No. 455752

Project No. 3936

July 16, 2004

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Brian Milton/MCH

Brian Milton, P.E.
Principal Engineer

INTRODUCTION

This report presents the results of the corrective action and second quarter 2004 groundwater monitoring at Express Gas & Mart, located at 2951 High Street in Oakland, California (the "Site"). The sampling described herein is part of an ongoing characterization of subsurface contamination that was caused by accidental releases from an underground storage tank (UST) system that was replaced in 2001. The corrective action described herein consists of installing and operating an ozone-sparging (OS) system. The contaminant investigation and corrective action are being conducted by W.A. Craig, Inc. (WAC) on behalf of Mr. Aziz Kandahari. The lead regulatory agency overseeing the investigation is the Alameda County Health Care Services, Environmental Health Services, Environmental Protection (Alameda County). Groundwater monitoring this quarter was conducted on April 29, 2004. Installation of the OS system began on March 24, 2004, and initial startup of the system occurred on April 14, 2004. Four of the onsite monitoring wells were sampled bi-weekly after the OS system started operating. OS system inspection and maintenance were conducted bi-weekly to ensure it was operating properly and to make any necessary repairs or adjustments.

PHYSICAL SETTING

Site Location

Express Gas & Mart is a self-service gasoline station and convenience store located on the corner of High Street and Penniman Avenue, in southeastern Oakland, California. The Site location is shown on **Figure 1** and Site features are shown on **Figure 2**. The surrounding area is densely developed. Neighboring land uses include commercial and residential developments.

Topography and Drainage

The Site is located about 3½ miles east of the San Francisco Bay. The Site location is near the base of the Oakland Hills, at a surface elevation of approximately 132 feet above mean sea level (amsl). Hilly topography occurs directly southeast of the Site, a short distance beyond High Street. The ground surface at the Site slopes gently toward High Street, but the regional topographic slope is southwesterly away from the Oakland Hills. The nearest surface water body is Peralta Creek located approximately ½ mile north northeast of the Site.

Geology and Soils

The Site area is located on an alluvial apron that extends northwest southeast between the San Francisco Bay on the west and the northern Diablo Range on the east. The active Hayward Fault forms a structural boundary between the alluvial apron and the Diablo Range. Surficial

sediments at the Site have been classified as Holocene-age alluvial fan and fluvial deposits (Helley, E.J. and Graymer, R.W., 1997). These sediments are described as gravelly sand and sandy gravel that grade into sand and silty clay. The nearby hilly areas directly southeast of the Site are underlain by similar, though older, deposits of Pleistocene age.

WAC drilled and sampled soil borings at the Site to install monitoring wells. Soils encountered in the 25-foot deep borings were predominantly gravelly to sandy silts with some interbedded silt and silty fine sand. Groundwater was positively identified in two of the four borings, at depths of 16 feet below grade (fbg) and 4 fbg. The latter boring was drilled offsite, within the High Street right-of-way.

Groundwater

The Site is within the San Francisco Bay regional watershed. The Quaternary alluvial deposits of the region host beneficial use aquifers. Slightly less than half the region's water supply is derived from groundwater. The balance is obtained from imported surface water. Confined groundwater occurs at a depth of approximately 21 fbg at Express Gas & Mart. The aquifer formation is primarily gravelly sandy silt. Static water levels in the onsite monitoring wells have ranged from about 5 to 9 fbg, depending upon the season. Water level data indicate the direction of groundwater flow is southerly. Field measurements of specific conductance (SC) among the monitoring wells have ranged from approximately 400 to 2,000 microsiemens, suggesting that the mineralogical quality of the groundwater is variable.

PROJECT BACKGROUND

The history of subsurface contamination investigations at the Site predates WAC's involvement, which began in 2001. Groundwater monitoring has been conducted periodically at the Site since early 1995. Groundwater quality is impacted by petroleum hydrocarbons such as benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MtBE). A report by Aqua Science Engineers, Inc. (ASE), dated November 14, 2000, indicates that 2,550 pounds of ORC® slurry was injected into borings along the northern and eastern side of the former USTs in June 1997. The ORC® apparently increased the dissolved oxygen (DO) concentrations in the five nearby monitoring wells for approximately one year. Contaminant concentrations were also reduced in well MW-5 during that period. ORC® socks were installed in wells MW-4 and MW-5 in August 1998 after the DO concentrations declined. The ORC® socks were removed in September 2000 after proving ineffective at reducing petroleum hydrocarbon concentrations in the groundwater.

A Tier 2 Risk-Based Corrective Action (RBCA) analysis was performed for the Site by Mr. Christopher Palmer in August 1997. The RBCA was conducted to develop site-specific

threshold levels (SSTLs are listed in **Table 3**) for petroleum hydrocarbon contaminants in soil and groundwater. The RBCA was reviewed and commented on by Alameda County. Alameda County approved the RBCA in a letter dated October 21, 1997.

On February 28, 2001, WAC collected soil samples from along the product line leading to the gas pumps adjacent to High Street. All of the soil samples yielded detectable concentration of petroleum hydrocarbons. TPH-g was detected at concentrations ranging from 71 milligrams per kilogram (mg/kg) to 3,600 mg/kg. WAC subsequently prepared a *Site Investigation Workplan* dated March 26, 2001 to conduct a soil and groundwater investigation around the gas pumps. Alameda County approved the workplan and requested that the USTs and contaminated soils be removed and properly disposed.

Six soil borings were drilled and sampled by WAC in late April 2001. Sampling results from the borings yielded TPH-g concentrations in soil up to 4,000 mg/kg, and in groundwater up to 78,000 micrograms per liter (µg/L), confirming that petroleum hydrocarbons had impacted soil and groundwater. The dispenser pumps, product lines, and four steel gasoline USTs were excavated and removed from the Site by WAC in May 2001. The USTs were inspected and appeared to be in good condition. However, soil samples from the base and the sides of the UST excavation yielded TPH-g concentrations up to 1,700 mg/kg on the west sidewall of the excavation at 8 fbg. WAC excavated additional contaminated soil from the Site in a number of separate phases between May 9 and September 27, 2001. Approximately 3,700 tons of petroleum hydrocarbon contaminated soil was removed and disposed at B&J Class II landfill in Vacaville, California. The over-excavation area is shown on **Figure 2**.

Following Site restoration and re-opening of the Express Gas & Mart, little additional activity occurred until March 2003, when WAC installed four new monitoring wells to obtain further data on the extent of the MtBE contamination in groundwater. Monitoring well construction information is summarized in **Table 1**. WAC also resumed quarterly groundwater monitoring in April 2003, for the first time since the September 2000 sampling reported by ASE. The April 2003 analytical data indicated that MtBE was above the SSTL of 8,400 µg/L in wells MW-5 and MW-7.

Based on the April 2003 groundwater sampling results, WAC recommended corrective action to remediate the subsurface contamination at the Site to below the SSTLs. WAC prepared a *Feasibility Study/Corrective Action Plan* dated July 28, 2003 and an *Addendum to Corrective Action Plan* dated September 10, 2003. Alameda County approved the installation of an OS system in a letter dated February 18, 2004.

An OS system consisting of ten ozone-sparge wells and a control panel was installed at the Site. Initial startup of the system occurred on April 14, 2004. On April 14, 2004 four monitoring

wells (MW-5, MW-7, MW-8, and MW-9) were purged and sampled to determine baseline concentrations in groundwater prior to operating the OS system. On April 29, 2004 quarterly groundwater sampling of eight monitoring wells was conducted.

SCOPE OF WORK

The scope of work performed during this quarter included the following tasks:

- Prepared a *Site-specific Health and Safety Plan* per the requirements of 29CFR 1910.120;
- Obtained appropriate regulatory permits and approvals;
- Obtained utility clearance through Underground Service Alert;
- Sawcut and excavated trenches for piping associated with the sparge wells;
- Excavated, loaded, hauled, and disposed of asphalt and concrete from the trenching;
- Backfilled and resurfaced the trench;
- Installed the ozone sparge system control panel;
- Installed ten ozone-sparge wells;
- Installed traffic-rated utility vaults around each sparge wellhead;
- Plumbed the sparge wells to the control panel;
- Disposed of soil cuttings from the well borings;
- Surveyed ten ozone-sparge wells for horizontal and vertical control;
- Maintained GeoTracker database;
- Measured static water levels in four monitoring wells;
- Purged and sampled groundwater from four monitoring wells;
- Collected field measurements from four monitoring wells, including water level, dissolved oxygen (DO) concentrations, temperature, pH, and SC;
- Measured static water levels in eight monitoring wells;
- Purged and sampled groundwater from eight monitoring wells;
- Collected field measurements from eight monitoring wells, including water level, DO concentrations, temperature, pH, and SC;

- Analyzed groundwater samples for the following compounds: TPH-g, MtBE, BTEX, DIPE, EtBE, tAME, tBA, methanol, ethanol, EDB, and 1,2-DCA (see ***Laboratory Analyses*** section of this report for chemical names and analytical methods used), and;
- Prepared this *Corrective Action and Quarterly Groundwater Monitoring Report.*

OZONE-SPARGE SYSTEM DESCRIPTION

Introduction

The proposed design and layout of the OS remediation system were initially described in WAC's *Feasibility Study/Corrective Action Plan* dated July 28, 2003 and *Addendum to Corrective Action Plan* dated September 10, 2003. Alameda County approved the work in a letter dated February 18, 2004. A C-Sparger™ OS system was subsequently purchased from Kerfoot Technology, Inc. The C-Sparger™ system is designed to operate up to 10 sparge points. Well permits were obtained from Alameda County prior to installing the OS wells. Installation of the system began on March 24, 2004 and initial startup of the system occurred on April 14, 2004.

Ozone-sparge System Description

The above ground components of the OS remediation system are mounted inside a locked, metal cabinet (the control panel). The equipment housed in the control panel includes an ozone generator, small air compressor, ozone leak detector, programmable timer, electrical wiring/circuits, pressure gauge, run-time clock, cooling fans, and manifold with electromagnetically-actuated solenoids for distributing the pressurized air/ozone mixture to individual sparge points. The ozone generator creates ozone by ionizing oxygen in either ambient air or with the aid of an optional oxygen concentrator. An oxygen concentrator was installed on this system to boost the amount of ozone delivered.

The operating schedule is controlled by an electronic timer. The OS points are operated one at a time for a programmed number of minutes. The timer cycles through all ten sparge points and then has a "rest" period to allow the compressor to cool. After the rest period, a new cycle starts. This process is repeated several times each day. The OS system can deliver ozone at a flow rate of approximately 3 cubic feet per minute (cfm) and a pressure of 50 pounds per square inch (psi). This delivery pressure is usually sufficient to overcome the hydraulic head and other resistive forces at the sparge point. With the oxygen concentrator installed, approximately 5 grams of ozone per hour can be injected into the subsurface.

The control panel was installed near the north corner of the Express Gas & Mart mini-mart as shown on **Figure 2**. The control panel was mounted on a plywood backboard mounted on two pieces of uni-strut bolted to the concrete with wedge anchors. An electrical power supply outlet

and circuit breaker box for the system were installed on the plywood backboard alongside the control panel. The incoming electrical power line from the main electrical panel is enclosed within a galvanized steel conduit.

The working portion of an OS point is a 30-inch length of 2-inch diameter, porous PVC casing (diffuser) placed at the bottom of each sparge well. The sparge point section is analogous to a well screen, but has much finer openings (pores). A ¾-inch diameter PVC riser extends from the sparge point up to within 12 inches of ground surface. Fine-grained sand was placed in the annular space of the borehole around each of the sparge points. The tiny pores of the sparge point and the fine-grained filter pack combine to help create microbubbles during sparging. A bentonite plug was placed at the bottom of the borehole and hydrated to fill the space below the desired sparge point depth. Graded sand (#60) was placed in the annular space between the sparge point and the borehole wall from the top of the bentonite plug to approximately 2 feet above the top of the sparge point. A 2-foot thick bentonite seal was placed above the sand filter pack and hydrated prior to grouting the remainder of the annulus with Portland type I/II neat cement. A traffic-rated vault set slightly above grade protects the top of each riser pipe at the surface. Teflon™ and PVC fittings are used within the well vaults to connect the riser pipe of each OS point to its supply line. An in-line check-valve within each vault prevents back flow out of the sparge point.

The existing concrete and asphalt pavement were sawcut and broken up with jackhammers in order to lay the sparge lines. Supply lines extend separately from the ozone generator panel to each sparge point within common trenches. The location of the trenches is shown on **Figure 2**. The supply lines consist of ⅜-inch inside diameter (ID), flexible polyethylene tubing enclosed within a secondary protective conduit of ⅞-inch ID high-density polyethylene (HDPE) tubing. The lines were installed in 24-inch deep by 16-inch wide trenches. Approximately 120 feet of trench was sawcut in the existing concrete and asphalt at the Site. The asphalt and concrete were demolished, removed, loaded, and hauled to Davis Street Transfer Station in San Leandro, California for recycling. Controlled density fill was placed in the trench to approximately four inches below grade. The top four inches of the trench was filled with asphaltic concrete to match the existing surface grade.

Sparge Point Construction

OS wells SP-1 through SP-10 were installed on March 24, 25, and 26, 2004. The well locations are shown on **Figure 2**. Resonant Sonic International (RSI, C-57 License No. 802334) installed the wells. The well borings were advanced by a sonic drill rig to a maximum of 37 fbg using 7-inch diameter casing. Well SP-3 was advanced using hollow stem augers. A California Professional Engineer supervised the drilling. Soils were classified by the Engineer using the

unified soil classification system and recorded on boring logs included in **Appendix A**. Prior to drilling each well, the coring barrels and augers were cleaned to avoid cross contamination.

Soil samples and cuttings were screened for VOCs using a portable photo-ionization detector (PID). The PID readings were recorded on the boring logs. A composite soil sample (SP 1-4) of the soil cuttings was analyzed for waste profiling purposes. Soil cuttings were stored onsite in a labeled, 55-gallon drum. The drum was later disposed of at Altamont Landfill, a licensed facility in Livermore, California. The laboratory analytical report for the composite soil sample is included in **Appendix B**. The non-hazardous waste manifest for the disposal of the soil cuttings is included in **Appendix C**.

Ozone-sparge System Start-up and Operation

The OS system started initial operation on April 14, 2004. WAC staff visited the Site bi-weekly to ensure that the OS system was running normally and to monitor the operating pressures. On April 15, a leak was detected in the hose supplying SP-5 with ozone. SP-5 was shut off on April 15. On April 29, the hose to SP-5 was replaced and SP-5 was turned on and has remained in operation since then. The operating time was adjusted on April 29, 2004. The following table summarizes the operation of the 10 OS points through the end of April 2004.

OZONE-SPARGE POINT OPERATION

Sparge Point	OS Point Depth (feet bgs)	Operating Time on 4/15/04	Operating Pressure on 4/15/04	Operating Pressure on 4/29/04 test 1	Operating Pressure on 4/29/04 test 2	Operating Time on 4/29/04 after adjustment
SP-1	30.5-33.0	5	44	30	30	5
SP-2	26.5-29.0	3	44	24	37	5
SP-3	28.5-31.0	3	38	23	38	5
SP-4	14.5-17.0	10	28	17	24	10
SP-5	20.0-22.5	off	n/a	n/a	47	3
SP-6	21.5-24.0	10	30	17	22	10
SP-7	25.5-28.0	10	34	26	41	8
SP-8	28.5-31.0	5	50	26	42	5
SP-9	25.0-27.5	3	40	26	36	5
SP-10	21.5-24.0	3	46	23	38	5

Operating times in minutes per cycle, pressures in psi.

Ozone-sparge Well Surveying

The 10 new ozone-sparge wells were surveyed on April 22, 2004 by Virgil Chavez Land Surveying (PLS number 6323). The benchmark for the survey was a cut square in the southeasterly return of the southern corner of the intersection of High Street and MacArthur Boulevard. The horizontal control data are based on the California State Coordinate System,

Zone III (NAD83). The vertical control data are based on the benchmark elevation of 177.397 feet (NGVD 29). The survey data and the map generated by the surveyor are included in **Appendix D.**

FIELD PROCEDURES

Groundwater Level Measurements

WAC staff measured the static water level in wells MW-5, MW-7, MW-8, and MW-9 on April 14, 2004 and in all eight of the monitoring wells on April 29, 2004. The water levels in the monitoring wells were obtained using an electronic water level indicator and recorded on monitoring well sampling logs included in **Appendix E.** Prior to the measurements, the wells were uncapped and water levels were allowed to equilibrate with atmospheric pressure for at least 30 minutes. Water level measurements were referenced to the surveyed top of the well casings. The depth-to-water measurements were used to calculate the standing well volume and the amount of water to be purged prior to collecting groundwater samples. The depth to water and surveyed wellhead elevations are also used to determine the static groundwater elevation and flow direction.

Monitoring Well Purging and Sampling

WAC staff purged and sampled wells MW-5, MW-7, MW-8, and MW-9 on April 14, 2004. On April 29, 2004, all eight of the monitoring wells were purged and sampled. At least three well casing volumes of water were purged from each well before collecting groundwater samples. Wells were purged using a clean disposable polyethylene bailer. The DO concentration, pH, temperature, and SC of the groundwater were intermittently monitored with portable instrumentation during purging. The DO concentration was measured in-situ immediately after uncapping the well and after sampling the well. Field measurements were recorded on the monitoring well sampling logs.

The water level indicator and the instrument probes were decontaminated after each use by washing in an Alconox® detergent solution followed by a tap water rinse. Well purge water was placed into 55-gallon drums for temporary onsite storage. The drums are emptied as needed and the purge water is disposed of at a licensed disposal facility.

Upon completion of purging activities, groundwater samples were collected from each monitoring well using a disposable polyethylene bailer. The groundwater samples were decanted from the bailer into laboratory-supplied, 40-ml volatile organic analysis (VOA) vials, pre-preserved with hydrochloric acid (HCl). Care was taken to ensure that the vials were completely filled, leaving no headspace. Each sample container was labeled with the well ID, project

number, and date collected. Labeled samples were stored in an ice chest cooled with ice until delivery to the laboratory under chain-of-custody control.

Laboratory Analyses

The groundwater samples were submitted under chain-of-custody control to a California Department of Health Services (DHS) certified analytical laboratory. McCampbell Analytical, Inc. (MAI, DHS certification number 1644) performed the analysis. The samples were analyzed for TPH-g using EPA Method 8015C (modified), for BTEX and MtBE using EPA Method 8021B, and for MtBE, di-isopropyl ether (DIPE), ethyl tert-butyl ether (EtBE), tert-amyl methyl ether (tAME), tert-butanol (tBA), methanol, ethanol, ethylene dibromide (EDB), and 1,2-dichloroethane (DCA) using EPA Method 8260B. Discussions in this report will cite MtBE concentrations determined by EPA Method 8260B, which is considered a more accurate analysis than Method 8021B.

DATA EVALUATION

Groundwater Levels and Gradient

Water level data for the monitoring wells are summarized in **Table 2**. The surveyed top of casing (TOC) elevations and the depth to static water measurements in monitoring wells were used to calculate groundwater elevations at the Site. The depth to water on April 29, 2004 ranged from 5.55 feet below the TOC in MW-1 to 20.80 feet below the TOC in MW-7. In comparison, on January 13, 2004 the depth to water ranged from 4.03 feet below the TOC in well MW-1 to 6.83 feet below the TOC in MW-9. The groundwater elevations in all monitoring wells decreased from last quarter. On April 29, 2004, groundwater elevations in the monitoring wells varied from 110.13 feet amsl in well MW-7 to 126.09 feet amsl in MW-1. In comparison, on January 13, 2004 groundwater elevations varied from 121.04 feet amsl in well MW-10 to 127.61 feet amsl in MW-1.

Groundwater elevations on April 29, 2004 are shown on **Figure 3**. Groundwater elevations indicate that the direction of groundwater flow is southerly. The groundwater gradient was calculated using static water elevations in wells MW-3, MW-8, and MW-9. On April 29, 2004 the groundwater flow direction was S2°W with a gradient of 0.046 ft/ft. On January 13, 2004 the groundwater flow direction was S4°W with a gradient of 0.040 ft/ft. The groundwater flow and gradient this quarter are consistent with previous monitoring events with the exception of well MW-7. After starting up the ozone-sparge system, the groundwater elevation in well MW-7 decreased approximately 6½ feet. Well MW-7 is located approximately four feet north of sparge well SP-1. Graphs of groundwater elevations in the shallow aquifer at the Site since April 4, 2003 are presented on **Figure 4**.

Quarterly Groundwater Monitoring Results

MtBE was detected in all the monitoring wells this quarter except for MW-6. The MtBE concentration was above the SSTL of 8,400 in wells MW-5 and MW-7, which are the closest wells to the former USTs. No wells had concentrations of any other hydrocarbon constituent above the SSTLs. Detected MtBE concentrations ranged from 4.7 µg/L in well MW-9 to 12,000 µg/L in well MW-7. The extent of the MtBE plume above the SSTL is shown on **Figure 5**. Graphs of MtBE concentrations in wells MW-5 and MW-7 are shown on **Figure 6**. Graphs of MtBE concentrations in the less impacted wells (MW-1, MW-3, MW-8, MW-9, and MW-10) are shown on **Figure 7**.

Significantly lower BTEX concentrations were observed in wells MW-5 and MW-7 this quarter. No BTEX constituents were detected in any other wells. Benzene in well MW-5 decreased from 2,700 µg/L to 6.3 µg/L and xylenes decreased from 260 µg/L to 7.8 µg/L between April 14 and April 29, 2004. In this same time frame, benzene concentrations in well MW-7 decreased from 520 µg/L to <5 µg/L, toluene decreased from 360 µg/L to <5 µg/L, ethylbenzene decreased from 640 µg/L to <5 µg/L, and xylenes decreased from 1,100 µg/L to 12 µg/L. Groundwater analytical results are summarized in **Table 3**. The laboratory analytical reports are included in **Appendix F**.

The DO concentration increased in all wells since the ozone-sparge system began operation. On April 29, 2004 the DO concentrations in the Site monitoring wells ranged from 0.19 milligrams per liter (mg/L) in well MW-10 to 10.02 mg/L in well MW-9. The average DO concentration was 4.62 mg/L. The highest DO concentration observed in any of the wells prior to the installation of the ozone sparge system was 2.75 mg/L in well MW-10 on April 23, 2003. DO concentrations in the monitoring wells are summarized on **Table 4**.

GeoTracker Requirements

All chemical analysis data are submitted electronically to the California State Water Resources Control Board Geographical Environmental Information Management System (GeoTracker) database as required by AB2886 (Water Code Sections 13195-13198). Electronic analytical reports (EDF files) are prepared and formatted by the laboratory and submitted by WAC. Along with chemical analyses, well latitudes, longitudes (GEO_XY files) and elevations (GEO_Z files) are submitted to the database. Submittal of a well status and usage report (GEO_WELL file) is required for each monitoring event. Current maps (GEO_MAP files) are also submitted when site features are added or changed.

CONCLUSIONS

The OS system began operation on April 14, 2004, and with the exception of a few repairs, has run continuously.

On April 29, 2004 the direction of groundwater flow was southerly with a gradient of 0.046 ft/ft. This is consistent with past measurements. The groundwater elevation in well MW-7 was apparently affected (lowered) by the OS system. DO concentrations have increased substantially in all onsite wells except MW-1 since the OS system began operating.

MtBE and benzene are the principal constituents of concern in shallow groundwater at the Site. Wells MW-5 and MW-7 were the only wells with MtBE above the SSTL of 8,400 µg/L this quarter. The benzene concentration in well MW-5 this quarter was the lowest on record for that well. The MtBE concentration in well MW-5 was the second lowest concentration on record for that well. BTEX constituents were detected above their respective SSTLs in well MW-7 on April 14, 2004, but concentrations decreased significantly by April 29. The benzene and MtBE concentrations in well MW-7 were both the lowest they have ever been since MW-7 was installed in April 2003. Record low MtBE concentrations were also reported this quarter in wells MW-1, MW-3, MW-8, MW-9, and MW-10.

As observed in previous monitoring events, the hydrocarbon constituents above the SSTLs in shallow groundwater at the Site are localized in the area immediately surrounding the former USTs.

RECOMMENDATIONS

We recommend continued operation of the ozone-sparge system. We will conduct bi-weekly sampling of wells MW-5, MW-7, MW-8, and MW-9 for the first two months of system operation.

The next quarterly monitoring will occur in July 2004.

TABLES

Table 1

Monitoring and Ozone-sparge Well Construction Information

2951 High Street, Oakland, California

Well ID	Date Installed	Casing Diameter (inches)	Total Depth (fbg)	Screened Interval (fbg)	Water-Bearing Unit	Top of Casing Elevation (feet amsl)	Northing (feet)	Easting (feet)
MW-1	2/95	2	25	N/A	N/A	131.64	2,112,552.39	6,070,038.16
MW-3	2/95	2	25	N/A	N/A	131.05	2,112,539.60	6,070,048.55
MW-5	12/9/96	2	30	5-30	N/A	131.99	2,112,582.04	6,070,083.59
MW-6	1/7/97	2	30	5-30	N/A	132.58	2,112,662.53	6,070,113.49
MW-7	3/24/03	2	25	15-25	gravelly sandy silt	130.93	2,112,533.18	6,070,106.31
MW-8	3/24/03	2	25	15-25	gravelly sandy silt	131.15	2,112,527.86	6,070,153.72
MW-9	3/25/03	2	25	15-25	silty gravelly sand	130.00	2,112,484.75	6,070,065.55
MW-10	4/4/03	2	25	15-25	sandy silt	127.19	2,112,393.29	6,069,984.72
SP-1	3/25/04	3/4	37	30.5-33	clayey sand	130.39	2,112,529.17	6,070,105.65
SP-2	3/25/04	3/4	31	26.5-29	sandy clay	130.07	2,112,534.87	6,070,118.37
SP-3	3/24/04	3/4	32	28.5-31	gravelly sandy clay	130.66	2,112,541.87	6,070,131.76
SP-4	3/25/04	3/4	33	14.5-17	gravelly sandy clay	130.51	2,112,541.66	6,070,102.66
SP-5	3/26/04	3/4	30	20-22.5	clayey gravelly sand	130.55	2,112,553.75	6,070,115.66
SP-6	3/26/04	3/4	30	21.5-24	clayey sandy gravel	130.88	2,112,564.81	6,070,106.43
SP-7	3/26/04	3/4	30	25.5-28	gravelly sand	131.20	2,112,575.20	6,070,106.74
SP-8	3/26/04	3/4	31	28.5-31	gravelly sandy clay	130.98	2,112,569.95	6,070,091.53
SP-9	3/25/04	3/4	33	25-27.5	clayey sand	130.85	2,112,562.57	6,070,080.59
SP-10	3/26/04	3/4	30	21.5-24	gravelly clay	131.23	2,112,578.47	6,070,085.11

Notes:

fbg = feet below grade; amsl = above mean sea level; N/A = data not available.

Monitoring wells surveyed by Virgil Chavez Land Surveying on April 15, 2003.

Ozone-sparge wells surveyed by Virgil Chavez Land Surveying on April 22, 2004.

MW-1, MW-3, MW-5, and MW-6 were installed by Aqua Science Engineers, Inc.

MW-7, MW-8, MW-9, MW-10, and SP-1 through SP-10 were installed by W.A. Craig, Inc.

Table 2
Groundwater Levels in Monitoring Wells
2951 High Street, Oakland, California

Well ID	Date	TOC Elevation	DTW	Groundwater Elevation
MW-1	4/4/03	131.64	5.07	126.57
	7/16/03		7.32	124.32
	10/28/03		9.16	122.48
	1/13/04		4.03	127.61
	4/14/04		5.37	126.27
	4/29/04		5.55	126.09
MW-3	4/4/03	131.05	5.86	125.19
	7/16/03		7.86	123.19
	10/28/03		9.43	121.62
	1/13/04		5.76	125.29
	4/14/04		6.72	124.33
	4/29/04		6.81	124.24
MW-5	4/4/03	131.99	6.94	125.05
	7/16/03		8.17	123.82
	10/28/03		9.43	122.56
	1/13/04		6.27	125.72
	4/14/04		6.79	125.20
	4/29/04		7.35	124.64
MW-6	4/4/03	132.58	5.13	127.45
	7/16/03		7.99	124.59
	10/28/03		9.18	123.40
	1/13/04		5.97	126.61
	4/29/04		7.05	125.53
MW-7	4/4/03	130.93	7.06	123.87
	7/16/03		8.11	122.82
	10/28/03		9.25	121.68
	1/13/04		6.80	124.13
	4/14/04		7.30	123.63
	4/29/04		20.8 *	110.13
MW-8	4/4/03	131.15	6.60	124.55
	7/16/03		7.79	123.36
	10/28/03		8.83	122.32
	1/13/04		6.02	125.13
	4/14/04		6.90	124.25
	4/29/04		7.25	123.90
MW-9	4/4/03	130.00	7.35	122.65
	7/16/03		8.50	121.50
	10/28/03		9.56	120.44
	1/13/04		6.83	123.17
	4/14/04		7.61	122.39
	4/29/04		8.23	121.77
MW-10	4/23/03	127.19	7.06	120.13
	7/16/03		7.72	119.47
	10/28/03		8.61	118.58
	1/13/04		6.15	121.04
	4/29/04		7.09	120.10

Notes:
Elevations are in feet above mean sea level.
TOC, Top of casing. DTW, Depth to water in feet below TOC.
* Water level in MW-7 was apparently affected by ozone sparging.

Table 3
Analytical Results for Groundwater Samples
2951 High Street, Oakland, California

Well ID	Date	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	DIPE	EtBE	tAME	tBA	methanol	ethanol	EDB	DCA
MW-1	2/23/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT
	5/26/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT
	8/23/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT
	4/4/03	<50	<0.5	<0.5	<0.5	<0.5	270	<5	<5	<5	<50	<5,000	<500	<5	<5
	7/16/03	<50	<0.5	<0.5	<0.5	<0.5	420	<10	<10	<10	<100	<10,000	<1,000	<10	<10
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	1,200	<50	<50	<50	<500	<50,000	<5,000	<50	<50
	1/13/04	58	0.85	<0.5	3.1	8.4	380	<0.5	<0.5	<0.5	<5.0	<50	<5	<0.5	<0.5
	4/29/04	<50	<0.5	<0.5	<0.5	<0.5	260	<5	<5	<5	<50	<5,000	<500	<5	<5
MW-3	2/23/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT
	5/26/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT
	8/23/95	<50	<0.5	<0.5	<0.5	<0.5	NT	NT	NT	NT	NT	NT	NT	NT	NT
	4/4/03	<50	<0.5	<0.5	<0.5	<0.5	1,600	<25	<25	<25	<250	<25,000	<2,500	<25	<25
	7/16/03	<50	<0.5	<0.5	<0.5	<0.5	1,200	<50	<50	<50	<500	<50,000	<5,000	<50	<50
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	1,400	<50	<50	<50	<500	<50,000	<5,000	<50	<50
	1/13/04	<200	<2	<2	<2	<2	790	<2	<2	<2	<20	<200	<20	<2	<2
	4/29/04	<50	<0.5	<0.5	<0.5	<0.5	140	<5	<5	<5	<50	<5,000	<500	<5	<5
MW-5	12/13/96	3,600	**180**	**350**	81	**510**	430	NT	NT	NT	NT	NT	NT	NT	NT
	3/27/97	120,000	**28,000**	**16,000**	**2,600**	**10,000**	**64,000**	NT	NT	NT	NT	NT	NT	NT	NT
*	6/27/97	6,300	**10,000**	**2,400**	**290**	**4,500**	**43,000**	NT	NT	NT	NT	NT	NT	NT	NT
	9/22/97	<50,000	7.9	3.3	0.6	3.3	**30,000**	NT	NT	NT	NT	NT	NT	NT	NT
	12/6/97	<5,000	33	12	<5	7.3	**33,000**	NT	NT	NT	NT	NT	NT	NT	NT
	3/23/98	29,000	**150**	160	130	320	**34,000**	NT	NT	NT	NT	NT	NT	NT	NT
	6/10/98	53,000	**7,000**	**2,400**	**540**	**3,400**	**67,000**	NT	NT	NT	NT	NT	NT	NT	NT
	7/23/98	36,000	**1,000**	**270**	<120	**740**	**51,000**	NT	NT	NT	NT	NT	NT	NT	NT
**	9/16/98	56,000	**3,400**	**1,300**	**430**	**1,800**	**84,000**	NT	NT	NT	NT	NT	NT	NT	NT
	11/23/98	63,000	**5,700**	**2,900**	**500**	**2,200**	**87,000**	NT	NT	NT	NT	NT	NT	NT	NT
	3/5/99	42,000	<250	<250	<250	<250	**38,000**	NT	NT	NT	NT	NT	NT	NT	NT
	6/17/99	37,000	**510**	85	5.6	89	**61,000**	NT	NT	NT	NT	NT	NT	NT	NT
	9/15/99	54,000	**8,500**	**1,800**	**420**	**2,400**	**55,000**	NT	NT	NT	NT	NT	NT	NT	NT
	12/9/99	34,000	**1,600**	230	130	**570**	**33,000**	NT	NT	NT	NT	NT	NT	NT	NT
	3/6/00	21,000	**7,800**	**870**	**440**	**2,100**	**30,000**	NT	NT	NT	NT	NT	NT	NT	NT
	6/7/00	<50,000	**11,000**	**890**	**570**	**3,000**	**68,000**	NT	NT	NT	NT	NT	NT	NT	NT
	9/18/00	40,000	**4,900**	<250	<250	**1,700**	**46,000**	NT	NT	NT	NT	NT	NT	NT	NT
	4/4/03	1,800	**560**	<5.0	<5.0	30	**19,000**	<330	<330	<330	<3,300	<330,000	<33,000	<330	<330
	7/16/03	2,800	**1,000**	<5	10	80	**16,000**	<200	<200	<200	<2,000	<200,000	<20,000	<200	<200

Table 3
Analytical Results for Groundwater Samples
2951 High Street, Oakland, California

Well ID	Date	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	DIPE	EtBE	tAME	tBA	methanol	ethanol	EDB	DCA
MW-5 (cont.)	10/28/03	740	**290**	<5.0	<5.0	7.2	**14,000**	<170	<170	<170	<1,700	<170,000	<17,000	<170	<170
	1/13/04	<500	**48**	<5	<5	<5	2,000	<5	<5	<5	<50	<500	<50	<5	<5
	4/14/04	6,600	**2,700**	<50	<50	260	**20,000**	<500	<500	<500	<5,000	<500,000	<50,000	<500	<500
	4/29/04	<500	6.3	<5	<5	7.8	**11,000**	<250	<250	<250	<2,500	<250,000	<25,000	<250	<250
MW-6	1/13/97	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	3/27/97	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	6/27/97	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	9/22/97	<50	<0.5	<0.5	<0.5	<0.5	24	NT	NT	NT	NT	NT	NT	NT	NT
	12/6/97	94	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	3/23/98	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	6/10/98	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	7/23/98	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	9/16/98	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	3/5/99	55	<0.5	0.92	0.5	1.3	<5	NT	NT	NT	NT	NT	NT	NT	NT
	6/17/99	<50	<0.5	<0.5	<0.5	<0.5	8.0	NT	NT	NT	NT	NT	NT	NT	NT
	9/15/99	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	12/9/99	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	3/6/00	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	6/7/00	<50	<0.5	<0.5	<0.5	<0.5	<5	NT	NT	NT	NT	NT	NT	NT	NT
	4/4/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<500	<50	<0.5	<0.5
	7/16/03	<50	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
	1/13/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<50	<5	<0.5	<0.5
	4/29/04	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	<0.5
MW-7	4/4/03	1,400	**54**	27	15	180	**26,000**	<500	<500	<500	<5,000	<500,000	<50,000	<500	<500
	7/16/03	18,000	**1,100**	**630**	**1,100**	**2,000**	**13,000**	<200	<200	<200	<2,000	<200,000	<20,000	<200	<200
	10/28/03	10,000	**750**	**370**	**750**	**1,000**	**17,000**	<500	<500	<500	<5,000	<500,000	<50,000	<500	<500
	1/13/04	7,200	**430**	150	**560**	**550**	**22,000**	<50	<50	<50	<500	<5000	<500	<50	<50
	4/14/04	8,900	**520**	**360**	**640**	**1,100**	**21,000**	<500	<500	<500	<5,000	<500,000	<50,000	<500	<500
	4/29/04	<500	<5	<5	<5	12	**12,000**	<250	<250	<250	<2,500	<250,000	<25,000	<250	<250

Table 3
Analytical Results for Groundwater Samples
2951 High Street, Oakland, California

Well ID	Date	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	DIPE	EtBE	tAME	tBA	methanol	ethanol	EDB	DCA
MW-8	4/4/03	<50	<0.5	<0.5	<0.5	<0.5	230	<5	<5	<5	<50	<5,000	<500	<5	<5
	7/16/03	<50	<0.5	<0.5	<0.5	<0.5	340	<5	<5	<5	<50	<5,000	<500	<5	<5
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	250	<5.0	<5.0	<5.0	<50	<5,000	<500	<5	<5.0
	1/13/04	<50	<0.5	<0.5	<0.5	<0.5	140	<0.5	<0.5	<0.5	<5.0	<50	<5	<0.5	<0.5
	4/14/04	<50	<0.5	<0.5	<0.5	<0.5	260	<5	<5	<5	<50	<5,000	<500	<5	<5
	4/29/04	<50	<0.5	<0.5	<0.5	<0.5	130	<5	<5	<5	<50	<5,000	<500	<5	<5
MW-9	4/4/03	<50	<0.5	<0.5	<0.5	<0.5	85	<1.5	<1.5	<1.5	<12	<1,200	<120	<1.5	2
	7/16/03	<50	<0.5	<0.5	<0.5	<0.5	170	<2.5	<2.5	3	27	<2,500	<250	<2.5	<2.5
	10/28/03	<50	<0.5	<0.5	<0.5	<0.5	230	<5.0	<5.0	<5.0	57	<5,000	<500	<5.0	<5.0
	1/13/04	<50	<0.5	<0.5	<0.5	<0.5	55	<0.5	<0.5	0.72	5.8	<50	<5	<0.5	1
	4/14/04	<50	<0.5	<0.5	<0.5	<0.5	58	<1	<1	<1	<10	<1,000	<100	<1	<1
	4/29/04	<50	<0.5	<0.5	<0.5	<0.5	4.7	<0.5	<0.5	<0.5	<5	<500	<50	<0.5	0.63
MW-10	4/23/03	79	<0.5	<0.5	<0.5	<0.5	1,900	<25	<25	58	<250	<25,000	<2,500	<25	<25
	7/16/03	73	20	<0.5	<0.5	<0.5	1,100	<20	<20	39	<200	<20,000	<2,000	<20	<20
	10/28/03	76	<0.5	<0.5	<0.5	<0.5	1,900	<50	<50	<50	<500	<50,000	<5,000	<50	<50
	1/13/04	<500	<5	<5	<5	<5	2,300	<5	<5	72	<50	<500	<50	<5	<5
	4/29/04	54	<0.5	<0.5	<0.5	<0.5	1,000	<17	<17	24	<170	<17,000	<1,700	<17	<17
SSTL		**NE**	**34**	**270**	**180**	**470**	**8,400**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**

Notes:

SSTLs are site-specific target levels developed for the site by Aqua Science Engineers, Inc. in 1997. **Bold** concentrations exceed the SSTL.
Concentrations are micrograms per liter (ug/L). NE, SSTL not established for this compound. NT, analyte not tested.
Data prior to April 2003 are from *Groundwater Monitoring Report for September 2000 Sampling* by Aqua Science Engineers, Inc. dated 11/14/2000.
* Oxygen Release Compound (ORC) was injected into borings on the south side of MW-5 in late June 1997.
** ORC socks were placed in MW-5 in August 1998 and removed in September 2000.

TPH-g	Total Petroleum Hydrocarbons as gasoline	EtBE	Ethyl tert-Butyl Ether	EDB	Ethylene Dibromide
MtBE	Methyl tert-Butyl Ether	tAME	tert-Amyl Methyl Ether	DCA	1,2-Dichloroethane
DIPE	Di-isopropyl Ether	tBA	tert-Butanol		

Table 4

Field Measurements of Dissolved Oxygen and Temperature
2951 High Street, Oakland, California

Well ID	Date	DO (mg/L)	Temperature (Celsius)	% Oxygen Saturation
MW-1	4/4/03	0.64	18.5	6.7%
	7/16/03	0.82	18.5	8.6%
	10/28/03	0.51	19.3	5.5%
	1/13/04	0.17	19.3	1.8%
	4/14/04	0.23	18.4	2.4%
	4/29/04	0.56	18.1	5.9%
MW-3	4/4/03	0.78	18.8	8.3%
	7/16/03	2.13	18.8	22.6%
	10/28/03	0.67	19.1	7.2%
	1/13/04	0.25	19.3	2.7%
	4/14/04	0.17	18.6	1.8%
	4/29/04	6.52	18.0	68.1%
MW-5	4/4/03	0.70	19.2	7.5%
	7/16/03	NA	NA	NA
	10/28/03	0.83	19.70	9.0%
	1/13/04	0.57	19.80	6.2%
	4/14/04	0.32	19.70	3.5%
	4/29/04	9.83	19.50	105.8%
MW-6	4/4/03	NA	NA	NA
	7/16/03	0.54	19.1	5.8%
	10/28/03	1.26	19.3	13.5%
	1/13/04	0.27	19.4	2.9%
	4/29/04	1.37	18.7	14.5%
MW-7	4/4/03	0.97	20.1	10.6%
	7/16/03	0.69	19.8	7.5%
	10/28/03	0.49	20.5	5.4%
	1/13/04	0.14	20.5	1.5%
	4/14/04	0.17	20.2	1.9%
	4/29/04	7.34	20.0	79.8%
MW-8	4/4/03	1.50	20.8	16.6%
	7/16/03	0.78	20.5	8.6%
	10/28/03	0.41	21.3	4.6%
	1/13/04	0.58	21.4	6.5%
	4/14/04	0.20	20.6	2.2%
	4/29/04	1.10	20.1	12.0%
MW-9	4/4/03	1.30	20.4	14.2%
	7/16/03	0.82	20.1	8.9%
	10/28/03	0.41	20.4	4.5%
	1/13/04	0.11	20.5	1.2%
	4/14/04	0.14	20.2	1.5%
	4/29/04	10.02	20.2	109.3%
MW-10	4/23/03	2.75	19.1	29.3%
	7/16/03	1.00	19.2	10.7%
	10/28/03	0.55	19.6	5.9%
	1/13/04	0.13	19.7	1.4%
	4/29/04	0.19	18.7	2.0%

Notes:

DO, Dissolved oxygen concentration in milligrams per liter.

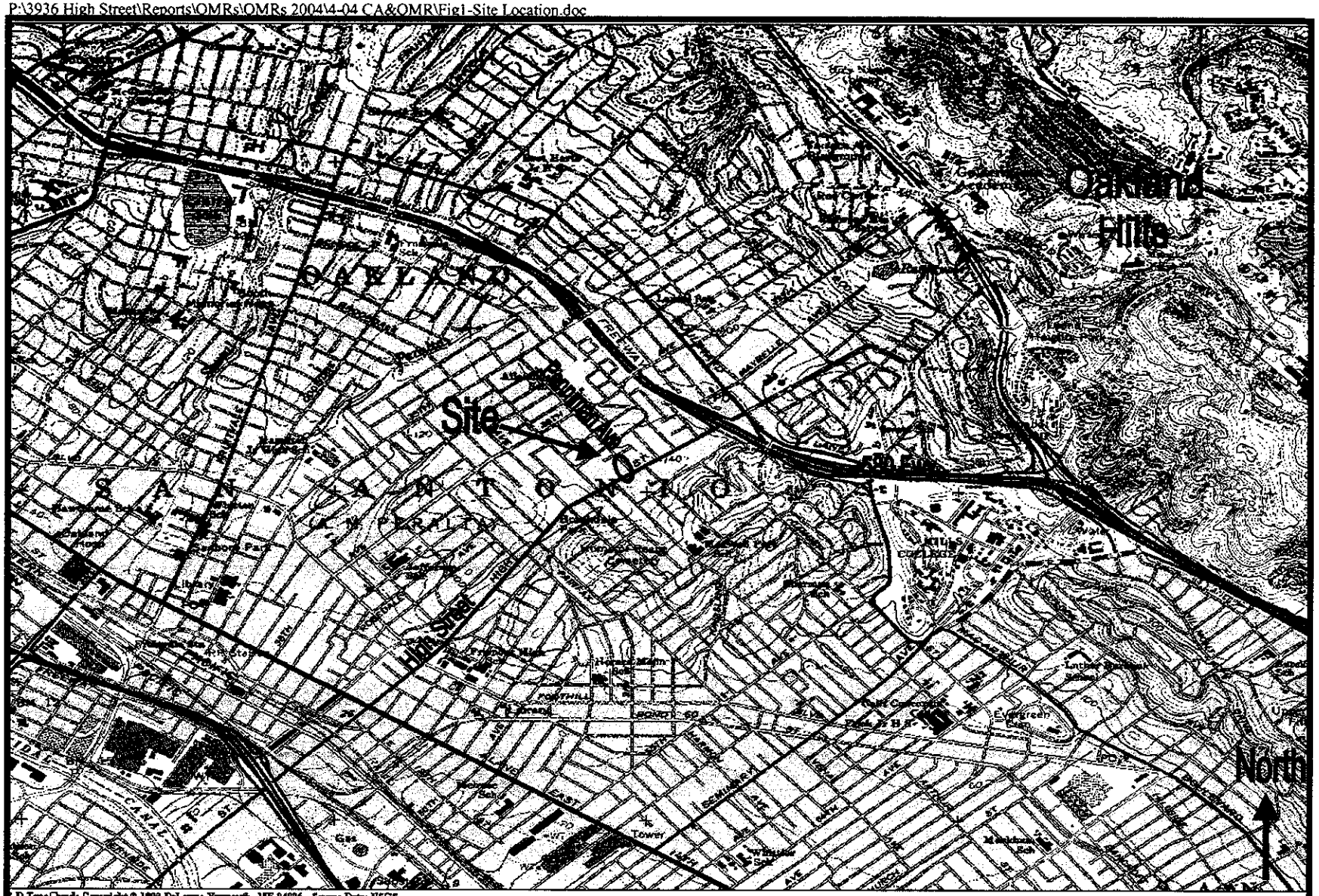
Formula for calculating % saturation = C/(-0.1883*T+12.967), where

C is the DO concentration in mg/L and T is the temperature in degrees Celsius.

N/A, No data available.

FIGURES

P:\3936 High Street\Reports\OMRs\OMRs 2004\4-04 CA&OMR\Fig1-Site Location.doc



TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 750 ft Scale: 1 : 25,000 Detail: 13-0 Datum: WGS84

Base map is the Oakland East 7.5-minute quad (USGS, 1980).

W. A. CRAIG, INC.

Environmental Contracting and Consulting

6940 Tremont Road

Dixon, California 95620

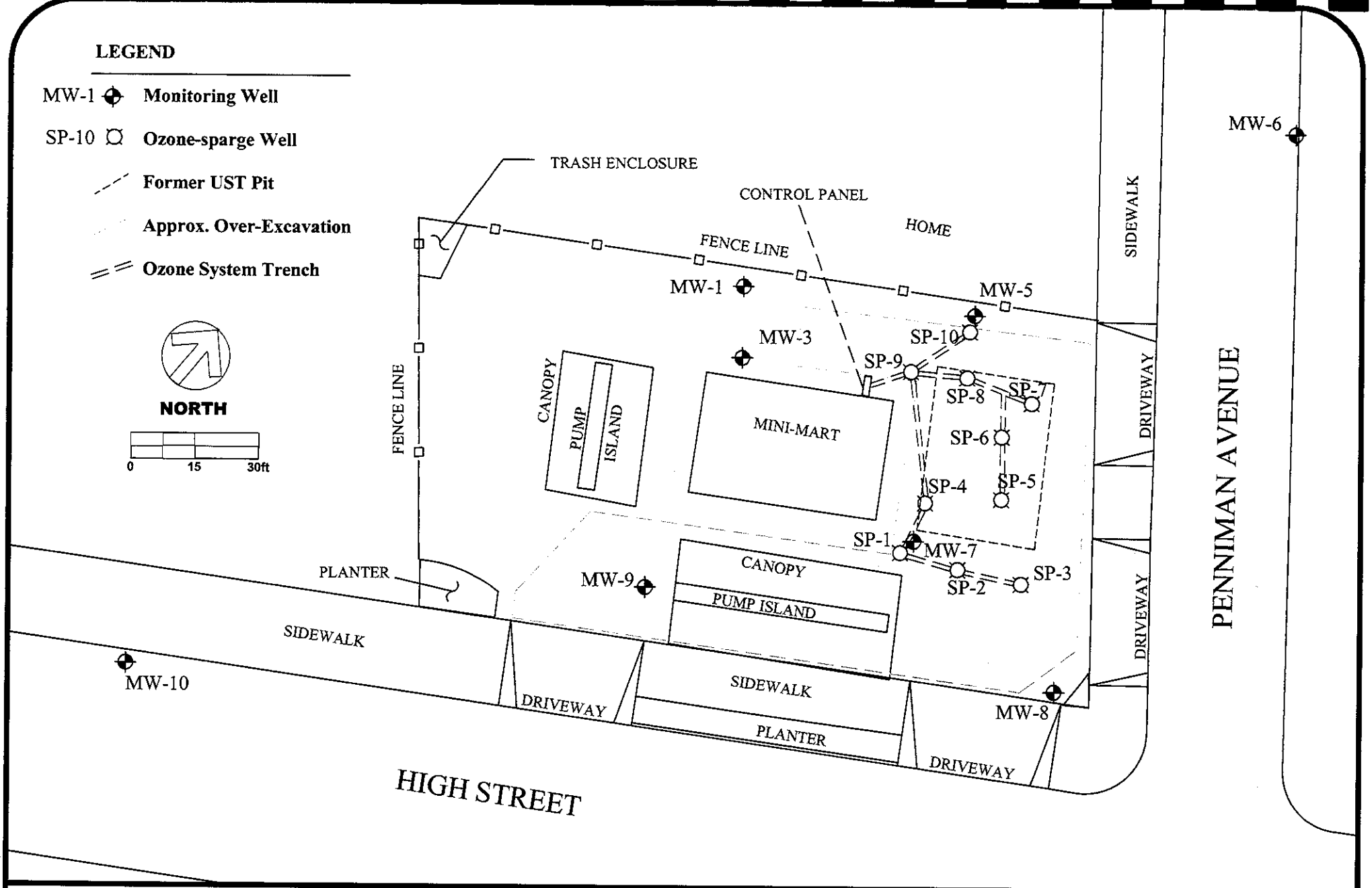
Site Location Map

Express Gas & Mart

2951 High Street, Oakland, California

Figure 1

Job No. 3936

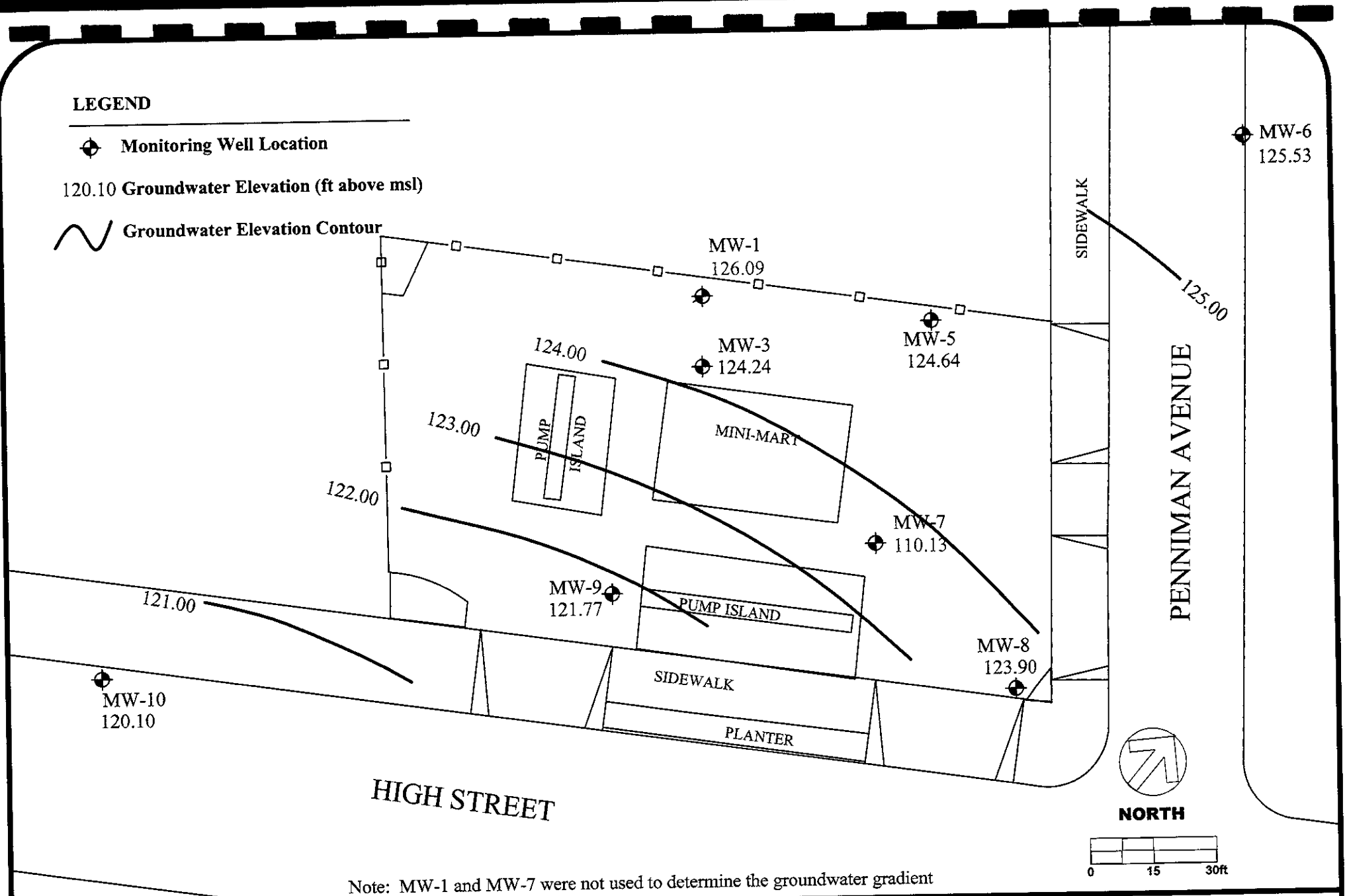


W.A. Craig, Inc.
6940 Tremont Road LIC# 455752
Dixon, California 95620-9603
PH# (707) 693-2929 Fax# (707) 693-2922

Site Features

Express Gas & Mart
2951 High Street
Oakland, California

Project #: 3936	Figure: 2
Date: 4/29/04	
Scale: 1"=30'	



Note: MW-1 and MW-7 were not used to determine the groundwater gradient

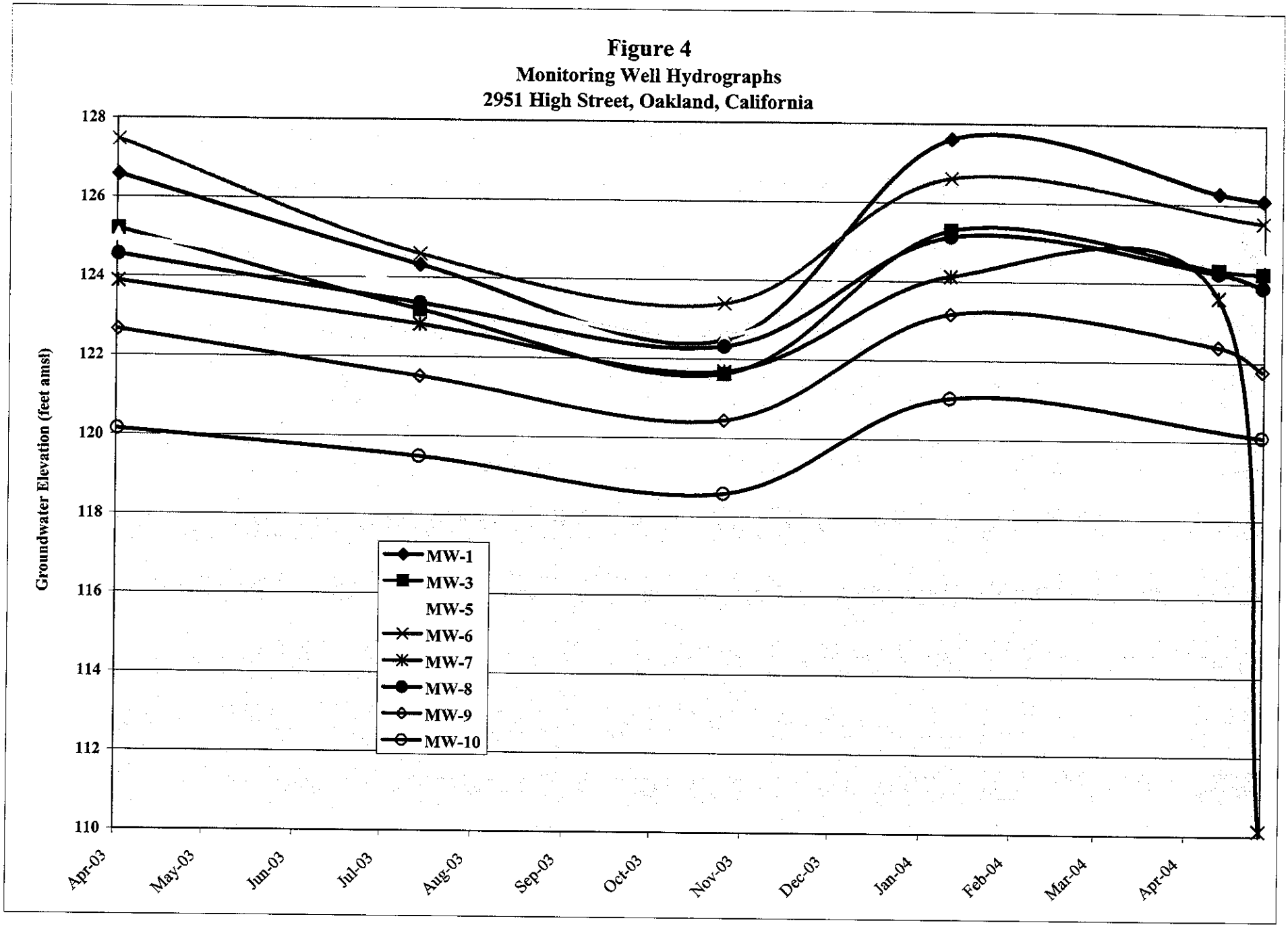
W.A. Craig, Inc.
6940 Tremont Road LIC# 455752
Dixon, California 95620-9603
PH# (707) 693-2929 Fax# (707) 693-2922

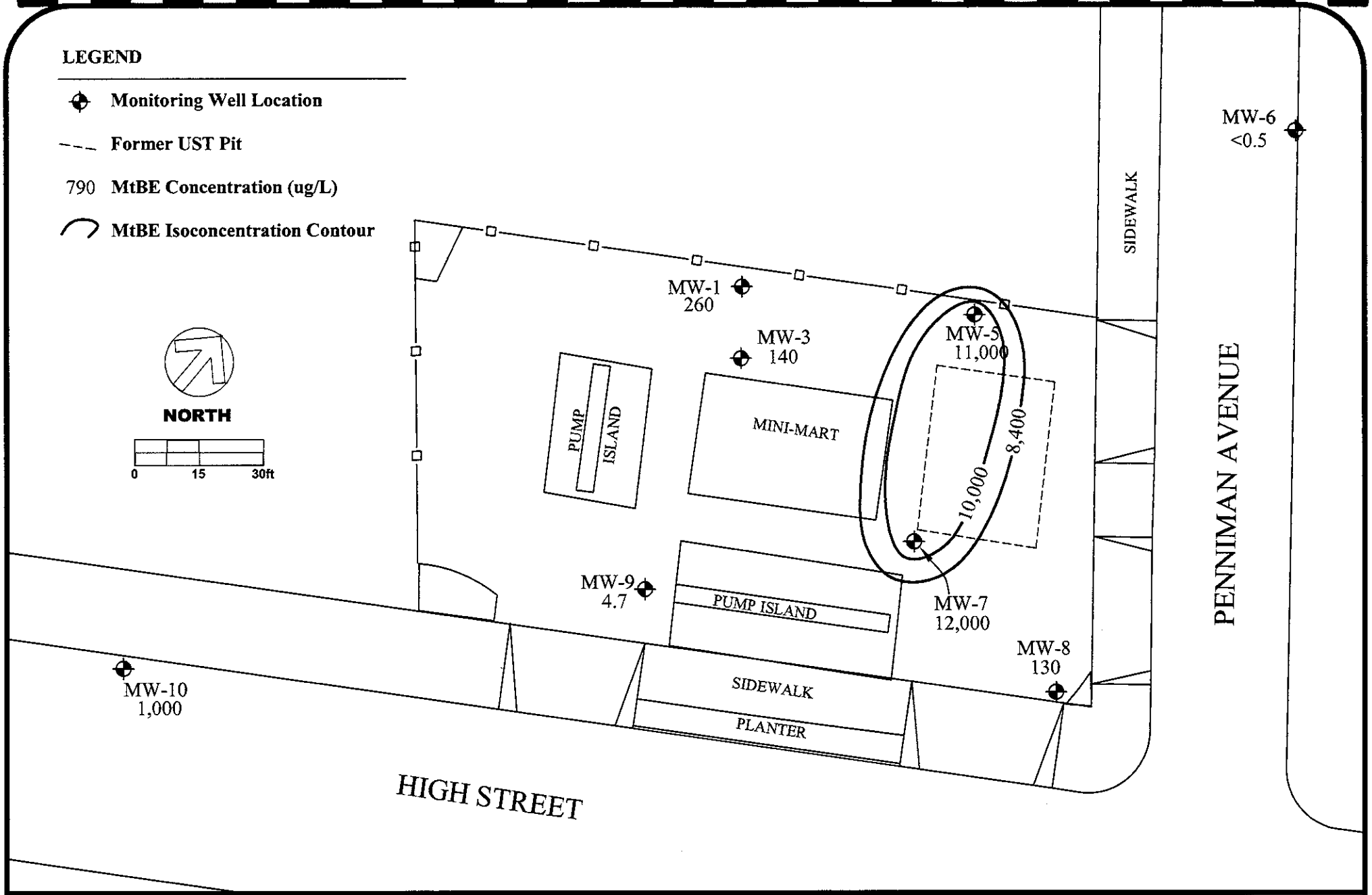
Groundwater Elevations on April 29, 2004

Express Gas & Mart
2951 High Street
Oakland, California

Project #: 3936	Figure: 3
Date: 4/29/04	
Scale: 1"=30'	

Figure 4
Monitoring Well Hydrographs
2951 High Street, Oakland, California





W.A. Craig, Inc.
6940 Tremont Road LIC# 455752
Dixon, California 95620-9603
PH# (707) 693-2929 Fax# (707) 693-2922

MtBE Concentrations in Groundwater on April 29, 2004

Express Gas & Mart
2951 High Street
Oakland, California

Project #: 3936	Figure: 5
Date: 4/29/04	
Scale: 1"=30'	

Figure 6
MtBE Concentrations in Wells MW-5 and MW-7
2951 High Street, Oakland, California

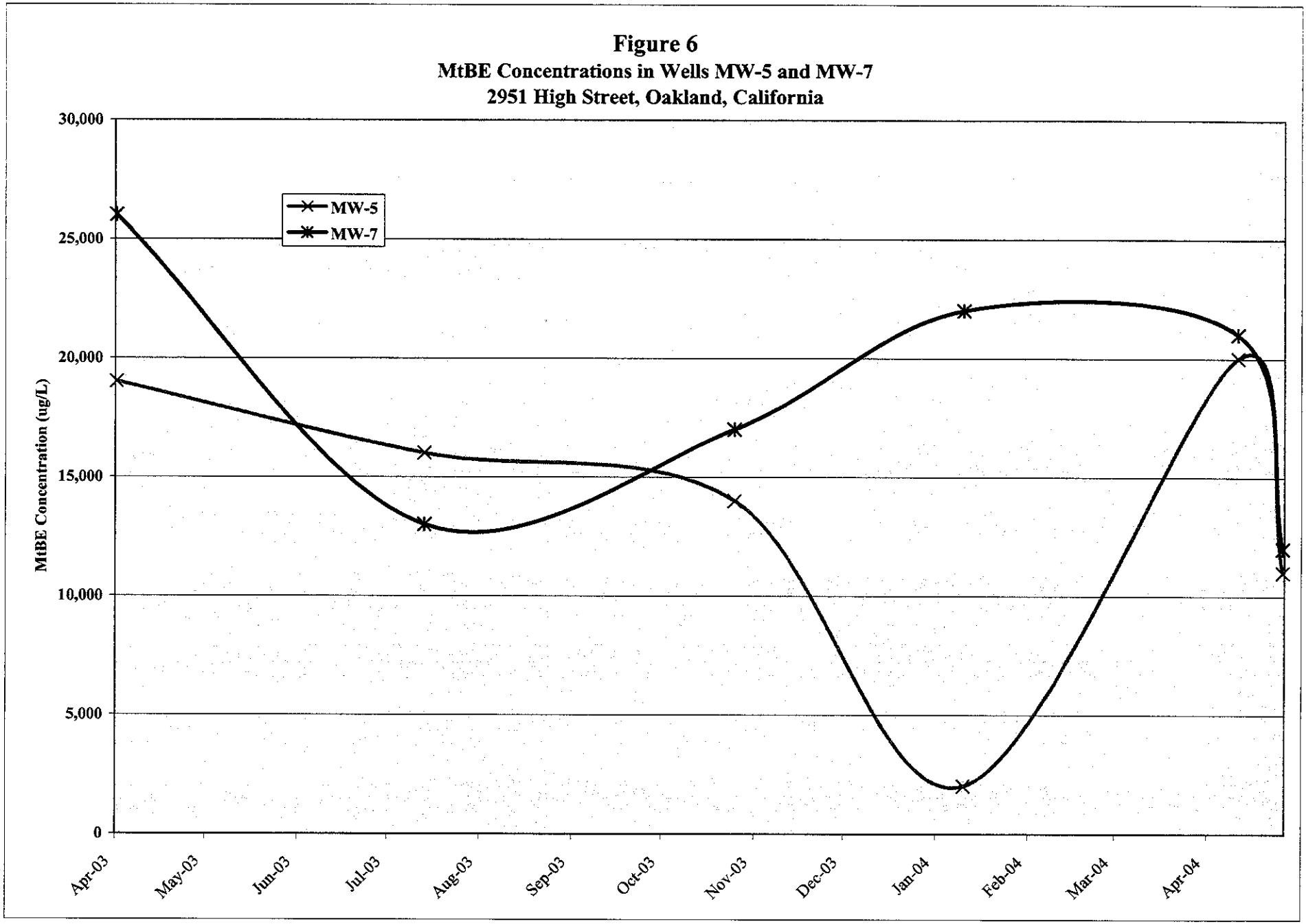
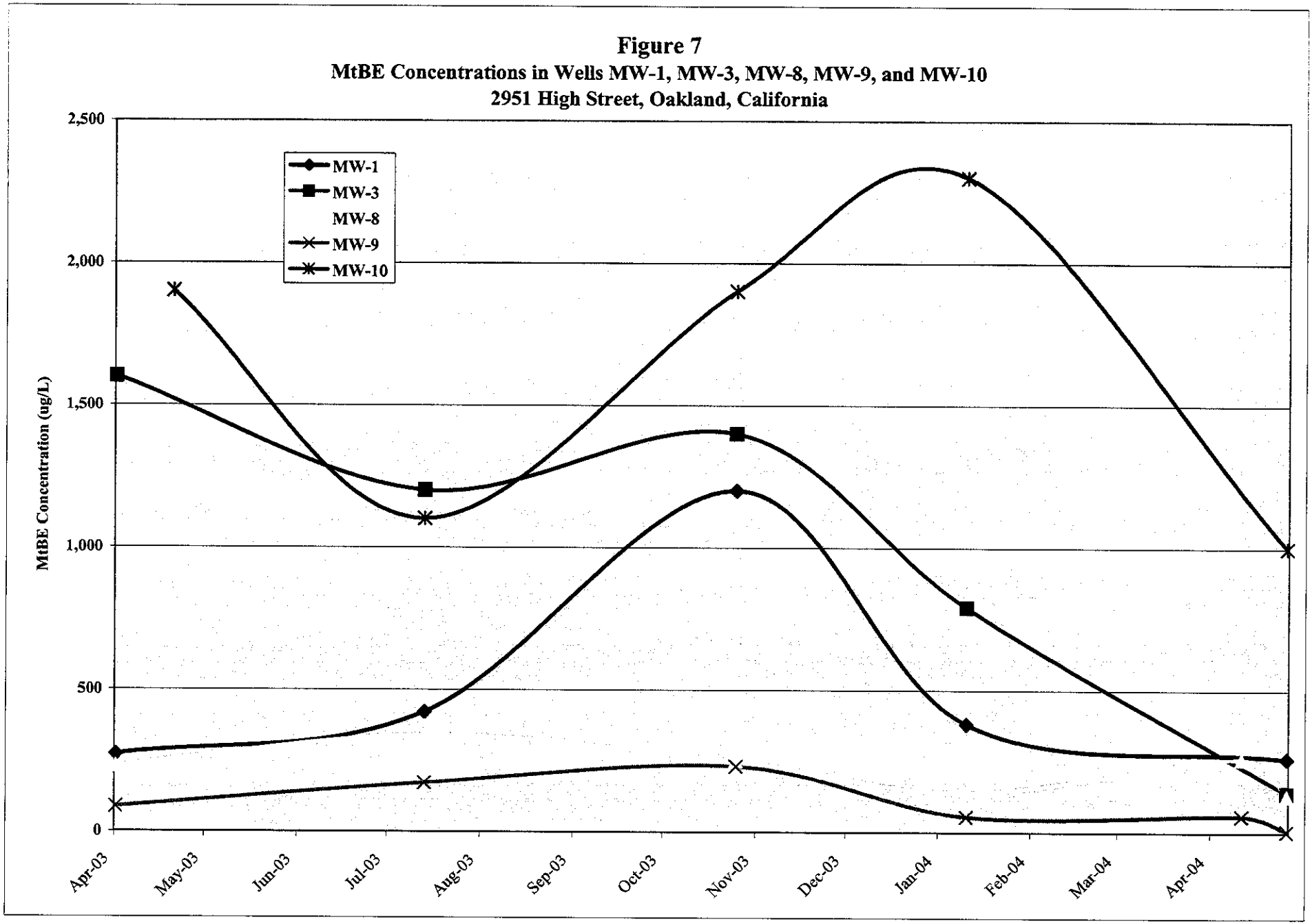
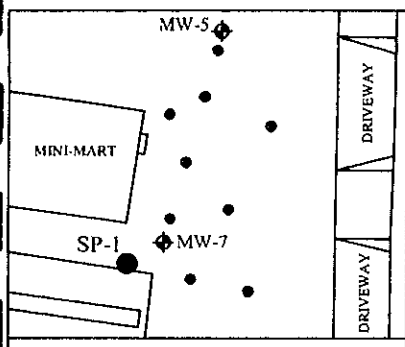


Figure 7
MtBE Concentrations in Wells MW-1, MW-3, MW-8, MW-9, and MW-10
2951 High Street, Oakland, California



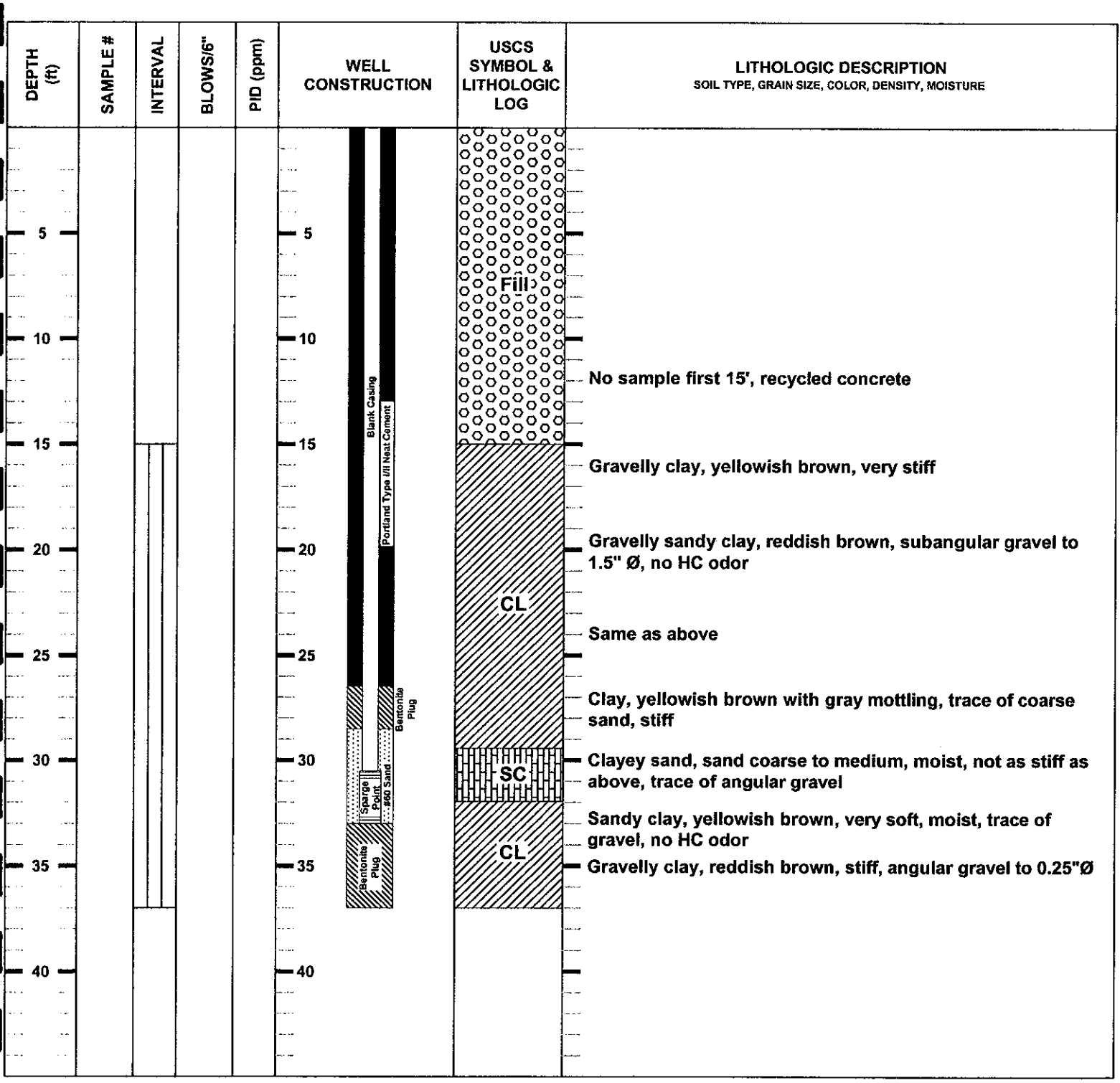
APPENDIX A
BORING LOGS AND SPARGE POINT CONSTRUCTION DIAGRAMS



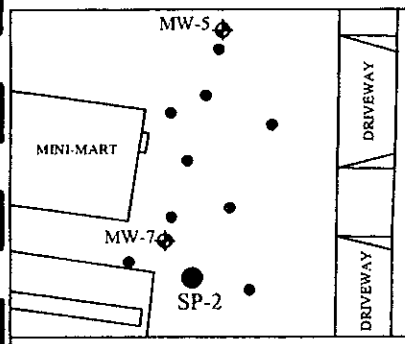
SITE MAP

W.A. Craig, Inc.
Environmental Contracting and Consulting
6940 Tremont Road
Dixon, California 95620-9603
Lic. #455752
(707) 693-2929
Fax (707) 693-2922

PROJECT: High Street	PROJECT #: 3936	BORING #: SP-1
DRILLING CONTRACTOR: Resonant Sonic Int.	START: 10:50 FINISH: 12:45	DATE: 3/25/04
DRILLING METHOD: Sonic Rig - 7" Casing	TOTAL DEPTH: 37'	DEPTH TO WATER: n/a
SAMPLER: 4" Core Sample Tube	SCREEN INT: 30.5'-33.0'	CASING: 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook



NOTE: THE LINE SEPARATING STRATA REPRESENT APPROXIMATE BOUNDARIES ONLY. THE ACTUAL TRANSITION MAY BE GRADUAL. NO WARRANTY IS PROVIDED AS TO THE CONTINUITY OF THE SOIL STRATA BETWEEN BORINGS. LOGS REPRESENT THE SOIL SECTION OBSERVED AT THE BORING LOCATION ON THE DATE OF DRILLING ONLY.



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Environmental Contracting and Consulting
6940 Tremont Road
Dixon, California 95620-9603
Lic. #455752
(707) 693-2929
Fax (707) 693-2922

PROJECT: High Street	PROJECT #: 3936	BORING #: SP-2
DRILLING CONTRACTOR: Resonant Sonic Int.	START: 8:30 FINISH: 10:35	DATE: 3/25/04
DRILLING METHOD: Sonic Rig - 7" Casing	TOTAL DEPTH: 31'	DEPTH TO WATER: n/a
SAMPLER: 4" Core Sample Tube	SCREEN INT: 26.5'-29.0'	CASING: 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook

DEPTH (ft)	SAMPLE #	INTERVAL	BLOWS/6"	PID (ppm)	WELL CONSTRUCTION	USCS SYMBOL & LITHOLOGIC LOG	LITHOLOGIC DESCRIPTION (SOIL TYPE, GRAIN SIZE, COLOR, DENSITY, MOISTURE)
5					Blank Casing; Portland Type I/II Neat Cement	Fill	No sample first 15', recycled concrete
10							
15							Gravelly sandy clay, reddish brown, stiff, with clasts to 1"Ø, no HC odor
20				35			
25				95	Bentonite Plug; Sparge Point; #40 Sand	CL	Gravelly sandy clay, reddish brown, stiff, moist, with granular gravel clasts to 2"Ø, no HC odor
30				120			Sandy clay, yellowish brown, soft, very moist, no HC odor
35				45	Bentonite Plug		Gravelly sandy clay, reddish brown, stiff
40							

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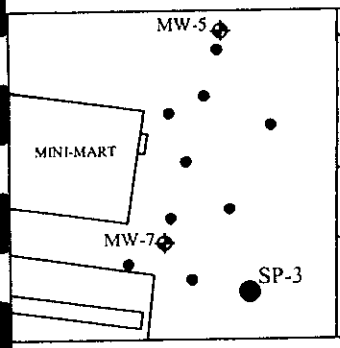

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6940 Tremont Road
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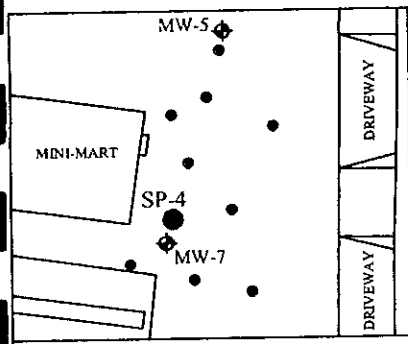
Lic. #455752
(707) 693-2929
Fax (707) 693-2922

PROJECT: High Street	**PROJECT #:** 3936	**BORING #:** SP-3
DRILLING CONTRACTOR: Resonant Sonic Int.	**START:** 8:20 **FINISH:** 11:25	**DATE:** 3/24/04
DRILLING METHOD: PowerProbe 9630 HSA	**TOTAL DEPTH:** 32'	**DEPTH TO WATER:** ~5'
SAMPLER: 4' Split Spoon	**SCREEN INT:** 28.5'-31.0'	**CASING:** 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook

DEPTH (ft)	SAMPLE #	INTERVAL	BLOWS/6"	PID (ppm)	WELL CONSTRUCTION	USCS SYMBOL & LITHOLOGIC LOG	LITHOLOGIC DESCRIPTION (SOIL TYPE, GRAIN SIZE, COLOR, DENSITY, MOISTURE)
5				120	Blank Casing; Portland Type I/II Neat Cement	Fill	No sample first 16', recycled concrete
10				12			Sandy clay, reddish brown, with gravel to 0.125"Ø, low plasticity, moist, HC odor
15				20			Gravelly sandy clay, with gravel to 0.5"Ø, angular, stiff, slightly moist, no HC odor
20				*			Sandy clay, no gravel, stiff, moist, no HC odor
25					Bentonite Plug	CL	Sandy gravelly clay, brown, wet, soft, gravel to 0.25"Ø, no HC odor
30					#60 Sand; Sparge Point		Increasing gravel to 0.25"Ø, very stiff, no HC odor
35					Bentonite Plug		Sandy clay, wet, brown, very soft, no HC odor
40							Sandy gravelly clay, reddish brown, stiff, moist
							Sandy clay, wet, soft, brown with gray mottling
						SC	Clayey gravelly sand, brown, wet, porous, no HC odor
						CL	Gravelly sandy clay, stiff, reddish brown, moist, no HC odor
							* PID batteries died

NOTE: THE LINE SEPARATING STRATA REPRESENT APPROXIMATE BOUNDARIES ONLY. THE ACTUAL TRANSITION MAY BE GRADUAL. NO WARRANTY IS PROVIDED AS TO THE CONTINUITY OF THE SOIL STRATA BETWEEN BORINGS. LOGS REPRESENT THE SOIL SECTION OBSERVED AT THE BORING LOCATION ON THE DATE OF DRILLING ONLY.



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W.A. Craig, Inc.
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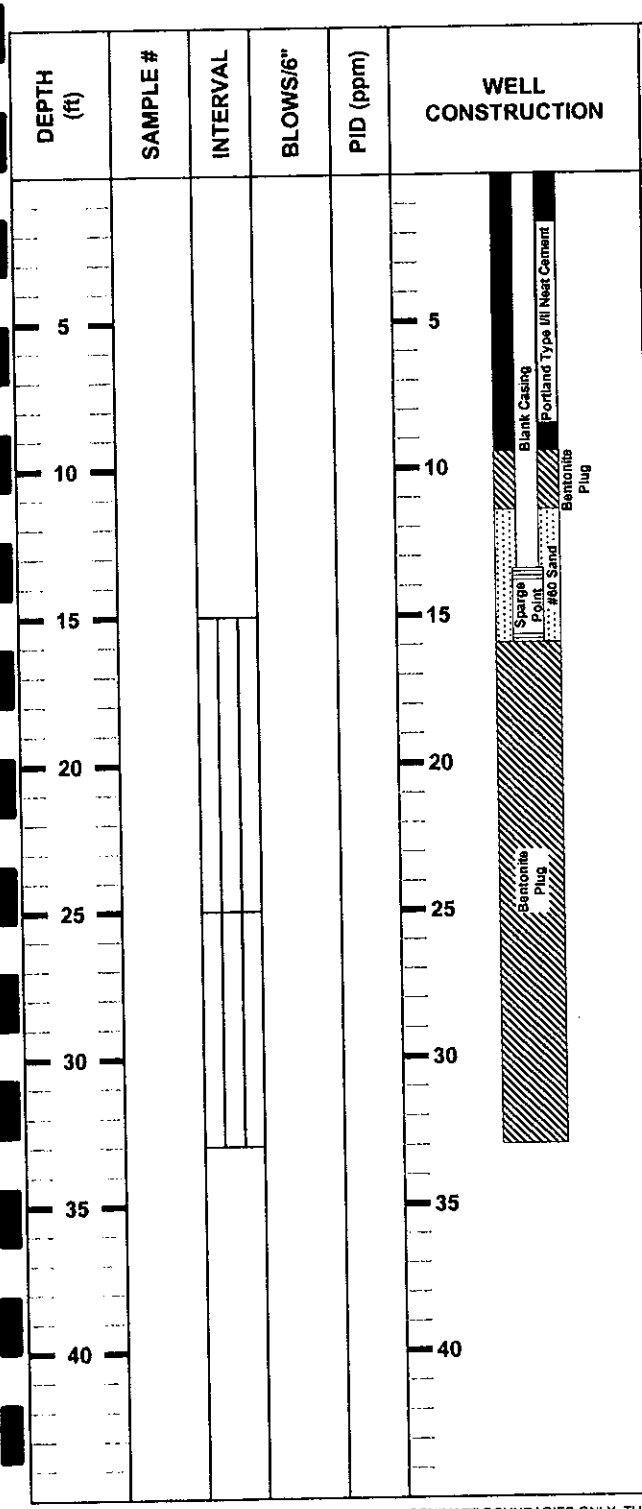
6940 Tremont Road
Dixon, California 95620-9603
Lic. #455752
(707) 693-2929
Fax (707) 693-2922

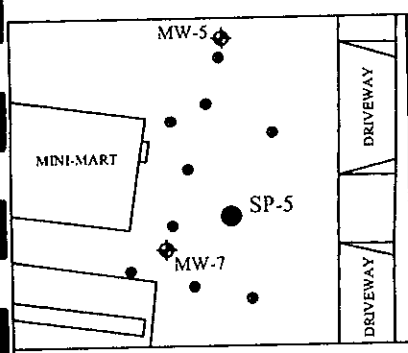
PROJECT: High Street	**PROJECT #:** 3936	**BORING #:** SP-4
DRILLING CONTRACTOR: Resonant Sonic Int.	**START:** 13:25 **FINISH:** 15:05	**DATE:** 3/25/04
DRILLING METHOD: Sonic Rig - 7" Casing	**TOTAL DEPTH:** 33'	**DEPTH TO WATER:** n/a
SAMPLER: 4" Core Sample Tube	**SCREEN INT:** 14.5'-17.0'	**CASING:** 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook



LITHOLOGIC DESCRIPTION
SOIL TYPE, GRAIN SIZE, COLOR, DENSITY, MOISTURE

- No sample first 15', recycled concrete
- Gravelly sandy clay, stiff, dark brown with dark gray staining strong gasoline odor to 16'
- Same as above except with no gasoline odor or gray stain
- Same as above
- Sandy clay, yellowish brown, soft, no HC odor, moist
- Gravelly sandy clay, stiff, reddish brown, with clasts to 0.75" Ø, no HC odor
- Same as above

NOTE: THE LINE SEPARATING STRATA REPRESENT APPROXIMATE BOUNDARIES ONLY. THE ACTUAL TRANSITION MAY BE GRADUAL. NO WARRANTY IS PROVIDED AS TO THE CONTINUITY OF THE SOIL STRATA BETWEEN BORINGS. LOGS REPRESENT THE SOIL SECTION OBSERVED AT THE BORING LOCATION ON THE DATE OF DRILLING ONLY.



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Environmental Contracting and Consulting
6940 Tremont Road
Dixon, California 95620-9603
Lic. #455752
(707) 693-2929
Fax (707) 693-2922

PROJECT: High Street	**PROJECT #:** 3936	**BORING #:** SP-5
DRILLING CONTRACTOR: Resonant Sonic Int.	**START:** 11:00 **FINISH:** 13:15	**DATE:** 3/26/04
DRILLING METHOD: Sonic Rig - 7" Casing	**TOTAL DEPTH:** 30'	**DEPTH TO WATER:** n/a
SAMPLER: 4" Core Sample Tube	**SCREEN INT:** 20.0'-22.5'	**CASING:** 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook

DEPTH (ft)	SAMPLE #	INTERVAL	BLOWS/6"	PID (ppm)	WELL CONSTRUCTION	USCS SYMBOL & LITHOLOGIC LOG	LITHOLOGIC DESCRIPTION (SOIL TYPE, GRAIN SIZE, COLOR, DENSITY, MOISTURE)
0–5					Blank Casing; Portland Type I/II Neat Cement	Fill	No sample first 15', recycled concrete
5–15					Bentonite Plug	CL	Gravelly clay, reddish brown, very firm, moist, angular gravel to 0.25"Ø, no HC odor
15–20						CL	Same as above but with gravel to 0.5"Ø with red oxide stain
20–25					Sparge Point; #60 Sand	SC	Clayey gravelly sand, reddish brown, moist, loose, angular to subangular gravel to 1"Ø
25–30					Bentonite Plug	CL	Gravelly clay, reddish brown, firm, moist, angular gravel
30–40							Clay, yellowish brown, no gravel, firm, moist, gray mottling

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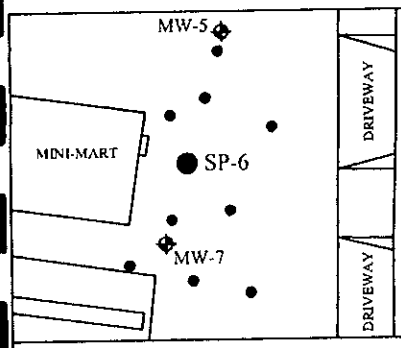

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(707) 693-2929
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PROJECT: High Street	**PROJECT #:** 3936	**BORING #:** SP-6
DRILLING CONTRACTOR: Resonant Sonic Int.	**START:** 13:35 **FINISH:** 15:10	**DATE:** 3/26/04
DRILLING METHOD: Sonic Rig - 7" Casing	**TOTAL DEPTH:** 30'	**DEPTH TO WATER:** n/a
SAMPLER: 4" Core Sample Tube	**SCREEN INT:** 21.5'-24.0'	**CASING:** 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook

DEPTH (ft)	SAMPLE #	INTERVAL	BLOWS/6"	PID (ppm)	WELL CONSTRUCTION	USCS SYMBOL & LITHOLOGIC LOG	LITHOLOGIC DESCRIPTION SOIL TYPE, GRAIN SIZE, COLOR, DENSITY, MOISTURE
5					Blank Casing; Portland Type I/II Neat Cement	Fill	No sample first 12', recycled concrete to 16', saturated
10							
15							
20					Bentonite Plug; #60 Sand; Sparge Point	CL	Gravelly clay, reddish brown, stiff, moist, angular gravel to 1" Ø, slight HC odor
25					Bentonite Plug	SC	Clayey sandy gravel, gray, loose, wet, angular gravel to 0.75" Ø, no HC odor
30						CL	Gravelly clay, reddish brown, stiff, moist, angular gravel to 0.75"Ø, red oxide stain on gravel, no HC odor
35							
40							

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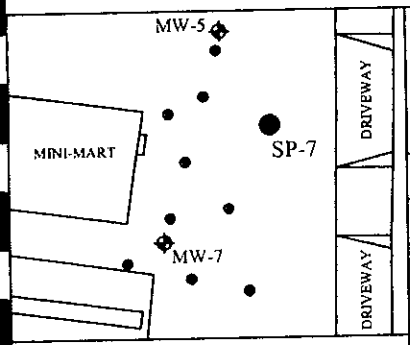

SITE MAP

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Environmental Contracting and Consulting
6940 Tremont Road
Dixon, California 95620-9603
Lic. #455752
(707) 693-2929
Fax (707) 693-2922

PROJECT: High Street	PROJECT #: 3936	BORING #: SP-7
DRILLING CONTRACTOR: Resonant Sonic Int.	START: 9:40 FINISH: 10:47	DATE: 3/26/04
DRILLING METHOD: Sonic Rig - 7" Casing	TOTAL DEPTH: 30'	DEPTH TO WATER: 26'
SAMPLER: 4" Core Sample Tube	SCREEN INT: 25.5'-28.0'	CASING: 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook

DEPTH (ft)	SAMPLE #	INTERVAL	BLOWS/6"	PID (ppm)	WELL CONSTRUCTION	USCS SYMBOL & LITHOLOGIC LOG	LITHOLOGIC DESCRIPTION (SOIL TYPE, GRAIN SIZE, COLOR, DENSITY, MOISTURE)
5					Blank Casing; Portland Type I/II Neat Cement	Fill	No sample first 12', recycled concrete
10							
15						CL	Gravelly clay, reddish brown, stiff, moist, gravel to 0.375"Ø, slight HC odor
20					Bentonite Plug		Clay, yellow, very stiff, moist, no gravel, minor black iron oxide stain, no HC odor
25					Sparge Point; #60 Sand	SW	Gravelly clay, reddish brown, stiff, moist, angular gravel to 0.5"Ø, no HC odor; Clay, yellow, stiff, moist, no HC odor; Gravelly sand, gray, wet, subangular gravel to 1"Ø, no HC odor
30					Bentonite Plug	CL	Gravelly clay, reddish brown, moist, stiff, no HC odor
35							
40							

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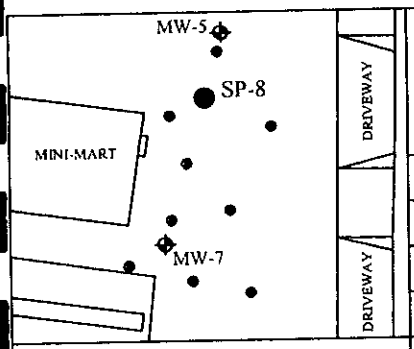

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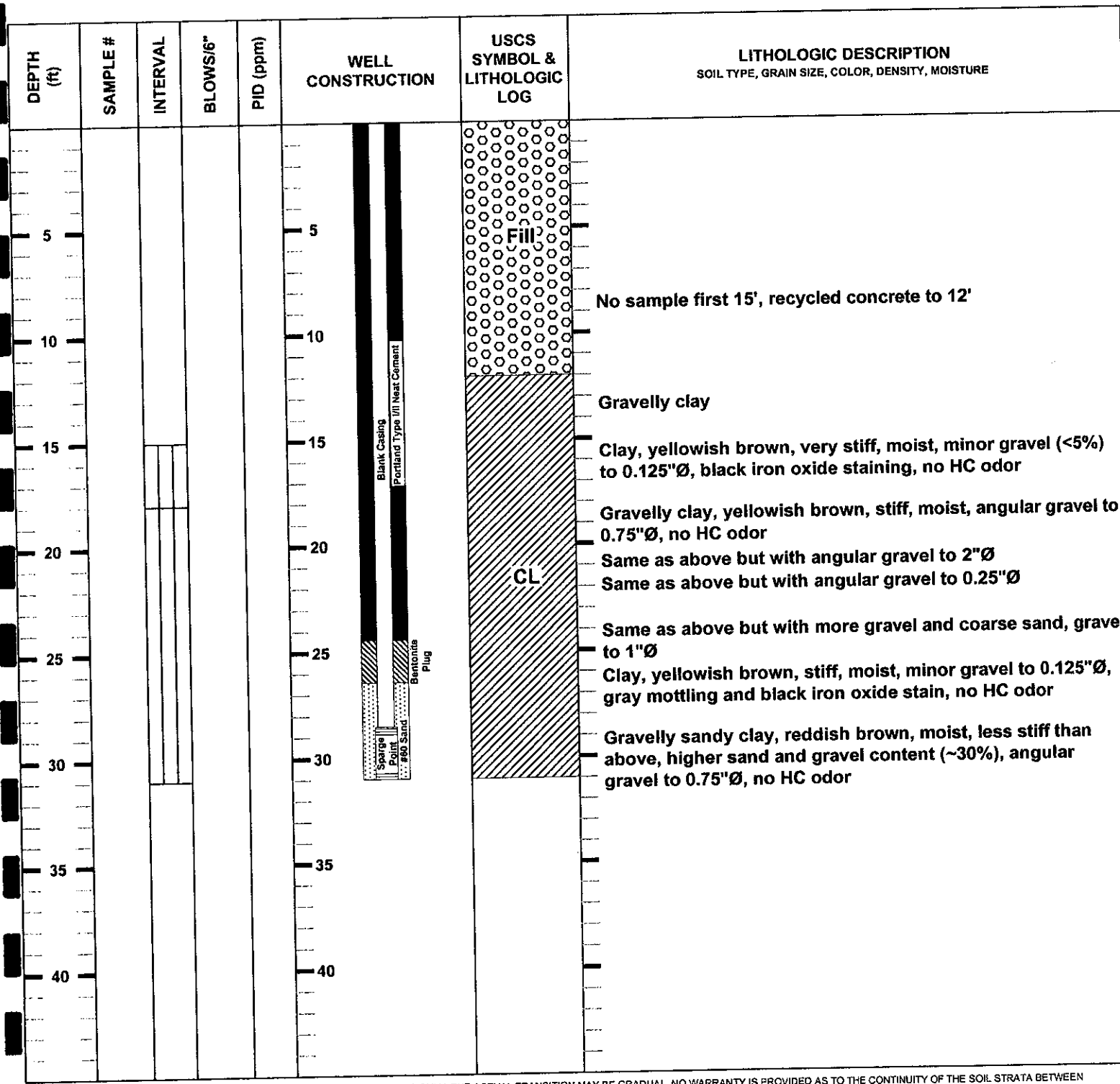
Environmental Contracting and Consulting
6940 Tremont Road
Dixon, California 95620-9603
Lic. #455752
(707) 693-2929
Fax (707) 693-2922

PROJECT: High Street	**PROJECT #:** 3936	**BORING #:** SP-8
DRILLING CONTRACTOR: Resonant Sonic Int.	**START:** 8:00 **FINISH:** 9:30	**DATE:** 3/26/04
DRILLING METHOD: Sonic Rig - 7" Casing	**TOTAL DEPTH:** 31'	**DEPTH TO WATER:** n/a
SAMPLER: 4" Core Sample Tube	**SCREEN INT:** 28.5'-31'	**CASING:** 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook



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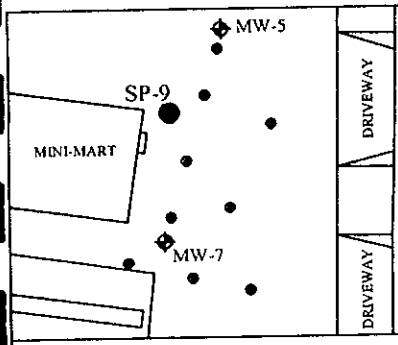

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PROJECT: High Street	PROJECT #: 3936	BORING #: SP-9
DRILLING CONTRACTOR: Resonant Sonic Int.	START: 15:20 FINISH: 17:00	DATE: 3/25/04
DRILLING METHOD: Sonic Rig - 7" Casing	TOTAL DEPTH: 33'	DEPTH TO WATER: n/a
SAMPLER: 4" Core Sample Tube	SCREEN INT: 25.0'-27.5'	CASING: 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook

DEPTH (ft)	SAMPLE #	INTERVAL	BLOWS/6"	PID (ppm)	WELL CONSTRUCTION	USCS SYMBOL & LITHOLOGIC LOG	LITHOLOGIC DESCRIPTION (SOIL TYPE, GRAIN SIZE, COLOR, DENSITY, MOISTURE)
5					Blank Casing; Portland Type I/II Neat Cement	Fill	No sample first 16', recycled concrete to 12'
10							Gravelly Clay, reddish brown, stiff, moist, no HC odor
15						CL	Clay with traces of gravel to 0.125"Ø, yellowish brown, stiff, moist, no HC odor
20					Bentonite Plug		Gravelly Clay, reddish brown, stiff, moist, no HC odor
25					Sparge Point; #60 Sand		Same as above
30					Bentonite Plug	SC	Clayey sand, medium to coarse grain, yellowish brown, soft, wet, no HC odor
35						CL	Clay with traces of gravel, yellow, stiff, moist, no HC odor
40							Gravelly clay with clasts to 0.75"Ø, reddish brown, stiff, moist, no HC odor

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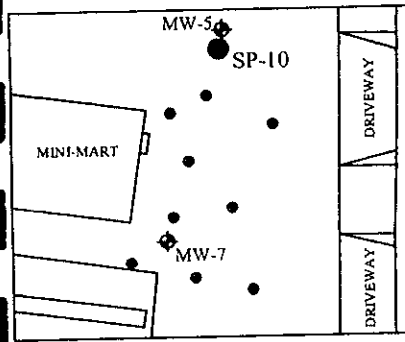

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Lic. #455752
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PROJECT: High Street	PROJECT #: 3936	BORING #: SP-10
DRILLING CONTRACTOR: Resonant Sonic Int.	START: 15:40 FINISH: 17:10	DATE: 3/26/04
DRILLING METHOD: Sonic Rig - 7" Casing	TOTAL DEPTH: 30'	DEPTH TO WATER: n/a
SAMPLER: 4" Core Sample Tube	SCREEN INT: 21.5'-24.0'	CASING: 3/4" PVC
	FIELD GEOLOGIST:	Tim Cook

DEPTH (ft)	SAMPLE #	INTERVAL	BLOWS/6"	PID (ppm)	WELL CONSTRUCTION	USCS SYMBOL & LITHOLOGIC LOG	LITHOLOGIC DESCRIPTION (SOIL TYPE, GRAIN SIZE, COLOR, DENSITY, MOISTURE)
5					Blank Casing; Portland Type I/II Neat Cement	Fill	No sample first 12', recycled concrete
10							Gravelly clay, angular to subangular gravel to 0.25"Ø, reddish brown, soft, moist, dark gray staining on contaminated zones, strong HC odor
15							Gravelly clay, gravel to 0.25"Ø, reddish brown, stiff, no HC odor
20					Bentonite Plug; #60 Sand; Sparge Point	CL	Same as above with increasing gravel to ~15%
25					Bentonite Plug		Gravelly clay, gravel to 0.25"Ø, looser than above but still stiff
30							Gravelly sandy clay, angular gravel to 0.5"Ø, reddish brown stiff, no HC odor
35							Clay, no gravel, yellowish brown, stiff, moist, no HC odor
40						SC	Gravelly sand, loose, wet

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APPENDIX B
LABORATORY ANALYTICAL REPORT FOR COMPOSITE SOIL SAMPLE

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc. 6940 Tremont Road Dixon, CA 95620-9603	Client Project ID: #3936; High Street	Date Sampled: 04/01/04
		Date Received: 04/01/04
	Client Contact: Tim Cook	Date Reported: 04/07/04
	Client P.O.:	Date Completed: 04/07/04

WorkOrder: 0404020

April 07, 2004

Dear Tim:

Enclosed are:

1). the results of 1 analyzed sample from your **#3936; High Street project,**

2). a QC report for the above sample

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc.	Client Project ID: #3936; High Street	Date Sampled: 04/01/04
		Date Received: 04/01/04
6940 Tremont Road	Client Contact: Tim Cook	Date Extracted: 04/01/04
Dixon, CA 95620-9603	Client P.O.:	Date Analyzed: 04/06/04-04/07/04

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0404020

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	SP 1-4	S	ND	ND	ND	ND	ND	0.015	1	114

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc. 6940 Tremont Road Dixon, CA 95620-9603	Client Project ID: #3936; High Street	Date Sampled: 04/01/04
		Date Received: 04/01/04
	Client Contact: Tim Cook	Date Extracted: 04/01/04
	Client P.O.:	Date Analyzed: 04/02/04

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0404020

					Reporting Limit for DF =1	
Lab ID	0404020-001A					
Client ID	SP 1-4					
Matrix	S					
DF	1				S	W
Compound	**Concentration**				µg/Kg	ug/L
tert-Amyl methyl ether (TAME)	ND				5.0	NA
t-Butyl alcohol (TBA)	ND				25	NA
1,2-Dibromoethane (EDB)	ND				5.0	NA
1,2-Dichloroethane (1,2-DCA)	ND				5.0	NA
Diisopropyl ether (DIPE)	ND				5.0	NA
Ethanol	ND				250	NA
Ethyl tert-butyl ether (ETBE)	ND				5.0	NA
Methanol	ND				2500	NA
Methyl-t-butyl ether (MTBE)	39				5.0	NA
Surrogate Recoveries (%)						
%SS:	94.1					
Comments						

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc. 6940 Tremont Road Dixon, CA 95620-9603	Client Project ID: #3936; High Street	Date Sampled: 04/01/04
		Date Received: 04/01/04
	Client Contact: Tim Cook	Date Extracted: 04/01/04
	Client P.O.:	Date Analyzed: 04/05/04

Lead by ICP*

Extraction method: SW3050B | Analytical methods: 6010C | Work Order: 0404020

Lab ID	Client ID	Matrix	Extraction	Lead	DF	% SS
0404020-001A	SP 1-4	S	TTLC	9.4	1	104

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TTLC	NA	mg/L
	S	TTLC	5.0	mg/Kg

*water/product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate recovery outside of acceptance range due to matrix interference; & means surrogate diluted out of acceptance range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water/liquid- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipe/filter - As, Se, Tl); 7471B (Hg).

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; j) reporting limit raised due to insufficient sample amount; k) results are reported by dry weight; y) estimated values due to low surrogate recovery; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0404020

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 10976 Spiked Sample ID: 0403521-006B

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex) £	0.14	0.60	75.8	72.6	3.28	97.1	101	3.57	70	130
MTBE	ND	0.10	90.1	84.1	6.89	95.9	98.2	2.33	70	130
Benzene	ND	0.10	105	98.8	6.26	109	113	3.21	70	130
Toluene	ND	0.10	87.7	83.4	5.04	89.8	93.5	4.07	70	130
Ethylbenzene	ND	0.10	97.3	102	4.48	107	111	3.11	70	130
Xylenes	ND	0.30	95.3	91	4.65	95.7	100	4.43	70	130
%SS:	105	0.10	93.4	85.2	9.18	101	104	2.93	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

Matrix: S WorkOrder: 0404020

EPA Method: SW8260B Extraction: SW5030B BatchID: 10960 Spiked Sample ID: 0403506-002A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
tert-Amyl methyl ether (TAME)	ND	50	94.6	93.7	0.982	96.4	95.3	1.14	70	130
t-Butyl alcohol (TBA)	ND	250	74.2	73.2	1.36	80.7	74.9	7.53	70	130
1,2-Dibromoethane (EDB)	ND	50	92.9	91.6	1.43	95.6	95	0.640	70	130
1,2-Dichloroethane (1,2-DCA)	ND	50	109	108	0.657	108	109	0.752	70	130
Diisopropyl ether (DIPE)	ND	50	104	103	0.405	103	103	0	70	130
Ethyl tert-butyl ether (ETBE)	ND	50	91.7	91.9	0.163	93.5	91.8	1.78	70	130
Methyl-t-butyl ether (MTBE)	ND	50	87.3	88.4	1.26	91.3	89.3	2.15	70	130
%SS1:	95.0	50	95	94.3	0.750	95.1	93.6	1.61	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR 6010C

Matrix: S WorkOrder: 0404020

EPA Method: 6010C Extraction: SW3050B BatchID: 10986 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	50	N/A	N/A	N/A	92.7	97	4.53	80	120
%SS:	N/A	250	N/A	N/A	N/A	103	108	5.41	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not applicable to this method.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
(925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

Turn Around Time: RUSH 24 HR 48 HR 72 HR 5 DAY◄
EDF Required: Yes◄ No

Report To: Tim Cook **Bill To:** W. A. Craig, Inc.
Company: W.A. Craig, Inc.
Address: 6940 Tremont Rd., Dixon, CA 95620
E-Mail: tech@wacraig.com thanield@wacraig.com
Tel: (707) 693-2929 **Fax:** (707) 693-2922
Project #: 3936 **Proj. Name:** High Street
Project Location: Oakland
Sampler Signature: Brett Smith

SAMPLE ID	DEPTH	DATE	TIME	# Containers	Type Containers	MATRIX: Water	MATRIX: Soil	METHOD PRESERVED: Ice	METHOD PRESERVED: HCl	METHOD PRESERVED: HNO_3	METHOD PRESERVED: H_2SO_4	BTEX+MtBE & TPH-g (8021B & 8015M)	TPH as Diesel (8015M)	Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	Halogenated VOCs (EPA 601 / 8010)	BTEX only (EPA 602 / 8021B)	Fuel Additives/Oxygenates (EPA 8260)	VOCs (EPA 8260)	SVOCs (EPA 625/8270)	Pesticides (EPA 608/8081)	PCBs only (EPA 608/8080)	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)			Comments
SP 1,2,3,4		4-1-04	12:30	4	Glass		X	X				X						X							X			Composite

Relinquished By:	Date: 4-1-04	Time: 12:45	Received By:
Relinquished By:	Date: 4/1/04	Time: 14:05	Received By:
Relinquished By:	Date: 4/1/04	Time: 6:25p	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ____
DECHLORINATED IN LAB ____
PRESERVATION VOAS O&G METALS OTHER ____
APPROPRIATE CONTAINERS ✓
PERSERVED IN LAB ____

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0404020

Report to:
Tim Cook
W. A. Craig Inc.
6940 Tremont Road
Dixon, CA 95620-9603
TEL: (707) 693-2929
FAX: (707) 693-2922
ProjectNo: #3936; High Street
PO:

Bill to:
Christine
W. A. Craig Inc.
6940 Tremont Road
Dixon, CA 95620-9603

Requested TAT: 5 days
Date Received: 4/1/04
Date Printed: 4/1/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0404020-001	SP 1-4	Soil	4/1/04 12:30:00 PM	☐	A	A	A												

Test Legend:

1	9-OXYS_S	2	G-MBTEX_S	3	PB_S	4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

APPENDIX C
NON-HAZARDOUS WASTE MANIFEST FOR SOIL CUTTINGS DISPOSAL

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.	Manifest Doc. No. 00001	2. Page 1 of 1

3. Generator's Name and Mailing Address: Aziz Kambhari, 2451 High Street, Oakland, CA 94619

4. Generator's Phone (510) 436-3400

5. Transporter 1 Company Name: Conti	6. US EPA ID Number	A. Transporter's Phone: 800-843-7056
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
9. Designated Facility Name and Site Address: ALTAMONT LANDFILL, 10840 ALTAMONT PASS RD., LIVERMORE, CA 94550	10. US EPA ID Number: CAD981382732	C. Facility's Phone: (925) 449-6349

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. C Soil			5 YDS	
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

PROFILE # 55243700

CUSTOMER NAME W.A. Craig, Inc.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name	Signature	Month	Day	Year
Aziz Kambhari	Christine [illegible]	04	14	04

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Chuck Keyes	Chuck Keyes	04	14	04

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR / TRANSPORTER / FACILITY

GENERATOR'S COPY

APPENDIX D
SURVEYOR DATA AND MAP

Virgil Chavez Land Surveying
312 Georgia Street, Suite 225
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

April 26, 2004
Project No.: 2232-02

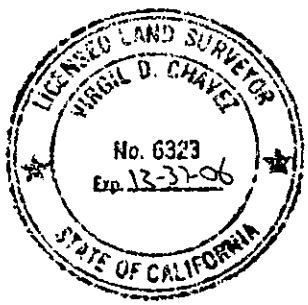
Tim Cook
W.A. Craig, Inc.
6940 Tremont Road
Dixon, CA 95620

Subject: Monitoring Well Survey
Express Gas & Mart
2951 High Street
Oakland, CA

Dear Tim:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was completed on April 22, 2004. The benchmark for this survey was a cut square in southeasterly return of southerly corner at intersection of High Street and MacArthur Boulevard. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83).
Benchmark Elevation = 177.397 feet (NGVD 29).

Latitude	Longitude	Northing	Easting	Elev.	Desc.	
				131.20	RIM	SP-1
37.7843501	-122.2010849	2112529.17	6070105.65	130.39	ELBOW	SP-1
				130.99	RIM	SP-2
37.7843664	-122.2010412	2112534.87	6070118.37	130.07	ELBOW	SP-2
				131.44	RIM	SP-3
37.7843863	-122.2009953	2112541.87	6070131.76	130.66	ELBOW	SP-3
				131.24	RIM	SP-4
37.7843843	-122.2010960	2112541.66	6070102.66	130.51	ELBOW	SP-4
				131.43	RIM	SP-5
37.7844181	-122.2010518	2112553.75	6070115.66	130.55	ELBOW	SP-5
				131.69	RIM	SP-6
37.7844481	-122.2010844	2112564.81	6070106.43	130.88	ELBOW	SP-6
				131.88	RIM	SP-7
37.7844766	-122.2010840	2112575.20	6070106.74	131.20	ELBOW	SP-7
				131.69	RIM	SP-8
37.7844614	-122.2011363	2112569.95	6070091.53	130.98	ELBOW	SP-8
				131.64	RIM	SP-9
37.7844406	-122.2011737	2112562.57	6070080.59	130.85	ELBOW	SP-9
				131.99	RIM	SP-10
37.7844845	-122.2011590	2112578.47	6070085.11	131.23	ELBOW	SP-10



Sincerely,

Virgil D. Chavez

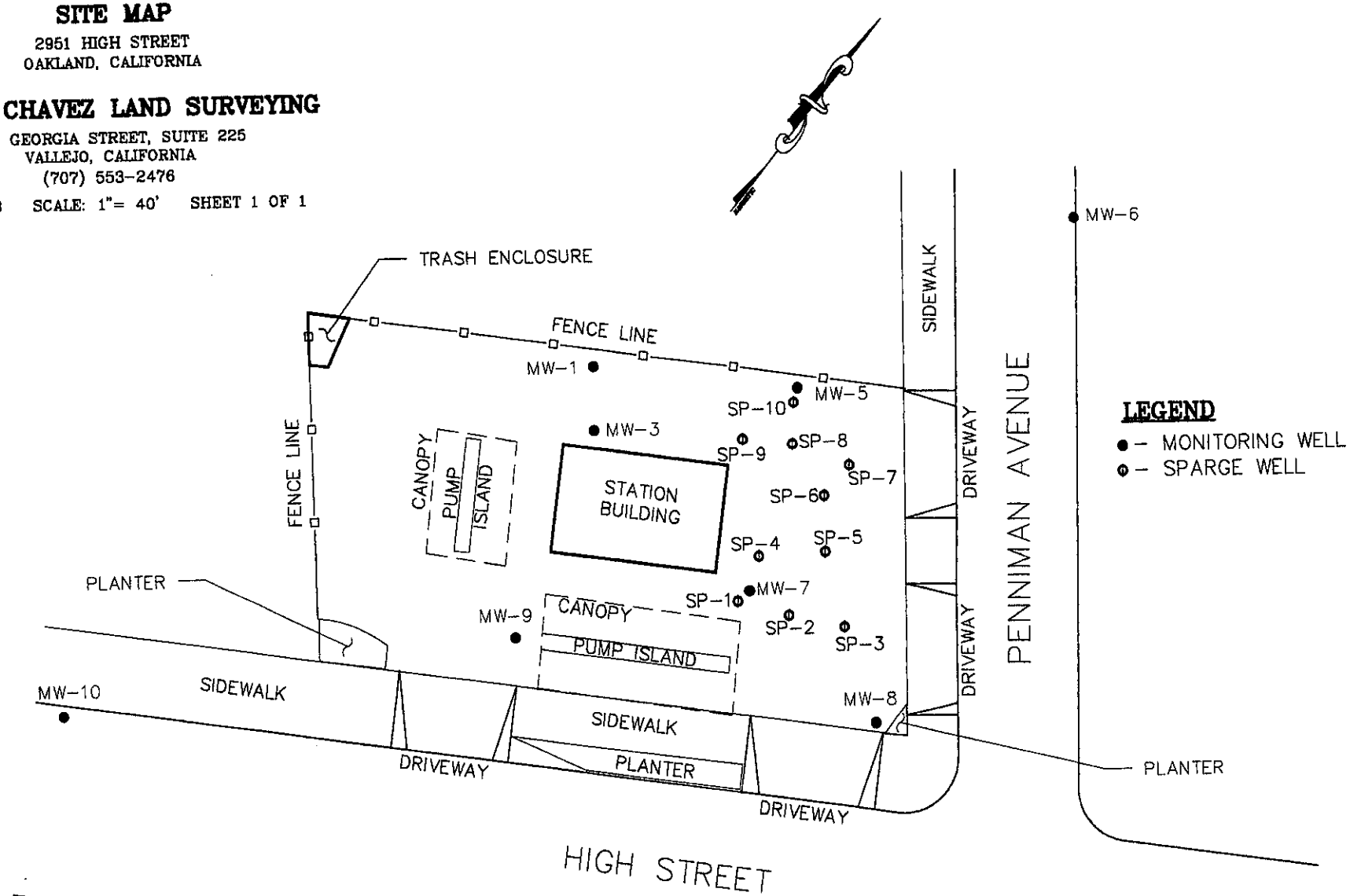
Virgil D. Chavez, PLS 6323

SITE MAP

2951 HIGH STREET
OAKLAND, CALIFORNIA

VIRGIL CHAVEZ LAND SURVEYING
312 GEORGIA STREET, SUITE 225
VALLEJO, CALIFORNIA
(707) 553-2476

APRIL, 2003 SCALE: 1"= 40' SHEET 1 OF 1



0 10 20 40
SCALE: 1" = 40'

PROJECT NUMBER: 2232-02

LICENSED LAND SURVEYOR
VIRGIL D. CHAVEZ
No. 6323
Exp 12-31-06
STATE OF CALIFORNIA

REVISED: APRIL, 2004

APPENDIX E
MONITORING WELL SAMPLING LOGS

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: High 57 JOB #: 3036

DATE: 4/14/04 SAMPLER'S INITIALS: CM

WELL ID: MW-7 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 7.30 WATER COLUMN Ht (ft): 17.7

STANDING WATER VOLUME (gal): 2.94 3 VOLUMES (gal): 8.8

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: bailer SAMPLING METHOD: bailer

D.O. Initially: @17/20.2

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
	2	20.5	6.38	1223			strong odor @27/20.3
	4	20.7	6.40	1281			well drawdown ≈ 8'
	6	21.1	6.45	1253			
	8	21.2	6.45	1240			
	9	21.3	6.45	1245			
							D.O After Purge and Sample @30/20.3

WELL ID: MW-9 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 7.61 WATER COLUMN Ht (ft): 17.39

STANDING WATER VOLUME (gal): 2.88 3 VOLUMES (gal): 8.7

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: bailer SAMPLING METHOD: bailer

D.O. Initially: @14/20.2

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
	2	21.1	7.03	1077			@19/22.1
	4	21.2	7.08	1080			
	6	21.3	7.13	1088			
	7	21.3	7.10	1080			
	9	21.3	7.11	1075			
							@17/22.5
							D.O After Purge and Sample

~~Site 530-880-9908~~

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: High St JOB #: 3936

DATE: 4/14/04 SAMPLER'S INITIALS: CJ

WELL ID: MW-5 WELL DIAMETER (in): 2

WELL DEPTH (ft): 30 DEPTH TO WATER (ft): 6.79 WATER COLUMN Ht (ft): 23.21

STANDING WATER VOLUME (gal): 3.85 3 VOLUMES (gal): 11.5

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or (Bailer) circle method used SAMPLING METHOD: Disposable Bailer

.32 | 19.7 initial D.O.

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
	2	20.8	7.51	1903			
	4	20.9	7.50	1897			
	6	21.0	7.47	1882			bailed dry / slow Recharge
	9	21.0	7.47	1887			
							.74 | 20.6

WELL ID: MW-8 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 6.90 WATER COLUMN Ht (ft): 18.1

STANDING WATER VOLUME (gal): 3 3 VOLUMES (gal): 9

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or (Bailer) circle method used SAMPLING METHOD: Disposable Bailer

.20 | 20.6 initial D.O.

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
	2	21.3	6.70	995			
	4	21.4	6.68	992			
	6	21.5	6.70	993			NOS
	9	21.5	6.72	990			
	4	21.6	6.74	985			
							.19 | 21.4

\\server\central file location\waci admin forms\forms and templates\tech dept forms\gw_sampling_log(shortform).xls W.A. Craig, Inc.

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: Higa St. JOB #: 3930

DATE: 4-29-09 SAMPLER'S INITIALS: CM

WELL ID: MW-3 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 6.81 WATER COLUMN Ht (ft): 18.19

STANDING WATER VOLUME (gal): 3.01 3 VOLUMES (gal): 9

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or Bailer (circle method used) SAMPLING METHOD: Disposable Bailer

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
						6.52 | 18.0	
	2	18.9	6.21	525		6.28 | 18.3	
	4	18.9	6.20	528			NOS
	6	18.9	6.23	535			
	8	19.0	6.26	538			
	9	19.1	6.28	541			
						3.49 | 18.7	

WELL ID: MW-1 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 5.55 WATER COLUMN Ht (ft): 19.45

STANDING WATER VOLUME (gal): 3.23 3 VOLUMES (gal): 9.7

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or Bailer (circle method used) SAMPLING METHOD: Disposable Bailer

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
						.56 | 18.1	
	~~2~~	~~18.9~~		525			
	3	20.1	6.29	595			NOS
	4	19.9	6.28	581			
	6	19.7	6.29	576			
	8	19.7	6.27	575			
	9	19.6	6.25	571		.74 | 18.7	

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: High St JOB #: 3936

DATE: 4-29-04 SAMPLER'S INITIALS: CM

WELL ID: MW-6 WELL DIAMETER (in): 2

WELL DEPTH (ft): 30 DEPTH TO WATER (ft): 7.05 WATER COLUMN Ht (ft): 22.95

STANDING WATER VOLUME (gal): 3.8 3 VOLUMES (gal): 11.4

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or (Bailer) SAMPLING METHOD: Disposable Bailer

circle method used

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
	-	19.9	6.60	545		1.37/18.7	HS
	4	19.9	6.60	543		.13/19.4	
	6	20.2	6.63	532			
	8	20.2	6.65	535			NOS
	10	20.2	6.66	531			
	12	20.3	6.67	526			
						.85/19.5	

WELL ID: MW-5 WELL DIAMETER (in): 2

WELL DEPTH (ft): 30 DEPTH TO WATER (ft): 7.35 WATER COLUMN Ht (ft): 22.65

STANDING WATER VOLUME (gal): 3.76 3 VOLUMES (gal): 11.3

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or (Bailer) SAMPLING METHOD: Disposable Bailer

circle method used

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
						9.83/19.5	
	2	21.0	7.42	3.05		7.79/19.7	
	4	21.0	7.45	2.98			NOS
	6	21.0	7.49	2.97			
	8	21.0	7.56	2.97			
	10	21.1	7.62	2.95			
	12	21.1	7.69	2.94		2.02/20.1	

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: High St JOB #: 3936

DATE: 4/29/04 SAMPLER'S INITIALS: CM

WELL ID: MW- 7 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 20.8 WATER COLUMN Ht (ft): 4.2

STANDING WATER VOLUME (gal): .69 3 VOLUMES (gal): 2

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or (Bailer) SAMPLING METHOD: Disposable Bailer

circle method used

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
						7.3 / 20.2	
	.5	21.8	7.47	843		10.15 / 20.0	
	1	21.7	7.45	837			NDS
	1.5	21.6	7.44	836			Well under extreme pressure
	2	21.6	7.45	834			
						11.03 / 20.0	

WELL ID: MW- 3 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 7.25 WATER COLUMN Ht (ft): 17.75

STANDING WATER VOLUME (gal): 2.99 3 VOLUMES (gal): 8.6

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or (Bailer) SAMPLING METHOD: Disposable Bailer

circle method used

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
						1.1 / 20.1	
	2	22.0	6.61	480		.66 / 20.3	
	4	22.0	6.62	479			
	6	22.1	6.64	485			
	8	22.1	6.68	484			
	9	22.1	6.69	480			
						.7 / 20.6	

MONITORING WELL SAMPLING LOG

SITE NAME/LOCATION: High St. JOB #: 3936

DATE: 4/29/04 SAMPLER'S INITIALS: CM

WELL ID: MW-10 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 7.09 WATER COLUMN Ht (ft): 17.91

STANDING WATER VOLUME (gal): 2.97 3 VOLUMES (gal): 9

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or (Bailer) SAMPLING METHOD: Disposable Bailer

circle method used

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
	0					19/18.7	
	2	20.2	6.87	588		17/18.8	NOS
	4	20.2	6.88	587			
	6	20.2	6.87	583			
	8	20.2	6.87	584			
	9	20.2	6.88	581			
						29/20	

WELL ID: MW-9 WELL DIAMETER (in): 2

WELL DEPTH (ft): 25 DEPTH TO WATER (ft): 8.23 WATER COLUMN Ht (ft): 16.77

STANDING WATER VOLUME (gal): 2.78 3 VOLUMES (gal): 8.4

To obtain standing volume in gallons, multiply the water column height by 0.17 for 2-inch well or 0.66 for a 4-inch well.

PURGE METHOD: Pump or (Bailer) SAMPLING METHOD: Disposable Bailer

circle method used

PURGE MEASUREMENTS

Time	Gallons Purged	Temp (C)	pH	SC (uS)	Turbidity (NTU)	DO (mg/L)	Comments
						10/20.2	
	2	21.4	6.91	1054		15/20.1	
	4	21.4	6.96	1055			NOS
	6	21.3	7.05	1048			
	8	21.3	7.01	1091			
	9	21.3	7.04	1050			
						20/20.1	

APPENDIX F
LABORATORY ANALYTICAL REPORTS FOR GROUNDWATER MONITORING

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc. 6940 Tremont Road Dixon, CA 95620-9603	Client Project ID: #3936; High Street	Date Sampled: 04/14/04
		Date Received: 04/14/04
	Client Contact: Tim Cook	Date Reported: 04/20/04
	Client P.O.:	Date Completed: 04/20/04

WorkOrder: 0404197

April 20, 2004

Dear Tim:

Enclosed are:

1). the results of 4 analyzed samples from your **#3936; High Street project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc.	Client Project ID: #3936; High Street	Date Sampled: 04/14/04
		Date Received: 04/14/04
6940 Tremont Road	Client Contact: Tim Cook	Date Extracted: 04/16/04
Dixon, CA 95620-9603	Client P.O.:	Date Analyzed: 04/16/04

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0404197

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-5	W	6600,a	16,000	2700	ND<50	ND<50	260	100	101
002A	MW-7	W	8900,a,i	18,000	520	360	640	1100	100	106
003A	MW-8	W	ND	210	ND	ND	ND	ND	1	102
004A	MW-9	W	ND	50	ND	ND	ND	ND	1	102
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc. 6940 Tremont Road Dixon, CA 95620-9603	Client Project ID: #3936; High Street	Date Sampled: 04/14/04
		Date Received: 04/14/04
	Client Contact: Tim Cook	Date Extracted: 04/15/04-04/16/04
	Client P.O.:	Date Analyzed: 04/15/04-04/16/04

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0404197

Lab ID	0404197-001B	0404197-002B	0404197-003B	0404197-004B	Reporting Limit for DF =1	
Client ID	MW-5	MW-7	MW-8	MW-9		
Matrix	W	W	W	W	S	W
DF	1000	1000	10	2	ug/kg	µg/L
Compound	**Concentration**					
tert-Amyl methyl ether (TAME)	ND<500	ND<500	ND<5.0	ND<1.0	NA	0.5
t-Butyl alcohol (TBA)	ND<5000	ND<5000	ND<50	ND<10	NA	5.0
1,2-Dibromoethane (EDB)	ND<500	ND<500	ND<5.0	ND<1.0	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<500	ND<500	ND<5.0	ND<1.0	NA	0.5
Diisopropyl ether (DIPE)	ND<500	ND<500	ND<5.0	ND<1.0	NA	0.5
Ethanol	ND<50,000	ND<50,000	ND<500	ND<100	NA	50
Ethyl tert-butyl ether (ETBE)	ND<500	ND<500	ND<5.0	ND<1.0	NA	0.5
Methanol	ND<500,000	ND<500,000	ND<5000	ND<1000	NA	500
Methyl-t-butyl ether (MTBE)	20,000	21,000	260	58	NA	0.5
Surrogate Recoveries (%)						
%SS:	97.8	95.8	102	99.5		
Comments		i				

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0404197

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 11115 Spiked Sample ID: 0404197-004A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex) £	ND	60	105	105	0	103	99.7	3.24	70	130
MTBE	50.41	10	NR	NR	NR	105	104	0.349	70	130
Benzene	ND	10	111	115	3.32	108	108	0	70	130
Toluene	ND	10	104	111	6.13	103	102	0.474	70	130
Ethylbenzene	ND	10	112	113	0.244	106	110	3.82	70	130
Xylenes	ND	30	100	100	0	100	100	0	70	130
%SS:	102	10	108	114	5.30	100	101	0.598	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

TL QA/QC Officer

DHS Certification No. 1644

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

Matrix: W

WorkOrder: 0404197

EPA Method: SW8260B Extraction: SW5030B BatchID: 11116 Spiked Sample ID: 0404203-003C

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
tert-Amyl methyl ether (TAME)	ND	10	93.6	94.7	1.18	89.4	92.6	3.50	70	130
t-Butyl alcohol (TBA)	ND	50	90	89.7	0.317	83.1	80.4	3.35	70	130
1,2-Dibromoethane (EDB)	ND	10	96.8	98.3	1.56	102	106	3.70	70	130
1,2-Dichloroethane (1,2-DCA)	ND	10	108	110	1.31	92.4	95.6	3.44	70	130
Diisopropyl ether (DIPE)	ND	10	99.6	100	0.839	87.5	88.4	1.03	70	130
Ethanol	ND	500	99.1	109	9.64	84.4	99.8	16.7	70	130
Ethyl tert-butyl ether (ETBE)	ND	10	94.9	96	1.22	83.9	85.4	1.80	70	130
Methanol	ND	2500	98.4	99.7	1.34	97.2	88.6	9.28	70	130
Methyl-t-butyl ether (MTBE)	ND	10	92.2	94	1.92	85.4	85.8	0.393	70	130
%SS1	101	10	96.3	95.9	0.430	98.9	97.7	1.15	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

QA/QC Officer

DHS Certification No. 1644

CHAIN-OF-CUSTODY RECORD

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

WorkOrder: 0404197

Requested TAT: 5 days

Report to:
Tim Cook
W. A. Craig Inc.
6940 Tremont Road
Dixon, CA 95620-9603

TEL: (707) 693-2929
FAX: (707) 693-2922
ProjectNo: #3936; High Street
PO:

Bill to:
Christine
W. A. Craig Inc.
6940 Tremont Road
Dixon, CA 95620-9603

Date Received: 4/14/04
Date Printed: 4/14/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0404197-001	MW-5	Water	4/14/04	☐	B	A													
0404197-002	MW-7	Water	4/14/04	☐	B	A													
0404197-003	MW-8	Water	4/14/04	☐	B	A													
0404197-004	MW-9	Water	4/14/04	☐	B	A													

Test Legend:

1 9-OXYS_W	2 G-MBTEX_W	3	4	5
6	7	8	9	10
11	12	13	14	15

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

maca 0404191

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Tim Cook Bill To:
Company: W.A. Craig, INC
E-Mail:
Tele: (707) 693-2929 Fax: ( )
Project #: 3936 Project Name: High Street
Project Location: High Street Oakland
Sampler Signature:

	SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260 (9oxys)	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other	Other	Comments: Filter Samples for Metals analysis: Yes / No
+	MW-5		4/14		VOA	3	X					X	X			X										X								
+s	MW-7		↓		↓	↓	X					X	X			X										X								
+	MW-8		↓		↓	↓	X					X	X			X										X								
+	MW-9		↓		↓	↓	X					X	X			X										X								

Relinquished By:	Date:	Time:	Received By:
[signature]	4/14	7:20p	Noel Valle
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓ ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ✓
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

PRESERVATION VOAS ✓ | O&G | METALS pH<2 | OTHER

*Please circle water type:
GROUND WASTE DRINKING RECREATIONAL EFFLUENT

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc. 6940 Tremont Road Dixon, CA 95620-9603	Client Project ID: #3936; High St.	Date Sampled: 04/29/04
		Date Received: 04/29/04
	Client Contact: Tim Cook	Date Reported: 05/06/04
	Client P.O.:	Date Completed: 05/06/04

WorkOrder: 0404460

May 06, 2004

Dear Tim:

Enclosed are:

1). the results of **8** analyzed samples from your **#3936; High St. project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc.	Client Project ID: #3936; High St.	Date Sampled: 04/29/04
		Date Received: 04/29/04
6940 Tremont Road	Client Contact: Tim Cook	Date Extracted: 05/03/04-05/04/04
Dixon, CA 95620-9603	Client P.O.:	Date Analyzed: 05/03/04-05/04/04

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0404460

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND	290	ND	ND	ND	ND	1	96.3
002A	MW-3	W	ND,i	170	ND	ND	ND	ND	1	99.6
003A	MW-5	W	ND<500,j	13,000	6.3	ND<5.0	ND<5.0	7.8	10	95.1
004A	MW-6	W	ND	ND	ND	ND	ND	ND	1	97.1
005A	MW-7	W	ND<500,j	14,000	ND<5.0	ND<5.0	ND<5.0	12	10	95.6
006A	MW-8	W	ND	190	ND	ND	ND	ND	1	97.2
007A	MW-9	W	ND	6.6	ND	ND	ND	ND	1	96.1
008A	MW-10	W	54,f	1000	ND	ND	ND	ND	1	97.6
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

Angela Rydelius, Lab Manager

DHS Certification No. 1644

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

W. A. Craig Inc.	Client Project ID: #3936; High St.	Date Sampled: 04/29/04
		Date Received: 04/29/04
6940 Tremont Road	Client Contact: Tim Cook	Date Extracted: 05/01/04-05/04/04
Dixon, CA 95620-9603	Client P.O.:	Date Analyzed: 05/01/04-05/04/04

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0404460

Lab ID	0404460-001B	0404460-002B	0404460-003B	0404460-004B	Reporting Limit for DF =1	
Client ID	MW-1	MW-3	MW-5	MW-6		
Matrix	W	W	W	W	S	W
DF	10	10	500	1	ug/kg	µg/L
Compound	**Concentration**					
tert-Amyl methyl ether (TAME)	ND<5.0	ND<5.0	ND<250	ND	NA	0.5
t-Butyl alcohol (TBA)	ND<50	ND<50	ND<2500	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND<5.0	ND<5.0	ND<250	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<5.0	ND<5.0	ND<250	ND	NA	0.5
Diisopropyl ether (DIPE)	ND<5.0	ND<5.0	ND<250	ND	NA	0.5
Ethanol	ND<500	ND<500	ND<25,000	ND	NA	50
Ethyl tert-butyl ether (ETBE)	ND<5.0	ND<5.0	ND<250	ND	NA	0.5
Methanol	ND<5000	ND<5000	ND<250,000	ND	NA	500
Methyl-t-butyl ether (MTBE)	260	140	11,000	ND	NA	0.5
Surrogate Recoveries (%)						
%SS:	104	105	102	106		
Comments		i				

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content.

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W. A. Craig Inc. 6940 Tremont Road Dixon, CA 95620-9603	Client Project ID: #3936; High St.	Date Sampled: 04/29/04
		Date Received: 04/29/04
	Client Contact: Tim Cook	Date Extracted: 05/01/04-05/04/04
	Client P.O.:	Date Analyzed: 05/01/04-05/04/04

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0404460

Lab ID	0404460-005B	0404460-006B	0404460-007B	0404460-008B	Reporting Limit for DF =1	
Client ID	MW-7	MW-8	MW-9	MW-10		
Matrix	W	W	W	W	S	W
DF	500	10	1	33	ug/kg	µg/L
Compound	**Concentration**					
tert-Amyl methyl ether (TAME)	ND<250	ND<5.0	ND	24	NA	0.5
t-Butyl alcohol (TBA)	ND<2500	ND<50	ND	ND<170	NA	5.0
1,2-Dibromoethane (EDB)	ND<250	ND<5.0	ND	ND<17	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<250	ND<5.0	0.63	ND<17	NA	0.5
Diisopropyl ether (DIPE)	ND<250	ND<5.0	ND	ND<17	NA	0.5
Ethanol	ND<25,000	ND<500	ND	ND<1700	NA	50
Ethyl tert-butyl ether (ETBE)	ND<250	ND<5.0	ND	ND<17	NA	0.5
Methanol	ND<250,000	ND<5000	ND	ND<17,000	NA	500
Methyl-t-butyl ether (MTBE)	12,000	130	4.7	1000	NA	0.5
Surrogate Recoveries (%)						
%SS:	104	105	108	110		
Comments						

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content.

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Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0404460

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 11331 Spiked Sample ID: 0404456-003A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	98.8	98.7	0.0789	100	100	0	70	130
MTBE	ND	10	104	104	0	118	108	8.87	70	130
Benzene	ND	10	105	109	3.94	113	108	4.61	70	130
Toluene	ND	10	101	103	2.51	106	102	4.07	70	130
Ethylbenzene	ND	10	106	111	4.69	113	109	4.08	70	130
Xylenes	ND	30	95.7	100	4.43	100	96.3	3.74	70	130
%SS	98.3	10	101	102	0.586	104	102	1.86	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

QA/QC Officer

DHS Certification No. 1644

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0404460

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 11349 Spiked Sample ID: 0404464-001A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	101	96.7	4.05	99.5	98.6	0.895	70	130
MTBE	ND	10	101	103	1.17	106	101	5.14	70	130
Benzene	ND	10	109	107	1.92	111	105	5.38	70	130
Toluene	ND	10	103	101	1.83	105	100	4.67	70	130
Ethylbenzene	ND	10	109	108	1.58	110	106	3.46	70	130
Xylenes	ND	30	100	95.7	4.43	96.3	95.3	1.04	70	130
%SS	99.8	10	104	104	0	105	103	1.85	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

QA/QC Officer

DHS Certification No. 1644

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

Matrix: W

WorkOrder: 0404460

EPA Method: SW8260B | Extraction: SW5030B | BatchID: 11345 | Spiked Sample ID: 0404458-003B

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
tert-Amyl methyl ether (TAME)	ND	10	81.9	77.7	5.33	90.3	88.3	2.26	70	130
t-Butyl alcohol (TBA)	ND	50	79.6	92.2	14.7	97.7	92.2	5.76	70	130
1,2-Dibromoethane (EDB)	ND	10	120	105	13.6	103	103	0	70	130
1,2-Dichloroethane (1,2-DCA)	ND	10	92.2	91.1	1.23	102	98.8	2.85	70	130
Diisopropyl ether (DIPE)	ND	10	101	90.8	10.4	91.7	91.8	0.0784	70	130
Ethanol	ND	500	85	83	2.42	114	117	2.56	70	130
Ethyl tert-butyl ether (ETBE)	ND	10	95.2	87.1	8.83	97	94.1	3.14	70	130
Methanol	ND	2500	84.7	91.5	7.81	73.5	89.2	19.3	70	130
Methyl-t-butyl ether (MTBE)	ND	10	89.6	86.5	3.56	95.7	88.6	7.67	70	130
%SS1	121	10	118	116	1.84	103	101	1.58	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike, MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

QA/QC Officer

DHS Certification No. 1644

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0404460 **ClientID: WACD**

Requested TAT: 5 days

Report to:
Tim Cook
W. A. Craig Inc.
6940 Tremont Road
Dixon, CA 95620-9603

TEL: (707) 693-2929
FAX: (707) 693-2922
ProjectNo: #3936; High St.
PO:

Bill to:
Christine
W. A. Craig Inc.
6940 Tremont Road
Dixon, CA 95620-9603

Date Received: 4/29/04
Date Printed: 4/29/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0404460-001	MW-1	Water	4/29/04	☐	B	A													
0404460-002	MW-3	Water	4/29/04	☐	B	A													
0404460-003	MW-5	Water	4/29/04	☐	B	A													
0404460-004	MW-6	Water	4/29/04	☐	B	A													
0404460-005	MW-7	Water	4/29/04	☐	B	A													
0404460-006	MW-8	Water	4/29/04	☐	B	A													
0404460-007	MW-9	Water	4/29/04	☐	B	A													
0404460-008	MW-10	Water	4/29/04	☐	B	A													

Test Legend:

1 9-OXYS_W	2 G-MBTEX_W	3	4	5
6	7	8	9	10
11	12	13	14	15

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CHAIN OF CUSTODY RECORD

McCAMPBELL ANALYTICAL INC.
110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
(925) 798-1620 Fax: (925) 798-1622

Turn Around Time: RUSH 24 HR 48 HR 72 HR 5 DAY
EDF Required: Yes No

Report To:
Bill To: W. A. Craig, Inc.
Company: W.A. Craig, Inc.
Address: 6940 Tremont Rd., Dixon, CA 95620
E-Mail: tech@wacraig.com
Tel: (707) 693-2929 **Fax:** (707) 693-2922
Project #: 3936 **Proj. Name:** High St
Project Location: Oakland, CA
Sampler Signature:

SAMPLE ID	DEPTH	DATE	TIME	# Containers	Type Containers	MATRIX: Water	MATRIX: Soil	METHOD PRESERVED: Ice	HCl	HNO_3	H_2SO_4	BTEX+MtBE & TPH-g (8021B & 8015M)	TPH as Diesel (8015M)	Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	Halogenated VOCs (EPA 601 / 8010)	BTEX only (EPA 602 / 8021B)	Fuel Additives/Oxygenates (EPA 8260)	VOCs (EPA 8260)	SVOCs (EPA 625/8270)	Pesticides (EPA 608/8081)	PCBs only (EPA 608/8080)	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	Comments
MW-1		4/29/04		3	VOA	X		X	X			X							X							
MW-3																										
MW-5																										
MW-6																										
MW-7																										
MW-8																										
MW-9																										
MW-10																										

Fuel Additives/Oxygenates (EPA 8260): 7 oxy only

Relinquished By:	Date:	Time:	Received By:
Clayton Mukai	4/29/04	2:45	
	4/29	5:50	
	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ____ PERSERVED IN LAB ____

PRESERVATION VOAS ✓ O&G METALS OTHER
APPROPRIATE CONTAINERS ✓