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**REPORT  
2005 FOURTH QUARTER  
SITE REMEDIATION STATUS  
SEARS AUTO CENTER #1248  
660 WEST WINTON AVENUE  
HAYWARD, CALIFORNIA  
FOR SEARS, ROEBUCK AND CO.**

URS Job No. 25363714  
January 30, 2006



January 30, 2006

Ms. Donna Drogos  
Hazardous Materials Specialist  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, CA 94502

RE: Report Submittal  
Sears Auto Center #1248  
660 West Winton Avenue  
Hayward, California  
For Sears, Roebuck and Co.

Dear Ms. Drogos:

Please find enclosed the 2005 Fourth Quarter Site Remediation Status Report on behalf of Sears, Roebuck and Co. The modified Fenton's Reagent injection program and quarterly groundwater monitoring will continue within the current scope of work through the 2006 first quarter. Please contact me at if you have any questions or require additional information.

Sincerely,  
URS Corporation

Joseph R. Liles  
Project Manager  
URS Corporation  
2020 East First Street, Suite 400  
Santa Ana, CA 92705  
Phone (714) 433-7682

cc: Bruce Kaye – Sears, Roebuck and Co.  
Chuck Headlee – RWQCB, San Francisco Region

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## 1.0 INTRODUCTION

This Remediation Status Report for Sears Auto Center #1248 (Site) has been prepared by URS Corporation (URS) on behalf of Sears, Roebuck & Co (Sears). The report presents details of the Site remediation activities, and results for the 2005 fourth quarter groundwater and soil gas monitoring programs. Remedial activities conducted at the Site include groundwater zone injections of a hydrogen peroxide solution (modified Fenton's reagent) to address groundwater affected with total petroleum hydrocarbons as gasoline (TPHg) and the gasoline constituents benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, six new injection wells were installed this quarter. The groundwater monitoring program consisted of sampling and analysis of 18 groundwater monitoring wells and one groundwater injection well. The soil gas monitoring consisted of sampling and analysis of five vadose wells. Installation of two groundwater monitoring wells (MW-23 and MW-24) also occurred during this quarter.

The groundwater sampling was conducted to evaluate current conditions of groundwater in the Site vicinity, and to monitor the progress of treating TPHg and BTEX impacted groundwater with hydrogen peroxide solution. The purpose of the soil gas monitoring was to confirm the absence of potential off-gassing and vapor migration from the underlying dissolved-phase hydrocarbons in shallow groundwater.

Groundwater monitoring has been conducted at the Site since March 1986. Attenuation monitoring of groundwater was initiated during the first quarter of 2000. The scope of the revised remediation program (Chemical Oxidation combined with Attenuation Monitoring) was presented in Dames & Moore's (now URS) *1999 First and Second Quarters Groundwater Monitoring and Revised Remedial Action Plan* dated October 4, 1999. Results of pilot studies for the treatment of TPHg and BTEX impacted soil and groundwater are presented in URS' *2003 First Quarter Remediation Status Report* dated June 18, 2003.

The work was previously performed under regulatory oversight of the City of Hayward Fire Department (HFD) as the Local Implementing Agency (LIA). However, the HFD transferred the case to the Alameda County Department of Environmental Health (ACDEH) in May 2003.

## 2.0 SITE DESCRIPTION

### 2.1 SITE FEATURES

The Sears Auto Center is located at 660 West Winton Avenue, at the north end of Southland Mall in Hayward, California (Figures 1 and 2). The mall encompasses approximately 95 acres southwest of the Winton Avenue and U.S. Interstate 880 junction (Figure 1). The mall is bordered on the north, south, and west by commercial and residential areas, and on the east by U.S. Interstate 880. Offsite commercial enterprises include banks, restaurants, office buildings, movie theaters, and automobile service and fueling stations.

### 2.2 HYDROGEOLOGIC SETTING

The Site is located within the East Bay Plain Groundwater Basin (Plain) of the San Francisco Bay hydrologic system. The Plain is about 25 miles long, 2 to 7 miles wide, and includes all or portions of the cities of Richmond, San Pablo, El Cerrito, Albany, Berkeley, Emeryville, Piedmont, Alameda, Oakland, San Leandro, San Lorenzo, and Hayward. It is bounded by San Francisco Bay to the west, San Pablo Bay to the north, and the Hayward Fault to the east. The southern boundary is defined as the northern boundary of the Alameda County Water District (DWR, 1980). The subject Site is located near the Alameda Creek watershed at the southern end of the Plain. The area has a Mediterranean climate with an average annual rainfall of 23 inches that occurs mostly between November and March. The upland watershed area for the Plain is over 100 square miles along the western slope of the Coast Ranges.

From the 1860s to the 1930s, all water supplies to the Plain area were provided by groundwater, springs, and local reservoirs. As a result of the development of various Sierra Nevada water supplies in the 1920s and 1930s, all local municipal water supplies were abandoned. Since then, the Plain has not been a regional water supply source. However, the Plain is used locally for irrigation, industrial, and emergency water supply purposes and as a limited drinking water supply. Water service in the Plain is provided by the City of Hayward and East Bay Municipal Utility District (EBMUD). Future potential beneficial uses include utilizing the Basin's aquifers for storage of imported surface water by EBMUD. This storage is intended for use during a drought or an earthquake. Additional potential uses by EBMUD include municipal extraction wells and non-potable irrigation wells (RWQCB, 1999).

The Site is located within the San Leandro Sub-Area of the Plain. Locally, unconsolidated sediments beneath the Sub-Area are approximately 500 feet thick and consist primarily of estuarine deposits of the Alameda Formation and younger alluvial fans. The upper portion of the sub-area is underlain extensively by the Yerba Buena Mud Member that contains high clay content and forms an extensive east-west aquitard across the Plain. This black, organic clay averages 25 to 50 feet thick with a gravel/sand/shell layer commonly in the middle of the unit. The RWQCB (1999) has identified the Yerba Buena Mud to be an ideal case for "less aggressive" remediation because "groundwater in these shallow deposits is unlikely to be used as a source of drinking water (due to low yield, elevated levels of coliform bacteria from leaking sewer pipes, and requirement for a 50 foot well seal for new municipal wells)." Deeper units beneath the Site consist of a sequence of alluvial fan deposits between older muds.

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The City of Hayward overlies the San Lorenzo Cone, which contains upper (Shallow Zone: 0 to 200 feet) and lower (Deep Zone: >200 feet) aquifers. The Shallow Zone groundwater is generally a calcium-bicarbonate type of water with total dissolved solids (TDS) concentrations ranging from about 300 to 1,000 milligrams per liter (mg/L). The Deep Zone groundwater is generally a sodium-bicarbonate type water with TDS concentrations ranging from about 300 to 1,400 mg/L (Muir, 1997).

Soil encountered beneath the Site and Site vicinity consists mostly of sandy silts, silty sands, fine sands, and clays consistent with the Yerba Buena Mud Member. The subsurface conditions can be divided into three broad lithologic units based on texture and relative depth. The units are:

- ◆ An upper fine-grained unit, extending to a depth of approximately 25 to 30 feet below ground surface (bgs), consisting of dark brown to olive gray clay, clayey silt and sandy silt, with occasional silty sand beds.
- ◆ A coarse-grained middle unit from a depth of approximately 30 to 45 feet bgs consisting of light brown to brownish yellow silty to gravelly sand, with sandy clay and silt interbeds. This coarse-grained middle unit was not encountered in every boring and is not locally continuous.
- ◆ A lower fine-grained unit beginning at a depth of approximately 45 feet consisting of sandy clay. This lower unit was not detected in all borings that contained the coarse-grained middle unit, primarily because those well borings were drilled to limited depths.

A cross-section showing the Site stratigraphy based on well borings completed on the northern edge of the Site is shown on Figure 3. Shallow groundwater beneath the Site has occurred at depths ranging from about 16 to 33 feet bgs. Groundwater is generally associated with the presence of the coarse-grained unit. The water-bearing zone is generally confined, as water levels rapidly ascend within drill rods after penetration of the sandy beds. Groundwater flow across the Site has historically been to the west-southwest at an approximate gradient of 0.001 to 0.002.



### 3.0 BACKGROUND

The Auto Center has been in operation since 1958. It consists of a multi-bay car repair facility and a former retail gasoline concession area (Figure 2). The Auto Center is currently in operation; however, retail gasoline sales were suspended in 1984. A number of underground storage tanks (USTs) were used in connection with the gasoline concession. Three steel 10,000-gallon gasoline USTs were installed in June 1958 and replaced by three fiberglass USTs in 1979. After an October 1984 report of fuel leaks from one of the product lines, the fiberglass USTs were removed in March 1985.

Seven steel USTs were installed at the Auto Center in 1959 to store motor oil. One 2,000-gallon UST and five 1,000-gallon USTs were used to store new motor oil, and one 1,000-gallon UST was used to store used oil. All seven USTs were removed in 1992, and replaced by a single 1,000-gallon used-oil UST that same year. The 1992 oil UST removal operation was presented in Dames & Moore's Tank Closure Report dated November 1, 1993 (Dames & Moore, 1993). During an August 4, 1994 meeting with regulatory officials, it was established that additional remedial action related to the oil USTs was not required. More recently, the 1,000-gallon replacement used-oil UST was removed under HFD oversight in June 1999. Additional remedial action has also not been required following the UST removal.

In general, results of the previous investigations indicate that gasoline impacted soil is present in the vicinity of the former gasoline USTs within the vadose zone (from just below ground surface down to groundwater). Since November 1984, a total of 24 groundwater monitoring wells (MW-1 to MW-24) have been installed to evaluate the extent of impacted groundwater emanating from the former gasoline UST area. Wells MW-1 through MW-12 have been monitored on a periodic basis since March 1986 while wells MW-13 through MW-17 have been monitored on a periodic basis since August 1993.

Groundwater monitoring wells MW-18, MW-19, and MW-21 were installed during April of 2000 and have been monitored on a periodic basis since April 2000. Groundwater monitoring well MW-22 was installed in late September 2001 to complete delineation and monitor the dissolved phase hydrocarbon plume extending north of the Site. Groundwater monitoring well MW-20 was installed on the eastern perimeter of the Site in December 2002 to complete delineation of the groundwater plume up-gradient of the former source area. As discussed in section 7.0, wells MW-23 and MW-24 were installed in the central area of the Site in October 2005.

Historical monitoring data shows that separate-phase product has been observed in seven wells (MW-1, MW-2, MW-3, MW-6, MW-8, MW-10, and MW-11), and dissolved phase TPHg and benzene in 20 of 22 wells. During the fourth quarter 2005, the presence of separate-phase product was limited to well MW-1. Dissolved phase TPHg and/or benzene was limited to 13 of the 21 wells sampled during the 2005 fourth quarter. A summary of the historical groundwater conditions, including depth to water, groundwater elevation, and hydrocarbon concentrations is included in Appendix A. The monitoring well locations are shown on Figure 2.

Pursuant to an earlier study conducted by Dames & Moore (currently URS) in 1999, and a letter of response dated December 21, 1999 by HFD, a revised remedial action program consisting of chemical

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oxidation combined with attenuation monitoring was implemented at the Site to enhance the degradation of sorbed and dissolved gasoline in soil and groundwater. Attenuation monitoring was initiated during the first quarter of 2000 and a bench scale chemical oxidation study was completed during the second quarter 2000. A second bench scale study was completed in May 2002 to evaluate the effectiveness of treating the TPHg and BTEX affected groundwater with hydrogen peroxide solution (modified Fenton's reagent). Results of the second bench scale study showed a 98% or greater destruction rate of the TPHg and BTEX in the treated groundwater (URS, June 2003).

A pilot study for a vadose zone injection program was conducted at the Site from February 2002 to April 2003. Due to the low hydraulic conductivities of the vadose zone soils and the resulting limited lateral influence of the injected treatment compounds (approximately 0.09 to 0.24 feet per year), the pilot study indicated that "in-situ injection treatment of the vadose zone soil impacted with TPHg and BTEX is not a feasible remedial option" (URS, June 2003).

A pilot study for a groundwater zone injection program was initiated at the Site in December 2002 with the installation of injection wells IW-1 through IW-7. Injection of hydrogen peroxide solution into groundwater using wells IW-1 through IW-7 began in January 2003. Initially, approximately 180 gallons of solution was injected on a weekly basis. Weekly injections were suspended in April 2003 and a larger scale injection of approximately 1,200 gallons of solution was conducted during May 2003. Since May 2003, injections of approximately 1,200 gallons of solution have occurred monthly.

As shown on Figure 2, five vadose monitoring wells (VW-1 through VW-5) were installed near the northern boundary of the Site during the third quarter 2001 (URS, April 2002). The five vadose monitoring wells have been monitored on a periodic basis since September 2001.

## 4.0 HEALTH AND SAFETY PLAN

Prior to initiating the field activities, URS prepared a site-specific Health and Safety Plan (HSP) to:

- ◆ Identify and describe potentially hazardous substances which may be encountered during field operations;
- ◆ Specify protective equipment and clothing for on-site activities; and
- ◆ Outline measures to be implemented in the event of an emergency.

URS field personnel and URS subcontractors reviewed the HSP prior to commencing the field procedures. Field monitoring activities were recorded in the HSP which is maintained in the project files at URS' Santa Ana office. A copy of the HSP remained onsite during field operations.

## 5.0 GROUNDWATER INJECTION PROGRAM

An ongoing groundwater zone injection program was initiated at the Site in December 2002. The injection program has consisted of:

- ◆ Installing seven injection wells (IW-1 through IW-7) within the TPHg and BTEX impacted groundwater plume on the northern edge of the Site,
- ◆ Slug testing of the wells,
- ◆ Periodic injections of hydrogen peroxide solution,
- ◆ Collection and evaluation of water quality data from adjacent groundwater monitoring wells.
  
- ◆ Installation of six additional injection wells (IW-8 through IW-13) downgradient of the source area as discussed in section 5.2 below.

The methods and results of the groundwater zone injection program are discussed in the following sections.

### 5.1 PERMITS AND NOTIFICATION

A work plan to install groundwater injection wells and inject hydrogen peroxide solution into the shallow groundwater zone beneath the Site was submitted to the HFD in September 2002 (URS, Sept. 2002). In addition, the Regional Water Quality Control Board (RWQCB), San Francisco Bay Basin (Region 2) was notified of the intent to install injection wells and inject hydrogen peroxide solution (modified Fenton's reagent) into the shallow groundwater zone beneath the Site. The work plan was approved by the HFD in correspondence dated October 9, 2002. A storage and management plan for the hydrogen peroxide solution at the Site was implemented under the oversight of the HFD.

Prior to initiating field activities, required well permits were obtained from the Alameda County Public Works Agency, Water Resources Section. Copies of the permits for wells installed in October 2005 are provided in Appendix B.

### 5.2 ADDITIONAL INJECTION WELL INSTALLATIONS

#### 5.2.1 Health and Safety Plan

H&S procedures observed during the field work conducted during the groundwater injection well installations, and injection program are described in Section 4.0.

#### 5.2.2 Utility Clearance

In accordance with California State Assembly Bill AB 73, URS notified Underground Services Alert (USA) of our intent to conduct subsurface borings at least 48 hours prior to initiation of intrusive field tasks. The proposed locations of subsurface borings were clearly marked with white paint as required by California Code 4216. USA contacted utility owners of record within the vicinity and notified them of

### 5.3 HYDROGEN PEROXIDE INJECTION PROGRAM

A bench-scale study was completed in May 2002 by URS to evaluate the effectiveness of treating TPHg and BTEX impacted groundwater with a hydrogen peroxide solution. Groundwater samples collected from impacted areas of the Site were used to complete the bench scale study. TPHg concentrations in the groundwater samples treated during the bench-study were reduced from 21,000 micrograms per liter ( $\mu\text{g/L}$ ) to below 400  $\mu\text{g/L}$ . Cumulative BTEX concentrations were reduced from 16,480  $\mu\text{g/L}$  to below 210  $\mu\text{g/L}$ . Results of the bench-scale study showed a 98% or greater destruction rate of the TPHg and BTEX in the treated groundwater (URS, June 2003).

Slug test results conducted on the groundwater injection wells yielded hydraulic conductivity (K) values ranging from approximately 3.1 feet per day (ft/day) to 24 ft/day. These K values for the shallow aquifer indicate that there is adequate lateral influence of the injected solution (URS, June 2003).

A pilot study for a groundwater zone injection program was initiated at the Site in December 2002 with the installation of injection wells IW-1 through IW-7 along the northern edge of the Site adjacent to La Playa Drive (Figure 2). Injection of hydrogen peroxide solution into the groundwater using wells IW-1 through IW-7 began in January 2003. The solution consisted of 10% hydrogen peroxide and 90% water. A solution of tap water, ferrous sulfate, and sulfuric acid was also injected, prior to hydrogen peroxide solution to lower the pH and increase the iron content of the surrounding aquifer.

Initially, approximately 180 gallons of hydrogen peroxide solution was injected on a weekly basis. Weekly injections were suspended in April 2003 and a larger scale injection of approximately 1,200 gallons of hydrogen peroxide solution was conducted during May 2003 prior to the second quarter groundwater sampling. The solution consisted of 15% hydrogen peroxide and 85% water. Beginning in April 2005, the solution consisted of approximately 7% hydrogen peroxide and 93% water solution. Injections of approximately 1,000 gallons of hydrogen peroxide solution followed by approximately 700 gallons of tap water are now being conducted two to three times between quarterly groundwater sampling events. A total of approximately 29,000 gallons of the hydrogen peroxide solution (not including the iron and acid pre-treatment solution, or the additional tap water injection) have been added to the groundwater injection wells from January 1, 2003 through August 10, 2005 (Appendix E). A summary of the 2005 groundwater zone injections is provided as Table 1.

Mass balance calculations assuming an aquifer thickness of 20 feet and porosity of 25% indicate that approximately 7,000 to 10,000 gallons of hydrogen peroxide solution would be required to treat the dissolved phase TPHg and BTEX impacted groundwater plume north of the injection well field. However, mass balance calculations often provide a low estimate of the actual volume of treatment solution required for complete hydrocarbon destruction due to multiple factors that reduce the effectiveness of the injected treatment compounds (EPA, 1999). Site specific factors that are potentially reducing the effectiveness of the injected compounds include the presence of separate phase product, a continuing source of hydrocarbons from the vadose zone, off-gassing of hydrogen peroxide, and soil oxidant demand. A recent study indicates that two (2) to 20 times the amount of hydrogen peroxide calculated by balanced chemical equations based on stoichiometric demand for oxidation of petroleum hydrocarbons may be required for effective insitu treatment (Mahmoud, et al., 2003).

### 5.4 INJECTION CONTROLS PROGRAM

The existing groundwater monitoring well field is being utilized to monitor groundwater quality during the hydrogen peroxide injection program. As part of the injection controls program, groundwater samples are collected and analyzed from three separate wells:

- ◆ A monitoring well outside the dissolved phase TPHg and BTEX plume to obtain background groundwater quality data from the shallow aquifer beneath the Site (MW-20),
- ◆ A monitoring well within the dissolved phase TPHg and BTEX plume and adjacent to the injection well field (MW-11),
- ◆ A monitoring well within the dissolved phase TPHg and BTEX plume and beyond the influence of the injection well field (MW-3).

Groundwater samples were collected from the wells on November 9, 2005. The wells were purged and sampled according to the methods described in Section 8.2. The samples were collected, labeled, and logged on a chain of custody (COC) document according to the methods described in Section 8.2. The sealed and labeled samples were placed in an ice chest containing ice, and transported to a California Department of Health Services (DHS) accredited laboratory for analysis. The ice chest temperature was recorded at 6 degrees centigrade by the laboratory upon sample receipt. COC documents were maintained throughout the sampling program. A copy of the COC document is included in Appendix F.

The groundwater samples were analyzed by Del Mar Analytical laboratories in Irvine, California for sulfate and chloride by EPA Method 300.0, chemical oxygen demand (COD) by EPA Method 410.4, biochemical oxygen demand (BOD) by EPA Method 405.1, dissolved carbon dioxide by SM 4500-CO<sub>2</sub>-C, ammonia by SM 4500-NH<sub>3</sub>F, dissolved methane by RSK-175 Modified, and Nitrate-N and Nitrite-N by EPA Method 300. The groundwater samples were analyzed by Southland Technical Services (STS) in Montebello, for TPHg by EPA 8015M, BTEX and fuel oxygenates by EPA Method 8260B, and dissolved methane by RSK-175 Modified. Dissolved oxygen (DO), oxygen reduction potential (ORP), temperature, ferrous iron concentration and pH were measured during well purging using field instruments described in Section 8.2. The laboratory analytical and field testing results for the injection controls program are presented in Table 2. Copies of the laboratory reports are provided in Appendix F.

Analytical results do not show elevated concentrations of the injection components (iron or sulfate) in the vicinity of the injection wells. Neither reduced pH nor elevated DO or ORP values were observed in the sample collected from well MW-11 located in the vicinity of the injection well field. Other measured parameters and analytes appear to be within the range of background levels for shallow groundwater beneath the Site.

Groundwater samples will continue to be collected on a quarterly basis from these wells and analyzed for the same parameters. The analytical results will be compared to assess any potential long-term effects to groundwater. The injection program will be suspended if the sampling results indicate groundwater quality is being adversely affected by iron or sulfate loading from the injected compounds.

In addition, during each injection application, pH is monitored in the perimeter wells adjacent to the groundwater injection wells to evaluate the lateral impact of the hydrogen peroxide injections. If the pH

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in the perimeter monitoring wells decreases below 6.0, the injection volume of acid will be decreased accordingly, or the injection program temporarily suspended until the pH returns to above 6.0.

## 6.0 SEPARATE PHASE PRODUCT REMOVAL

During the third quarter 2004, one Clean Environment Equipment (CEE) passive skimmer was installed in monitoring well MW-1 to recover separate phase product. Through December 2005 approximately 0.39 gallons of separate phase product has been removed with the CEE passive skimmer that was installed in well MW-1. The passive skimmer is checked for separate phase product during the monthly hydrogen peroxide injections and during the quarterly sampling events. The volume of separate phase product removed is recorded in the field. A log of the total volume removed is maintained in the project files.



## 7.0 ADDITIONAL GROUNDWATER MONITORING WELL INSTALLATION

Two additional groundwater monitoring wells (MW-23 and MW-24) were installed in the central area of the site during October 2005. The purpose of the wells is to monitor TPHg and BTEX concentrations directly upgradient and downgradient of the injection well field installed in October 2005.

### 7.1 PERMITS

Prior to initiating field activities, the required well permit was obtained from the Alameda County Public Works Agency, Water Resources Section. A copy of the permit is included in Appendix B.

### 7.2 HEALTH AND SAFETY PLAN

H&S procedures observed during the field work conducted during the groundwater monitoring well installation are described in Section 4.0.

### 7.3 UTILITY CLEARANCE

Utility clearance procedures observed prior to the groundwater monitoring well drilling activities are described in Section 5.2.2.

### 7.4 MONITORING WELL BORINGS

Well borings MW-23 and MW-24 were drilled with a CME-85 drill rig equipped with 8-inch outside diameter hollow-stem augers. The first 5 feet of each boring was hand-augered to assess the potential presence of subsurface utilities or other structures. The borings were drilled during October 10 and 11, 2005 by BC<sup>2</sup> Environmental of San Leandro, CA (C-57 License #686255). The well boring locations are shown on Figure 2.

### 7.5 GROUNDWATER MONITORING WELL CONSTRUCTION

Well borings MW-23 and MW-24 were completed as groundwater monitoring wells. Each well was installed through the hollow stem of the 8-inch diameter augers. The wells were constructed of blank 2-inch diameter, flush-threaded, schedule 40 PVC casing from the ground surface to 30 feet bgs, and 2-inch diameter flush-threaded schedule 40 PVC, 0.010-inch slotted casing from 30 feet bgs to 40 feet bgs. The bottom of the slotted casing was fitted with a threaded bottom cap. The top of blank casing was secured with a locking, air-tight, PVC cap.

The annular space between slotted casing (well screen) and the borehole was filled with #2/12 sand filter-pack to approximately one foot above the top of the well screen. The wells were surged following sand pack installation and the sand pack checked for settlement. A four-foot bentonite chip seal was placed above the filter pack and hydrated with deionized water. The remainder of the well boring was sealed with cement bentonite slurry. A concrete vaulted, traffic-rated, flush-mount well box was installed at the ground surface to secure the well head. Well construction details are included in the boring logs (Appendix C).

### 7.6 WELL DEVELOPMENT

Groundwater monitoring wells MW-23 and MW-24 were developed October 14, 2005 by surging, bailing and pumping. Well development proceeded until the produced water was relatively free of sediment, and temperature, pH, and conductivity had stabilized. Approximately 30 to 129 gallons of water were removed from each well during development.

### 7.7 SURVEY ACTIVITIES

The groundwater monitoring wells were surveyed by URS Corporation, a licensed California Land Surveyor on December 12, 2005. The wells were surveyed with respect to the California State Plane Coordinate System horizontal (NAD83) and vertical (NGVD88) datums. Well survey data is provided in Appendix D.

### 8.0 QUARTERLY GROUNDWATER MONITORING

Field activities for the 2005 fourth quarter groundwater monitoring were completed on November 7 through 9, 2005. The 2005 fourth quarter monitoring consisted of groundwater gauging of 24 monitoring wells and post-purge sample collection and analysis of 18 monitoring wells (MW-2, MW-3, MW-4, MW-8 through MW-13, MW-15, MW-16, and MW-18 through MW-24), and one groundwater injection well (IW-13). A well sampling and analysis schedule initially provided in the "1999 First and Second Quarter Groundwater Monitoring Results and Revised Remedial Action Plan (Dames & Moore, Oct. 4, 1999) was approved by the HFD. The sampling schedule has been modified since 1999 with the addition of new monitoring wells and injection wells and is provided in Appendix G. A description of the monitoring methods is presented below.

#### 8.1 GROUNDWATER GAUGING

Prior to purging and sampling, water levels were gauged to the nearest 0.01 foot using a Solinst electronic water level indicator. The depth to water was measured relative to the surveyed top of well casing. Water level measurements for the 2005 fourth quarter monitoring event were recorded on the field logs and are provided in Table 3. During water level gauging, the wells were checked for the presence of separate phase product using a product interface probe. Separate phase product was present in well MW-1, and is being actively removed with a passive skimmer.

#### 8.2 PURGING AND SAMPLING METHODS

After gauging, post-purge groundwater samples were collected from the wells for laboratory analysis. Wells MW-21 and IW-13 were purged dry with a disposable pre-cleaned polyethylene bailer. The remaining wells were purged of approximately three well casing volumes using a Grundfos RediFlo 2™ well pump. Water purged from each well was monitored for various field parameters including temperature, pH, turbidity, electrical conductivity, dissolved oxygen (D.O.), and oxygen reduction potential (O.R.P.) using a YSI™ multi-parameter meter equipped with a flow through cell. Purging continued until temperature, pH and conductivity had stabilized. Ferrous iron was tested using a HACH™ model IR-18C ferrous iron test kit. Measured field parameters for the 2005 fourth quarter monitoring event are listed in Table 3 and Appendix A. Copies of the groundwater purge logs are provided in Appendix H.

Groundwater samples were collected from 18 of the 24 monitoring wells and one injection well for laboratory analysis during the 2005 fourth quarter groundwater monitoring event. A groundwater sample was not collected for analysis from well MW-1 due to the presence of separate phase product. Groundwater samples were collected from the discharge tubing of the well pump following well purging. Due to slow re-charge, the "post-purge" groundwater samples were collected from wells MW-21 and IW-13 using a disposable pre-cleaned polyethylene bailer after 80% recovery. The Grundfos RediFlo 2™ submersible well pump was cleaned prior to use and between wells by washing in a solution of Liquinox, rinsing with tap water, final rinsing with deionized water, and air drying. Pre-cleaned, disposable, polyethylene discharge tubing was attached to the pump following each decontamination and was

## 2005 Fourth Quarter Site Remediation Status Report

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changed between each well purging event. Duplicate samples were collected from wells MW-2 and MW-18 and labeled Dup-2 and Dup-1, respectively. Two equipment blanks, labeled EB-1 and EB-2, were collected by pumping deionized water through the pump and clean, disposable, polyethylene tubing into sample containers following decontamination procedures on November 8, (EB-1) and November 9, 2005 (EB-2).

Sample containers and handling procedures conformed with the established protocols for each specific parameter as described in EPA SW-846. The sample bottles, once filled and preserved as required, were properly labeled. The label included well identification number, sample number, date and time sampled, job number, Site/client name and location, and sampling personnel's initials. The sealed and labeled samples were logged on a COC document, placed in ice chests containing ice, and transported to a California DHS accredited laboratory for analysis. A trip blank, prepared by the laboratory, remained in the ice chests during sample collection and transport. The ice chest temperatures were recorded at 4 and 6 degrees centigrade by the laboratory upon sample receipt. COC documents were maintained throughout the sampling program. Copies of the COC documents for the 2005 fourth quarter groundwater monitoring are included in Appendix I.

### 8.3 LABORATORY ANALYSIS PROGRAM FOR GROUNDWATER

All groundwater samples collected from monitoring wells, duplicates and equipment blanks were analyzed for TPHg by modified EPA Method 8015M, BTEX and the fuel oxygenates methyl-tert-butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA) by EPA Method 8260B. All groundwater samples were also analyzed for total nitrate by EPA Method 352.1, sulfate by EPA Method 300 or 375.4, and dissolved methane by GC/FID or RSK-175 Modified. The groundwater samples were analyzed by Southland Technical Services (STS) in Montebello, California and Del Mar Analytical laboratories in Irvine, California.

### 8.4 WELL HEAD MAINTENANCE

As part of the quarterly monitoring program, each well head is inspected to ensure that wells are properly sealed and secured. The routine well maintenance associated with the quarterly groundwater sampling consists of: inspection of water-tight well caps and locks on all monitoring wells and replacement as necessary; replacement of missing or damaged bolts on well box covers; and removal and replacement of damaged well boxes and associated concrete aprons. Locks were replaced on wells MW-10 and MW-12, and bolts were replaced for well MW-6 during the fourth quarter sampling event. Well MW-19 need the bolt holes repaired and are scheduled for repair during the first quarter 2006. No other maintenance was required during this quarterly event.

### 8.5 QUARTERLY GROUNDWATER MONITORING RESULTS

#### 8.5.1 Elevations and Contours

The measured depth to water ranged from 19.04 (MW-15) to 30.63 (MW-21) feet bgs during the 2005 fourth quarter monitoring event (Table 3). Groundwater elevations ranged between 34.23 (MW-19) and 35.72 (MW-13) feet mean sea level (msl). Groundwater elevations decreased an average of about 0.60 feet between the 2005 third quarter monitoring event and the 2005 fourth quarter monitoring event.

An interpretive groundwater elevation contour map, based on the water level measurements, is shown on Figure 4. The groundwater elevation contours and groundwater flow vectors were generated by a geostatistical gridding method using SURFER™, a graphical, contouring software program. The resultant groundwater contours indicate a west-southwest groundwater flow direction with a gradient of about 0.001 (Figure 4).

#### 8.5.2 Laboratory Analysis

Chemical analytical results of the 2005 fourth quarter are presented in Table 4. Elevated concentrations of TPHg (>10,000 µg/L) were detected in wells MW-2, MW-3, MW-4, MW-10, MW-11, MW-16, MW-18, and MW-21. Elevated concentrations of benzene (>1,000 µg/L) were detected during the 2005 fourth quarter monitoring event in wells MW-2, MW-3, MW-4, MW-11, MW-16, and MW-21. The groundwater samples collected from wells MW-9, MW-12, MW-13, MW-19, MW-20, and MW-22 did not contain concentrations of TPHg or BTEX above laboratory reporting limits. The fuel oxygenates MTBE, DIPE, TAME, ETBE, and TBA were not detected above the laboratory reporting limits in any of the groundwater samples. A sample was not collected for analysis from well MW-1 due to the presence of separate phase product.

A copy of the laboratory reports and COC documents are included in Appendix I. Based on results of the analyses, iso-concentration contour maps for dissolved phase TPHg and benzene in groundwater for the 2005 fourth quarter are provided as Figures 5 and 6, respectively.

URS conducted a check of data completeness for the analytical laboratory reports for groundwater samples collected during the 2005 fourth quarter monitoring event. Results of the data completeness check indicate, "these data are considered to be useable for meeting project objectives." A copy of URS' Data Validation reports is included in Appendix J.

## 9.0 SOIL GAS MONITORING

Five vadose monitoring wells (VW-1 through VW-5) were purged and sampled during the 2005 fourth quarter monitoring event. Vadose monitoring wells were purged with a Gilian™ Gilair-5RC pump connected to the well head sample port with pre-cleaned, disposable Tygon™ tubing. Prior to use, the flow rate of the pump was calibrated using a Gilian™ Gilibrator II flow meter. Vapor monitoring wells were purged until approximately three well volumes of soil gas had been removed from each well. Soil gas samples were collected following well purging by connecting the disposable Tygon tubing from the ball-valve sample port on the well head to the sampling port of a Summa canister under negative pressure. After the Summa canister was securely connected to the well head, the sample port valve on the Summa canister was opened to draw soil gas from the monitoring well into the sample canister. The sample port was closed and secured following sample collection.

Sample labels were affixed to the sample canisters with the following information: well designation, sample number, date, collector initials, owner, sample location, and time of collection. The labeled canister samples were then logged on a COC document and subsequently transported to a DHS accredited laboratory for analysis.

Decontamination is not required for the Gilian™ Gilair-5RC pump between well purgings because the pump is not placed within the well and is not immersed in the vapor/gas to be sampled. Residual gas/vapor from the monitoring well is flushed from the pump when the pump is subsequently turned on. Residual vapor/gas cannot inadvertently back flush through the well sample port as the pump is turned on prior to opening the sample port on the well head. The flow of air is directed away from the well through the pump and released to the atmosphere during purging.

## 10.0 SOIL GAS MONITORING RESULTS

Soil gas samples from vadose monitoring wells VW-1 through VW-5 were submitted to STS for chemical analysis. The samples were analyzed for TPHg, BTEX, and MTBE by EPA analysis method 8015/8021B. TPHg, BTEX, and MTBE were not detected above laboratory reporting limits in any of the samples submitted.

Chemical analytical results for the soil gas samples collected during the 2005 fourth quarter are provided on Table 5. Laboratory report and COC documents for the 2005 fourth quarter are provided as Appendix K.

URS conducted a check of data completeness for the soil gas analytical laboratory reports. Results of the data completeness check indicate, "these data are considered to be useable for meeting project objectives." A copy of URS' Data Validation report is included in Appendix L.

## 11.0 WASTE MANAGEMENT

Liquid wastes (decontamination water and well purge water) were collected and stored in five 55-gallon Department of Transportation (DOT)-approved drums. The drums were labeled to identify the source of the wastes. The drums were stored onsite in a designated area and properly disposed by a licensed waste transporter under contract with Sears following review of the chemical analysis data.

Solid wastes (soil for well installations) were collected and stored in five 55-gallon DOT approved drums. The drums were labeled to identify the source of the wastes. The drums were stored onsite in a designated area and properly disposed by American Integrated Services Incorporated. Copies of the waste manifests are included in Appendix M.



### 12.0 DISCUSSION

In December 2002, URS installed seven groundwater injection wells along West Winton Avenue to provide locations for the periodic injection of modified Fenton's Reagent directly into impacted groundwater to aid in the destruction of dissolved phase TPHg and BTEX compounds that migrate across West Winton Avenue as described in our *Groundwater Injection Well and Modified Fenton's Reagent Treatment Program Work Plan* dated September 23, 2002. Results of a bench-scale study conducted during May 2002 by URS showed a 98% or greater destruction rate of dissolved phase TPHg and BTEX in groundwater samples collected from the Site. In October 2005, URS installed an additional six groundwater injection wells downgradient of the source area to aid in the destruction of dissolved phase TPHg and BTEX compounds in groundwater that are migrating to the west-southwest direction.

Groundwater injections were initiated during January 2003 and are ongoing. Hydraulic conductivity values obtained from the injection wells along Winton Avenue indicate the saturated zone is moderately to highly permeable which is favorable for injections. Historical groundwater monitoring results indicate wells within the injection well field along Winton Avenue are showing a response to the injection program. Concentrations rebounded during the 2004 fourth quarter in monitoring wells within the injection well field (MW-11, MW-16, and MW-21), but have decreased since that time (Appendix A).

Elevated concentrations of TPHg ( $>10,000$   $\mu\text{g/L}$ ) were detected during the 2005 fourth quarter monitoring event in groundwater samples collected from wells MW-2, MW-3, MW-4, MW-10, MW-11, MW-16, MW-18, and MW-21. Elevated concentrations of benzene ( $>1,000$   $\mu\text{g/L}$ ) were detected during the 2005 fourth quarter monitoring event in groundwater samples collected from wells MW-2, MW-3, MW-4, MW-11, MW-16, and MW-21.

Well MW-1 was not sampled due to the presence of separate phase product in the well. A passive skimmer was installed in the well during the third quarter 2004. As of September 2005 approximately 0.39 gallons of separate phase product have been recovered.

Natural attenuation parameters indicate current anaerobic degradation of petroleum hydrocarbons within the dissolved phase plume. Reduced D.O. concentrations within the hydrocarbon plume area indicate aerobic biodegradation of dissolved phase petroleum hydrocarbons has occurred. Elevated concentrations of methane within the central area of the plume indicate that anaerobic degradation of dissolved phase petroleum hydrocarbons is occurring (Figure 7). Increased concentrations of dissolved iron (Figure 8) and decreased concentrations of sulfate (Figure 9) and nitrate in the central area of the plume also indicate that anaerobic biodegradation of dissolved phase petroleum hydrocarbons is occurring.

Soil gas samples collected from the five vadose monitoring wells during the 2005 fourth quarter monitoring did not contain TPHg, BTEX, or MTBE above laboratory reporting limits.

### 13.0 SCHEDULE

The schedule for work to be conducted during the 2006 first quarter is as follows:

- ◆ Continued injections of modified Fenton's Reagent into groundwater; January - March 2006,
- ◆ Quarterly groundwater monitoring; February 2006,
- ◆ Quarterly soil gas monitoring; February 2006,

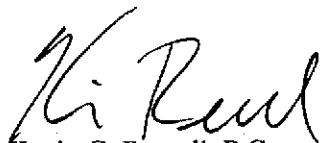
The ACDEH will be notified of upcoming field activities.

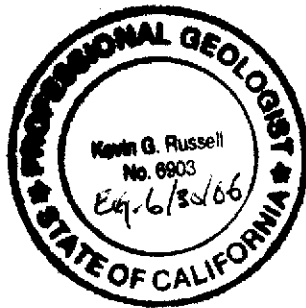
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Should you have any questions or comments, please do not hesitate to contact us.

Respectfully submitted,

URS CORPORATION

  
Kevin G. Russell, P.G.  
Senior Project Geologist



  
Taras B. Kruk, P.G., C.HG., C.E.G.  
Project Director

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**Table 1**  
**Summary of 2005 Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-5	5/6/2005	805	NA	60	NA
IW-6	5/6/2005	NA	NA	0	NA
IW-7	5/6/2005	754	NA	60	NA
IW-1	6/9/2005	1715	NA	60	NA
IW-2	6/9/2005	1705	22.54	120	6.9
IW-3A	6/9/2005	1638	NA	120	NA
IW-4	6/9/2005	1631	22.23	60	7.1
IW-5	6/9/2005	1603	NA	60	NA
IW-7	6/9/2005	1554	NA	60	NA
IW-1	6/10/2005	1026	NA	60	6.4
IW-2	6/10/2005	1032	NA	90	5.5
IW-3A	6/10/2005	1106	NA	90	6.5
IW-4	6/10/2005	1113	NA	60	6.6
IW-5	6/10/2005	1139	NA	60	NA
IW-7	6/10/2005	1148	NA	60	NA
IW-1	7/12/2005	1306	NA	60	NA
IW-2	7/12/2005	1339	23.08	120	6.6
IW-3A	7/12/2005	1405	NA	120	NA
IW-4	7/12/2005	1312	22.77	60	6.7
IW-5	7/12/2005	1442	NA	45	NA
IW-6	7/12/2005	1428	NA	15	NA
IW-7	7/12/2005	1436	NA	60	NA
IW-1	7/13/2005	756	NA	60	5.5
IW-2	7/13/2005	829	NA	120	5.1
IW-3A	7/13/2005	855	NA	120	6.5
IW-4	7/13/2005	805	NA	60	NA
IW-5	7/13/2005	949	NA	110	NA
IW-6	7/13/2005	917	NA	20	NA
IW-7	7/13/2005	923	NA	60	NA
IW-1	8/9/2005	1537	23.68	90	7.0
IW-2	8/9/2005	1509	NA	120	NA
IW-3A	8/9/2005	1443	NA	120	NA
IW-4	8/9/2005	1420	23.21	60	7.0
IW-5	8/9/2005	1413	NA	60	NA
IW-6	8/9/2005	1344	NA	20	NA
IW-7	8/9/2005	1356	NA	100	NA
IW-1	8/10/2005	940	NA	50	5.5
IW-2	8/10/2005	915	NA	120	5.3
IW-3A	8/10/2005	946	NA	120	NA
IW-4	8/10/2005	824	NA	60	NA
IW-5	8/10/2005	818	NA	60	NA
IW-6	8/10/2005	1004	NA	20	NA
IW-7	8/10/2005	1010	NA	20	NA
<b>Total Volume Injected</b>				<b>29017</b>	
Explanations: ft. btoc - feet below top of casing NA - not analyzed/ not measured H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O - hydrogen peroxide/water solution					

Table 2  
 2005 Fourth Quarter Injection Controls Results  
 Sears Auto Center #1248  
 Hayward, California

Monitoring Well No.	LABORATORY ANALYTICAL RESULTS													
	Notes	Sample Period	pH	Chloride (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Nitrogen (mg/L)	Ammonia (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Methane (mg/L)	COD (mg/L)	BOD (mg/L)	CO <sub>2</sub> (mg/L)
MW-3	1	Nov-05	6.52	95	< 0.15	< 1.5	< 0.11	< 0.50	0.87	2.0	2.9	180	19	220
MW-11	1	Nov-05	6.56	48	0.15	< 0.15	0.15	< 0.50	1.8	4.4	0.33	180	18	210
MW-20	1	Nov-05	6.67	45	16	< 0.15	16	< 0.50	86	0.0	< 0.050	< 20	< 2.0	120

Notes/Explanations:  
 1. "Post-purge" sample  
 mg/L - milligrams per liter  
 pH - Reading value collected in field during purging of well  
 COD - Chemical Oxygen Demand  
 BOD - Biochemical Oxygen Demand  
 CO<sub>2</sub> - Carbon Dioxide

**Table 3**  
**2005 Fourth Quarter Groundwater Levels and Parameters**  
**Sears Auto Center #1248**  
**Hayward, California**

Monitoring/ Injection Well No.	Notes	Sample Period	GROUNDWATER LEVELS ( levels collected 11/07/05)					FIELD PARAMETERS								
			Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Casing Elevation (m MSL)	Groundwater Elevation (ft MSL)	Temperature		pH	Conductivity ( $\mu$ S/cm)	Turbidity (NTU)	Ferrous Iron (mg/L)	D.O. (mg/L)	O.R.P. (mV)	
								( $^{\circ}$ F)	( $^{\circ}$ C)							
MW-1	SP	Nov-05	24.42	0.01	60.04	18.30	35.63	--	--	--	--	--	--	--	--	
MW-2	1	Nov-05	24.00	0.00	59.55	18.15	35.55	71.19	21.77	6.59	1,665	24.7	5.4	1.46	-99.3	
MW-3	1	Nov-05	23.25	0.00	58.78	17.92	35.53	72.12	22.29	6.52	2,026	11.4	2.0	0.66	-99.3	
MW-4	1	Nov-05	22.95	0.00	58.31	17.77	35.36	73.27	22.93	6.47	1,721	5.5	3.5	0.53	-97.5	
MW-5	2	Nov-05	23.83	0.00	59.20	18.05	35.37	--	--	--	--	--	--	--	--	
MW-6	2	Nov-05	25.01	0.00	60.72	18.51	35.71	--	--	--	--	--	--	--	--	
MW-7	2	Nov-05	22.83	0.00	58.04	17.69	35.21	--	--	--	--	--	--	--	--	
MW-8	1	Nov-05	23.39	0.00	58.70	17.89	35.31	68.83	20.46	6.55	1,348	30.5	5.8	0.39	-134.0	
MW-9	1	Nov-05	20.76	0.00	55.94	17.05	35.18	74.57	23.65	6.49	1,603	4.6	0.8	0.88	-104.2	
MW-10	1	Nov-05	22.19	0.00	57.21	17.44	35.02	72.63	22.57	6.60	1,756	10.8	6.0	0.49	-124.8	
MW-11	1	Nov-05	23.99	0.00	59.44	18.12	35.45	69.35	20.75	6.56	1,578	10.4	4.4	0.48	-105.4	
MW-12	1	Nov-05	22.75	0.00	58.41	17.80	35.66	69.39	20.77	6.61	1,315	4.8	0.0	1.32	41.6	
MW-13	1	Nov-05	23.26	0.00	58.98	17.98	35.72	67.71	19.84	6.61	770	31.3	0.0	0.31	98.4	
MW-14	2	Nov-05	24.65	0.00	59.72	18.20	35.07	--	--	--	--	--	--	--	--	
MW-15	1	Nov-05	19.04	0.00	53.84	16.41	34.80	70.65	21.47	6.70	1,140	200.4	2.4	0.35	-124.5	
MW-16	1	Nov-05	24.64	0.00	60.28	18.37	35.64	68.14	20.08	6.58	2,178	622.1	3.8	0.74	-68.4	
MW-17	2	Nov-05	19.50	0.00	55.03	16.77	35.53	--	--	--	--	--	--	--	--	
MW-18	1	Nov-05	22.28	0.00	57.34	17.48	35.06	68.32	20.18	6.54	1,053	17.7	3.2	0.38	-100.8	
MW-19	1	Nov-05	19.85	0.00	54.08	16.48	34.23	73.98	23.32	6.67	1,315	4.5	0.0	0.44	100.0	
MW-20	1	Nov-05	27.84	0.00	63.44	19.34	35.60	67.69	19.83	6.67	1,382	19.7	0.0	1.30	132.7	
MW-21	1,5	Nov-05	30.63	0.00	66.17	20.17	35.54	65.86	18.81	6.58	2,577	167.7	3.4	2.29	-91.9	
MW-22	1	Nov-05	21.91	0.00	57.16	17.42	35.25	66.40	19.11	6.76	901	46.2	0.0	3.59	109.9	
MW-23	1	Nov-05	23.38	0.00	58.92	17.96	35.54	70.25	21.25	6.74	1,255	8.8	1.0	0.76	-21.7	
MW-24	1	Nov-05	23.76	0.00	59.38	18.10	35.62	69.33	20.74	6.70	1,246	87.0	0.0	1.11	60.5	
IW-13	1	Nov-05	22.59	0.00	58.20	17.74	35.61	71.22	21.79	6.84	1,452	1191.0	0.2	0.84	57.9	

**Notes/Explanations:**

- |  |  |
|--|--|
| 1. "Post-purge" sample   | $\mu$ S/cm - microSiemens per centimeter |
| 2. Well not scheduled for sampling this quarter  | mV - millivolt                           |
| 3. Passive skimmer in well   | mg/L - milligrams per liter              |
| 4. Hydrocarbon odor  | NTU - nephelometric turbidity units      |
| 5. Purged dry and sampled with disposable baffle   | -- = Not analyzed/Not measured           |
| SP - Separate phase product in well  | D.O. - Dissolved Oxygen                  |
| Groundwater Elevation = Top of casing elevation - (Depth to Water - (0.8 * Standing Product Thickness)). | O.R.P. - Oxidation Reduction Potential   |
| ft - feet  | ( $^{\circ}$ C) - degree centigrade      |
| bgs - below ground surface   | ( $^{\circ}$ F) - degree fahrenheit      |
| MSL - Mean Sea Level   |  |



**Table 4**  
**2005 Fourth Quarter Groundwater Analytical Results**  
**Sears Auto Center #1248**  
**Hayward, California**

Monitoring/ Injection Well No.	Notes	Sample Period	LABORATORY ANALYTICAL RESULTS												
			TPH <sub>g</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	TBA (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Methane (µg/L)
MW-1	SP,4	Sep-05	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	1	Nov-05	54,600	7,310	12,000	1,990	9,500	< 100	< 100	< 100	< 100	< 500	1.72	< 1.0	9,450
	1,2	Nov-05	56,900	7,340	11,900	1,900	9,630	< 100	< 100	< 100	< 100	< 500	--	--	--
MW-3	1	Nov-05	32,800	8,590	694	3,160	8,970	< 100	< 100	< 100	< 100	< 500	< 0.15	0.87	2,900
MW-4	1	Nov-05	34,900	2,690	441	1,490	2,860	< 100	< 100	< 100	< 100	< 500	1.64	1.05	4,020
MW-5	3	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	3	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	3	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	1	Nov-05	8,290	37.5	< 2	168	27.7	< 4	< 4	6.0	< 4	< 20	2.6	3.7	1,210
MW-9	1	Nov-05	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	6.7	22.9	< 5
MW-10	1	Nov-05	14,200	630	399	1,720	2,990	< 50	< 50	< 50	< 50	< 250	1.81	< 1.0	11,300
MW-11	1	Nov-05	38,500	3,130	2,690	2,140	10,800	< 100	< 100	< 100	< 100	< 500	0.15	1.8	330
MW-12	1	Sep-05	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	17.2	79.7	< 5
MW-13	1	Sep-05	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	13.2	18.9	< 5
MW-14	3	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	1	Nov-05	2,090	1	< 1	23.0	44.2	< 2	< 2	< 2	< 2	< 10	8.4	6.8	192
MW-16	1	Nov-05	11,100	2,660	175	1,350	1,920	< 50	< 50	< 50	< 50	< 250	12.3	5.4	858
MW-17	3	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	1	Nov-05	21,000	541	854	1,280	4,070	< 40	< 40	< 40	< 40	< 200	2.1	1.3	< 5
		Nov-05	21,900	536	940	1,250	4,130	< 40	< 40	< 40	< 40	< 200	--	--	--
MW-19	1	Sep-05	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	20.2	62.4	< 5
MW-20	1	Nov-05	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	16.0	86	< 5
MW-21	1,5	Nov-05	28,100	5,060	654	1,760	2,910	< 100	< 100	< 100	< 100	< 500	2.02	< 1.0	< 50
MW-22	1	Nov-05	< 50	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	19.8	45.9	< 5
MW-23	1	Nov-05	198	6.6	1.2	15.5	18.7	< 2	< 2	< 2	< 2	< 10	27.0	62.4	356
MW-24	1	Nov-05	5,130	124	384	70.0	1,080	< 10	< 10	< 10	< 10	< 50	22.3	77.6	< 5
IW-13	1,5	Nov-05	125	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 10	25.6	83.4	< 5

**Notes/Explanations:**

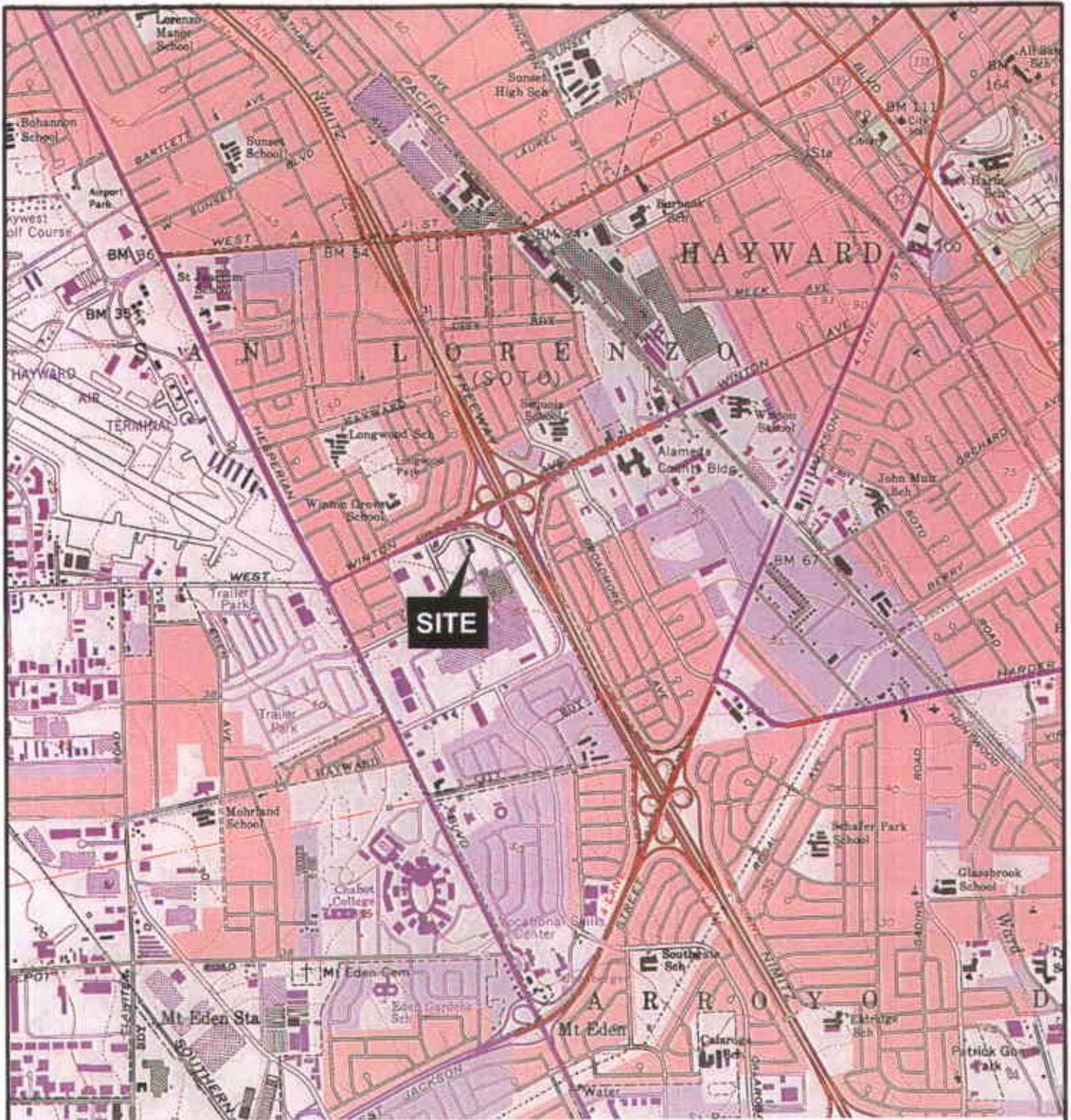
- 1. "Post-purge" sample
- 2. Duplicate sample
- 3. Well not scheduled for sampling this quarter
- 4. Passive skimmer installed in well
- 5. Purged dry and sampled with disposable bailer
- SP - Separate phase product in well
- µg/L - micrograms per liter
- mg/L - milligrams per liter

- TPHg = Total Petroleum Hydrocarbons - gasoline range organics.
- MTBE - Methyl Tertiary Butyl Ether
- ETBE - Ethyl Tertiary Butyl Ether
- DIPE - Di-isopropyl Ether
- TAME - Tertiary Amyl Methyl Ether
- TBA - Tertiary Butyl Alcohol
- = Not analyzed/Not measured
- < = Less than the detection limit indicated

**Table 5**  
**2005 Fourth Quarter Soil Gas Monitoring Results**  
**Sears Auto Center #1248**  
**Hayward, California**

Well No.	Notes	Sample Period	LABORATORY ANALYTICAL RESULTS							
			Anal. Units	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	
VW-1	1	Nov-05	ppm-Vol	< 1.3	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033
VW-2	1	Nov-05	ppm-Vol	< 1.3	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033
VW-3	1	Nov-05	ppm-Vol	< 1.3	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033
VW-4	1	Nov-05	ppm-Vol	< 1.3	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033
VW-5	1	Nov-05	ppm-Vol	< 1.3	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033	< 0.033

**Notes/ Explanations:**  
1. "Post-purge" sample  
ppm-Vol - parts per million per volume  
< = Less than the reporting limit indicated



REFERENCE: USGS 7.5 Minute Series Hayward, CA Quad, Photorevised 1980

**FIGURE 1**  
**VICINITY MAP**  
 SEARS AUTO CENTER #1248  
 660 WEST WINTON AVENUE  
 HAYWARD, CALIFORNIA  
 For Sears, Roebuck & Co.



Scale in Miles

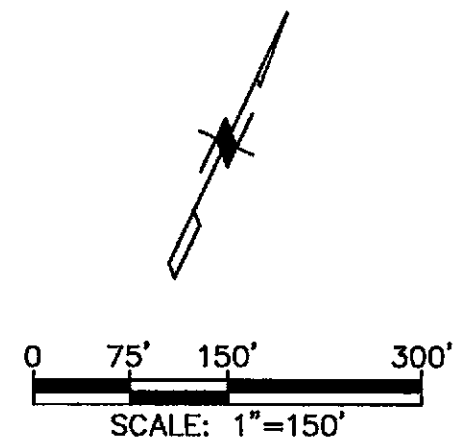
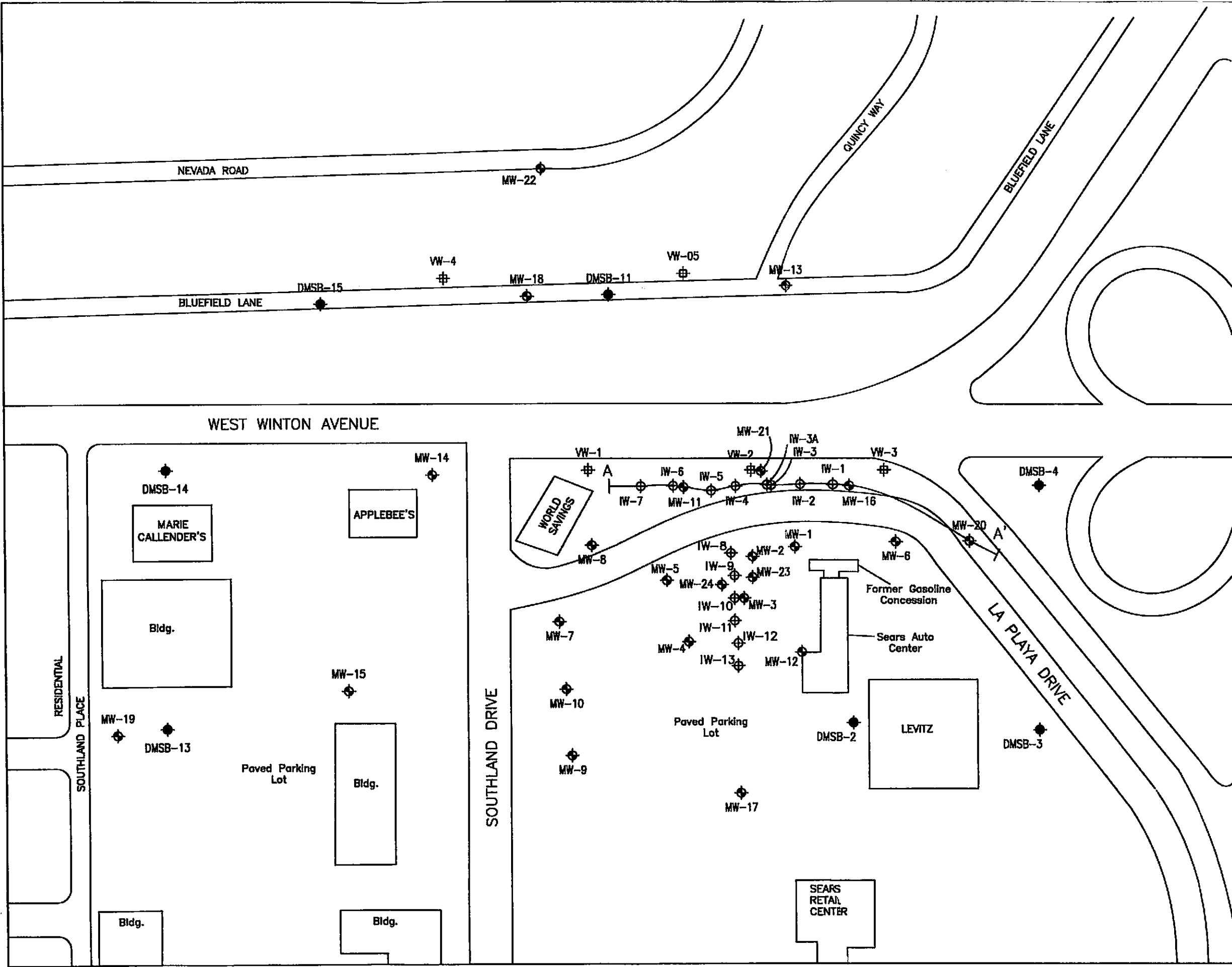
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**URS**

# LEGEND

- VW-1 VADOSE ZONE MONITORING WELL
- DMSB-15 PREVIOUS HYDRPUNCH SAMPLING LOCATION
- IW-7 GROUNDWATER INJECTION WELL
- MW-22 MONITORING WELL LOCATION
- A A' LINE OF CROSS-SECTION

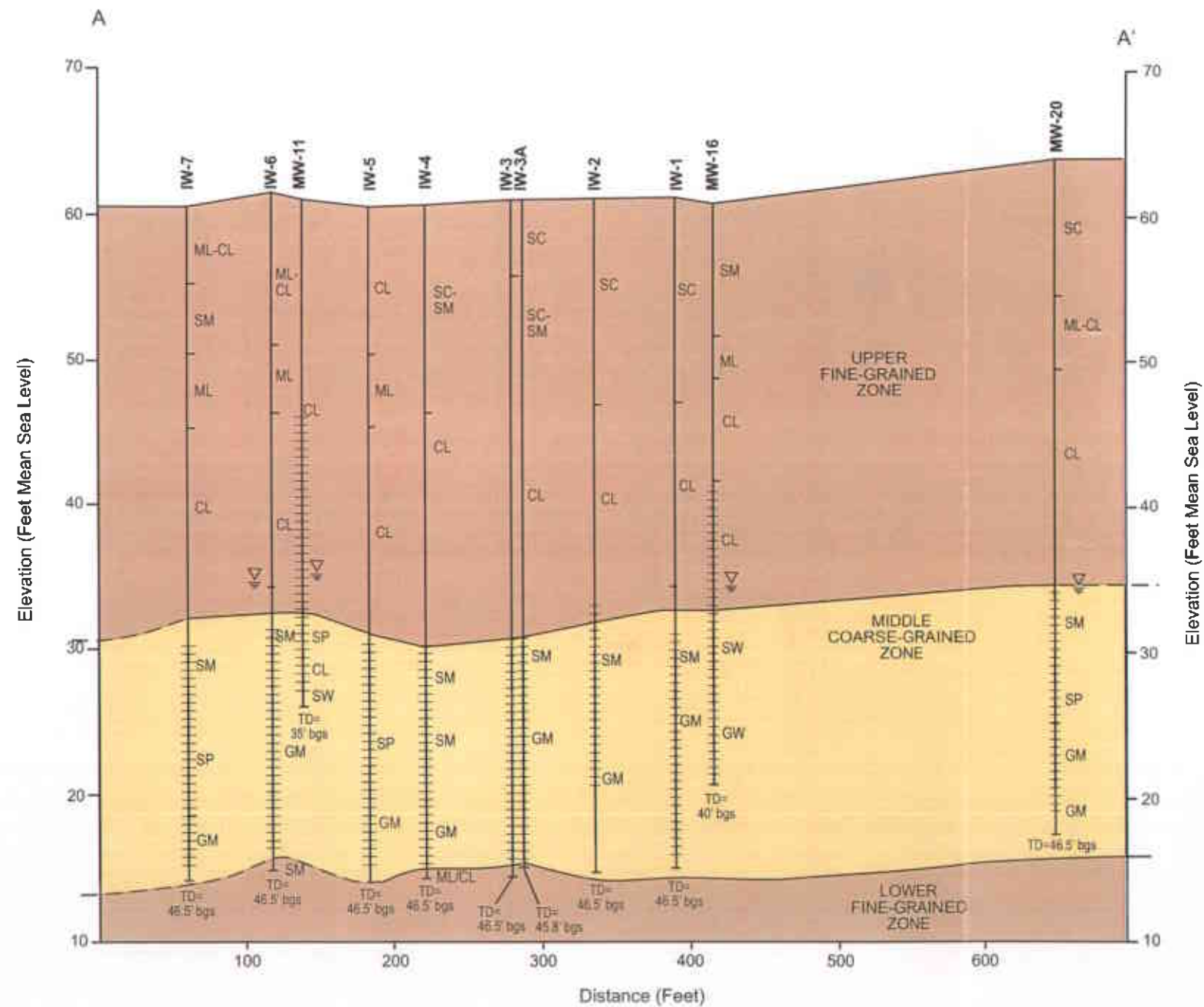
MAP REFERENCE:  
 Dames & Moore Plot Plan  
 URS Regional Survey Group  
 Hayward Aerial Photo 3/25/95



**URS Corporation**

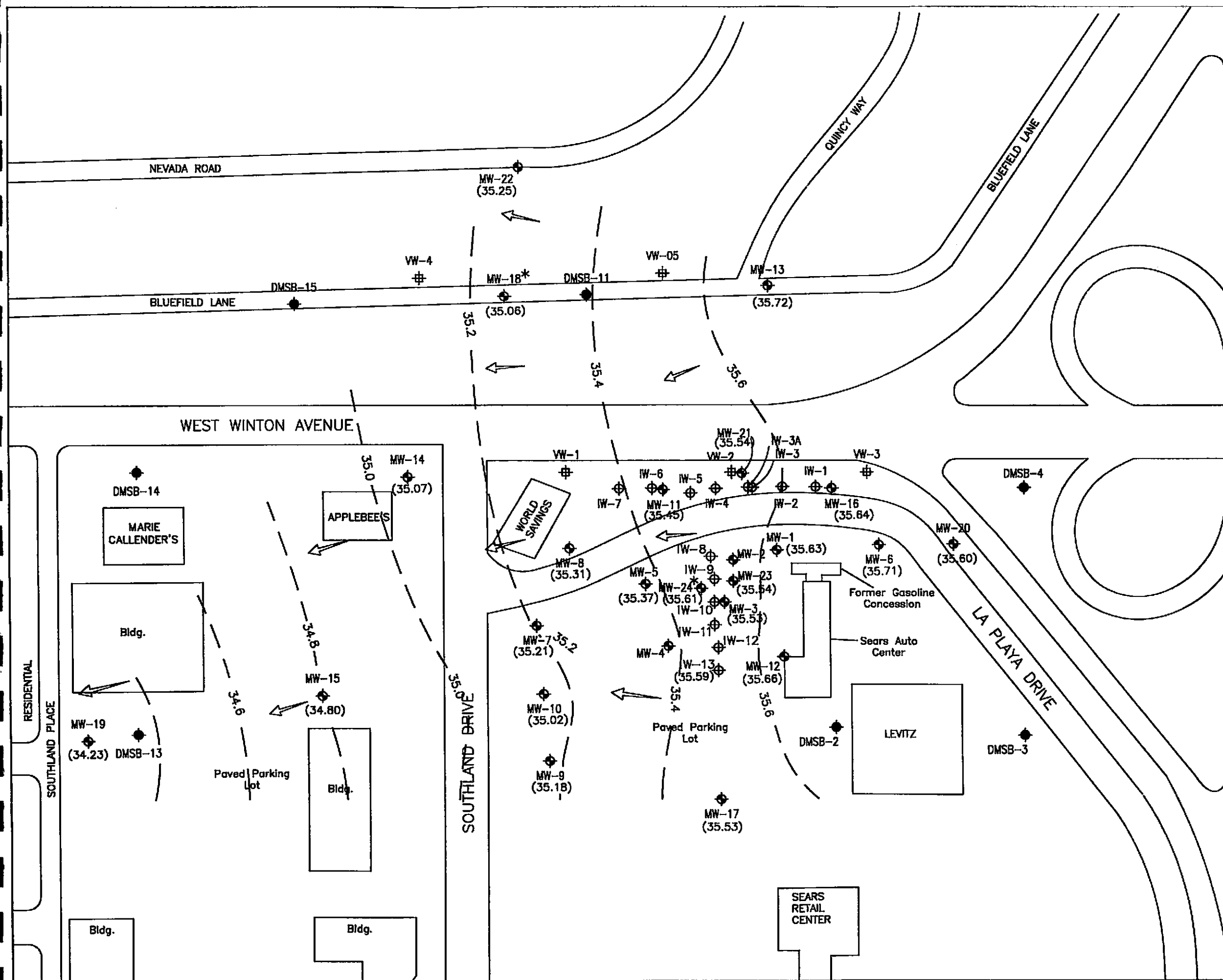
PLOT PLAN  
 SEARS AUTO CENTER # 1248  
 HAYWARD, CA.

Proj. No.: 25363714	Date: DEC. 2005
Project: SEARS-HAYWARD	CAD ID: SH-PLOT
	Figure: 2



- LEGEND**
- Horizontal Scale: 1" = 100'
  - Vertical Scale: 1" = 10'
  - bgs = Below Ground Surface
  - TD = Total Depth
  - ≡ = Groundwater Well Screen Interval
  - ∇ = Groundwater Potentiometric Surface (measured 12/9/02)
  - SP = USCS Soil Classification

<b>GEOLOGIC CROSS SECTION A-A'</b>	
Project: SEARS AUTO CENTER #1248 660 WEST WINTON AVE., HAYWARD, CA	
Project No.: 25363714	Figure 3
Drill Dates: DEC. 3-5, 2002	

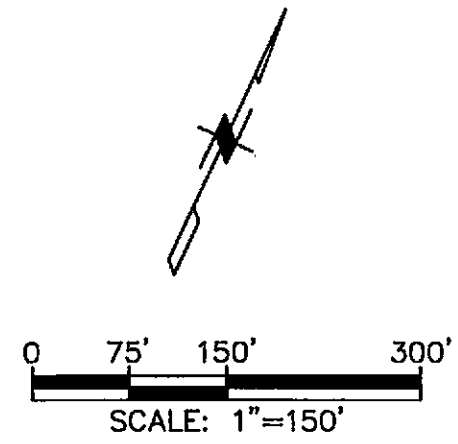


**LEGEND**

- VW-1 VADOSE ZONE MONITORING WELL
- DMSB-15 PREVIOUS HYDROPUNCH SAMPLING LOCATION
- IW-7 GROUNDWATER INJECTION WELL
- MW-22 MONITORING WELL LOCATION
- (35.25) GROUNDWATER ELEVATION (FEET MEAN SEA LEVEL)
- 35.0- GROUNDWATER CONTOUR (FEET MEAN SEA LEVEL)
- GROUNDWATER FLOW VECTOR
- \* GROUNDWATER ELEVATION NOT USED FOR CONTOURING

MAP REFERENCE:  
 Dames & Moore Plot Plan  
 URS Regional Survey Group  
 Hayward Aerial Photo 3/25/95

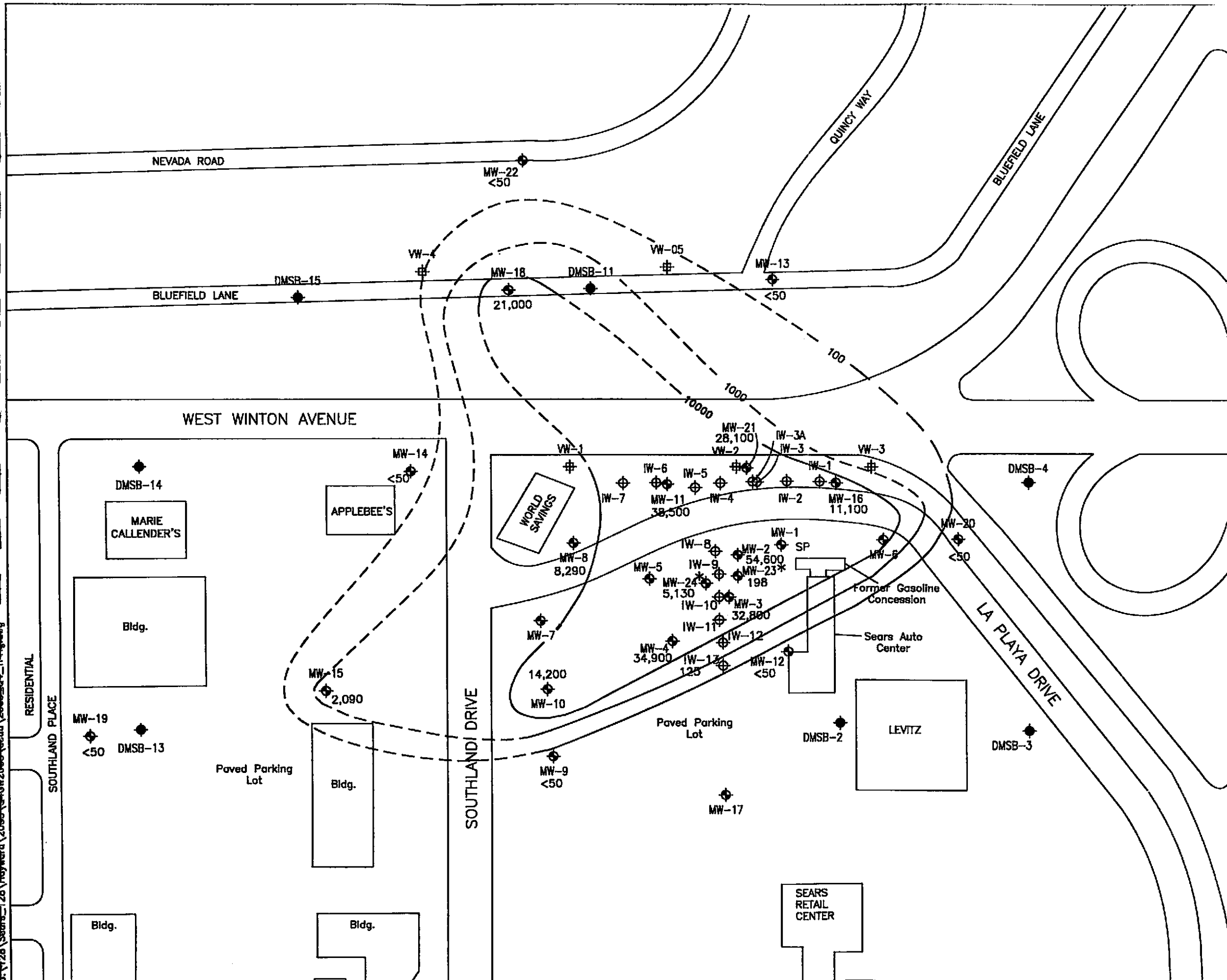
SAMPLE DATE: NOVEMBER 2005



**URS Corporation**

2005 FOURTH QUARTER  
 GROUNDWATER CONTOUR MAP  
 SEARS AUTO CENTER # 1248  
 HAYWARD, CA.

Proj. No.: 25363714	Date: DEC. 2005
Project: SEARS-HAYWARD	CAD ID: SH-PLOT
	Figure: 4

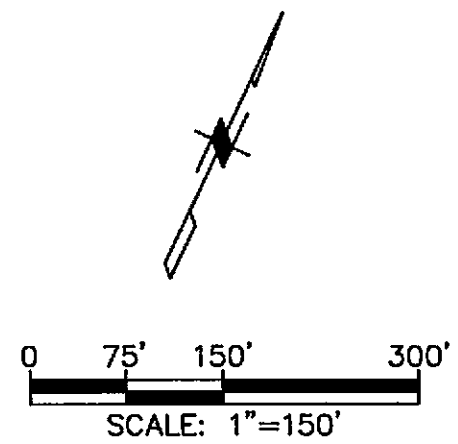


**LEGEND**

- WV-1 VADOSE ZONE MONITORING WELL
- DMSB-15 PREVIOUS HYDROPUNCH SAMPLING LOCATION
- IW-7 GROUNDWATER INJECTION WELL
- MW-16 MONITORING WELL LOCATION
- 11,100 TPHg CONCENTRATION IN ug/L
- 100- ISOCONCENTRATION CONTOUR
- SP SEPARATE PHASE PRODUCT
- <50 NOT DETECTED ABOVE REPORTING LIMIT
- \* CONCENTRATION NOT USED FOR CONTOURING

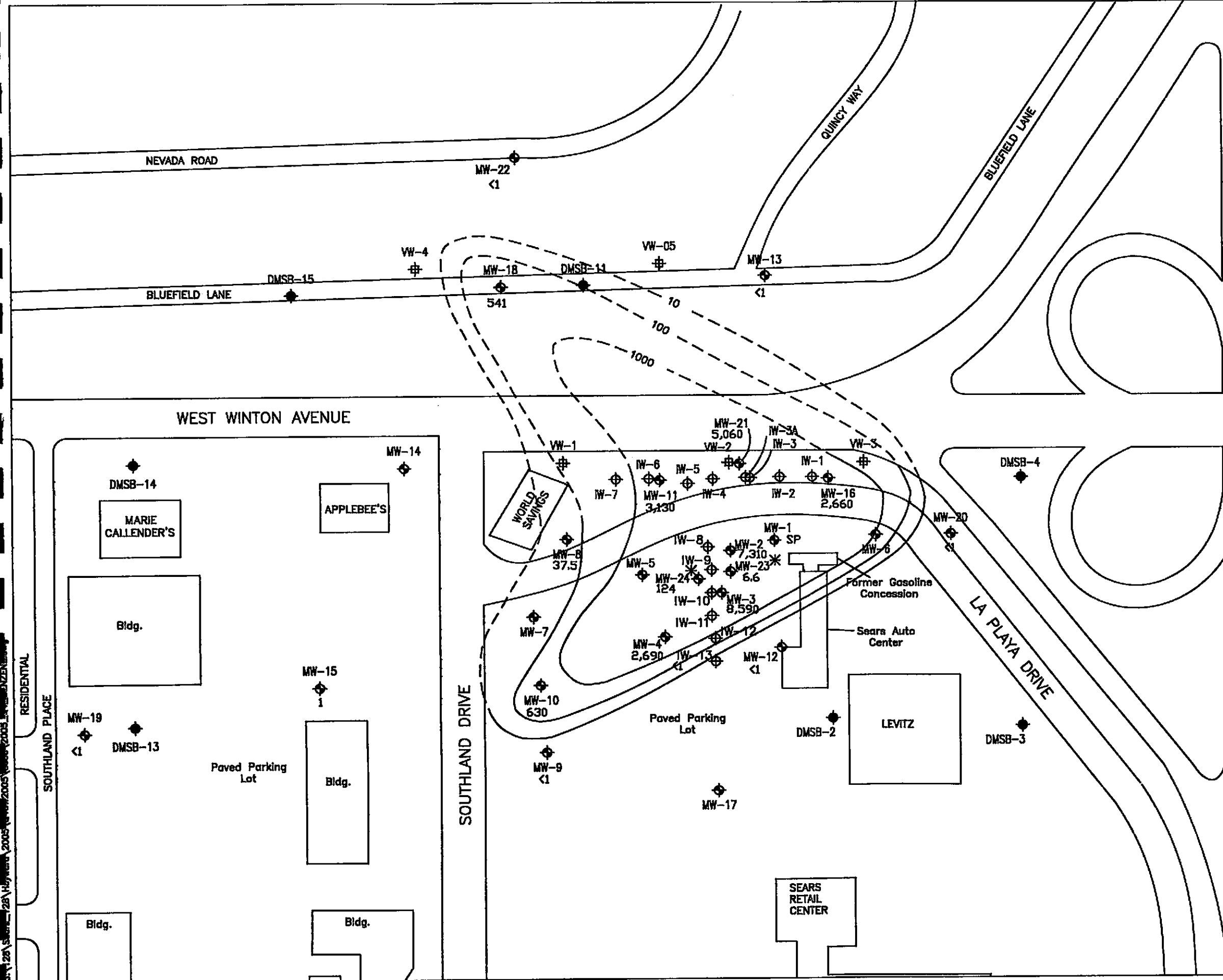
MAP REFERENCE:  
 Dames & Moore Plot Plan  
 URS Regional Survey Group  
 Hayward Aerial Photo 3/25/95

SAMPLE DATE: NOVEMBER 2005



<b>URS Corporation</b>	
2005 FOURTH QUARTER TPHg ISOCONCENTRATION MAP SEARS AUTO CENTER # 1248 HAYWARD, CA.	
Proj. No.: 25363714	Date: DEC. 2005
Project: SEARS-HAYWARD	CAD ID.: SH-PLOT
	Figure: 5

U:\128\Sears\_128\Hayward\25363714\GIS\2005\2005\_04\_11\GIS.mxd  
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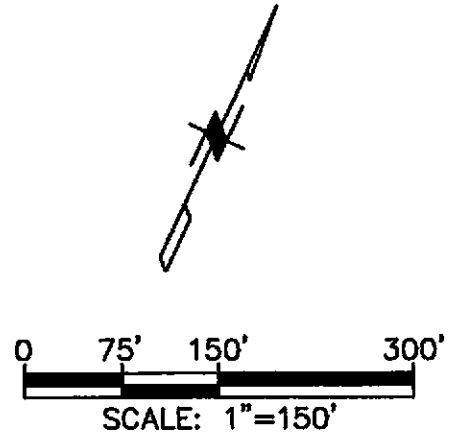


### LEGEND

- VW-1  
[Symbol] VADOSE ZONE MONITORING WELL
- DMSB-15  
[Symbol] PREVIOUS HYDROPUNCH SAMPLING LOCATION
- IW-7  
[Symbol] GROUNDWATER INJECTION WELL
- MW-22  
[Symbol] MONITORING WELL LOCATION
- <1  
BENZENE CONCENTRATION IN ug/L
- 100-  
ISOCONCENTRATION CONTOUR
- SP  
SEPARATE PHASE PRODUCT
- <1  
NOT DETECTED ABOVE REPORTING LIMIT
- \*  
CONCENTRATION NOT USED FOR CONTOURING

MAP REFERENCE:  
 Dames & Moore Plot Plan  
 URS Regional Survey Group  
 Hayward Aerial Photo 3/25/95

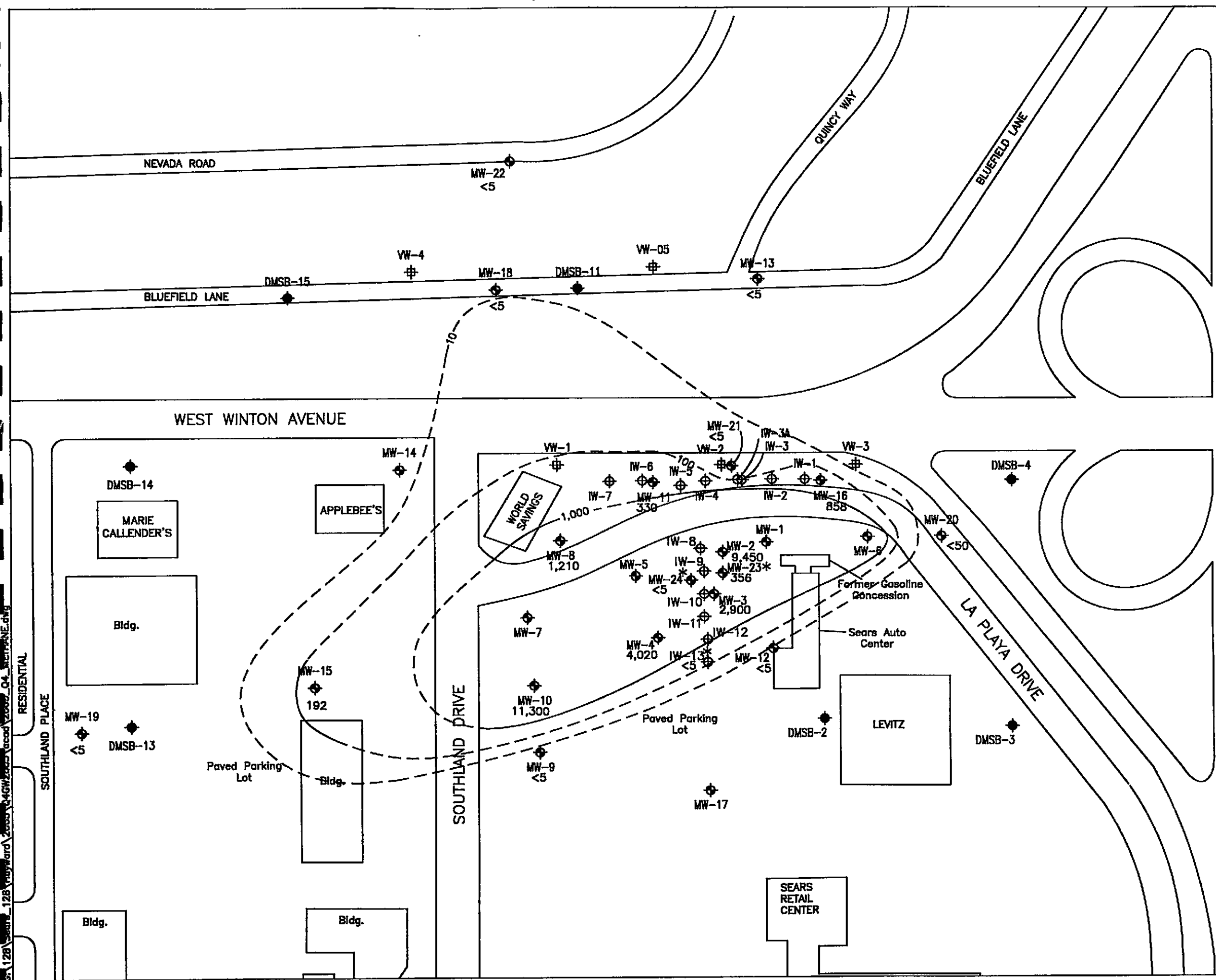
SAMPLE DATE: NOVEMBER 2005



<b>URS Corporation</b>	
2005 FOURTH QUARTER BENZENE ISOCONCENTRATION MAP SEARS AUTO CENTER # 1248 HAYWARD, CA.	
Proj. No.: Project:	25363714 SEARS-HAYWARD
Date:	DEC. 2005
CAD ID.:	SH-PLOT
Figure:	6

25363714.dwg 25363714.dwg 25363714.dwg 25363714.dwg 25363714.dwg 25363714.dwg 25363714.dwg 25363714.dwg  
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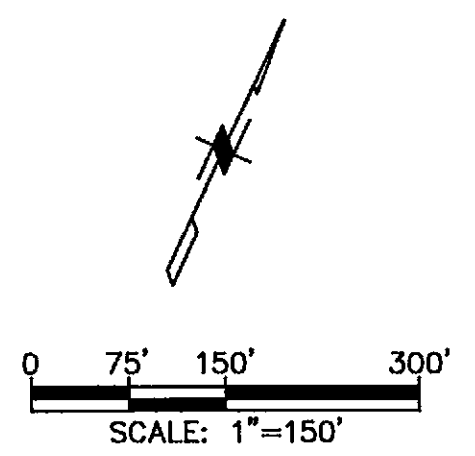


**LEGEND**

- VW-1 VADOSE ZONE MONITORING WELL
- DMSB-15 PREVIOUS HYDROPUNCH SAMPLING LOCATION
- IW-7 GROUNDWATER INJECTION WELL
- MW-22 MONITORING WELL LOCATION
- <5 METHANE CONCENTRATION IN ug/L
- <5 NOT DETECTED ABOVE REPORTING LIMIT
- 100- ISOCONCENTRATION CONTOUR
- \* CONCENTRATION NOT USED FOR CONTOUR

MAP REFERENCE:  
 Dames & Moore Plot Plan  
 URS Regional Survey Group  
 Hayward Aerial Photo 3/25/95

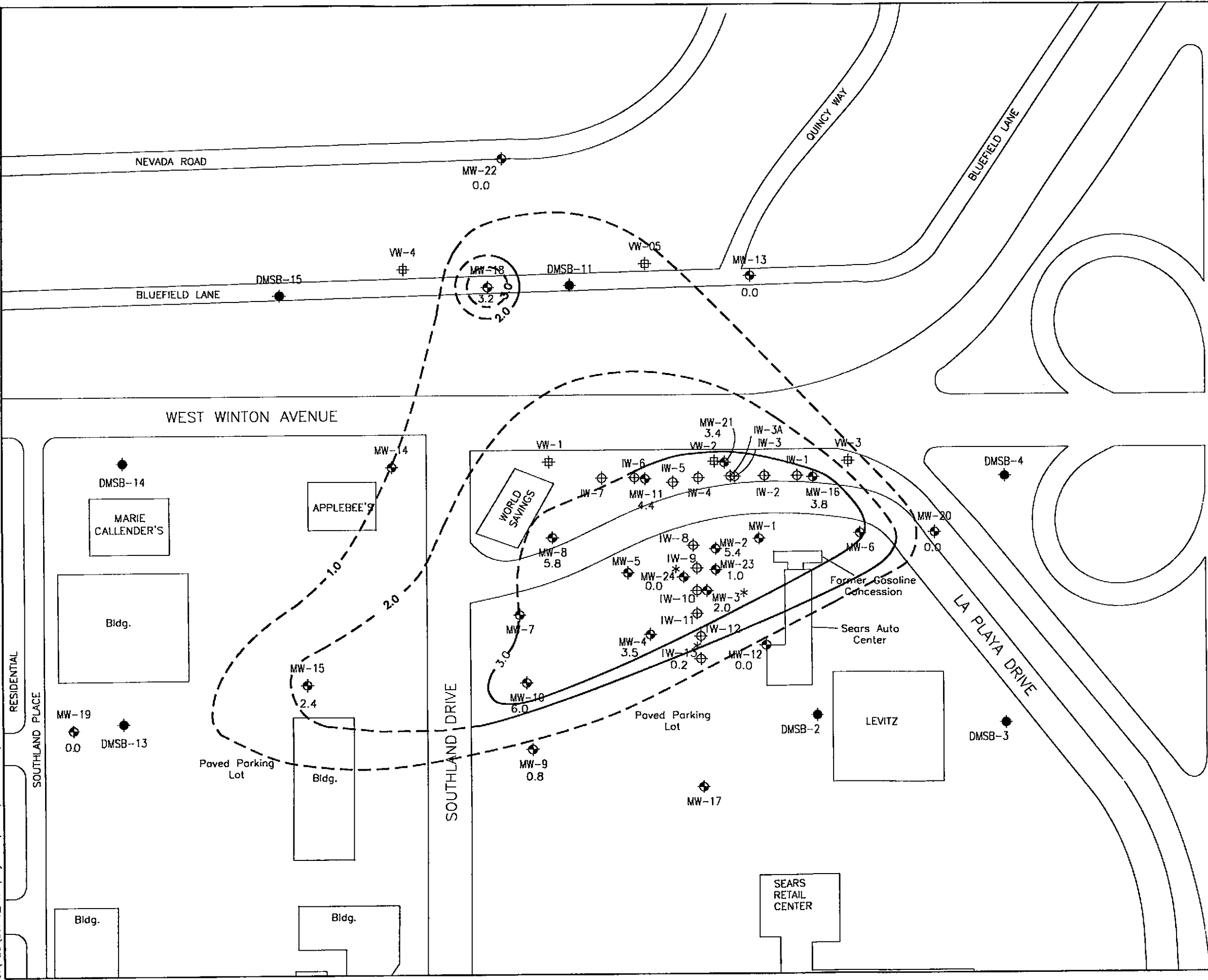
SAMPLE DATE: NOVEMBER 2005



<b>URS Corporation</b>	
2005 FOURTH QUARTER DISSOLVED METHANE ISOCONCENTRATION MAP SEARS AUTO CENTER # 1248 HAYWARD, CA.	
Proj. No.:	25363714
Date:	DEC. 2005
Project:	SEARS-HAYWARD
CAD ID.:	SH-PLOT
Figure:	7

C:\128\sears\_128\Hayward\2005\04\GIS\2005\Acad\2005\_04\_methane.dwg  
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 SOUTHLAND PLACE  
 SOUTHLAND DRIVE

G:\128\Sears\_128\Hayward\2005\Q4GW2005\acad\2005\_Q4\_IRON.dwg

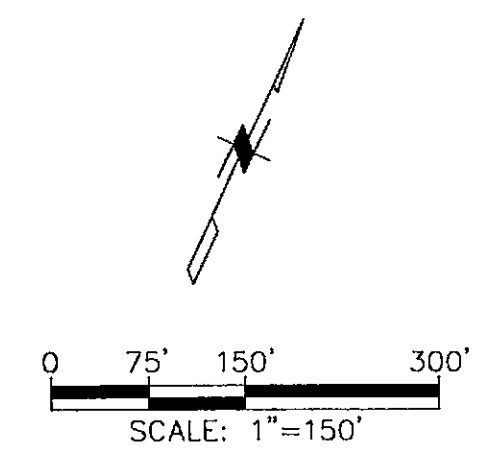


### LEGEND

- VW-1 VADOSE ZONE MONITORING WELL
- DMSB-15 PREVIOUS HYDROPUNCH SAMPLING LOCATION
- IW-7 GROUNDWATER INJECTION WELL
- MW-22 MONITORING WELL LOCATION
- 0.0 FERROUS IRON CONCENTRATION IN mg/L
- 3.0- ISOCONCENTRATION CONTOUR
- \* CONCENTRATION NOT USED FOR CONTOURING

MAP REFERENCE:  
 Dames & Moore Plot Plan  
 URS Regional Survey Group  
 Hayward Aerial Photo 3/25/95

SAMPLE DATE: NOVEMBER 2005

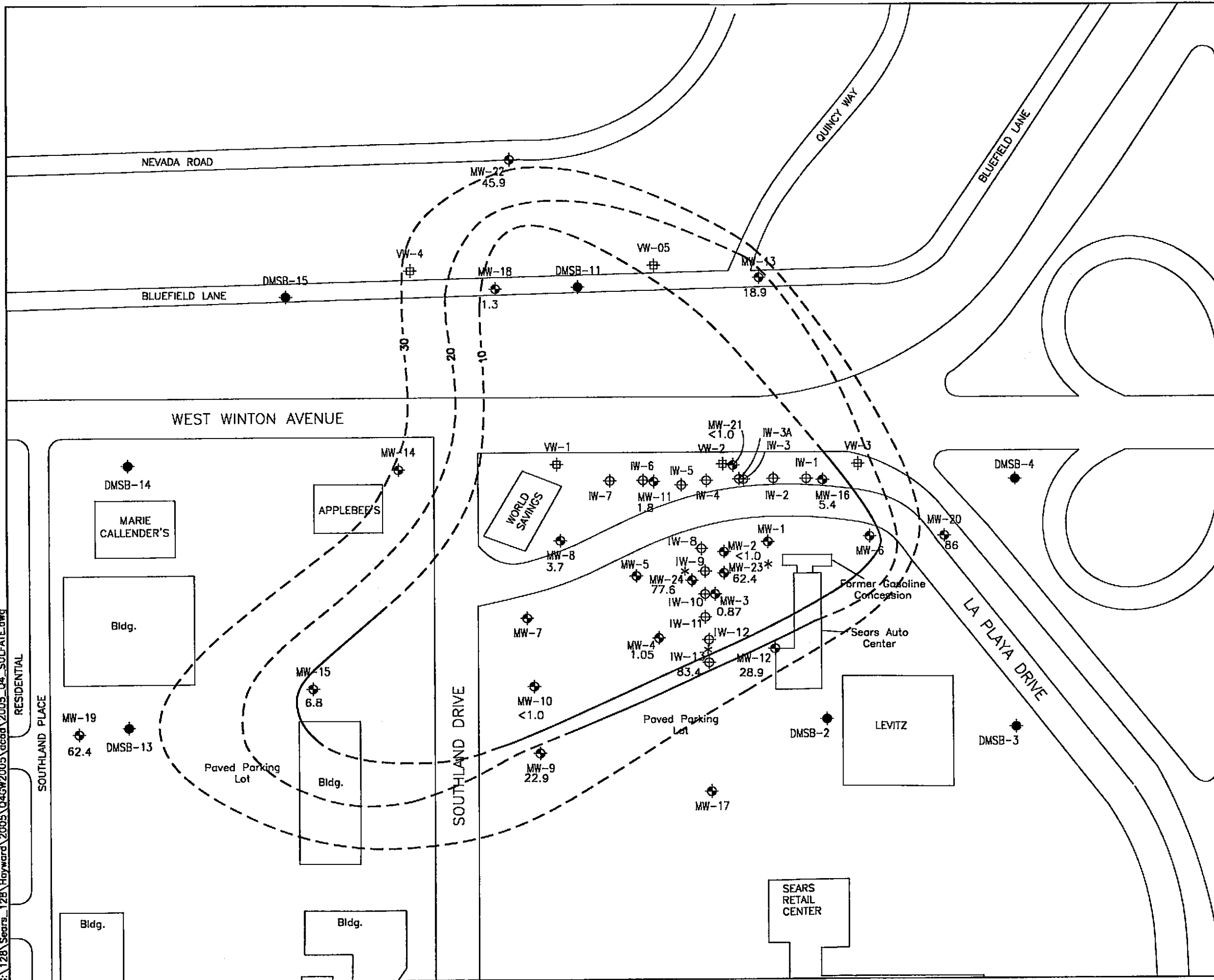


**URS Corporation**

2005 FOURTH QUARTER  
 FERROUS IRON ISOCONCENTRATION MAP  
 SEARS AUTO CENTER # 1248  
 HAYWARD, CA.

Proj. No.: 25363714	Date: DEC. 2005
Project: SEARS-HAYWARD	CAD ID.: SH-PLOT
	Figure: 8

G:\128\Sears\_128\Hayward\_2005\Q4-QW2005\acad\2005\_04\_SULFATE.dwg  
 RESIDENTIAL  
 SOUTHLAND PLACE

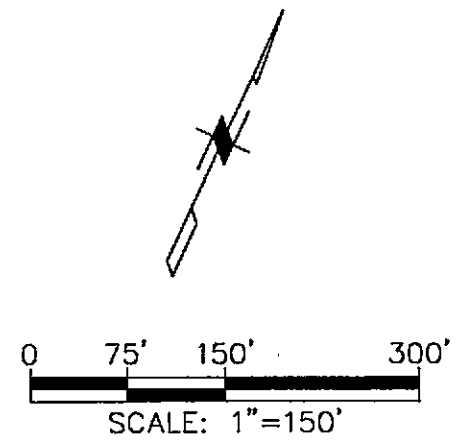


**LEGEND**

- VW-1 VADOSE ZONE MONITORING WELL
- DMSB-15 PREVIOUS HYDROPUNCH SAMPLING LOCATION
- IW-7 GROUNDWATER INJECTION WELL
- MW-22 MONITORING WELL LOCATION
- 45.9 SULFATE CONCENTRATION IN mg/L
- 30- ISOCONCENTRATION CONTOUR
- \* CONCENTRATION NOT USED FOR CONTOURING

MAP REFERENCE:  
 Dames & Moore Plot Plan  
 URS Regional Survey Group  
 Hayward Aerial Photo 3/25/95

SAMPLE DATE: NOVEMBER 2005



**URS Corporation**

2005 FOURTH QUARTER  
 SULFATE ISOCONCENTRATION MAP  
 SEARS AUTO CENTER # 1248  
 HAYWARD, CA.

Proj. No.: 25363714	Date: DEC. 2005
Project: SEARS-HAYWARD	CAD ID.: SH-PLOT
	Figure: 9

**APPENDIX A**  
**HISTORICAL GROUNDWATER MONITORING RESULTS**

Appendix A  
 Historical Groundwater Monitoring Results  
 Sears Auto Center #1248  
 Hayward, California  
 Page 1 of 10

Well No.	Sample No.	Notes	Sample Period	FIELD PARAMETERS							LABORATORY ANALYTICAL RESULTS													
				Temperature (°F)	pH	Conductivity (µmhos/cm)	Turbidity (NTU)	Fe <sup>++</sup> (mg/L)	D.O. (mg/L)	O.R.P. (mV)	Fe <sup>+++</sup> (mg/L)	TDS (mg/L)	Total Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	TOC (mg/L)	Methane (mg/L)	Dissolved CO2 (µg/L)	Hydrocarbon Degraders (CFU/ML)	HPC (CFU/ML)			
MW-1	--	--	Apr-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Jun-00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Sep-00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Dec-00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Mar-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Jun-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Sep-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Dec-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Mar-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	--	Jun-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	--	Sep-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	4	Dec-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP	Dec-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP	Mar-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP	Jun-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP	Sep-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	Dec-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	Feb-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	May-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	Aug-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	Nov-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	Feb-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	May-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	Sep-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	MW-1	SP, 6	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	MW-2	2	Apr-00	70.88	6.69	1550	--	4.6	4.46	-877	--	1.889	865	865	--	--	157.0	2.000	--	--	<	10	200	
MW-2	MW-2	2,3	Apr-00	70.58	6.69	1550	--	4.6	4.49	-877	--	1.876	854	854	--	--	163.0	2.489	--	--	<	10	400	
MW-2	MW-2	2	Jun-00	71.78	8.18	1210	--	3.8	2.39	-96.4	--	--	756	756	--	--	--	1.090	--	--	--	120	1,199	
MW-2	MW-2	2	Sep-00	69.68	6.61	970	--	3.6	1.59	-110	--	--	840	--	--	--	--	3.390	--	--	--	50	169	
MW-2	MW-2	2	Dec-00	71.86	6.58	1533	--	2.0	0.95	-84.0	--	--	850	--	3.00	55.00	--	4.300	--	--	--	12,000	12,000	
MW-2	MW-2	2	Mar-01	69.80	6.89	1549	67.1	2.3	0.86	-110	--	1.000	790	--	--	--	18.0	4.400	--	--	--	400	2,000	
MW-2	MW-2	2	Jun-01	32.00	5.90	1490	--	--	0.25	-95.0	--	--	800	--	--	--	--	4.700	--	--	--	35,000	100,000	
MW-2	Blind Dup2	2,3	Sep-01	71.30	6.69	1416	218.5	--	3.32	-68.2	<	0.20	--	818	--	<	1.0	<	1.0	--	--	4.000	10	30
MW-2	MW-2	2	Sep-01	71.25	6.69	1416	218.5	--	2.32	-69.2	0.69	--	730	--	--	<	1.0	<	1.0	--	--	4.500	10	30
MW-2	MW-2	2	Dec-01	72.30	6.60	1339	37.4	3.3	1.13	-88.3	--	--	740	--	--	<	1.0	61.00	--	--	--	4.700	2	250
MW-2	MW-2	2	Mar-02	70.70	6.68	991	57.1	>	3.20	0.00	-94.1	--	740	--	--	<	1.0	<	1.0	18	--	3.300	100	200
MW-2	MW-2	2	Jun-02	72.86	6.45	963	35.2	--	0.01	-72.7	0.85	--	860	--	--	--	--	<	0.010	--	--	50	50	
MW-2	MW-2	2	Sep-02	71.41	6.54	1352	41.5	0.2	--	--	--	--	798	--	--	--	--	--	1.630	--	--	2,800	60,000	
MW-2	MW-2	2	Dec-02	72.50	6.36	1515	152.0	2.9	0.29	-95.6	--	--	785	--	--	--	--	--	4.420	--	--	10	700	
MW-2	MW-2	2	Mar-03	73.53	6.49	1388	31.7	2.4	2.82	-93.8	--	1.278	736	--	--	--	11	7.100	--	--	--	280	300	
MW-2	MW-2	2	Jun-03	71.55	6.64	1526	173.2	4.2	64.00	--	--	--	810	--	--	--	--	--	5.160	110,000	--	190	600	
MW-2	MW-2	2	Sep-03	70.63	6.55	1427	87.9	2.4	0.43	-86.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	MW-2	2	Dec-03	70.95	6.58	1521	93.8	--	0.99	-72.3	1.89	--	--	--	3.22	1.24	--	4.790	--	--	--	--	--	--
MW-2	MW-2	2	Feb-04	71.83	6.36	1287	25.5	4.3	0.00	-67.8	--	--	--	--	3.89	16.60	--	6.760	--	--	--	--	--	--
MW-2	MW-2	2	May-04	71.06	6.55	1287	24.4	4.3	0.64	-62.1	--	--	--	--	1.35	--	--	6.540	--	--	--	--	--	--
MW-2	MW-2	2	Aug-04	71.37	6.39	1699	52.0	4.6	0.86	-71.9	--	--	--	--	5.44	<	1.0	--	1.980	--	--	--	--	--
MW-2	Dup-1	2,3	Aug-04	71.37	6.39	1699	52.0	4.6	0.86	-71.9	--	--	--	--	5.68	<	1.0	--	2.020	--	--	--	--	--
MW-2	MW-2	2	Nov-04	72.16	6.65	1640	19.4	1.8	4.18	-88.9	--	--	--	--	3.16	<	1.0	--	4.470	--	--	--	--	--
MW-2	Dup-1	2,3	Nov-04	72.16	6.65	1660	19.4	1.8	4.18	-88.9	--	--	--	--	3.40	<	1.0	--	4.650	--	--	--	--	--
MW-2	MW-2	2	Feb-05	72.10	6.48	1558	11.8	3.5	0.58	-120.8	--	--	--	--	1.49	<	1.0	--	5.390	--	--	--	--	--
MW-2	MW-2	2	May-05	70.92	6.37	1476	4.9	2.6	1.33	-183.6	--	--	--	--	1.99	<	1.0	--	5.530	--	--	--	--	--
MW-2	MW-2	2	Sep-05	70.72	6.45	1660	15.7	3.6	0.76	-79.6	--	--	--	--	2.44	<	1.0	--	5.530	--	--	--	--	--
MW-2	DUP-2	2,3	Sep-05	70.71	6.45	1640	15.7	3.6	0.76	-79.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	MW-2	2	Nov-05	71.19	6.59	1665	24.7	5.4	1.46	-89.3	--	--	--	--	1.72	<	1.0	--	5.450	--	--	--	--	--
MW-2	DUP-2	2,3	Nov-05	71.19	6.59	1665	24.7	5.4	1.46	-89.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	MW-3	2	Apr-00	70.52	6.59	180	--	4.5	7.50	-075	--	--	905	905	--	--	--	0.120	--	--	--	<	10	350
MW-3	MW-3	--	Jun-00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	MW-3	1	Sep-00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



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Well No.	Sample No.	Notes	Sample Period	FIELD PARAMETERS							LABORATORY ANALYTICAL RESULTS										
				Temperature (°F)	pH	Conductivity (µmhos/cm)	Turbidity (NTU)	Fe <sup>++</sup> (mg/L)	D.O. (mg/L)	O.R.P. (mV)	Fe <sup>++</sup> (mg/L)	TDS (mg/L)	Total Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	TOC (mg/L)	Methane (mg/L)	Dissolved CO <sub>2</sub> (µg/L)	Hydrocarbon Degraders (CFU/ML)	HPC (CFU/ML)
MW-5	MW-5	2	Jun-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	1	Sep-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	1	Dec-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	2	Mar-02	70.90	6.60	1059	43.7	< 3.30	0.09	-94.2	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	4	Jun-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	1	Sep-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	4	Dec-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	2	Mar-03	70.93	6.64	1581	35.9	4.7	2.20	-45.2	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	4	Jun-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	2	Sep-03	71.44	6.46	1614	13.4	3.4	0.25	-99.2	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	4	Dec-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	2	Feb-04	71.73	6.30	1462	19.5	5.8	0.80	-75.4	--	--	6.55	22.48	--	1.558	--	--			
MW-5	Dup-2	2	Feb-04	71.73	6.30	1462	19.5	5.8	0.80	-75.4	--	--	16.18	29.28	--	1.690	--	--			
MW-5	MW-5	4	May-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	2	Aug-04	72.09	6.28	1759	5.8	5.0	0.18	-87.3	--	--	1.56	< 1.00	--	0.623	--	--			
MW-5	MW-5	4	Nov-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	2	Feb-05	71.58	6.44	1787	9.5	4.4	0.67	-131.7	--	--	1.77	< 1.0	--	1.240	--	--			
MW-5	Dup-2	2	Feb-05	71.58	6.44	1787	9.5	4.4	0.67	-131.7	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	4	May-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-5	MW-5	2	Sep-05	70.65	6.39	1739	14.0	3.8	0.74	-68.3	--	--	2.88	< 1.0	--	1.240	--	--			
MW-5	MW-5	4	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Apr-06	69.26	6.84	1710	--	2.8	17.38	-049	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	--	Jun-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	1	Sep-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	--	Dec-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Mar-07	68.18	6.93	1517	56.7	0.8	0.41	-118.6	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Jun-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	4	Sep-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	4	Dec-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Mar-08	69.84	6.76	1816	9.7	--	2.36	-39.2	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	4	Jun-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Sep-08	70.97	6.53	1917	5.1	4.2	1.25	-83.1	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	4	Dec-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Feb-04	70.52	6.54	1782	3.6	5.9	0.88	-88.3	--	--	--	--	--	--	--	--	--		
MW-6	Dup-1	2	Feb-04	70.52	6.54	1782	3.6	5.9	0.88	-88.3	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	4	May-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Aug-04	70.97	6.34	2174	4.8	5.2	0.12	-77.1	--	--	1.34	< 1.00	--	6.688	--	--			
MW-6	MW-6	4	Nov-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Feb-05	70.18	6.47	2105	5.4	4.8	0.68	-222.4	--	--	2.88	< 1.0	--	1.978	--	--			
MW-6	Dup-1	2	Feb-05	70.18	6.47	2105	5.4	4.8	0.68	-222.4	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	4	May-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6	MW-6	2	Sep-05	69.58	6.35	2332	11.7	3.9	1.12	-64.8	--	--	2.21	< 1.0	--	1.978	--	--			
MW-6	MW-6	4	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	2	Apr-06	70.88	6.88	1440	--	5.9	4.58	-490	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	--	Jun-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	1	Sep-06	71.40	6.71	--	--	4.4	--	-126.8	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	--	Dec-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	2	Mar-07	70.78	6.98	1598	> 280	2.1	0.50	-108.0	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	2	Jun-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	1	Sep-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	1	Dec-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	2	Mar-08	73.64	6.62	1149	3.2	> 3.50	0.32	-128.0	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	4	Jun-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-7	MW-7	1	Sep-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

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Well No.	Sample No.	Notes	Sample Period	FIELD PARAMETERS								LABORATORY ANALYTICAL RESULTS									
				Temperature (°F)	pH	Conductivity (µmhos/cm)	Turbidity (NTU)	Fa <sup>++</sup> (mg/L)	D.O. (mg/L)	O.R.P. (mV)	Fe <sup>++</sup> (mg/L)	TDS (mg/L)	Total Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	TOC (mg/L)	Methane (mg/L)	Dissolved CO2 (µg/L)	Hydrocarbon Degradors (CFU/ML)	HPC (CFU/ML)
MW-7	MW-7	4	Dec-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	2	Mar-03	71.78	6.79	1856	5.6	3.0	2.85	-54.1	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	4	Jun-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	2	Sep-03	71.30	6.57	1494	1.7	3.2	0.83	-127.1	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	3,3	Sep-03	72.59	6.57	1494	1.7	3.2	0.83	-127.1	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	4	Dec-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	2	Feb-04	71.18	6.59	1369	2.8	3.0	0.80	-116.8	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	4	May-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	2	Aug-04	72.05	6.36	1580	5.2	4.4	0.83	-71.0	--	--	--	1.69	5.42	1.860	--	--	--	--	
MW-7	MW-7	4	Nov-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	2	Feb-05	71.73	6.56	1541	1.5	3.0	0.55	-196.0	--	--	--	2.31	< 1.0	--	2.410	--	--	--	
MW-7	MW-7	4	May-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	MW-7	2	Sep-05	70.99	6.55	1694	2.5	3.0	0.81	-114	--	--	--	2.29	< 1.0	--	2.410	--	--	--	
MW-7	MW-7	4	Nov-05	70.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	MW-8	2	Apr-06	66.92	6.83	1108	--	2.8	--	-97.5	--	--	637	637	--	--	--	0.807	--	--	
MW-8	MW-8	2	Jun-06	68.00	6.32	1080	--	--	2.40	-185	--	--	612	612	--	--	--	< 0.010	120	2,200	
MW-8	MW-8	2	Sep-06	67.58	6.42	940	--	3.5	0.90	-183.0	--	--	640	--	--	--	--	0.921	--	--	
MW-8	MW-8	2	Dec-06	67.14	6.55	1219	--	3.8	0.26	-125.8	--	--	600	--	29.88	--	--	0.971	--	--	
MW-8	MW-8	2	Mar-07	67.49	6.98	1373	48.7	1.8	0.71	-123.8	--	--	480	--	--	--	--	0.861	--	--	
MW-8	MW-8	2	Jun-07	32.80	6.92	1150	--	--	0.75	-107.8	--	--	640	--	--	--	--	0.882	--	--	
MW-8	MW-8	2	Sep-07	68.78	6.71	1132	110.3	--	1.41	-73.3	< 0.20	--	640	--	--	--	--	0.160	--	--	
MW-8	MW-8	2	Dec-07	68.20	6.41	1104	96.2	> 3.00	0.58	-104.9	--	--	670	--	--	3.5	--	0.270	--	--	
MW-8	MW-8	2	Mar-08	68.07	6.66	1016	34.8	> 3.00	0.00	-114.9	--	--	650	--	--	--	--	0.230	--	--	
MW-8	MW-8	2	Jun-08	67.82	6.56	729	71.2	--	-0.81	-98.4	1.48	--	720	--	--	--	--	0.120	--	--	
MW-8	MW-8	2	Sep-08	68.90	6.44	1290	14.1	4.6	--	--	--	--	714	--	--	--	--	0.305	--	--	
MW-8	MW-8	2	Dec-08	69.55	6.42	985	68.0	4.9	0.57	-115.5	--	--	680	--	--	--	--	0.460	--	--	
MW-8	MW-8	2	Mar-09	68.54	6.80	1214	7.2	1.6	1.96	-57.3	--	--	661	--	--	--	--	0.715	--	--	
MW-8	MW-8	2	Jun-09	69.66	6.45	1392	31.4	2.4	0.17	--	--	766	682	< 0.02	11.80	--	6.699	92,800	--	--	
MW-8	MW-8	2	Sep-09	68.10	6.56	1290	28.7	5.4	0.64	-116.7	--	--	--	--	--	--	--	--	--	--	
MW-8	MW-8	2	Dec-09	68.34	6.56	1226	27.5	--	0.75	-115.5	2.55	--	--	11.50	8.93	--	--	1.560	--	--	
MW-8	MW-8	2	Feb-10	69.81	6.55	1158	17.9	3.2	0.80	-107.3	--	--	--	4.14	24.80	--	--	1.110	--	--	
MW-8	MW-8	2	May-10	68.74	6.56	1284	28.7	3.2	0.88	-126.3	--	--	--	0.38	18.80	--	--	1.922	--	--	
MW-8	MW-8	2	Aug-10	68.94	6.31	1221	14.9	4.2	0.83	-54.8	--	--	--	< 0.01	12.28	--	--	0.592	--	--	
MW-8	MW-8	2	Nov-10	69.19	6.71	1227	18.8	2.8	2.54	-114.2	--	--	--	10.3	7.92	--	--	1.205	--	--	
MW-8	MW-8	2	Feb-11	69.19	6.53	1059	5.3	4.8	0.41	-161.2	--	--	--	2.48	3.94	--	--	0.575	--	--	
MW-8	MW-8	2	May-11	68.77	6.37	1227	4.6	2.2	1.54	-121.3	--	--	--	2.16	< 1.0	--	--	0.912	--	--	
MW-8	MW-8	2	Sep-11	67.95	6.92	1330	35.6	3.6	1.23	-96.4	--	--	--	1.31	2.89	--	--	0.575	--	--	
MW-8	DUP-1	3,3	Sep-11	67.85	6.52	1330	35.6	3.6	1.23	-96.4	--	--	--	--	--	--	--	--	--	--	
MW-8	MW-8	2	Nov-11	68.83	6.55	1348	30.5	5.8	0.59	-124.0	--	--	--	2.6	3.7	--	--	1.210	--	--	
MW-9	MW-9	2	Apr-06	72.48	6.83	1119	--	0.0	16.30	--	--	--	558	558	--	--	--	0.009	--	--	
MW-9	MW-9	2	Jun-06	73.40	6.67	1300	--	--	4.90	-125.6	--	--	620	620	--	--	--	< 0.003	92	5,200	
MW-9	MW-9	2	Sep-06	76.40	6.54	1290	--	0.8	4.20	247.9	--	--	480	--	--	--	--	0.050	--	--	
MW-9	MW-9	2	Dec-06	73.58	6.05	1425	--	1.8	0.13	68.0	--	--	700	--	1.20	39.00	--	0.026	--	--	
MW-9	MW-9	2	Mar-07	72.10	6.90	1114	> 200	0.0	--	-39.0	--	--	--	--	--	--	--	0.813	--	--	
MW-9	MW-9	2	Jun-07	32.80	6.86	1488	--	--	7.30	43.8	--	--	780	--	--	--	--	0.821	--	--	
MW-9	MW-9	2	Sep-07	73.40	6.60	1439	18.6	2.10	75.4	< 0.20	--	--	670	--	--	--	--	0.812	--	--	
MW-9	MW-9	2	Dec-07	73.78	6.57	1452	15.0	0.1	0.75	4.4	--	--	690	--	--	3.0	--	0.016	--	--	
MW-9	MW-9	2	Mar-08	74.10	6.61	1266	3.7	0.2	1.50	33.9	--	--	700	--	--	--	--	0.150	--	--	
MW-9	MW-9	2	Jun-08	73.16	6.43	1809	7.3	--	-0.83	137.5	< 0.10	--	780	--	--	--	< 0.010	--	--	--	
MW-9	MW-9	2	Sep-08	73.28	6.52	1598	5.1	0.3	--	--	--	--	764	--	--	--	--	0.056	--	--	
MW-9	MW-9	2	Dec-08	73.70	6.37	897	8.7	0.2	0.40	37.3	--	--	758	--	--	--	--	0.066	< 1,000	480	
MW-9	MW-9	2	Mar-09	74.28	6.58	1488	6.2	0.0	2.38	78.5	--	--	711	--	--	--	--	0.819	--	--	
MW-9	MW-9	2	Jun-09	74.26	6.46	1613	2.4	< 0.1	1.94	--	--	--	560	--	--	--	--	0.819	99,700	--	
MW-9	MW-9	2	Sep-09	74.25	6.54	1436	2.6	0.0	0.78	84.1	--	--	--	--	--	--	--	--	--	--	
MW-9	MW-9	2	Dec-09	74.25	6.47	1560	3.5	--	0.83	59.8	< 0.05	--	--	7.80	24.40	--	< 0.005	--	--	--	
MW-9	MW-9	2	Feb-10	74.73	6.51	1411	0.2	0.0	0.80	86.1	--	--	--	3.48	25.80	--	< 0.005	--	--	--	
MW-9	MW-9	2	May-10	74.71	6.46	1416	1.6	0.0	1.58	-33.8	--	--	--	3.53	26.10	--	--	0.816	--	--	
MW-9	MW-9	2	Aug-10	74.88	6.37	1437	0.7	0.0	0.86	6.8	--	--	--	< 0.01	21.90	--	--	0.817	--	--	





Appendix A  
 Historical Groundwater Monitoring Results  
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Well No.	Sample No.	Notes	Sample Period	FIELD PARAMETERS							LABORATORY ANALYTICAL RESULTS											
				Temperature (°F)	pH	Conductivity (µmhos/cm)	Turbidity (NTU)	Fe <sup>++</sup> (mg/L)	D.O. (mg/L)	O.R.P. (mV)	Fe <sup>++</sup> (mg/L)	TDS (mg/L)	Total Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	TOC (mg/L)	Methane (mg/L)	Dissolved CO <sub>2</sub> (µg/L)	Hydrocarbon Degraders (CFU/ML)	HPC (CFU/ML)	
MW-12	MW-12	2	Dec-06	72.56	6.56	1223	--	0.2	0.18	117.9	--	--	610	--	21.68	192.09	--	0.018	--	--		
MW-12	MW-12	2	Mar-01	69.88	7.80	1217	68.1	0.9	2.11	-0.1	--	--	569	--	--	--	--	0.011	--	--		
MW-12	MW-12	2	Jun-01	72.89	7.55	1271	--	--	7.30	75.0	--	--	588	--	--	--	--	< 0.010	--	--		
MW-12	MW-12	2	Sep-01	70.49	6.70	1382	9.5	--	1.57	183.6	< 0.20	--	520	--	--	--	--	< 0.010	--	--		
MW-12	MW-12	2	Dec-01	69.89	6.69	1189	8.6	0.8	0.54	99.4	--	--	510	--	--	1.4	--	0.014	--	--		
MW-12	MW-12	2	Mar-02	69.50	6.72	1160	3.8	0.8	0.04	115.9	--	--	520	--	--	--	--	< 0.010	--	--		
MW-12	MW-12	2	Jun-02	69.53	6.66	811	4.1	--	-0.02	124.5	< 0.10	--	600	--	--	--	--	0.030	--	--		
MW-12	MW-12	2	Sep-02	69.23	6.64	1318	3.3	0.2	--	--	--	--	568	--	--	--	--	0.006	--	--		
MW-12	MW-12	2	Dec-02	68.83	6.60	1227	11.7	0.2	0.20	98.3	--	--	565	--	--	--	--	0.018	--	--		
MW-12	MW-12	2	Mar-03	69.35	6.71	1201	2.9	0.8	1.75	88.2	--	--	512	--	--	--	--	0.018	--	--		
MW-12	MW-12	2	Jun-03	69.87	6.57	1421	5.9	--	0.73	--	< 0.05	--	555	--	0.02	24.98	--	0.016	64,500	--		
MW-12	MW-12	2	Sep-03	69.55	6.68	1198	2.7	0.8	1.89	188.5	--	--	--	--	--	--	--	--	--	--		
MW-12	MW-12	2	Dec-03	69.28	6.63	1288	2.9	--	0.73	121.7	< 0.05	--	--	--	21.80	22.28	--	< 0.005	--	--		
MW-12	DUP-03	2,3	Dec-03	69.28	6.63	1288	2.9	--	0.73	121.7	< 0.05	--	--	--	23.80	27.78	--	< 0.005	--	--		
MW-12	MW-12	2	Feb-04	69.91	6.65	1113	0.2	0.9	0.89	169.8	--	--	--	--	28.00	26.58	--	< 0.005	--	--		
MW-12	MW-12	2	May-04	69.93	6.61	1166	1.8	0.8	0.99	46.8	--	--	--	--	28.18	69.58	--	0.013	--	--		
MW-12	MW-12	2	Aug-04	69.76	6.31	1288	4.3	0.6	0.81	121.7	--	--	--	--	29.60	64.38	--	0.011	--	--		
MW-12	MW-12	2	Nov-04	69.39	6.68	1357	1.3	0.4	0.75	138.7	--	--	--	--	18.7	51.6	--	0.0095	--	--		
MW-12	MW-12	2	Feb-05	69.82	6.61	1224	1.8	0.8	0.58	44.9	--	--	--	--	25.9	78.1	--	< 0.005	--	--		
MW-12	MW-12	2	May-05	69.89	6.46	1285	0.6	0.9	1.71	-4.1	--	--	--	--	24.6	55.3	--	0.0085	--	--		
MW-12	MW-12	2	Sep-05	69.39	6.53	1237	1.3	0.8	0.92	187.6	--	--	--	--	23.3	28.9	--	< 0.005	--	--		
MW-12	MW-12	2	Nov-05	69.39	6.61	1335	4.8	0.8	1.32	41.6	--	--	--	--	17.1	79.7	--	< 0.005	--	--		
MW-13	MW-13	2	Apr-08	66.92	6.83	649	--	0.0	89.70	--	--	452	316	316	--	--	47.8	< 0.005	140	2,900		
MW-13	MW-13	2	Jun-08	69.26	5.87	648	--	--	8.50	-1061	--	--	284	284	--	--	--	< 0.005	190	56,000		
MW-13	MW-13	2	Sep-08	66.60	6.71	578	--	0.0	1.48	56.8	--	--	325	--	--	--	--	0.016	190	56,000		
MW-13	MW-13	2	Dec-08	68.18	6.76	749	--	0.2	0.22	121.0	--	--	338	--	12.00	38.88	--	< 0.010	2,500	3,500		
MW-13	MW-13	2	Mar-01	65.98	7.98	856	> 200	0.0	1.81	8.8	--	570	348	--	--	--	1.3	< 0.010	700	4,200		
MW-13	MW-13	2	Jun-01	72.00	7.21	719	--	--	0.20	118.8	--	--	388	--	--	--	--	< 0.010	50,000	1,000,000		
MW-13	MW-13	2	Sep-01	68.20	6.80	798	182.7	--	0.98	6.2	< 0.20	--	340	--	17.08	35.80	--	< 0.010	10	150		
MW-13	MW-13	2	Dec-01	67.60	6.73	780	19.8	0.3	0.37	19.5	--	--	348	--	20.88	38.00	< 1.0	< 0.019	5	1,300		
MW-13	MW-13	2	Mar-02	66.80	6.82	621	212.3	0.1	0.12	48.6	--	--	338	--	17.88	34.00	< 1.8	< 0.019	10	38		
MW-13	DUP-2	2,3	Mar-02	66.80	6.82	621	212.3	0.1	0.12	48.6	--	--	316	--	16.90	34.00	< 1.8	< 0.010	10	2,000		
MW-13	MW-13	2	Jun-02	68.00	6.08	433	24.1	--	0.80	27.8	< 0.10	--	240	--	--	--	--	< 0.010	30,000	30		
MW-13	DUP-1	2,3	Jun-02	68.00	6.08	433	24.1	--	0.80	27.8	--	--	--	--	--	--	--	--	--	--		
MW-13	MW-13	2	Sep-02	67.64	6.66	748	46.1	1.1	--	--	--	--	368	--	--	--	--	< 0.005	200	308		
MW-13	DUP-1	2,3	Sep-02	67.64	6.66	748	46.1	1.1	--	--	--	--	--	--	--	--	--	--	--	--		
MW-13	MW-13	2	Dec-02	69.34	6.78	484	188.3	1.5	0.48	82.1	--	--	485	--	--	--	--	< 0.010	38	1,900		
MW-13	MW-13	2	Mar-03	68.77	6.79	669	16.6	0.0	1.49	51.8	--	1,050	316	--	--	--	1.2	0.005	70	180		
MW-13	MW-13	2	Jun-03	68.41	6.80	779	35.4	< 0.1	1.64	--	--	--	555	--	--	--	--	< 0.005	42,400	680		
MW-13	MW-13	2	Sep-03	67.82	6.74	666	24.2	0.1	0.28	113.8	--	--	--	--	--	--	--	--	--	--		
MW-13	MW-13	2	Dec-03	67.86	6.65	758	17.1	--	0.56	109.2	< 0.05	--	--	--	12.38	31.48	--	< 0.005	--	--		
MW-13	MW-13	2	Feb-04	67.42	6.69	663	19.1	0.0	0.80	148.7	--	--	--	--	18.28	44.48	--	< 0.005	--	--		
MW-13	MW-13	2	May-04	67.88	6.63	632	7.8	0.6	0.88	53.8	--	--	--	--	19.90	46.90	--	< 0.005	--	--		
MW-13	MW-13	2	Aug-04	69.01	6.32	748	66.1	0.8	0.84	238.5	--	--	--	--	11.18	35.28	--	< 0.005	--	--		
MW-13	MW-13	2	Nov-04	67.93	6.72	814	7.3	0.8	0.78	125.9	--	--	--	--	14.5	11.9	--	< 0.005	--	--		
MW-13	MW-13	2	Feb-05	68.82	6.64	726	7.7	0.8	0.34	161.0	--	--	--	--	28.3	27.5	--	< 0.005	--	--		
MW-13	MW-13	2	May-05	68.80	6.48	712	5.8	0.0	1.29	18.3	--	--	--	--	28.8	23.7	--	0.0075	--	--		
MW-13	MW-13	2	Sep-05	68.18	6.52	721	18.7	0.9	0.77	186.3	--	--	--	--	17	16.9	--	< 0.005	--	--		
MW-13	MW-13	2	Nov-05	67.71	6.81	778	31.3	0.8	0.31	98.4	--	--	--	--	13.2	18.9	--	< 0.005	--	--		
MW-14	MW-14	2	Apr-08	69.26	7.27	648	--	0.3	36.88	--	--	--	--	--	--	--	--	--	--	--		
MW-14	MW-14	--	Jun-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-14	MW-14	1	Sep-08	71.28	--	18	--	6.6	--	292.8	--	--	--	--	--	--	--	--	--	--		
MW-14	MW-14	--	Dec-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-14	MW-14	2	Mar-01	68.78	7.81	517	> 200	0.6	1.92	163.8	--	--	--	--	--	--	--	--	--	--		
MW-14	MW-14	2	Jun-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-14	MW-14	1	Sep-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-14	MW-14	1	Dec-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
MW-14	MW-14	2	Mar-02	68.48	6.72	555	24.1	0.5	0.94	44.3	--	--	--	--	--	--	--	--	--	--		

Appendix A  
 Historical Groundwater Monitoring Results  
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Well No.	Sample No.	Notes	Sample Period	FIELD PARAMETERS							LABORATORY ANALYTICAL RESULTS										
				Temperature (°F)	pH	Conductivity (µmhos/cm)	Turbidity (NTU)	Fe <sup>++</sup> (mg/L)	D.O. (mg/L)	O.R.P. (mV)	Fe <sup>++</sup> (mg/L)	TDS (mg/L)	Total Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	TOC (mg/L)	Methane (mg/L)	Dissolved CO2 (µg/L)	Hydrocarbon Degraders (CFU/ML)	HPC (CFU/ML)
MW-14	MW-14	4	Jan-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	1	Sep-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	4	Dec-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	2	Mar-03	68.02	6.83	566	5.8	0.0	1.42	80.3	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	4	Jun-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	2	Sep-03	69.24	6.71	487	3.2	0.0	0.13	48.3	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	2	Dec-03	69.94	6.67	563	6.5	--	0.67	64.4	0.19	--	--	0.76	24.48	--	0.005	--	--	--	--
MW-14	MW-14	2	Feb-04	70.23	6.65	549	8.0	0.4	0.38	84.8	--	--	--	2.19	36.90	--	0.015	--	--	--	--
MW-14	MW-14	4	May-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	2	Aug-04	69.62	6.42	638	14.0	0.0	0.03	93.8	--	--	--	< 0.01	39.80	--	0.023	--	--	--	--
MW-14	MW-14	4	Nov-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	2	Feb-05	68.91	6.59	707	3.8	0.2	1.29	0.6	--	--	--	4.03	38.2	--	0.054	--	--	--	--
MW-14	MW-14	4	May-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14	MW-14	2	Sep-05	68.29	6.54	822	8.5	1.0	1.25	68.8	--	--	--	4.4	26.5	--	< 0.005	--	--	--	--
MW-14	MW-14	4	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15	MW-15	2	Apr-06	68.90	6.84	1800	--	0.7	10.40	-069	665	567	567	--	64.3	< 0.005	--	36,800	30,000	--	
MW-15	MW-15	2	Jun-06	68.89	8.98	1858	--	0.8	3.20	-864	520	520	--	--	--	< 0.005	--	290	3,980	--	
MW-15	MW-15	2	Sep-06	70.20	6.77	890	--	0.8	0.80	-142.8	--	550	--	--	--	< 0.010	--	6,908	14,800	--	
MW-15	MW-15	2	Dec-06	69.36	6.72	1121	--	1.2	0.93	-101.8	--	540	--	2.98	47.88	--	0.010	300	1,780	--	
MW-15	MW-15	2	Mar-07	70.00	7.01	2100	> 200	0.1	0.61	-60.8	--	788	--	--	--	1.9	0.013	2,500	22,000	--	
MW-15	MW-15	2	Jun-07	32.00	7.02	1080	--	--	0.25	-66.8	--	518	--	--	--	--	0.012	7,880	25,000	--	
MW-15	MW-22	2,3	Jun-07	32.00	7.03	1088	--	--	0.25	-66.8	--	528	--	--	--	--	0.018	7,580	25,000	--	
MW-15	MW-15	2	Sep-07	71.90	6.84	1039	990.8	--	3.18	-58.0	< 0.20	548	--	1.40	28.08	--	0.081	10	50	--	
MW-15	MW-15	1	Dec-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-15	MW-15	2	Mar-08	70.95	6.81	980	257.3	0.8	0.16	-97.9	--	540	--	1.90	18.80	1.7	0.108	10	48	--	
MW-15	MW-15	2	Jun-08	70.63	6.72	790	18.7	--	0.81	5.9	0.32	600	--	--	--	--	0.098	18,080	700	--	
MW-15	MW-15	2	Sep-08	70.25	6.70	1101	181.1	2.0	--	--	--	584	--	--	--	--	0.496	40	< 10	100	
MW-15	MW-15	2	Dec-08	69.39	6.61	615	510.6	2.4	0.44	-101.9	--	560	--	--	--	--	0.310	10	100	--	
MW-15	MW-15	2	Mar-09	71.31	6.89	1010	8.5	2.0	2.54	-37.2	--	1,338	542	--	1.4	0.262	28	35	--	--	
MW-15	MW-15	3	Jun-09	71.67	6.60	1175	104.5	3.2	1.31	--	--	545	--	--	--	--	333,000	62,280	48	208	
MW-15	MW-15	2	Sep-09	70.68	6.69	1011	72.1	1.8	1.23	-141.2	--	--	--	--	--	--	--	--	--	--	--
MW-15	MW-15	2	Dec-09	71.38	6.69	1088	8.2	--	0.61	-95.8	0.64	--	--	--	--	--	--	--	--	--	--
MW-15	MW-15	2	Feb-10	72.03	6.69	969	9.6	2.8	0.88	-58.4	--	--	--	5.56	48.10	--	0.159	--	--	--	--
MW-15	MW-15	2	May-10	70.95	6.65	947	8.1	3.4	1.09	-175.8	--	--	--	8.75	19.88	--	0.255	--	--	--	--
MW-15	MW-15	2	Aug-10	71.48	6.51	1890	56.1	3.4	0.82	-23.9	--	--	--	< 0.01	15.50	--	0.255	--	--	--	--
MW-15	Dup-2	2,3	Aug-10	71.48	6.51	1890	56.1	3.4	0.82	-23.9	--	--	--	< 0.01	14.80	--	0.341	--	--	--	--
MW-15	MW-15	2	Nov-10	70.79	6.79	1172	29.8	2.6	0.84	-27.3	--	--	--	2.20	25.0	--	0.424	--	--	--	--
MW-15	Dup-2	2,3	Nov-10	70.79	6.79	1172	29.8	2.6	0.84	-27.3	--	--	--	2.48	23.7	--	0.373	--	--	--	--
MW-15	MW-15	2	Feb-05	71.38	6.68	1088	134.1	2.6	0.40	-218.0	--	--	--	--	6.75	8.2	--	0.350	--	--	--
MW-15	MW-15	2	May-05	70.85	6.55	1,162	3.8	2.2	1.37	-87.3	--	--	--	--	13.7	11.9	--	0.156	--	--	--
MW-15	MW-15	2	Sep-05	70.16	6.68	1,105	132.7	2.4	0.82	-53.1	--	--	--	9.72	12.4	--	0.433	--	--	--	--
MW-15	MW-15	2	Nov-05	70.65	6.79	1,148	288.4	2.4	0.35	-124.5	--	--	--	8.4	6.8	--	0.192	--	--	--	--
MW-16	MW-16	2	Apr-08	68.72	6.97	1918	--	3.8	23.70	-979	1,370	1,300	1,280	--	177.8	--	0.026	500	280	--	--
MW-16	MW-16	2	Jun-08	67.64	6.24	1950	--	4.7	5.80	-938	--	1,188	1,188	--	--	--	0.148	618	4,880	--	--
MW-16	MW-16	2	Sep-08	70.99	6.62	1648	--	2.9	0.80	-185.0	--	1,209	--	--	--	--	0.158	12	148	--	--
MW-16	MW-16	2	Dec-08	67.64	6.40	1952	--	2.6	0.47	-87.0	--	1,128	--	1.78	--	--	0.086	18,880	64,000	--	--
MW-16	MW-00	3	Dec-08	67.64	6.68	1952	--	2.6	0.47	-87.6	--	1,228	--	--	--	--	0.188	350	2,880	--	--
MW-16	MW-16	1	Mar-09	--	--	--	--	NA	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-16	MW-16	2	Jun-09	32.00	6.95	1938	--	--	0.25	-112.0	--	1,188	--	--	--	--	0.268	--	4,688	36,880	--
MW-16	MW-16	2	Sep-09	70.58	6.88	2038	28.2	--	2.99	-82.7	< 0.20	--	< 5.0	--	< 1.00	--	0.178	--	< 10	80	--
MW-16	MW-16	2	Dec-09	70.38	6.65	1725	631.3	3.3	2.11	-76.8	--	1,080	--	3.40	5.98	--	0.198	--	1,588	3,688	--
MW-16	MW-16	2	Mar-10	68.38	6.78	1466	78.8	> 3.38	0.83	-79.7	--	1,188	--	2.88	7.30	18	0.218	38	288	--	--
MW-16	MW-16	2	Jun-10	69.87	6.54	1152	152.2	--	-0.81	-147.3	3.68	--	1,288	--	--	--	0.068	--	< 10	268	--
MW-16	MW-16	2	Sep-10	69.18	6.58	1844	115.1	3.6	--	--	--	--	1,844	--	--	--	0.287	--	588	388	--
MW-16	MW-16	2	Dec-10	68.48	6.84	1245	878.9	4.1	1.83	-84	--	1,028	--	--	--	--	0.228	--	18	2,088	--
MW-16	MW-16	2	Mar-03	68.83	6.73	1322	49.6	4.1	2.55	-42.8	--	1,928	978	--	--	19	0.278	--	50,888	18,888	--
MW-16	MW-16	3	Jun-03	69.88	6.56	2838	338.3	--	0.56	--	--	--	1,118	--	--	--	0.258	133,888	2,888	5,888	--
MW-16	MW-16	2	Sep-03	68.48	6.54	1772	85.8	3.4	0.83	-65.8	--	--	--	--	--	--	--	--	--	--	--

Appendix A  
 Historical Groundwater Monitoring Results  
 Sears Auto Center #1248  
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Well No.	Sample No.	Notes	Sample Period	FIELD PARAMETERS							LABORATORY ANALYTICAL RESULTS										
				Temperature (°F)	pH	Conductivity (umhos/cm)	Turbidity (NTU)	Fe** (mg/L)	D.O. (mg/L)	O.R.P. (mV)	Fe** (mg/L)	TDS (mg/L)	Total Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	TOC (mg/L)	Methane (mg/L)	Dissolved CO2 (µg/L)	Hydrocarbon Degraders (CFU/ML)	HPC (CFU/ML)
MW-16	MW-16	2	Dec-03	68.52	6.50	1779	239.8	--	6.78	-12.3	6.58	--	--	--	--	17.39	47.80	--	0.858	--	--
MW-16	MW-16	1	Feb-04	68.99	6.43	1615	323.4	3.2	1.24	-8.2	--	--	--	--	--	25.78	29.98	--	0.274	--	--
MW-16	MW-16	2	May-04	68.14	6.56	1680	274.5	2.6	4.88	-14.6	--	--	--	--	--	16.58	17.00	--	0.194	--	--
MW-16	MW-16	2	Aug-04	69.57	6.34	1967	432.7	3.2	6.42	26.1	--	--	--	--	--	13.68	8.08	--	0.183	--	--
MW-16	MW-16	2	Nov-04	69.83	6.78	2038	235.1	2.2	6.48	-5.4	--	--	--	--	--	5.22	7.82	--	0.246	--	--
MW-16	MW-16	2	Feb-05	69.24	6.50	2052	370.7	2.8	3.30	-38.4	--	--	--	--	--	18.5	9.93	--	0.277	--	--
MW-16	MW-16	2	May-05	68.95	6.36	1922	94.7	1.8	5.32	-15.8	--	--	--	--	--	25.7	17.3	--	0.339	--	--
MW-16	MW-16	2	Sep-05	68.68	6.42	2143	696.3	3.8	2.84	-8.2	--	--	--	--	--	6.63	3.29	--	0.277	--	--
MW-16	MW-16	2	Nov-05	68.14	6.58	2178	622.1	3.8	8.74	-45.4	--	--	--	--	--	12.3	5.4	--	0.858	--	--
MW-17	MW-17	2	Apr-06	71.60	6.74	1249	--	0.2	68.90	95.3	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-170	2,3	Apr-09	71.60	6.74	1249	--	0.2	68.90	95.3	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	--	Jun-00	73.04	6.43	1238	--	--	6.00	-112.3	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	1	Sep-00	72.58	6.59	18	--	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	--	Dec-00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Mar-01	71.78	7.22	1231	61.7	0.0	1.58	0.8	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Jun-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	1	Sep-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	1	Dec-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Mar-02	71.80	6.73	958	193.4	0.1	0.42	103.8	--	--	--	--	--	--	--	--	--	--	--
MW-17	Dup-1	2,3	Mar-02	71.80	6.73	958	193.4	0.1	0.42	103.8	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	4	Jun-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	1	Sep-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	4	Dec-02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Mar-03	71.83	6.69	975	5.5	0.0	1.83	99.8	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Jun-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Sep-03	71.62	6.78	978	59.1	--	0.67	98.1	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	4	Dec-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Feb-04	72.52	6.65	1000	16.5	0.0	0.80	111.6	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	4	May-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Aug-04	71.62	6.45	1104	158.4	0.0	0.95	375.6	--	--	--	--	--	24.00	83.78	--	< 0.005	--	--
MW-17	MW-17	4	Nov-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	1	Feb-05	72.64	6.59	1099	146.8	0.0	0.44	40.5	--	--	--	--	--	11.8	42.9	--	< 0.005	--	--
MW-17	MW-17	4	May-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-17	MW-17	2	Sep-05	72.14	6.51	1163	48.1	0.0	0.88	175.4	--	--	--	--	--	22.3	28.1	--	< 0.005	--	--
MW-17	MW-17	4	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-18	MW-18	2	Apr-06	67.82	6.72	898	--	0.3	72.00	-85.6	--	--	525	525	--	--	--	--	< 0.005	--	--
MW-18	MW-18	2	Jun-06	69.26	7.33	888	--	--	3.18	-188.4	--	--	528	528	--	--	--	--	< 0.005	--	1,708
MW-18	MW-18	2	Sep-06	68.00	6.64	740	--	1.5	0.75	-183.0	--	--	580	--	--	--	--	--	< 0.010	--	--
MW-18	MW-1888	2,3	Sep-06	68.08	6.64	760	--	1.5	0.80	-183.0	--	--	580	--	--	--	--	--	< 0.010	--	--
MW-18	MW-18	2	Dec-06	67.82	6.69	1061	--	2.4	0.88	-111.0	--	--	580	--	--	2.38	--	--	< 0.010	--	--
MW-18	MW-18	2	Mar-07	66.99	6.98	999	86.7	0.5	0.81	-138.8	--	--	568	--	--	--	--	--	< 0.010	--	--
MW-18	MW-18	2	Jun-07	32.80	7.45	1010	--	--	0.28	-185.9	--	--	578	--	--	--	--	--	< 0.010	--	--
MW-18	MW-18	2	Sep-07	69.39	6.74	1844	64.1	--	1.90	-68.1	0.25	--	550	--	--	--	--	--	< 0.010	--	--
MW-18	MW-18	3	Dec-07	67.50	6.83	760	189.0	1.5	0.52	-87.7	--	--	568	--	--	--	--	--	< 0.010	--	--
MW-18	MW-18	2,3	Dec-07	67.50	6.83	760	189.0	1.5	0.52	-87.7	--	--	468	--	--	--	--	--	< 0.010	--	--
MW-18	MW-18	1	Mar-08	67.58	6.88	782	358.1	> 3.39	0.84	-88.4	--	--	528	--	--	--	--	--	< 0.010	--	--
MW-18	MW-18	2	Jun-08	68.50	6.60	598	7.8	--	-8.1	-88.2	0.59	--	390	--	--	--	--	--	< 0.010	--	--
MW-18	MW-18	2	Sep-08	68.45	6.54	991	19.9	4.9	--	--	--	--	564	--	--	--	--	--	0.011	--	--
MW-18	MW-18	2	Dec-08	70.78	6.39	983	184.6	5.2	0.61	-98.3	--	--	578	--	--	--	--	--	0.028	--	--
MW-18	MW-18	2	Mar-09	69.73	6.77	988	4.8	3.9	2.12	-35.6	--	--	503	--	--	--	--	--	0.018	--	--
MW-18	MW-18	3	Jun-09	73.53	6.48	1838	128.4	4.1	4.80	--	--	--	525	--	--	--	--	--	0.018	80,390	--
MW-18	MW-18	2	Sep-09	68.85	6.55	956	1.8	3.8	0.68	-63.1	--	--	--	--	--	--	--	--	--	--	--
MW-18	MW-18	2	Dec-09	68.11	6.54	1089	9.3	--	0.67	-92.4	2.02	--	--	--	4.18	8.71	--	< 0.005	--	--	--
MW-18	MW-18	2	Feb-10	68.77	6.42	983	2.8	4.8	0.80	-80.4	--	--	--	--	7.90	29.28	--	0.076	--	--	--
MW-18	MW-18	2	May-10	69.37	6.51	987	2.6	5.3	0.81	-211.2	--	--	--	--	0.79	4.68	--	0.057	--	--	--
MW-18	MW-18	2	Aug-10	69.48	6.24	1018	7.1	5.9	0.96	-23.3	--	--	--	--	< 0.01	5.91	--	0.053	--	--	--
MW-18	MW-18	2	Nov-10	69.38	6.69	1097	4.4	2.2	1.38	-96.6	--	--	--	--	2.82	1.62	--	0.056	--	--	--
MW-18	MW-18	2	Feb-11	68.83	6.53	947	5.2	2.6	0.42	-233.3	--	--	--	--	1.64	< 1.0	--	0.063	--	--	--



Appendix A  
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Well No.	Sample No.	Notes	Sample Period	FIELD PARAMETERS							LABORATORY ANALYTICAL RESULTS										
				Temperature (°F)	pH	Conductivity (µmhos/cm)	Turbidity (NTU)	Fe <sup>++</sup> (mg/L)	D.O. (mg/L)	O.R.P. (mV)	Fe <sup>++</sup> (mg/L)	TDS (mg/L)	Total Alkalinity (mg/L)	Bicarbonate Alkalinity (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)	TOC (mg/L)	Methane (mg/L)	Dissolved CO2 (µg/L)	Hydrocarbon Degraders (CFU/ML)	HPC (CFU/ML)
MW-21	MW-21	2	Feb-04	69.75	6.45	1921	22.1	2.6	0.58	-40.4	--	--	--	4.92	5.92	--	0.074	--	--		
MW-21	MW-21	2	May-04	71.42	6.57	1733	24.0	2.6	1.16	-68.3	--	--	--	2.32	< 1.00	--	0.045	--	--		
MW-21	MW-21	2	Aug-04	--	--	--	--	5.8	--	--	--	--	--	1.32	< 1.00	--	0.040	--	--		
MW-21	MW-21	2	Nov-04	--	--	--	--	--	--	--	--	--	--	6.67	0.54	--	0.021	--	--		
MW-21	MW-21	2	Feb-05	66.25	6.42	1111	770.3	3.4	3.22	-72.7	--	--	--	2.20	< 1.0	--	0.033	--	--		
MW-21	MW-21	2A	May-05	67.95	6.38	1,091	1,264.3	2.6	6.15	-64.3	--	--	--	2.05	< 1.0	--	0.027	--	--		
MW-21	MW-21	2B	Sep-05	65.79	6.54	2,528	417.2	2.8	3.41	-57.8	--	--	--	2.15	< 1.0	--	< 0.005	--	--		
MW-21	MW-21	2B	Nov-05	65.86	6.58	2,577	167.7	3.4	2.29	-91.9	--	--	--	2.02	< 1.0	--	< 0.005	--	--		
MW-22	MW-22	2	Dec-01	68.00	6.50	786	292.6	0.1	3.50	34.5	--	300	--	--	--	< 0.010	--	--			
MW-22	MW-22	2	Dec-01	68.00	6.50	766	292.6	0.1	3.50	34.5	--	300	--	--	--	< 0.010	--	--			
MW-22	MW-22	2	Mar-02	66.50	6.99	783	146.1	0.5	1.67	9.7	--	--	--	--	--	--	--	--			
MW-22	MW-22	2	Jun-02	66.27	6.81	525	46.2	--	0.19	95.7	< 0.10	--	410	--	--	--	< 0.010	--	--		
MW-22	MW-22	2	Sep-02	66.04	6.76	882	13.6	< 0.1	--	--	--	398	--	--	--	< 0.005	--	--			
MW-22	MW-22	2	Dec-02	65.45	6.85	647	719.8	0.0	2.21	107.8	--	--	445	--	--	< 0.010	--	--			
MW-22	MW-22	2	Mar-03	66.56	6.86	825	43.7	0.0	3.25	105.1	--	371	--	--	--	0.262	--	--			
MW-22	MW-22	3	Jun-03	67.53	6.71	959	102.4	< 0.1	12.24	--	--	565	--	--	--	< 0.005	37,900	--			
MW-22	MW-22	2	Sep-03	65.08	6.29	835	27.1	0.0	0.24	96.8	--	--	--	--	--	--	--	--			
MW-22	MW-22	2	Dec-03	66.34	6.78	876	16.2	--	3.66	117.0	0.05	--	--	18.80	43.50	--	< 0.005	--	--		
MW-22	MW-22	2	Feb-04	66.78	6.79	771	16.3	0.0	1.84	158.6	--	--	--	19.80	185.00	--	< 0.005	--	--		
MW-22	MW-22	2	May-04	67.08	6.78	807	13.3	0.0	1.59	72.4	--	--	--	19.90	46.90	--	< 0.005	--	--		
MW-22	MW-22	2	Aug-04	66.60	6.61	857	108.3	0.0	0.01	391.8	--	--	--	29.70	53.90	--	< 0.005	--	--		
MW-22	MW-22	2	Nov-04	66.52	6.84	916	26.6	0.0	3.95	132.9	--	--	--	9.0	19.2	--	< 0.005	--	--		
MW-22	MW-22	2	Feb-05	66.18	6.77	850	62.3	0.0	3.29	152.8	--	--	--	24.9	30.5	--	< 0.005	--	--		
MW-22	MW-22	2	May-05	66.23	6.61	903	16.7	0.0	4.55	-5.6	--	--	--	19.3	39.3	--	0.0075	--	--		
MW-22	MW-22	2	Sep-05	64.76	6.69	870	28.3	0.0	3.59	149.7	--	--	--	31.4	16.9	--	< 0.005	--	--		
MW-22	MW-22	2	Nov-05	66.40	6.76	901	46.2	0.0	3.59	109.9	--	--	--	19.8	45.9	--	< 0.005	--	--		
MW-23	MW-23	2	Nov-05	70.25	6.74	1,255	8.8	1.0	0.76	-21.7	--	--	--	27	62.4	--	0.556	--	--		
MW-24	MW-23	2	Nov-05	69.33	6.70	1,246	87.0	0.0	1.11	60.5	--	--	--	22.3	77.4	--	< 0.005	--	--		
IW-13	IW-13	2	Nov-05	71.22	6.84	1,452	1191.0	0.2	0.84	57.0	--	--	--	23.6	83.4	--	< 0.005	--	--		

Notes/Explanations:  
 1. "Pre-purge" sample  
 2. "Post-purge" sample  
 3. Duplicate sample  
 4. Well not scheduled for sampling this quarter  
 5. Well not accessible for sampling  
 6. Passive skimmer installed in well  
 7. Sample was received and analyzed past holding time.  
 8. Parged dry and sampled with disposable boiler.  
 SP = Separate phase petroleum hydrocarbons present, not sampled

CFU/ML = colony forming units/milliliter  
 D.O. = Dissolved Oxygen  
 °F = degrees Fahrenheit  
 Fe<sup>++</sup> = Ferrous Iron field testing  
 O.R.P. = Oxidation Reductive Potential  
 H. Degraders = Hydrocarbon Degraders  
 HPC = Heterotrophic Plate Count

mg/L = milligrams per liter  
 µg/L = micrograms per liter  
 TDS = Total Dissolved Solids  
 TOC = Total Organic Carbon  
 -- = Not analyzed/Not measured  
 NTU = nephelometric turbidity units  
 µmhos/cm = micromhos per centimeter

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>t</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-1	SP	Mar-86	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Jul-86	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Apr-87	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Jun-87	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Sep-87	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Dec-87	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Mar-88	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Jun-88	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Sep-88	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Dec-88	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	Mar-89	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP	May-89	--	--	--	--	--	--	--	--	--	--	--
MW-1	--	Aug-89	--	DRY	DRY	--	--	DRY	DRY	DRY	DRY	DRY	--
MW-1	--	Nov-89	--	DRY	DRY	--	--	DRY	DRY	DRY	DRY	DRY	--
MW-1	--	Dec-90	--	DRY	DRY	--	--	DRY	DRY	DRY	DRY	DRY	--
MW-1	--	Dec-90	--	DRY	DRY	--	--	DRY	DRY	DRY	DRY	DRY	--
MW-1	--	Apr-91	30	30.38	0.00	57.60	27.22	170,000	16,000	19,000	3,800	16,000	--
MW-1	--	Jan-92	30	31.27	0.00	57.60	26.33	300,000	26,000	31,000	6,300	31,000	--
MW-1	--	Apr-92	30	29.57	0.00	57.60	28.03	120,000	18,000	21,000	2,900	14,000	--
MW-1	--	Jun-92	30	29.61	0.00	57.60	27.99	150,000	24,000	28,000	3,200	16,000	--
MW-1	--	Oct-92	30	30.65	trace	57.60	26.95	92,000	11,000	13,000	2,300	11,000	--
MW-1	SP	Mar-93	30	27.35	0.20	57.60	30.41	--	--	--	--	--	--
MW-1	SP	Aug-93	30	27.48	trace	57.60	30.12	--	--	--	--	--	--
MW-1	SP	Nov-93	30	28.62	0.12	57.60	29.08	--	--	--	--	--	--
MW-1	SP	Mar-94	30	28.64	0.09	57.60	29.03	--	--	--	--	--	--
MW-1	SP	Sep-94	30	28.37	0.22	57.60	29.41	--	--	--	--	--	--
MW-1	SP	Dec-94	30	28.05	0.13	57.60	29.65	--	--	--	--	--	--
MW-1	SP	Dec-94	25	23.94	0.25	57.60	33.86	--	--	--	--	--	--
MW-1	SP	Jun-95	25	24.33	0.24	57.60	33.46	--	--	--	--	--	--
MW-1	SP	Sep-95	25	26.00	0.40	57.60	31.92	--	--	--	--	--	--
MW-1	SP	Sep-98	--	21.38	0.06	57.60	36.27	--	--	--	--	--	--
MW-1	SP	Dec-98	--	22.94	0.05	57.60	34.70	--	--	--	--	--	--
MW-1	SP	Mar-99	--	--	0.01	57.60	--	--	--	--	--	--	--
MW-1	SP	Jun-99	--	22.64	0.02	57.60	34.97	--	--	--	--	--	--
MW-1	SP	Sep-99	--	--	--	57.60	--	--	--	--	--	--	--
MW-1	SP	Dec-99	--	--	--	57.60	--	--	--	--	--	--	--
MW-1	SP	Apr-00	--	21.73	0.07	57.60	--	--	--	--	--	--	--
MW-1	--	Jun-00	--	--	--	57.60	--	--	--	--	--	--	--
MW-1	SP	Sep-00	--	--	0.07	57.60	--	--	--	--	--	--	--
MW-1	SP	Dec-00	--	25.88	0.04	57.60	31.72	--	--	--	--	--	--
MW-1	SP	Mar-01	--	23.90	0.14	57.60	33.70	--	--	--	--	--	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>x</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-1	SP	Jun-01	--	25.75	0.05	57.60	31.85	--	--	--	--	--	--
MW-1	SP	Sep-01	--	25.94	0.09	57.60	31.66	--	--	--	--	--	--
MW-1	SP	Dec-01	--	25.95	0.01	57.60	31.65	--	--	--	--	--	--
MW-1	SP	Mar-02	--	24.22	0.12	57.60	33.38	--	--	--	--	--	--
MW-1	SP	Jun-02	--	23.45	0.15	57.60	34.15	--	--	--	--	--	--
MW-1	SP,1	Sep-02	--	25.74	0.11	57.60	31.86	308,000	10,300	7,300	4,960	28,000	< 500
MW-1	SP	Dec-02	--	26.35	0.00	60.04	33.69	--	--	--	--	--	--
MW-1	SP	Mar-03	--	24.14	0.01	60.04	35.91	--	--	--	--	--	--
MW-1	SP	Jun-03	--	23.70	0.01	60.04	36.35	--	--	--	--	--	--
MW-1	2	Sep-03	--	--	--	--	--	--	--	--	--	--	--
MW-1	SP, 6	Dec-03	--	25.96	--	--	--	--	--	--	--	--	--
MW-1	2	Feb-04	--	24.52	0.01	60.04	35.53	--	--	--	--	--	--
MW-1	SP, 6	May-04	--	24.24	0.01	60.04	35.81	--	--	--	--	--	--
MW-1	SP, 6	Aug-04	--	25.55	0.04	60.04	34.52	--	--	--	--	--	--
MW-1	SP, 6	Nov-04	--	26.22	0.02	60.04	33.84	--	--	--	--	--	--
MW-1	SP, 6	Feb-05	--	23.97	0.02	60.04	36.09	--	--	--	--	--	--
MW-1	SP, 6	May-05	--	22.05	0.02	60.04	38.01	--	--	--	--	--	--
MW-1	SP, 6	Sep-05	--	23.77	0.01	60.04	36.28	--	--	--	--	--	--
MW-1	SP, 6	Nov-05	--	24.42	0.01	60.04	35.63	--	--	--	--	--	--
MW-2	SP	Mar-86	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Jul-86	--	--	--	--	--	--	--	--	--	--	--
MW-2	--	Apr-87	--	--	--	--	--	280,000	19,000	2,000	--	21,000	--
MW-2	SP	Jun-87	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Sep-87	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Dec-87	--	--	--	--	--	--	--	--	--	--	--
MW-2	--	Mar-88	--	--	--	--	--	170,000	22,000	34,000	--	12,000	--
MW-2	SP	Jun-88	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Sep-88	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Dec-88	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Mar-89	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	May-89	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Aug-89	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Nov-89	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Feb-90	--	--	--	--	--	--	--	--	--	--	--
MW-2	--	Dec-90	--	--	--	--	--	--	--	--	--	--	--
MW-2	SP	Apr-91	30	30.02	0.01	57.13	27.12	--	--	--	--	--	--
MW-2	--	Jan-92	--	DRY	DRY	--	--	DRY	DRY	DRY	DRY	DRY	--
MW-2	--	Apr-92	30	29.18	trace	57.13	27.95	140,000	17,000	28,000	2,700	16,000	--
MW-2	--	Jun-92	30	29.22	0.00	57.13	27.91	220,000	20,000	35,000	4,200	23,000	--
MW-2	--	Oct-92	30	30.28	trace	57.13	26.85	130,000	17,000	26,000	2,600	14,000	--
MW-2	--	Mar-93	25	26.95	trace	57.13	30.18	130,000	21,000	33,000	3,200	18,000	--



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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS						
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>1</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	
MW-2	SP	Aug-93	30	27.12	0.01	57.13	30.02		--	--	--	--	--	--
MW-2	--	Nov-93	30	28.17	0.00	57.13	28.96	120,000	20,000	27,000	2,800	15,000	--	--
MW-2	--	Mar-94	30	27.12	0.00	57.13	30.01	170,000	27,000	35,000	3,300	19,000	--	--
MW-2	--	Sep-94	30	28.02	0.00	57.13	29.11	110,000	20,000	24,000	2,400	13,000	--	--
MW-2	--	Dec-94	30	27.70	0.00	57.13	29.43	J 110,000	J 24,000	J 32,000	J 2,900	J 16,000	--	--
MW-2	--	Apr-95	25	23.37	0.00	57.13	33.76	110,000	19,000	22,000	13,000	2,300	--	--
MW-2	--	Jun-95	25	24.01	0.00	57.13	33.12	130,000	26,000	28,000	3,400	170,000	--	--
MW-2	--	Sep-95	25	25.31	0.00	57.13	31.82	90,000	22,000	28,000	3,100	16,000	--	--
MW-2	1	Sep-98	20	21.00	0.00	57.13	36.13	61,400	12,200	6,640	1,820	8,420	< 200	--
MW-2	2	Sep-98	20	21.00	0.00	57.13	36.13	108,000	14,900	20,000	2,490	13,600	< 200	--
MW-2	1	Dec-98	25	22.53	0.00	57.13	34.60	133,000	25,800	22,800	3,900	19,500	< 200	--
MW-2	1	Mar-99	25	20.90	0.00	57.13	36.23	51,000	23,000	11,000	2,700	12,000	< 100	--
MW-2	1	Jun-99	25	22.30	0.00	57.13	34.83	98,400	19,000	12,600	2,840	13,100	< 200	--
MW-2	1	Sep-99	27	23.97	0.00	57.13	33.16	95,000	18,000	14,000	2,900	13,000	< 500	--
MW-2	1	Dec-99	28	24.89	0.00	57.13	32.24	115,000	19,200	17,600	2,970	16,000	< 500	--
MW-2	1	Apr-00	21	20.61	0.00	57.13	36.52	153,000	17,000	27,100	3,400	18,800	ND	--
MW-2	2,3	Apr-00	21	20.61	0.00	57.13	36.52	140,000	16,600	24,400	3,180	17,600	ND	--
MW-2	2	Jun-00	--	22.31	0.00	57.13	34.82	73,200	16,000	15,400	2,090	10,800	ND	--
MW-2	2	Sep-00	--	23.74	0.00	57.13	33.39	98,000	19,000	25,000	2,500	15,000	ND	--
MW-2	2	Dec-00	--	23.85	0.00	57.13	33.28	110,000	17,000	24,000	2,900	17,000	ND	--
MW-2	2	Mar-01	--	23.26	0.00	57.13	33.87	90,000	16,000	18,000	2,100	12,000	< 2,500	--
MW-2	2	Jun-01	--	24.30	0.00	57.13	32.83	140,000	14,000	26,000	3,000	17,000	< 2,500	--
MW-2	2,3	Sep-01	--	25.47	0.00	57.13	31.66	130,000	13,000	23,000	3,000	15,000	< 2,500	--
MW-2	2	Sep-01	--	25.47	0.00	57.13	31.66	140,000	13,000	26,000	3,400	17,000	< 2,500	--
MW-2	2	Dec-01	--	25.63	0.00	57.13	31.50	110,000	14,000	22,000	3,500	17,000	< 2,500	--
MW-2	2	Mar-02	--	23.74	0.00	57.13	33.39	92,000	11,000	18,000	1,500	10,000	< 2,500	--
MW-2	2	Jun-02	--	24.10	0.00	57.13	33.03	130,000	16,000	23,000	3,200	16,000	1,200	--
MW-2	2	Sep-02	--	25.37	0.00	57.13	31.76	102,000	12,000	20,500	3,550	15,700	< 50.0	--
MW-2	2	Dec-02	--	25.97	0.00	59.55	33.58	100,000	11,200	26,900	3,630	17,700	137.0	--
MW-2	2	Mar-03	--	23.78	0.00	59.55	35.77	181,000	11,200	24,900	3,300	16,500	< 400	--
MW-2	2	Jun-03	--	23.35	0.00	59.55	36.20	91,900	9,340	18,700	2,430	12,400	< 400	--
MW-2	2	Jun-03	--	23.35	0.00	59.55	36.20	111,000	8,660	19,200	2,350	12,200	< 400	--
MW-2	2	Sep-03	--	25.07	0.00	59.55	34.48	68,700	10,400	23,300	2,800	14,600	< 400	--
MW-2	2	Dec-03	--	25.65	0.00	59.55	33.90	137,000	12,400	32,500	3,900	20,400	< 500	--
MW-2	2	Feb-04	--	24.03	0.00	59.55	35.52	72,100	12,400	27,600	3,880	19,500	< 200	--
MW-2	2	May-04	--	23.75	0.00	59.55	35.80	60,500	11,800	26,000	3,210	18,200	< 200	--
MW-2	2,3	May-04	--	23.75	0.00	59.55	35.80	70,300	10,100	25,600	3,220	17,100	< 200	--
MW-2	2	Aug-04	--	25.15	0.00	59.55	34.40	77,600	9,930	20,000	2,370	12,300	< 200	--
MW-2	2,3	Aug-04	--	25.15	0.00	59.55	34.40	73,100	10,000	19,200	2,380	12,000	< 200	--
MW-2	2	Nov-04	--	25.71	0.00	59.55	33.84	87,300	10,700	15,500	1,980	11,000	< 200	--
MW-2	2,3	Nov-04	--	25.71	0.00	59.55	33.84	84,200	9,740	14,100	1,720	10,500	< 200	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>1</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-2	2	Feb-05	--	23.47	0.00	59.55	36.08	59,700	8,420	19,500	1,990	11,500	< 200
MW-2	2	May-05	--	21.16	0.00	59.55	38.39	91,000	13,700	19,200	2,180	9,170	< 200
MW-2	2	Sep-05	--	23.36	0.00	59.55	36.19	107,000	11,900	22,200	3,430	17,100	< 200
MW-2	2,3	Sep-05	--	23.36	0.00	59.55	36.19	108,000	10,900	22,000	3,340	16,900	< 200
MW-2	2	Nov-05	--	24.00	0.00	59.55	35.55	54,600	7,310	12,000	1,990	9,500	< 100
MW-2	2,3	Nov-05	--	24.00	0.00	59.55	35.55	56,900	7,340	11,900	1,900	9,630	< 100
MW-3	--	Mar-86	--	--	--	--	--	140,000	14,000	12,000	--	13,000	--
MW-3	--	Jul-86	--	--	--	--	--	120,000	17,000	7,800	--	1,100	--
MW-3	--	Apr-87	--	--	--	--	--	180,000	19,000	12,000	--	16,000	--
MW-3	--	Jun-87	--	--	--	--	--	120,000	20,000	11,000	--	13,000	--
MW-3	--	Sep-87	--	--	--	--	--	130,000	23,000	13,000	--	20,000	--
MW-3	--	Dec-87	--	--	--	--	--	160,000	24,000	10,000	--	14,000	--
MW-3	--	Mar-88	--	--	--	--	--	120,000	26,000	10,000	--	13,000	--
MW-3	--	Jun-88	--	--	--	--	--	140,000	22,000	11,000	2,200	14,000	--
MW-3	SP	Sep-88	--	--	--	--	--	--	--	--	--	--	--
MW-3	SP	Dec-88	--	--	--	--	--	--	--	--	--	--	--
MW-3	SP	Mar-89	--	--	--	--	--	--	--	--	--	--	--
MW-3	SP	May-89	--	--	--	--	--	--	--	--	--	--	--
MW-3	SP	Aug-89	--	--	--	--	--	--	--	--	--	--	--
MW-3	SP	Nov-89	--	--	--	--	--	--	--	--	--	--	--
MW-3	SP	Feb-90	--	--	--	--	--	--	--	--	--	--	--
MW-3	--	Dec-90	--	Inaccessible	Inaccessible	--	--	--	--	--	--	--	--
MW-3	SP	Apr-91	30	29.01	0.08	56.39	27.38	--	--	--	--	--	--
MW-3	SP	Jan-92	30	30.20	0.11	56.39	26.28	--	--	--	--	--	--
MW-3	--	Apr-92	30	28.47	trace	56.39	27.92	75,000	12,000	5,200	1,600	12,000	--
MW-3	--	Jun-92	30	28.52	0.00	56.39	27.87	98,000	17,000	5,300	1,900	13,000	--
MW-3	--	Oct-92	30	29.57	trace	56.39	26.82	78,000	17,000	4,000	1,500	9,900	--
MW-3	--	Mar-93	25	26.14	trace	56.39	30.25	73,000	17,000	5,000	2,000	14,000	--
MW-3	SP	Aug-93	25	26.46	0.01	56.39	29.94	--	--	--	--	--	--
MW-3	--	Nov-93	30	27.46	0.00	56.39	28.93	100,000	20,000	3,400	1,800	13,000	--
MW-3	--	Mar-94	25	26.37	0.00	56.39	30.02	150,000	28,000	3,700	2,600	19,000	--
MW-3	--	Sep-94	30	27.30	0.00	56.39	29.09	72,000	18,000	2,000	1,600	11,000	--
MW-3	--	Dec-94	25	26.98	0.00	56.39	29.41	J 94,000	J 19,000	J 2,100	J 1,700	J 11,000	--
MW-3	--	Apr-95	25	22.65	0.00	56.39	33.74	79,000	16,000	1,200	9,600	1,600	--
MW-3	--	Jun-95	25	22.65	0.00	56.39	33.74	79,000	16,000	1,200	9,600	1,600	--
MW-3	SP	Sep-95	25	23.38	0.05	56.39	33.05	--	--	--	--	--	--
MW-3	1	Sep-98	20	20.25	0.00	56.39	36.14	32,900	6,020	380	794	4,680	< 40
MW-3	1	Dec-98	20	21.78	0.00	56.39	34.61	78,000	18,000	929	2,680	13,600	< 200
MW-3	1	Mar-99	20	20.18	0.00	56.39	36.21	50,000	14,000	410	1,300	5,800	< 100
MW-3	1	Jun-99	25	21.61	0.00	56.39	34.78	59,800	12,900	621	1,840	8,950	< 200
MW-3	1	Sep-99	27	24.02	0.00	56.39	32.37	56,000	12,000	540	1,900	7,800	< 500

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>k</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-3	1	Dec-99	27	24.13	0.00	56.39	32.26	67,700	12,700	660	2,150	12,000	< 250
MW-3	2	Apr-00	21	20.58	0.00	56.39	35.81	88,000	16,200	996	2,710	14,000	ND
MW-3	--	Jun-00	--	21.55	0.00	56.39	34.84	--	--	--	--	--	--
MW-3	1	Sep-00	--	22.98	0.00	56.39	33.41	79,000	20,000	810	3,300	18,000	ND
MW-3	--	Dec-00	--	24.50	0.00	56.39	31.89	--	--	--	--	--	--
MW-3	2,3	Mar-01	--	22.25	0.00	56.39	34.14	47,000	11,000	480	1,700	7,900	< 500
MW-3	--	Jun-01	--	24.50	0.00	56.39	31.89	--	--	--	--	--	--
MW-3	2	Sep-01	--	24.72	0.00	56.39	31.67	53,000	8,400	410	2,000	7,500	< 500
MW-3	--	Dec-01	--	24.83	0.00	56.39	31.56	--	--	--	--	--	--
MW-3	2	Mar-02	--	23.00	0.00	56.39	33.39	63,000	11,000	640	2,500	12,000	< 500
MW-3	--	Jun-02	--	23.37	0.00	56.39	33.02	--	--	--	--	--	--
MW-3	1	Sep-02	--	24.61	0.00	56.39	31.78	19,000	4,600	638	76.1	3,860	< 100.0
MW-3	--	Dec-02	--	25.28	0.00	58.78	33.50	--	--	--	--	--	--
MW-3	2	Mar-03	--	23.01	0.00	58.78	35.77	55,500	11,900	677	3,260	11,600	< 200
MW-3	--	Jun-03	--	22.60	0.00	58.78	36.18	--	--	--	--	--	--
MW-3	2	Sep-03	--	24.28	0.00	58.78	34.50	48,300	9,880	755	2,410	8,300	< 200
MW-3	2	Dec-03	--	24.90	0.00	58.78	33.88	47,000	14,200	1,110	3,640	13,000	< 100
MW-3	2	Feb-04	--	23.29	0.00	58.78	35.49	45,900	7,840	730	2,660	8,430	< 100
MW-3	2	May-04	--	23.01	0.00	58.78	35.77	29,300	8,350	780	2,610	8,750	< 100
MW-3	2	Aug-04	--	24.32	0.00	58.78	34.46	30,000	8,100	765	2,300	6,970	< 100
MW-3	2	Nov-04	--	24.98	0.00	58.78	33.80	88,900	15,100	959	4,460	14,500	< 100
MW-3	2	Feb-05	--	22.71	0.00	58.78	36.07	30,100	7,190	624	2,140	6,970	< 200
MW-3	2	May-05	--	20.43	0.00	58.78	38.35	34,800	8,150	622	2,570	7,840	< 100
MW-3	2	Sep-05	--	22.61	0.00	58.78	36.17	41,100	8,590	612	3,150	8,390	< 100
MW-3	2	Nov-05	--	23.25	0.00	58.78	35.53	32,800	8,590	694	3,160	8,970	< 100
MW-4	--	Mar-86	--	--	--	--	--	95,000	8,600	4,300	--	95,000	--
MW-4	--	Jul-86	--	--	--	--	--	110,000	13,000	4,500	--	15,000	--
MW-4	--	Apr-87	--	--	--	--	--	97,000	9,200	4,600	--	12,000	--
MW-4	--	Jun-87	--	--	--	--	--	76,000	11,000	3,500	--	15,000	--
MW-4	--	Sep-87	--	--	--	--	--	82,000	11,000	5,200	--	15,000	--
MW-4	--	Dec-87	--	--	--	--	--	99,000	11,000	4,300	--	13,000	--
MW-4	--	Mar-88	--	--	--	--	--	110,000	13,000	5,600	--	16,000	--
MW-4	--	Jun-88	--	--	--	--	--	85,000	11,000	3,900	1,700	11,000	--
MW-4	--	Sep-88	--	--	--	--	--	140,000	12,000	6,200	2,200	15,000	--
MW-4	--	Dec-88	--	--	--	--	--	81,000	9,700	4,800	1,500	10,000	--
MW-4	--	Mar-89	--	--	--	--	--	56,000	3,000	1,400	790	5,600	--
MW-4	--	May-89	--	--	--	--	--	43,000	4,700	3,100	990	6,800	--
MW-4	--	Aug-89	--	--	--	--	--	51,000	6,500	3,000	870	6,400	--
MW-4	--	Nov-89	--	--	--	--	--	69,000	8,500	2,800	1,500	11,000	--
MW-4	--	Dec-90	--	--	--	--	--	36,000	5,500	1,100	1,400	8,000	--
MW-4	--	Dec-90	--	--	--	--	--	50,000	6,700	2,000	1,200	8,300	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>n</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-4	--	Apr-91	30	28.90	0.00	55.90	27.00	37,000	5,700	1,100	1,600	10,000	--
MW-4	--	Jan-92	30	29.72	0.00	55.90	26.18	45,000	5,500	850	1,500	8,400	--
MW-4	--	Apr-92	30	28.03	0.00	55.90	27.87	48,000	3,800	630	1,600	8,300	--
MW-4	--	Jun-92	30	28.11	0.00	55.90	27.79	65,000	5,800	870	2,100	11,000	--
MW-4	--	Oct-92	30	29.16	0.00	55.90	26.74	56,000	5,000	840	1,800	10,000	--
MW-4	--	Mar-93	25	25.73	0.00	55.90	30.17	38,000	3,700	550	1,700	8,500	--
MW-4	--	Aug-93	25	26.09	0.00	55.90	29.81	67,000	4,200	930	1,700	9,200	--
MW-4	--	Nov-93	30	27.06	0.00	55.90	28.84	53,000	5,000	1,000	1,900	11,000	--
MW-4	--	Mar-94	25	25.80	0.00	55.90	30.10	56,000	4,400	1,000	1,900	11,000	--
MW-4	--	Sep-94	25	26.88	0.00	55.90	29.02	36,000	4,200	850	1,500	9,400	--
MW-4	--	Dec-94	25	26.60	0.00	55.90	29.30	38,000	4,600	890	1,800	9,700	--
MW-4	--	Apr-95	25	22.32	0.00	55.90	33.58	32,000	3,700	590	8,800	1,500	--
MW-4	--	Jun-95	25	23.00	0.00	55.90	32.90	41,000	4,100	790	1,700	8,200	--
MW-4	--	Sep-95	25	24.28	0.00	55.90	31.62	40,000	4,000	730	1,700	8,200	--
MW-4	--	Jul-96	20	21.94	0.00	55.90	33.96	--	--	--	--	--	--
MW-4	1	Sep-98	20	19.99	0.00	55.90	35.91	40,000	4,120	670	1,720	7,350	< 100
MW-4	1,3	Sep-98	20	19.99	0.00	55.90	35.91	2,500	3,670	590	1,660	6,850	< 100
MW-4	1	Dec-98	20	21.51	0.00	55.90	34.39	48,700	5,170	731	2,360	8,790	< 100
MW-4	1	Mar-99	20	19.97	0.00	55.90	35.93	40,000	3,900	380	1,700	4,900	< 500
MW-4	1	Jun-99	24	21.27	0.00	55.90	34.63	30,700	3,370	391	1,460	3,920	< 50
MW-4	1	Sep-99	26	22.87	0.00	55.90	33.03	37,000	4,400	400	1,900	5,600	< 500
MW-4	1	Dec-99	27	23.84	0.00	55.90	32.06	43,300	4,360	503	1,930	6,970	< 250
MW-4	1	Apr-00	21	20.32	0.00	55.90	35.58	43,400	4,110	458	1,810	5,550	ND
MW-4	2	Jun-00	--	21.26	0.00	55.90	34.64	23,900	2,960	324	1,140	2,940	ND
MW-4	2,3	Jun-00	--	21.26	0.00	55.90	34.64	22,300	2,850	319	1,070	2,770	ND
MW-4	2	Sep-00	--	22.70	0.00	55.90	33.2	23,900	2,960	324	1,140	2,940	ND
MW-4	2	Dec-00	--	23.52	0.00	55.90	32.4	30,000	4,100	270	1,500	4,300	ND
MW-4	2	Mar-01	--	22.15	0.00	55.90	33.75	21,000	3,000	190	1,000	2,800	< 500
MW-4	2	Jun-01	--	23.29	0.00	55.90	32.61	32,000	3,200	260	1,400	4,000	< 250
MW-4	2	Sep-01	--	24.42	0.00	55.90	31.48	42,000	4,000	440	1,900	4,800	< 500
MW-4	2	Dec-01	--	24.57	0.00	55.90	31.33	32,000	3,600	250	1,900	3,800	< 500
MW-4	2	Mar-02	--	22.70	0.00	55.90	33.20	35,000	3,900	210	1,500	4,100	< 500
MW-4	2	Jun-02	--	23.06	0.00	55.90	32.84	33,000	3,800	240	1,700	3,300	180
MW-4	2,3	Jun-02	--	23.06	0.00	55.90	32.84	33,000	3,800	270	1,700	3,500	210
MW-4	2	Sep-02	--	24.30	0.00	55.90	31.60	32,500	4,360	218	1,650	3,870	< 50
MW-4	2,3	Sep-02	--	24.30	0.00	55.90	31.60	31,700	4,280	183	1,270	3,650	< 50
MW-4	2	Dec-02	--	24.70	0.00	58.31	33.61	34,700	4,510	563	2,030	3,901	63.6
MW-4	2,3	Dec-02	--	24.70	0.00	58.31	33.61	35,500	4,220	548	2,370	3,980	64.8
MW-4	2	Mar-03	--	22.72	0.00	58.31	35.59	36,700	4,240	340	2,130	4,440	< 100
MW-4	2,3	Mar-03	--	22.72	0.00	58.31	35.59	35,100	4,190	295	1,980	4,210	< 100
MW-4	2	Jun-03	--	22.30	0.00	58.31	36.01	35,900	2,910	259	1,330	2,640	< 200

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>r</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-4	2,3	Jun-03	--	22.30	0.00	58.31	36.01	38,500	2,980	253	1,370	2,800	< 200
MW-4	2	Sep-03	--	24.00	0.00	58.31	34.31	25,500	4,500	337	1,740	3,970	< 200
MW-4	2,3	Sep-03	--	24.00	0.00	58.31	34.31	23,600	4,270	303	1,820	3,770	< 50
MW-4	2	Dec-03	--	24.57	0.00	58.31	33.74	27,800	3,760	320	1,700	3,330	< 100
MW-4	2,3	Dec-03	--	24.57	0.00	58.31	33.74	24,000	3,750	302	1,850	3,880	< 100
MW-4	2	Feb-04	--	22.99	0.00	58.31	35.32	23,300	3,140	228	1,720	3,090	< 100
MW-4	2	May-04	--	22.71	0.00	58.31	35.60	18,300	2,880	280	1,570	3,000	< 100
MW-4	2	Aug-04	--	24.02	0.00	58.31	34.29	33,400	5,380	395	2,540	4,220	< 100
MW-4	2	Nov-04	--	24.65	0.00	58.31	33.66	13,600	2,860	438	1,090	2,060	< 100
MW-4	2	Feb-05	--	22.45	0.00	58.31	35.86	26,500	3,330	237	1,500	2,980	< 40
MW-4	2	May-05	--	20.17	0.00	58.31	38.14	33,600	3,330	243	1,420	2,440	< 50
MW-4	2,3	May-05	--	20.17	0.00	58.31	38.14	34,200	3,480	328	1,610	2,450	< 40
MW-4	2	Sep-05	--	22.33	0.00	58.31	35.98	30,100	2,950	282	1,760	2,630	< 100
MW-4	2	Nov-05	--	22.95	0.00	58.31	35.36	34,900	2,690	441	1,490	2,860	< 100
MW-5	--	Apr-87	--	--	--	--	--	83,000	5,500	1,800	--	8,000	--
MW-5	--	Jun-87	--	--	--	--	--	75,000	14,000	910	--	7,300	--
MW-5	--	Sep-87	--	--	--	--	--	66,000	13,000	1,500	--	12,000	--
MW-5	--	Dec-87	--	--	--	--	--	70,000	17,000	620	--	5,000	--
MW-5	--	Mar-88	--	--	--	--	--	71,000	13,000	1,100	--	7,300	--
MW-5	--	Jun-88	--	--	--	--	--	86,000	17,000	760	2,100	6,600	--
MW-5	--	Sep-88	--	--	--	--	--	68,000	12,000	380	1,700	5,900	--
MW-5	--	Dec-88	--	--	--	--	--	51,000	12,000	200	1,200	2,900	--
MW-5	--	Mar-89	--	--	--	--	--	59,000	13,000	420	1,500	5,000	--
MW-5	--	May-89	--	--	--	--	--	57,000	15,000	470	1,500	4,900	--
MW-5	--	Aug-89	--	--	--	--	--	48,000	9,600	470	840	2,600	--
MW-5	--	Nov-89	--	--	--	--	--	1,300	9,800	190	1,300	3,100	--
MW-5	--	Dec-90	--	--	--	--	--	44,000	12,000	510	1,200	2,600	--
MW-5	--	Apr-91	30	29.70	0.00	56.80	27.10	56,000	11,000	130	1,900	3,400	--
MW-5	--	Jan-92	30	30.59	0.00	56.80	26.21	27,000	13,000	99	1,700	3,700	--
MW-5	--	Apr-92	30	28.85	0.00	56.80	27.95	52,000	11,000	ND	1,900	4,800	--
MW-5	--	Jun-92	30	28.94	0.00	56.80	27.86	56,000	12,000	39	2,200	4,400	--
MW-5	--	Oct-92	30	29.97	0.00	56.80	26.83	41,000	9,300	ND	1,600	2,700	--
MW-5	--	Mar-93	25	26.56	0.00	56.80	30.24	43,000	8,900	ND	2,300	4,500	--
MW-5	--	Aug-93	25	26.92	0.00	56.80	29.88	65,000	9,400	ND	2,100	4,700	--
MW-5	--	Nov-93	30	27.88	0.00	56.80	28.92	41,000	11,000	ND	1,900	4,100	--
MW-5	--	Mar-94	25	26.81	0.00	56.80	29.99	44,000	9,700	ND	1,900	3,500	--
MW-5	--	Sep-94	30	27.74	0.00	56.80	29.06	40,000	12,000	93	1,500	3,000	--
MW-5	--	Dec-94	30	27.54	0.00	56.80	29.26	42,000	13,000	67	2,100	4,100	--
MW-5	--	Apr-95	25	23.19	0.00	56.80	33.61	26,000	840	24	3,300	1,500	--
MW-5	--	Jun-95	25	23.79	0.00	56.80	33.01	43,000	12,000	ND	2,200	4,500	--
MW-5	--	Sep-95	25	25.14	0.00	56.80	31.66	37,000	12,000	ND	2,100	4,200	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>2</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-5	--	Jul-96	25	22.88	0.00	56.80	33.92	--	--	--	--	--	--
MW-5	1	Sep-98	20	20.88	0.00	56.80	35.92	35,200	9,260	98	1,540	2,530	< 200
MW-5	1	Dec-98	25	22.39	0.00	56.80	34.41	45,100	12,000	102	2,000	3,470	< 100
MW-5	1	Mar-99	25	20.78	0.00	56.80	36.02	42,000	10,000	55	1,400	2,100	< 500
MW-5	3	Mar-99	25	20.78	0.00	56.80	36.02	42,000	9,400	59	1,300	1,900	< 500
MW-5	1	Jun-99	25	22.15	0.00	56.80	34.65	28,800	8,700	< 50	1,340	2,150	< 200
MW-5	3	Jun-99	25	22.15	0.00	56.80	34.65	34,800	8,530	< 50	1,280	1,980	< 200
MW-5	1	Sep-99	27	23.70	0.00	56.80	33.10	36,000	9,200	66	1,500	2,200	< 500
MW-5	3	Sep-99	27	23.70	0.00	56.80	33.10	32,000	8,700	120	1,300	2,000	< 500
MW-5	1	Dec-99	28	24.71	0.00	56.80	32.09	41,100	9,860	< 50	1,630	2,850	< 250
MW-5	2	Apr-00	21	21.18	0.00	56.80	35.62	41,800	8,970	53.6	1,660	2,900	ND
MW-5	--	Jun-00	--	22.15	0.00	56.80	34.65	--	--	--	--	--	--
MW-5	1	Sep-00	--	23.58	0.00	56.80	33.22	280,000	7,600	84	1,300	2,700	ND
MW-5	--	Dec-00	--	24.20	0.00	56.80	32.38	--	--	--	--	--	--
MW-5	2	Mar-01	--	23.00	0.00	56.80	33.80	28,000	7,800	110	1,100	1,900	< 500
MW-5	--	Jun-01	--	24.14	0.00	56.80	32.66	--	--	--	--	--	--
MW-5	2	Sep-01	--	25.30	0.00	56.80	31.50	35,000	7,100	< 50	1,400	2,000	< 500
MW-5	--	Dec-01	--	25.43	0.00	56.80	31.37	--	--	--	--	--	--
MW-5	--	Mar-02	--	23.55	0.00	56.80	33.25	37,000	8,700	< 50	1,400	2,400	< 500
MW-5	--	Jun-02	--	23.92	0.00	56.80	32.88	--	--	--	--	--	--
MW-5	1	Sep-02	--	25.17	0.00	56.80	31.63	50,000	13,000	52	1,950	3,300	< 100
MW-5	1	Dec-02	--	25.75	0.00	59.20	33.45	--	--	--	--	--	--
MW-5	2	Mar-03	--	23.60	0.00	59.20	35.60	39,800	10,000	75	1,900	2,980	< 100
MW-5	--	Jun-03	--	23.18	0.00	59.20	36.02	--	--	--	--	--	--
MW-5	2	Sep-03	--	24.88	0.00	59.20	34.32	32,900	8,470	148	1,300	2,110	< 200
MW-5	--	Dec-03	--	25.44	0.00	59.20	33.76	--	--	--	--	--	--
MW-5	2	Feb-04	--	23.85	0.00	59.20	35.35	31,200	8,000	75	1,600	2,280	< 100
MW-5	2,3	Feb-04	--	23.85	0.00	59.20	35.35	33,000	7,950	72.0	1,630	2,350	< 100
MW-5	--	May-04	--	23.58	0.00	59.20	35.62	--	--	--	--	--	--
MW-5	--	Aug-04	--	24.88	0.00	59.20	34.32	17,200	6,500	55.0	1,090	1,430	< 100
MW-5	--	Nov-04	--	25.52	0.00	59.20	33.68	--	--	--	--	--	--
MW-5	2	Feb-05	--	23.29	0.00	59.20	35.91	18,800	6,930	88	1,010	1,670	< 100
MW-5	2,3	Feb-05	--	23.29	0.00	59.20	35.91	22,500	6,890	90.0	1,330	1,930	< 20
MW-5	--	May-05	--	21.03	0.00	59.20	38.17	--	--	--	--	--	--
MW-5	2	Sep-05	--	23.19	0.00	59.20	36.01	33,400	6,690	< 50	1490	2,020	< 100
MW-5	--	Nov-05	--	23.83	0.00	59.20	35.37	--	--	--	--	--	--
MW-6	--	Mar-86	--	--	--	--	--	150,000	7,600	9,500	--	16,000	--
MW-6	--	Jul-86	--	--	--	--	--	87,000	13,000	4,600	--	8,200	--
MW-6	--	Apr-87	--	--	--	--	--	120,000	9,000	6,200	--	12,000	--
MW-6	SP	Jun-87	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Sep-87	--	--	--	--	--	--	--	--	--	--	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>x</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-6	SP	Dec-87	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Mar-88	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Jun-88	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Sep-88	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Dec-88	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Mar-89	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	May-89	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Aug-89	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Nov-89	--	--	--	--	--	--	--	--	--	--	--
MW-6	SP	Dec-90	--	--	--	--	--	--	--	--	--	--	--
MW-6	--	Apr-91	30	29.93	0.00	57.83	27.90	39,000	4,700	230	960	3,100	--
MW-6	--	Jan-92	30	31.44	0.00	57.83	26.39	280,000	17,000	1,300	5,700	19,000	--
MW-6	--	Apr-92	30	30.11	0.00	57.83	27.72	55,000	12,000	ND	1,900	6,900	--
MW-6	--	Jun-92	30	30.12	0.00	57.83	27.71	65,000	11,000	200	2,000	6,100	--
MW-6	--	Oct-92	30	31.15	trace	57.83	26.68	59,000	11,000	ND	1,900	6,000	--
MW-6	--	Mar-93	30	27.74	0.00	57.83	30.09	59,000	14,000	ND	2,100	6,700	--
MW-6	--	Aug-93	30	28.05	0.00	57.83	29.78	160,000	14,000	ND	3,200	8,400	--
MW-6	--	Nov-93	30	29.04	0.00	57.83	28.79	45,000	13,000	110	2,000	5,100	--
MW-6	--	Mar-94	30	27.58	0.00	57.83	30.25	69,000	14,000	92	2,000	5,100	--
MW-6	--	Sep-94	30	28.55	0.00	57.83	29.28	42,000	11,000	120	1,300	3,300	--
MW-6	--	Dec-94	30	28.28	0.00	57.83	29.55	39,000	15,000	160	1,600	3,900	--
MW-6	--	Apr-95	25	23.89	0.00	57.83	33.94	33,000	4,600	24	1,500	940	--
MW-6	--	Jun-95	25	24.57	0.00	57.83	33.26	39,000	10,000	72	1,700	3,100	--
MW-6	--	Sep-95	25	25.76	0.00	57.83	32.07	J 40,000	J 9,100	J 80	J 1,600	J 2,400	--
MW-6	1	Sep-98	20	21.47	0.00	57.83	36.36	1,540	363	< 5	27	30	< 20
MW-6	1	Dec-98	25	23.03	0.00	57.83	34.80	21,400	4,970	< 10	840	493	< 40
MW-6	1	Mar-99	25	21.50	0.00	57.83	36.33	19,000	4,200	< 50	510	220	< 500
MW-6	1	Jun-99	26	22.81	0.00	57.83	35.02	13,300	3,070	< 10	415	16	< 40
MW-6	1	Sep-99	28	24.93	0.00	57.83	32.90	19,000	4,500	< 50	630	340	< 500
MW-6	1,5	Dec-99	3	--	0.00	--	0.00	20,100	3,050	< 5	631	377	< 25
MW-6	2	Apr-00	23	22.28	0.00	58.29	36.01	3,060	4,140	5.91	716	1,120	ND
MW-6	--	Jun-00	--	23.28	0.00	58.29	35.01	--	--	--	--	--	--
MW-6	1	Sep-00	--	24.78	0.00	58.29	33.51	14,000	4,100	< 25	350	440	ND
MW-6	--	Dec-00	--	25.58	0.00	58.29	33.01	--	--	--	--	--	--
MW-6	2	Mar-01	--	24.31	0.00	58.29	33.98	13,000	3,500	< 25	320	250	< 250
MW-6	--	Jun-01	--	25.30	0.00	58.29	32.99	--	--	--	--	--	--
MW-6	2	Sep-01	--	26.46	0.00	58.29	31.83	--	--	--	--	--	--
MW-6	--	Dec-01	--	26.62	0.00	58.29	31.67	14,000	2200	< 25	370	260	< 250
MW-6	2	Mar-02	--	24.71	0.00	58.29	33.58	20,000	3,200	< 25	430	510	< 250
MW-6	--	Jun-02	--	25.14	0.00	58.29	33.15	--	--	--	--	--	--
MW-6	1	Sep-02	--	26.37	0.00	58.29	31.92	4,530	788	10.3	5.2	67.2	< 10

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>t</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-6	1	Dec-02	--	26.98	0.00	60.72	33.74	--	--	--	--	--	--
MW-6	2	Mar-03	--	24.78	0.00	60.72	35.94	15,400	2,550	< 1	531	547	< 20
MW-6	--	Jun-03	--	24.35	0.00	60.72	36.37	--	--	--	--	--	--
MW-6	2	Sep-03	--	26.05	0.00	60.72	34.67	13,900	2,690	< 1	484	575	< 40
MW-6	--	Dec-03	--	26.65	0.00	60.72	34.07	--	--	--	--	--	--
MW-6	2,7	Feb-04	--	25.07	0.00	60.72	35.65	12,800	2,210	20	578	566	< 40
MW-6	2,3	Feb-04	--	25.07	0.00	60.72	35.65	14,700	2,320	20	614	682	< 40
MW-6	--	May-04	--	24.77	0.00	60.72	35.95	--	--	--	--	--	--
MW-6	--	Aug-04	--	26.06	0.00	60.72	34.66	13,200	2,080	< 10	163	324	< 20
MW-6	--	Nov-04	--	26.74	0.00	60.72	33.98	--	--	--	--	--	--
MW-6	2	Feb-05	--	24.47	0.00	60.72	36.25	12,500	2,560	< 20	582	463	< 40
MW-6	2,3	Feb-05	--	24.47	0.00	60.72	36.25	13,900	2,290	< 20	634	440	< 40
MW-6	--	May-05	--	22.14	0.00	60.72	38.58	--	--	--	--	--	--
MW-6	2	Sep-05	--	24.37	0.00	60.72	36.35	13,200	1,700	< 25	393	247	< 50
MW-6	--	Nov-05	--	25.81	0.00	60.72	35.71	--	--	--	--	--	--
MW-7	--	Mar-86	--	--	--	--	--	52,000	1,400	99	--	5,000	--
MW-7	--	Jul-86	--	--	--	--	--	42,000	110	48	--	8,900	--
MW-7	--	Apr-87	--	--	--	--	--	70,000	1,800	190	--	7,800	--
MW-7	--	Jun-87	--	--	--	--	--	55,000	1,400	140	--	8,800	--
MW-7	--	Sep-87	--	--	--	--	--	34,000	1,600	73	--	8,200	--
MW-7	--	Dec-87	--	--	--	--	--	45,000	1,400	97	--	7,500	--
MW-7	--	Mar-88	--	--	--	--	--	46,000	1,400	57	--	7,000	--
MW-7	--	Jun-88	--	--	--	--	--	51,000	1,300	ND	3,200	6,000	--
MW-7	--	Sep-88	--	--	--	--	--	45,000	1,100	54	3,000	5,100	--
MW-7	--	Dec-88	--	--	--	--	--	44,000	800	78	210	410	--
MW-7	--	Mar-89	--	--	--	--	--	31,000	410	56	2,000	4,000	--
MW-7	--	May-89	--	--	--	--	--	28,000	530	ND	830	3,600	--
MW-7	--	Aug-89	--	--	--	--	--	17,000	270	80	490	1,800	--
MW-7	--	Nov-89	--	DRY	DRY	--	--	DRY	DRY	DRY	DRY	DRY	--
MW-7	--	Dec-90	--	DRY	DRY	--	--	DRY	DRY	DRY	DRY	DRY	--
MW-7	--	Dec-90	--	--	--	--	--	31,000	380	87	2,000	3,500	--
MW-7	--	Apr-91	30	28.51	0.00	55.64	27.13	35,000	190	51	1,400	3,600	--
MW-7	--	Jan-92	30	30.24	0.00	55.64	25.40	37,000	500	46	3,000	6,600	--
MW-7	--	Apr-92	30	28.05	0.00	55.64	27.59	27,000	230	ND	2,000	4,700	--
MW-7	--	Jun-92	30	28.18	0.00	55.64	27.46	37,000	270	ND	2,500	5,000	--
MW-7	--	Oct-92	30	28.55	0.00	55.64	27.09	DRY	DRY	DRY	DRY	DRY	--
MW-7	--	Mar-93	25	25.82	0.00	55.64	29.82	27,000	180	ND	2,500	4,700	--
MW-7	--	Aug-93	25	26.21	0.00	55.64	29.43	49,000	300	ND	2,600	4,300	--
MW-7	--	Nov-93	30	27.20	0.00	55.64	28.44	36,000	260	ND	2,400	3,400	--
MW-7	--	Mar-94	25	26.10	0.00	55.64	29.54	32,000	210	ND	2,200	3,000	--
MW-7	--	Sep-94	25	26.70	0.00	55.64	28.94	25,000	270	24	2,300	3,100	--



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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>4</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-7	--	Dec-94	25	26.44	0.00	55.64	29.20	28,000	280	15	2,400	3,400	--
MW-7	--	Apr-95	25	22.21	0.00	55.64	33.43	18,000	160	9	2,700	1,600	--
MW-7	--	Jun-95	25	22.82	0.00	55.64	32.82	29,000	250	27	2,500	4,000	--
MW-7	--	Sep-95	25	24.11	0.00	55.64	31.53	18,000	170	22	1,800	2,700	--
MW-7	--	Jul-96	20	21.84	0.00	55.64	33.80	--	--	--	--	--	--
MW-7	1	Sep-98	20	19.94	0.00	55.64	35.70	262	2.35	< 0.5	6.43	1.41	< 2.0
MW-7	1	Dec-98	20	21.40	0.00	55.64	34.24	1320	11.9	< 0.5	143	61.2	< 5.0
MW-7	1	Mar-99	20	19.84	0.00	55.64	35.80	19,000	140	< 50	2,200	1,200	< 500
MW-7	1	Jun-99	24	21.16	0.00	55.64	34.48	19,000	140	< 50	2,200	1,200	< 10
MW-7	1	Sep-99	26	22.75	0.00	55.64	32.89	9,600	92	< 20	1,600	510	< 50
MW-7	1	Dec-99	27	23.69	0.00	55.64	31.95	10,400	119	12.2	1,770	313	< 25
MW-7	2	Apr-00	21	20.22	0.00	55.64	35.42	1,170	151	32.5	2,360	1,940	ND
MW-7	--	Jun-00	--	21.17	0.00	55.64	34.47	--	--	--	--	--	--
MW-7	1	Sep-00	--	22.58	0.00	55.64	33.06	4,600	96	31	1,200	200	ND
MW-7	1,3	Sep-00	--	22.58	0.00	55.64	33.06	8,000	110	6.6	1,800	220	ND
MW-7	--	Dec-00	--	23.43	0.00	55.64	32.21	--	--	--	--	--	--
MW-7	2	Mar-01	--	21.95	0.00	55.64	33.69	5,800	98	15	1,300	270	< 50
MW-7	--	Jun-01	--	23.14	0.00	55.64	32.50	--	--	--	--	--	--
MW-7	2	Sep-01	--	24.30	0.00	55.64	31.34	840	2.1	< 0.50	84	5.8	< 5.0
MW-7	--	Dec-01	--	23.99	0.00	55.64	31.65	--	--	--	--	--	--
MW-7	2	Mar-02	--	22.55	0.00	55.64	33.09	9,600	83	< 5	1,100	570	< 50
MW-7	--	Jun-02	--	22.95	0.00	55.64	32.69	--	--	--	--	--	--
MW-7	1	Sep-02	--	24.17	0.00	55.64	31.47	1,710	89.2	27.6	28.4	37.9	7.3
MW-7	--	Dec-02	--	24.77	0.00	58.04	33.27	--	--	--	--	--	--
MW-7	2	Mar-03	--	22.61	0.00	58.04	35.43	10,200	64	8	855	391	22.5
MW-7	--	Jun-03	--	22.20	0.00	58.04	35.84	--	--	--	--	--	--
MW-7	2	Sep-03	--	23.89	0.00	58.04	34.15	9,130	86	11	735	310	< 10
MW-7	--	Dec-03	--	24.44	0.00	58.04	33.60	--	--	--	--	--	--
MW-7	2	Feb-04	--	22.88	0.00	58.04	35.16	8,260	49.0	12.5	509	219	< 5
MW-7	--	May-04	--	22.62	0.00	58.04	35.42	--	--	--	--	--	--
MW-7	--	Aug-04	--	23.90	0.00	58.04	34.14	7,430	45	5.7	238	98	< 5
MW-7	--	Nov-04	--	24.55	0.00	58.04	33.49	--	--	--	--	--	--
MW-7	2	Feb-05	--	22.32	0.00	58.04	35.72	7,810	30.6	3.0	348	170	< 10
MW-7	--	May-05	--	20.06	0.00	58.04	37.98	--	--	--	--	--	--
MW-7	2	Sep-05	--	22.21	0.00	58.04	35.83	8,660	28.0	< 5	191	110	< 10
MW-7	--	Nov-05	--	22.83	0.00	58.04	35.21	--	--	--	--	--	--
MW-8	--	Mar-86	--	--	--	--	--	21,000	160	12	--	560	--
MW-8	--	Jul-86	--	--	--	--	--	4,600	35	ND	--	140	--
MW-8	--	Apr-87	--	--	--	--	--	12,000	310	27	--	900	--
MW-8	--	Jun-87	--	--	--	--	--	10,000	92	8	--	450	--
MW-8	--	Sep-87	--	--	--	--	--	9,100	200	13	--	970	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>2</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-8	--	Dec-87	--	--	--	--	--	7,700	140	9	--	950	--
MW-8	--	Mar-88	--	--	--	--	--	13,000	180	17	--	1,200	--
MW-8	--	Jun-88	--	--	--	--	--	11,000	220	19	1,300	230	--
MW-8	--	Sep-88	--	--	--	--	--	9,500	63	8	680	70	--
MW-8	--	Dec-88	--	--	--	--	--	22,000	81	240	670	99	--
MW-8	--	Mar-89	--	--	--	--	--	9,800	60	29	720	190	--
MW-8	--	May-89	--	--	--	--	--	190,000	190	160	2,100	570	--
MW-8	--	Aug-89	--	--	--	--	--	35,000	94	ND	1,800	670	--
MW-8	--	Nov-89	--	--	--	--	--	15,900	140	20	1,200	270	--
MW-8	--	Dec-90	--	--	--	--	--	3,800	55	16	160	85	--
MW-8	--	Dec-90	--	--	--	--	--	17,000	77	170	1,000	210	--
MW-8	--	Apr-91	30	29.49	0.00	56.31	26.82	22,000	120	59	1,600	540	--
MW-8	--	Jan-92	30	30.13	0.00	56.31	26.18	12,000	110	13	1,200	150	--
MW-8	--	Apr-92	30	28.67	0.00	56.31	27.64	20,000	81	ND	2,100	570	--
MW-8	--	Jun-92	30	28.77	0.00	56.31	27.54	21,000	50	ND	2,000	330	--
MW-8	--	Oct-92	30	29.82	0.00	56.31	26.49	14,000	46	ND	1,300	180	--
MW-8	--	Mar-93	25	26.40	trace	56.31	29.91	22,000	59	ND	2,200	720	--
MW-8	--	Aug-93	25	26.77	trace	56.31	29.54	16,000	160	ND	1,700	510	--
MW-8	--	Nov-93	30	27.75	0.00	56.31	28.56	13,000	210	ND	2,400	580	--
MW-8	--	Mar-94	25	26.68	0.00	56.31	29.63	19,000	94	12	2,000	550	--
MW-8	--	Sep-94	30	27.36	0.00	56.31	28.95	14,000	230	17	1,600	630	--
MW-8	--	Dec-94	30	27.08	0.00	56.31	29.23	J 9,900	J 140	J 25	J 1,400	J 430	--
MW-8	--	Apr-95	25	22.79	0.00	56.31	33.52	1,800	5.3	ND	43	180	--
MW-8	--	Jun-95	25	23.44	0.00	56.31	32.87	4,400	12	11	420	52	--
MW-8	--	Sep-95	25	24.72	0.00	56.31	31.59	7,700	2.5	29	640	180	--
MW-8	--	Jul-96	25	22.41	0.00	56.31	33.90	--	--	--	--	--	--
MW-8	1	Sep-98	25	20.50	0.00	56.31	35.81	2,370	8.62	< 1.0	240	6.04	14.6
MW-8	1	Dec-98	20	21.96	0.00	56.31	34.35	1,720	5.3	< 1.0	122	< 1.0	< 5.0
MW-8	1	Mar-99	20	20.36	0.00	56.31	35.95	1,400	< 5	< 5.0	71	< 5.0	< 50
MW-8	1	Jun-99	25	21.74	0.00	56.31	34.57	1,950	7.89	< 1.0	96.1	< 1.0	< 5.0
MW-8	1	Sep-99	26	23.33	0.00	56.31	32.98	1,200	9.2	2.0	71	4.2	< 10
MW-8	1	Dec-99	27	24.26	0.00	56.31	32.05	2,550	13.5	< 1.0	145	4.99	< 10
MW-8	2	Apr-00	21	20.78	0.00	56.31	35.53	6270	24.6	2.23	382	130	ND
MW-8	2	Jun-00	--	21.74	0.00	56.31	34.57	9100	43.2	27.3	475	183	ND
MW-8	2	Sep-00	--	23.15	0.00	56.31	33.16	3,300	56	6.6	200	60	ND
MW-8	2	Dec-00	--	23.99	0.00	56.31	32.32	8,900	310	9.7	840	310	ND
MW-8	2	Mar-01	--	22.55	0.00	56.31	33.76	7,800	280	< 25	330	51	< 250
MW-8	2	Jun-01	--	23.68	0.00	56.31	32.63	9,400	380	6.6	730	300	< 25
MW-8	2	Sep-01	--	24.85	0.00	56.31	31.46	11,000	370	29	690	360	< 250
MW-8	2	Dec-01	--	24.98	0.00	56.31	31.33	8,800	410	< 25	650	290	< 250
MW-8	2	Mar-02	--	23.12	0.00	56.31	33.19	8,300	360	< 25	430	190	< 250

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>t</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-8	2	Jun-02	--	23.51	0.00	56.31	32.80	4,200	180	48	240	170	63
MW-8	2	Sep-02	--	24.72	0.00	56.31	31.59	4,070	291	16.2	158	168	5.2
MW-8	2	Dec-02	--	25.33	0.00	58.70	33.37	8,530	331	11.9	480	210	49.8
MW-8	2	Mar-03	--	23.18	0.00	58.70	35.52	7,060	177	< 1.0	406	178	25.0
MW-8	2	Jun-03	--	22.75	0.00	58.70	35.95	7,830	100	< 1.0	271	95	< 10
MW-8	2	Sep-03	--	24.43	0.00	58.70	34.27	4,180	77.5	6.5	245	105	< 10
MW-8	2	Sep-03	--	24.43	0.00	58.70	34.27	10,200	77.5	14.5	730	303	< 10
MW-8	2	Dec-03	--	24.99	0.00	58.70	33.71	5,020	62.5	3.6	230	81.8	< 4
MW-8	2	Feb-04	--	23.42	0.00	58.70	35.28	4,700	65.0	< 1	250	89.0	< 5
MW-8	2	May-04	--	23.19	0.00	58.70	35.51	6,210	103	< 2.5	222	119	< 5
MW-8	2	Aug-04	--	24.53	0.00	58.70	34.17	4,630	73.5	< 2.5	177	50.0	< 5
MW-8	2	Nov-04	--	25.10	0.00	58.70	33.60	4,130	29.8	< 2.5	125	34.7	< 5
MW-8	2	Feb-05	--	22.86	0.00	58.70	35.84	3,250	23.4	< 2	104	51.8	< 4
MW-8	2	May-05	--	20.61	0.00	58.70	38.09	5,500	61.4	< 5	98.2	36.6	< 10
MW-8	2	Sep-05	--	22.76	0.00	58.70	35.94	6,090	28.5	< 2	144.0	33.3	< 4
MW-8	2,3	Sep-05	--	22.76	0.00	58.70	35.94	5,600	28.4	< 2	140	30.7	< 4
MW-8	2	Nov-05	--	23.39	0.00	58.70	35.31	8,290	37.5	< 2	168	27.7	< 4
MW-9	--	Mar-86	--	--	--	--	--	180	2.8	1.4	--	ND	--
MW-9	--	Jul-86	--	--	--	--	--	63	ND	ND	--	ND	--
MW-9	--	Apr-87	--	--	--	--	--	180	ND	ND	--	ND	--
MW-9	--	Jun-87	--	--	--	--	--	150	1.5	ND	--	ND	--
MW-9	--	Sep-87	--	--	--	--	--	ND	ND	ND	--	ND	--
MW-9	--	Dec-87	--	--	--	--	--	ND	2.2	ND	--	ND	--
MW-9	--	Mar-88	--	--	--	--	--	94	ND	ND	--	ND	--
MW-9	--	Jun-88	--	--	--	--	--	130	ND	ND	ND	ND	--
MW-9	--	Sep-88	--	--	--	--	--	100	ND	ND	ND	ND	--
MW-9	--	Dec-88	--	--	--	--	--	1,600	9.5	78	27	150	--
MW-9	--	Mar-89	--	--	--	--	--	73	ND	ND	ND	ND	--
MW-9	--	May-89	--	--	--	--	--	ND	ND	5	ND	ND	--
MW-9	--	Aug-89	--	--	--	--	--	ND	ND	ND	ND	ND	--
MW-9	--	Nov-89	--	--	--	--	--	5	ND	ND	1	ND	--
MW-9	--	Dec-90	--	--	--	--	--	ND	0.9	1.3	ND	3.5	--
MW-9	--	Dec-90	--	--	--	--	--	ND	ND	5	ND	ND	--
MW-9	--	Apr-91	25	26.82	0.00	53.54	26.72	100	ND	0.7	ND	3.4	--
MW-9	--	Jan-92	30	27.45	0.00	53.54	26.09	ND	ND	ND	ND	ND	--
MW-9	--	Apr-92	25	25.99	0.00	53.54	27.55	ND	ND	ND	ND	ND	--
MW-9	--	Jun-92	25	26.12	0.00	53.54	27.42	ND	ND	ND	ND	ND	--
MW-9	--	Oct-92	30	27.20	0.00	53.54	26.34	ND	ND	ND	ND	ND	--
MW-9	--	Mar-93	25	23.74	0.00	53.54	29.80	ND	ND	ND	ND	ND	--
MW-9	--	Aug-93	25	24.15	0.00	53.54	29.39	ND	ND	ND	ND	ND	--
MW-9	--	Nov-93	25	25.11	0.00	53.54	28.43	ND	6.1	7.5	0.75	4.5	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>t</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-9	--	Mar-94	25	24.00	0.00	53.54	29.54	ND	ND	ND	ND	ND	--
MW-9	--	Sep-94	25	24.72	0.00	53.54	28.82	78	1.1	1.1	0.8	5	--
MW-9	--	Dec-94	25	24.40	0.00	53.54	29.14	50	ND	2.4	0.7	0.7	--
MW-9	--	Apr-95	20	20.20	0.00	53.54	33.34	ND	ND	ND	ND	ND	--
MW-9	--	Jun-95	20	20.80	0.00	53.54	32.74	58	ND	3.5	0.66	2.8	--
MW-9	--	Sep-95	25	22.06	0.00	53.54	31.48	ND	ND	3	ND	1.4	--
MW-9	--	Jul-96	20	19.79	0.00	53.54	33.75	--	--	--	--	--	--
MW-9	1	Sep-98	20	17.95	0.00	53.54	35.59	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
MW-9	1	Dec-98	20	19.36	0.00	53.54	34.18	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
MW-9	1	Mar-99	20	17.88	0.00	53.54	35.66	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-9	1	Jun-99	22	19.11	0.00	53.54	34.43	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
MW-9	1	Sep-99	24	20.70	0.00	53.54	32.84	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-9	1	Dec-99	25	21.64	0.00	53.54	31.90	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5
MW-9	2	Apr-00	18	18.20	0.00	53.54	35.34	82.5	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-9	2	Jun-00	--	19.10	0.00	53.54	34.44	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-9	2	Sep-00	--	20.52	0.00	53.54	33.02	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-9	2	Dec-00	--	21.37	0.00	53.54	32.17	57	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-9	2	Mar-01	--	19.97	0.00	53.54	33.57	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-9	2	Jun-01	--	21.08	0.00	53.54	32.46	92	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-9	2	Sep-01	--	22.23	0.00	53.54	31.31	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-9	2	Dec-01	--	22.36	0.00	53.54	31.18	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-9	2	Mar-02	--	20.55	0.00	53.54	32.99	66	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-9	2	Jun-02	--	20.91	0.00	53.54	32.63	< 50	< 0.3	2.0	< 0.3	< 0.6	< 1.0
MW-9	2	Sep-02	--	22.13	0.00	53.54	31.41	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-9	2	Dec-02	--	22.72	0.00	55.94	33.22	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-9	2	Mar-03	--	20.56	0.00	55.94	35.38	< 50	< 1	< 1	< 2	< 1	2.3
MW-9	2	Jun-03	--	20.20	0.00	55.94	35.74	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	Sep-03	--	21.81	0.00	55.94	34.13	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	Dec-03	--	22.38	0.00	55.94	33.56	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	Feb-04	--	20.86	0.00	55.94	35.08	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	May-04	--	20.56	0.00	55.94	35.38	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	Aug-04	--	21.90	0.00	55.94	34.04	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	Nov-04	--	22.50	0.00	55.94	33.44	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	Feb-05	--	20.30	0.00	55.94	35.64	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	May-05	--	18.13	0.00	55.94	37.81	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	Sep-05	--	20.18	0.00	55.94	35.76	< 50	< 1	< 1	< 1	< 2	< 2
MW-9	2	Nov-05	--	20.76	0.00	55.94	35.18	< 50	< 1	< 1	< 1	< 2	< 2
MW-10	--	Mar-86	--	--	--	--	--	64,000	3,400	2,400	--	8,200	--
MW-10	--	Jul-86	--	--	--	--	--	61,000	5,500	2,400	--	7,100	--
MW-10	--	Apr-87	--	--	--	--	--	130,000	5,900	4,200	--	14,000	--
MW-10	--	Jun-87	--	--	--	--	--	120,000	5,000	2,600	--	15,000	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>t</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-10	--	Sep-87	--	--	--	--	--	140,000	6,200	3,400	--	17,000	--
MW-10	--	Dec-87	--	--	--	--	--	76,000	6,000	4,800	--	12,000	--
MW-10	--	Mar-88	--	--	--	--	--	66,000	5,700	4,400	--	8,500	--
MW-10	--	Jun-88	--	--	--	--	--	77,000	5,000	4,300	2,300	7,400	--
MW-10	--	Sep-88	--	--	--	--	--	84,000	5,900	6,100	3,000	11,000	--
MW-10	--	Dec-88	--	--	--	--	--	170,000	7,900	15,000	3,600	16,000	--
MW-10	--	Mar-89	--	--	--	--	--	200,000	6,900	14,000	4,200	19,000	--
MW-10	--	May-89	--	--	--	--	--	130,000	5,800	13,000	3,100	14,000	--
MW-10	--	Aug-89	--	--	--	--	--	220,000	6,600	15,000	4,100	21,000	--
MW-10	--	Nov-89	--	--	--	--	--	150,000	6,600	12,000	3,900	18,000	--
MW-10	SP	Dec-90	--	--	--	--	--	--	--	--	--	--	--
MW-10	--	Dec-90	--	--	--	--	--	98,000	4,900	95,000	3,300	18,000	--
MW-10	SP	Apr-91	30	27.76	0.02	54.79	27.03	--	--	--	--	--	--
MW-10	SP	Jan-92	30	28.76	0.14	54.79	26.14	--	--	--	--	--	--
MW-10	--	Apr-92	25	26.94	trace	54.79	27.85	94,000	3,700	11,000	3,100	16,000	--
MW-10	--	Jun-92	30	27.11	0.00	54.79	27.68	88,000	3,600	9,700	3,000	16,000	--
MW-10	--	Oct-92	30	28.16	trace	54.79	26.63	80,000	4,000	7,700	2,500	13,000	--
MW-10	--	Mar-93	25	24.71	0.00	54.79	30.08	60,000	2,600	2,300	2,400	10,000	--
MW-10	SP	Aug-93	25	25.11	0.02	54.79	29.70	--	--	--	--	--	--
MW-10	--	Nov-93	25	26.10	0.00	54.79	28.69	65,000	4,000	4,400	2,300	9,600	--
MW-10	--	Mar-94	25	25.02	0.00	54.79	29.77	73,000	5,000	6,400	2,500	11,000	--
MW-10	--	Sep-94	25	25.96	0.00	54.79	28.83	62,000	4,800	6,300	2,500	10,000	--
MW-10	--	Dec-94	25	25.66	0.00	54.79	29.13	63,000	4,800	7,200	2,500	10,000	--
MW-10	--	Apr-95	20	21.45	0.00	54.79	33.34	39,000	2,000	3,500	6,600	1,400	--
MW-10	--	Jun-95	25	22.04	0.00	54.79	32.75	36,000	2,300	4,500	1,200	4,700	--
MW-10	--	Sep-95	25	23.31	0.00	54.79	31.48	56,000	2,900	4,500	1,900	7,200	--
MW-10	--	Jul-96	20	21.05	0.00	54.79	33.74	--	--	--	--	--	--
MW-10	1	Sep-98	20	19.18	0.00	54.79	35.61	26,700	1,590	1,040	1,310	4,720	< 100
MW-10	2	Sep-98	20	19.18	0.00	54.79	35.61	64.9	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
MW-10	1	Dec-98	20	20.58	0.00	54.79	34.21	2,080	12.7	< 1	< 1	< 1	< 5.0
MW-10	1	Mar-99	20	19.08	0.00	54.79	35.71	42,000	1,800	1,700	1,900	6,100	< 500
MW-10	1	Jun-99	23	20.35	0.00	54.79	34.44	25,600	1,390	557	1,450	3,390	< 50
MW-10	1	Sep-99	25	21.95	0.00	54.79	32.84	30,000	1,500	1,200	1,600	4,600	< 500
MW-10	1	Dec-99	26	22.89	0.00	54.79	31.90	28,500	1,550	864	1,660	5,160	< 125
MW-10	1,3	Dec-99	26	22.89	0.00	54.79	31.90	32,700	1,540	859	1,750	5,390	< 500
MW-10	2	Apr-00	19	19.45	0.00	54.79	35.34	52,300	1,660	3,220	2,270	9,390	ND
MW-10	2	Jun-00	--	20.37	0.00	54.79	34.42	35,800	1,320	2,450	1,780	5,970	ND
MW-10	2	Sep-00	--	21.76	0.00	54.79	33.03	32,000	1,200	2,700	1,700	7,200	ND
MW-10	2	Dec-00	--	22.63	0.00	54.79	32.16	32,000	1,400	2,200	1,800	6,900	ND
MW-10	2	Mar-01	--	21.15	0.00	54.79	33.64	29,000	1,300	1,800	2,000	6,300	< 250
MW-10	2	Jun-01	--	22.33	0.00	54.79	32.46	38,000	1,200	2,200	1,800	7,400	< 500

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>1</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-10	2	Sep-01	--	23.48	0.00	54.79	31.31	52,000	1,300	3,300	2,600	11,000	< 250
MW-10	2	Dec-01	--	--	--	54.79	--	28,000	450	1,900	1,700	8,200	< 200
MW-10	2	Mar-02	--	21.76	0.00	54.79	33.03	45,000	880	3,300	2,000	11,000	< 250
MW-10	2	Jun-02	--	22.15	0.00	54.79	32.64	43,000	1,200	3,300	2,100	8,700	330
MW-10	2	Sep-02	--	23.36	0.00	54.79	31.43	37,100	1,530	2,310	13.2	9,590	47.4
MW-10	2	Dec-02	--	23.97	0.00	57.21	33.24	1,090	55.0	18.0	12.4	33.0	24.2
MW-10	2	Mar-03	--	21.80	0.00	57.21	35.41	40,300	1,300	2,530	2,630	10,600	< 100
MW-10	2	Jun-03	--	21.40	0.00	57.21	35.81	36,700	898	1,460	1,860	7,330	< 100
MW-10	2	Sep-03	--	23.08	0.00	57.21	34.13	21,700	1,050	1,170	1,840	6,340	< 100
MW-10	2	Dec-03	--	23.65	0.00	57.21	33.56	39,600	1,260	1,460	2,370	8,300	< 50
MW-10	2	Feb-04	--	22.08	0.00	57.21	35.13	26,400	905	1,020	2,310	7,600	< 50
MW-10	2	May-04	--	21.81	0.00	57.21	35.40	22,800	890	1,090	1,940	6,920	< 50
MW-10	2	Aug-04	--	23.10	0.00	57.21	34.11	25,200	948	742	1,810	5,530	< 40
MW-10	2	Nov-04	--	23.76	0.00	57.21	33.45	36,700	1,160	784	2,280	5,990	< 50
MW-10	2	Feb-05	--	21.52	0.00	57.21	35.69	34,600	1,160	891	3,380	7,920	< 50
MW-10	2	May-05	--	19.43	0.00	57.21	37.78	37,200	1,140	752	2,110	4,740	< 50
MW-10	2,3	May-05	--	19.43	0.00	57.21	37.78	38,100	1,060	777	2,230	4,940	< 50
MW-10	2	Sep-05	--	21.44	0.00	57.21	35.77	31,000	1,070	717	3,160	5,590	< 50
MW-10	2	Nov-05	--	22.19	0.00	57.21	35.02	14,200	630	399	1,720	2,990	< 50
MW-11	--	Feb-86	--	--	--	--	--	130,000	12,000	32,000	--	21,000	--
MW-11	--	Mar-86	--	--	--	--	--	150,000	7,800	19,000	--	14,000	--
MW-11	--	Jul-86	--	--	--	--	--	70,000	5,600	9,900	--	6,900	--
MW-11	--	Apr-87	--	--	--	--	--	16,000	9,000	10,000	--	14,000	--
MW-11	--	Jun-87	--	--	--	--	--	95,000	9,600	19,000	--	12,000	--
MW-11	--	Sep-87	--	--	--	--	--	88,000	8,400	13,000	--	15,000	--
MW-11	--	Dec-87	--	--	--	--	--	120,000	11,000	18,000	--	16,000	--
MW-11	--	Mar-88	--	--	--	--	--	120,000	12,000	17,000	--	13,000	--
MW-11	--	Jun-88	--	--	--	--	--	110,000	11,000	16,000	1,300	9,300	--
MW-11	--	Sep-88	--	--	--	--	--	94,000	7,700	12,000	1,500	9,200	--
MW-11	--	Dec-88	--	--	--	--	--	77,000	6,700	9,000	1,300	6,500	--
MW-11	--	Mar-89	--	--	--	--	--	79,000	6,400	8,500	1,300	6,800	--
MW-11	--	May-89	--	--	--	--	--	94,000	10,000	15,000	1,400	8,000	--
MW-11	SP	Aug-89	--	--	--	--	--	--	--	--	--	--	--
MW-11	SP	Nov-89	--	--	--	--	--	--	--	--	--	--	--
MW-11	--	Dec-90	--	--	--	--	--	62,000	5,300	9,900	2,600	13,000	--
MW-11	SP	Dec-90	--	--	--	--	--	--	--	--	--	--	--
MW-11	--	Apr-91	30	30.09	0.00	57.04	26.95	370,000	7,600	20,000	6,200	39,000	--
MW-11	--	Jan-92	30	30.81	0.00	57.04	26.23	51,000	7,800	7,200	2,200	12,000	--
MW-11	--	Apr-92	30	29.22	0.00	57.04	27.82	98,000	7,800	15,000	2,400	17,000	--
MW-11	--	Jun-92	30	29.30	0.00	57.04	27.74	110,000	7,200	13,000	3,300	22,000	--
MW-11	--	Oct-92	30	30.33	0.00	57.04	26.71	72,000	6,000	8,600	1,900	12,000	--

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>r</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-11	--	Mar-93	25	26.89	trace	57.04	30.15	80,000	6,500	9,500	2,900	16,000	--
MW-11	--	Aug-93	30	27.24	0.00	57.04	29.80	98,000	5,900	8,300	2,300	13,000	--
MW-11	--	Nov-93	30	28.24	0.00	57.04	28.80	63,000	6,200	7,900	2,400	13,000	--
MW-11	--	Mar-94	30	27.14	0.00	57.04	29.90	100,000	5,800	7,200	2,200	13,000	--
MW-11	--	Sep-94	30	27.98	0.00	57.04	29.06	60,000	6,200	7,600	2,000	12,000	--
MW-11	--	Dec-94	30	27.70	0.00	57.04	29.34	J 54,000	J 6,900	J 8,700	J 2,300	J 13,000	--
MW-11	--	Apr-95	25	23.36	0.00	57.04	33.68	45,000	4,400	5,400	8,700	1,800	--
MW-11	--	Jun-95	25	24.01	0.00	57.04	33.03	74,000	6,400	7,400	2,500	11,000	--
MW-11	--	Sep-95	25	25.30	0.00	57.04	31.74	J 57,000	J 5,400	J 7,000	J 2,300	J 10,000	--
MW-11	--	Jul-96	25	22.99	0.00	57.04	34.05	--	--	--	--	--	--
MW-11	1	Sep-98	20	21.03	0.00	57.04	36.01	2,320	460	32.9	67	16.5	< 10
MW-11	1	Dec-98	25	22.52	0.00	57.04	34.52	3,420	674	17.7	199	9.91	< 10
MW-11	1	Mar-99	25	20.92	0.00	57.04	36.12	44,000	2,800	1,500	1,800	6,000	* 590
MW-11	1	Jun-99	25	22.30	0.00	57.04	34.74	32,300	2,870	925	1,530	4,700	< 50
MW-11	1	Sep-99	27	23.93	0.00	57.04	33.11	34,000	2,700	720	1,700	5,100	< 500
MW-11	1	Dec-99	28	24.87	0.00	57.04	32.17	39,500	3,040	987	1,990	7,230	< 125
MW-11	2	Apr-00	22	21.31	0.00	57.04	35.73	54,300	3,550	3,250	2,090	8,430	ND
MW-11	2	Jun-00	--	22.30	0.00	57.04	34.74	38,700	2,820	2,030	1,650	5,620	ND
MW-11	2	Sep-00	--	23.72	0.00	57.04	33.32	43,000	3,200	2,800	1,700	7,300	ND
MW-11	2	Dec-00	--	24.58	0.00	57.04	32.46	42,000	3,900	4,900	2,100	9,300	ND
MW-11	2,3	Mar-01	--	23.00	0.00	57.04	34.04	37,000	3,200	2,900	1,600	7,400	< 500
MW-11	2	Jun-01	--	24.28	0.00	57.04	32.76	45,000	2,800	3,800	1,600	7,500	< 500
MW-11	2	Sep-01	--	25.47	0.00	57.04	31.57	51,000	2,900	4,900	1,900	7,900	< 500
MW-11	2	Dec-01	--	25.58	0.00	57.04	31.46	41,000	2,300	3,800	2,000	7,400	< 500
MW-11	2	Dec-01	--	25.58	0.00	57.04	31.46	44,000	2,600	4,200	1,800	8,400	< 2500
MW-11	2	Mar-02	--	23.71	0.00	57.04	33.33	46,000	3,100	3,500	1,800	8,300	< 500
MW-11	2	Jun-02	--	24.10	0.00	57.04	32.94	55,000	3,800	5,000	2,300	9,100	860
MW-11	2	Sep-02	--	25.34	0.00	57.04	31.70	54,500	4,940	5,480	2,730	10,600	< 50.0
MW-11	2	Dec-02	--	25.95	0.00	59.44	33.49	49,100	4,540	4,960	2,520	9,950	95.6
MW-11	2	Mar-03	--	23.75	0.00	59.44	35.69	46,900	4,430	6,160	2,700	12,300	< 100
MW-11	2	Jun-03	--	23.30	0.00	59.44	36.14	42,700	3,150	4,180	1,850	8,620	< 100
MW-11	2	Sep-03	--	25.11	0.00	59.44	34.33	37,000	3,500	4,030	1,970	8,800	< 100
MW-11	2	Dec-03	--	25.65	0.00	59.44	33.79	53,200	3,320	3,490	1,840	8,210	< 50
MW-11	2	Feb-04	--	24.00	0.00	59.44	35.44	30,600	1,970	2,450	2,270	8,290	< 50
MW-11	2	May-04	--	23.72	0.00	59.44	35.72	21,000	1,690	2,830	1,570	7,300	< 50
MW-11	2	Aug-04	--	25.03	0.00	59.44	34.41	36,200	2,850	3,110	1,580	5,530	< 40
MW-11	2	Nov-04	--	25.69	0.00	59.44	33.75	94,600	4,910	5,440	3,130	15,800	< 100
MW-11	2	Feb-05	--	23.44	0.00	59.44	36.00	57,400	3,810	4,220	2,130	12,200	< 100
MW-11	2	May-05	--	21.15	0.00	59.44	38.29	32,100	2,110	2,470	1,560	7,220	< 100
MW-11	2	Sep-05	--	23.32	0.00	59.44	36.12	42,900	3,920	4,200	2,920	14,400	< 100
MW-11	2	Nov-05	--	23.99	0.00	59.44	35.45	38,500	3,130	2,690	2,140	10,800	< 100

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>z</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-12	-	Feb-86	-	-	-	-	-	15,000	440	260	-	3,400	-
MW-12	-	Mar-86	-	-	-	-	-	20,000	500	140	-	2,000	-
MW-12	-	Jul-86	-	-	-	-	-	2,200	95	15	-	140	-
MW-12	-	Apr-87	-	-	-	-	-	1,500	94	6	-	130	-
MW-12	-	Jun-87	-	-	-	-	-	1,300	77	2	-	78	-
MW-12	-	Sep-87	-	-	-	-	-	660	36	2	-	55	-
MW-12	-	Dec-87	-	-	-	-	-	390	16	ND	-	12	-
MW-12	-	Mar-88	-	-	-	-	-	1,700	120	5	-	150	-
MW-12	-	Jun-88	-	-	-	-	-	200	3.9	ND	2	ND	-
MW-12	-	Sep-88	-	-	-	-	-	740	36	1	4	6	-
MW-12	-	Dec-88	-	-	-	-	-	490	17	15	4	10	-
MW-12	-	Mar-89	-	-	-	-	-	300	12	1	1	3	-
MW-12	-	May-89	-	-	-	-	-	310	8.6	11	1	ND	-
MW-12	-	Aug-89	-	-	-	-	-	610	20	16	2	8	-
MW-12	-	Nov-89	-	-	-	-	-	690	45	6	8	22	-
MW-12	-	Dec-90	-	-	-	-	-	220	11	1.1	1.3	5.3	-
MW-12	-	Dec-90	-	-	-	-	-	500	14	11	2	8	-
MW-12	-	Apr-91	30	28.88	0.00	55.98	27.10	190	5.1	ND	0.5	1.9	-
MW-12	-	Jan-92	30	29.68	0.00	55.98	26.30	400	24	6	8	25	-
MW-12	-	Apr-92	30	28.02	0.00	55.98	27.96	1,500	65	17	49	110	-
MW-12	-	Jun-92	30	28.04	0.00	55.98	27.94	980	110	3	ND	18	-
MW-12	-	Oct-92	30	29.09	0.00	55.98	26.89	430	29	1.1	1	7.8	-
MW-12	-	Mar-93	25	25.69	0.00	55.98	30.29	950	180	ND	4.5	17	-
MW-12	-	Aug-93	25	25.97	0.00	55.98	30.01	940	28	2.3	2.1	6.8	-
MW-12	-	Nov-93	25	26.98	0.00	55.98	29.00	660	37	2.5	13	21	-
MW-12	-	Mar-94	25	26.94	0.00	55.98	29.04	230	7.7	0.82	5.7	8.5	-
MW-12	-	Sep-94	25	26.80	0.00	55.98	29.18	240	6.2	0.8	0.7	1.7	-
MW-12	-	Dec-94	25	26.52	0.00	55.98	29.46	390	12	1.2	1.8	5.7	-
MW-12	-	Apr-95	25	22.13	0.00	55.98	33.85	2,700	100	16	160	120	-
MW-12	-	Jun-95	25	22.77	0.00	55.98	33.21	330	J 16	J 4.9	J 19	J 22	-
MW-12	-	Sep-95	25	24.12	0.00	55.98	31.86	520	32	5.2	45	48	-
MW-12	-	Jul-96	20	21.73	0.00	55.98	34.25	-	-	-	-	-	-
MW-12	1	Sep-98	20	19.73	0.00	55.98	36.25	52.5	1.76	< 0.5	< 0.5	< 0.5	< 2.0
MW-12	1	Dec-98	20	21.26	0.00	55.98	34.72	< 50	1.39	< 0.5	< 0.5	< 0.5	< 2.0
MW-12	1	Mar-99	20	19.67	0.00	55.98	36.31	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-12	1	Jun-99	24	21.06	0.00	55.98	34.92	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
MW-12	1	Sep-99	26	22.73	0.00	55.98	33.25	58	JS 3.1	< 0.5	< 0.5	< 0.5	< 5.0
MW-12	1	Dec-99	27	23.64	0.00	55.98	32.34	< 50	2.52	1.29	< 0.5	< 0.5	< 2.5
MW-12	2	Apr-00	20	20.07	0.00	55.98	35.91	860	23.9	2.58	60.1	36.2	ND
MW-12	2	Jun-00	-	21.06	0.00	55.98	34.92	1040	40	1.37	88.9	47.9	ND
MW-12	2	Sep-00	-	22.50	0.00	55.98	33.48	290	16	0.65	27	11	ND



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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>2</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-12	2	Dec-00	--	23.31	0.00	55.98	32.67	130	3	< 0.5	9.4	2.9	ND
MW-12	2	Mar-01	--	22.11	0.00	55.98	33.87	58	1.2	< 0.5	< 0.5	< 0.5	< 5.0
MW-12	2	Jun-01	--	23.06	0.00	55.98	32.92	250	6.4	< 0.5	17	5.6	< 5.0
MW-12	2	Sep-01	--	24.25	0.00	55.98	31.73	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-12	2	Dec-01	--	24.37	0.00	55.98	31.61	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-12	2	Mar-02	--	22.50	0.00	55.98	33.48	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-12	2	Jun-02	--	22.96	0.00	55.98	33.02	< 50	< 0.3	< 0.3	< 0.3	< 0.6	< 1.0
MW-12	2	Sep-02	--	24.12	0.00	55.98	31.86	< 50	< 0.5	< 0.5	< 0.5	< 0.5	1.7
MW-12	2	Dec-02	--	24.73	0.00	58.41	33.68	< 50	< 0.5	0.8	< 0.5	< 0.5	< 1.0
MW-12	2	Mar-03	--	22.54	0.00	58.41	35.87	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Jun-03	--	22.11	0.00	58.41	36.30	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Sep-03	--	23.78	0.00	58.41	34.63	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Dec-03	--	24.37	0.00	58.41	34.04	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2,3	Dec-03	--	24.37	0.00	58.41	34.04	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Feb-04	--	22.84	0.00	58.41	35.57	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	May-04	--	22.52	0.00	58.41	35.89	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Aug-04	--	23.82	0.00	58.41	34.59	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Nov-04	--	24.49	0.00	58.41	33.92	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Feb-05	--	22.24	0.00	58.41	36.17	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	May-05	--	19.92	0.00	58.41	38.49	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Sep-05	--	22.13	0.00	58.41	36.28	< 50	< 1	< 1	< 1	< 2	< 2
MW-12	2	Nov-05	--	22.75	0.00	58.41	35.66	< 50	< 1	< 1	< 1	< 2	< 2
MW-13	--	Aug-93	25	25.16	0.00	56.65	31.49	1,800	ND	9.6	ND	11	--
MW-13	--	Nov-93	30	27.41	0.00	56.65	29.24	270	0.94	ND	1.3	1.2	--
MW-13	--	Mar-94	30	27.34	0.00	56.65	29.31	290	2.1	ND	ND	0.96	--
MW-13	--	Sep-94	30	27.27	0.00	56.65	29.38	250	ND	2.2	ND	ND	--
MW-13	--	Dec-94	25	26.98	0.00	56.65	29.67	89	ND	ND	ND	ND	--
MW-13	--	Apr-95	25	22.55	0.00	56.65	34.10	ND	ND	ND	ND	ND	--
MW-13	--	Jun-95	25	23.22	0.00	56.65	33.43	200	ND	4.8	ND	ND	--
MW-13	--	Sep-95	25	24.51	0.00	56.65	32.14	120	ND	4.9	0.65	1.7	--
MW-13	--	Jul-96	25	22.18	0.00	56.65	34.47	--	--	--	--	--	--
MW-13	1	Sep-98	25	20.21	0.00	56.65	36.44	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
MW-13	1	Dec-98	20	21.75	0.00	56.65	34.90	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
MW-13	1	Mar-99	20	20.06	0.00	56.65	36.59	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-13	1	Jun-99	25	21.52	0.00	56.65	35.13	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
MW-13	1	Sep-99	26	23.23	0.00	56.65	33.42	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-13	1	Dec-99	27	24.11	0.00	56.65	32.54	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5
MW-13	2	Apr-00	21	20.45	0.00	56.65	36.20	< 50	< 10	< 10	< 10	< 10	ND
MW-13	2	Jun-00	--	21.51	0.00	56.65	35.14	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-13	2	Sep-00	--	23.00	0.00	56.65	33.65	*	*	*	*	*	*
MW-13	2	Dec-00	--	23.87	0.00	56.65	32.78	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS						
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>x</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	
MW-13	2	Mar-01	--	22.59	0.00	56.65	34.06	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-13	2	Jun-01	--	22.56	0.00	56.65	34.09	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-13	2	Sep-01	--	24.73	0.00	56.65	31.92	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-13	2	Dec-01	--	24.84	0.00	56.65	31.81	61	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-13	2	Mar-02	--	22.95	0.00	56.65	33.70	51	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-13	2,3	Mar-02	--	22.95	0.00	56.65	33.70	56	0.66	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-13	2	Jun-02	--	23.36	0.00	56.65	33.29	< 50	< 0.3	0.86	< 0.3	< 0.6	< 1.0	
MW-13	2,3	Jun-02	--	23.36	0.00	56.65	33.29	< 50	< 0.3	1.1	< 0.3	< 0.6	< 1.0	
MW-13	2	Sep-02	--	24.59	0.00	56.65	32.06	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	3.5
MW-13	2,3	Sep-02	--	24.59	0.00	56.65	32.06	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-13	2	Dec-02	--	25.21	0.00	56.65	31.44	< 50	1.0	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-13	2	Mar-03	--	23.01	0.00	58.98	35.97	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Jun-03	--	22.54	0.00	58.98	36.44	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Sep-03	--	24.25	0.00	58.98	34.73	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Dec-03	--	24.91	0.00	58.98	34.07	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Feb-04	--	23.26	0.00	58.98	35.72	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	May-04	--	22.97	0.00	58.98	36.01	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Aug-04	--	24.29	0.00	58.98	34.69	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Nov-04	--	24.94	0.00	58.98	34.04	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Feb-05	--	22.31	0.00	58.98	36.67	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	May-05	--	20.36	0.00	58.98	38.62	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Sep-05	--	22.56	0.00	58.98	36.42	< 50	< 1	< 1	< 1	< 2	< 2	
MW-13	2	Nov-05	--	23.26	0.00	58.98	35.72	< 50	< 1	< 1	< 1	< 2	< 2	
MW-14	--	Aug-93	30	27.72	0.00	57.33	29.61	42,000	200	140	1,000	3,400	--	
MW-14	--	Nov-93	30	28.45	0.00	57.33	28.88	22,000	190	ND	790	1,600	--	
MW-14	--	Mar-94	30	27.53	0.00	57.33	29.80	9,100	330	24	170	240	--	
MW-14	--	Sep-94	30	28.56	0.00	57.33	28.77	9,200	34	14	420	610	--	
MW-14	--	Dec-94	30	28.22	0.00	57.33	29.11	7,600	31	21	460	550	--	
MW-14	--	Apr-95	25	24.00	0.00	57.33	33.33	2,100	14	ND	170	120	--	
MW-14	--	Jun-95	25	24.63	0.00	57.33	32.70	2,400	11	20	130	160	--	
MW-14	--	Sep-95	25	25.88	0.00	57.33	31.45	2,400	12	13	150	190	--	
MW-14	--	Jul-96	25	23.64	0.00	57.33	33.69	--	--	--	--	--	--	
MW-14	1	Sep-98	20	21.74	0.00	57.33	35.59	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	
MW-14	1	Dec-98	25	23.20	0.00	57.33	34.13	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0	
MW-14	1	Mar-99	25	21.64	0.00	57.33	35.69	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	
MW-14	1	Jun-99	26	22.95	0.00	57.33	34.38	< 50	< 0.5	< 1	< 0.5	< 0.5	< 2.0	
MW-14	1	Sep-99	28	24.61	0.00	57.33	32.72	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	
MW-14	1	Dec-99	28	25.47	0.00	57.33	31.86	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5	
MW-14	2	Apr-00	22	22.02	0.00	57.33	35.31	91.7	< 0.5	< 0.5	3.27	3.34	ND	
MW-14	--	Jun-00	--	22.57	0.00	57.33	34.76	--	--	--	--	--	--	
MW-14	1	Sep-00	--	24.40	0.00	57.33	32.93	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND	

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>2</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-14	--	Dec-00	--	25.23	0.00	57.33	32.10	--	--	--	--	--	--
MW-14	2	Mar-01	--	24.00	0.00	57.33	33.33	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-14	--	Jun-01	--	24.97	0.00	57.33	32.36	--	--	--	--	--	--
MW-14	2	Sep-01	--	26.08	0.00	57.33	31.25	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-14	--	Dec-01	--	26.17	0.00	57.33	31.16	--	--	--	--	--	--
MW-14	2	Mar-02	--	24.27	0.00	57.33	33.06	80	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-14	--	Jun-02	--	24.74	0.00	57.33	32.59	--	--	--	--	--	--
MW-14	1	Sep-02	--	25.96	0.00	57.33	31.37	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-14	--	Dec-02	--	26.54	0.00	59.72	33.18	--	--	--	--	--	--
MW-14	2	Mar-03	--	24.45	0.00	59.72	35.27	< 50	< 1	< 1	< 1	< 2	< 2
MW-14	--	Jun-03	--	24.00	0.00	59.72	35.72	--	--	--	--	--	--
MW-14	2	Sep-03	--	25.71	0.00	59.72	34.01	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2
MW-14	2	Dec-03	--	26.25	0.00	59.72	33.47	52	< 1	< 1	< 1	< 2	< 2
MW-14	2	Feb-04	--	24.65	0.00	59.72	35.07	< 50	< 1	< 1	< 1	< 2	< 2
MW-14	--	May-04	--	24.40	0.00	59.72	35.32	--	--	--	--	--	--
MW-14	2	Aug-04	--	25.68	0.00	59.72	34.04	< 50	< 1	< 1	< 1	< 2	< 2
MW-14	--	Nov-04	--	26.33	0.00	59.72	33.39	--	--	--	--	--	--
MW-14	2	Feb-05	--	24.11	0.00	59.72	35.61	< 50	< 1	< 1	< 1	< 2	< 2
MW-14	--	May-05	--	19.85	0.00	59.72	39.87	--	--	--	--	--	--
MW-14	2	Sep-05	--	24.03	0.00	59.72	35.69	< 50	< 1	< 1	< 1	< 2	< 2
MW-14	--	Nov-05	--	24.65	0.00	59.72	35.07	--	--	--	--	--	--
MW-15	--	Aug-93	20	21.85	0.00	51.51	29.66	17,000	51	ND	610	1,100	--
MW-15	--	Nov-93	25	23.04	0.00	51.51	28.47	13,900	78	16	680	700	--
MW-15	--	Mar-94	20	21.92	0.00	51.51	29.59	13,000	ND	ND	560	450	--
MW-15	--	Sep-94	25	22.95	0.00	51.51	28.56	8,600	30	8.9	440	290	--
MW-15	--	Dec-94	25	22.60	0.00	51.51	28.91	7,900	98	26	380	270	--
MW-15	--	Apr-95	20	18.45	0.00	51.51	33.06	2,700	8	ND	180	200	--
MW-15	--	Jun-95	20	19.05	0.00	51.51	32.46	4,800	15	20	180	140	--
MW-15	--	Sep-95	20	20.29	0.00	51.51	31.22	6,000	11	33	170	140	--
MW-15	--	Jul-96	20	18.08	0.00	51.51	33.43	--	--	--	--	--	--
MW-15	1	Sep-98	20	16.32	0.00	51.51	35.19	887	1.82	< 0.5	41.9	6.69	< 2
MW-15	1	Dec-98	20	17.66	0.00	51.51	33.85	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2
MW-15	1	Mar-99	20	16.10	0.00	51.51	35.41	1,100	2.5	0.66	18	4.46	* 16
MW-15	1	Jun-99	20	17.42	0.00	51.51	34.09	1,680	3.45	< 1	46.7	4.37	< 5
MW-15	1	Sep-99	22	19.02	0.00	51.51	32.49	710	4.2	2.5	35	12	7.2
MW-15	1	Dec-99	23	19.90	0.00	51.51	31.61	654	1.51	1.7	29.8	4.95	< 1
MW-15	2	Apr-00	17	16.51	0.00	51.51	35.00	1270	2.31	< 0.5	32	20.9	ND
MW-15	2	Jun-00	--	17.43	0.00	51.51	34.08	892	1.69	2.24	26.3	23.2	ND
MW-15	2	Sep-00	--	18.82	0.00	51.51	32.69	1,300	< 5	< 5	61	68	ND
MW-15	2	Dec-00	--	19.64	0.00	51.51	31.87	3,200	< 5	< 5	70	71	ND
MW-15	2	Mar-01	--	18.57	0.00	51.51	32.94	2,300	8.6	8.8	35	32	< 25

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>4</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-15	2	Jun-01	--	19.37	0.00	51.51	32.14	1,900	6.1	0.61	34	37	< 5
MW-15	2,3	Jun-01	--	19.37	0.00	51.51	32.14	1,600	< 0.5	0.56	37	40	< 5
MW-15	2	Sep-01	--	20.49	0.00	51.51	31.02	2,800	12	3.1	80	81	< 25
MW-15	--	Dec-01	--	20.59	0.00	51.51	30.92	--	--	--	--	--	--
MW-15	2	Mar-02	--	18.81	0.00	51.51	32.70	2,100	30	< 0.5	43	44	26
MW-15	2	Jun-02	--	19.21	0.00	51.51	32.30	1,400	1.9	23	39	34	12
MW-15	2	Sep-02	--	20.36	0.00	51.51	31.15	2,300	33.4	3.5	23.7	60.9	16.1
MW-15	2	Dec-02	--	20.95	0.00	53.84	32.89	2,090	32.4	3.8	42.8	55.7	15.8
MW-15	2	Mar-03	--	18.83	0.00	53.84	35.01	2,340	1.8	< 1	34.2	47.4	< 2
MW-15	2	Jun-03	--	18.44	0.00	53.84	35.40	2,480	1.8	< 1	35.5	51.8	< 2
MW-15	2	Sep-03	--	20.09	0.00	53.84	33.75	1,860	< 1.0	1	27.8	44.2	< 2
MW-15	2	Dec-03	--	20.62	0.00	53.84	33.22	3,010	1.4	< 1	20.9	40.6	< 2
MW-15	2	Feb-04	--	19.08	0.00	53.84	34.76	743	1.7	1.1	21.7	34.0	< 2
MW-15	2	May-04	--	18.94	0.00	53.84	34.90	1,670	1.2	< 1	21.1	38.1	< 2
MW-15	2,3	May-04	--	18.94	0.00	53.84	34.90	1,650	1.2	< 1	20.4	36.5	< 2
MW-15	2	Aug-04	--	20.09	0.00	53.84	33.75	1,790	< 1	< 1	16.2	25.4	< 2
MW-15	2,3	Aug-04	--	20.09	0.00	53.84	33.75	1,600	< 1	< 1	14.0	22.0	< 2
MW-15	2	Nov-04	--	20.75	0.00	53.84	33.09	2,120	< 1	< 1	15.5	28.3	< 2
MW-15	2,3	Nov-04	--	20.75	0.00	53.84	33.09	2,080	< 1	< 1	15.1	27.6	< 2
MW-15	2	Feb-05	--	18.54	0.00	53.84	35.30	1,320	< 1	< 1	13.4	17.0	< 2
MW-15	2	May-05	--	16.44	0.00	53.84	37.40	1,830	< 1	< 1	13.4	11.1	< 2
MW-15	2	Sep-05	--	18.44	0.00	53.84	35.40	1,520	1.1	< 1	20.4	35.6	< 2
MW-15	2	Nov-05	--	19.04	0.00	53.84	34.80	2,090	1	< 1	23.0	44.2	< 2
MW-16	--	Aug-93	30	28.07	0.00	57.85	29.78	41,000	3,300	1,900	1,420	5,800	--
MW-16	--	Nov-93	30	28.98	0.00	57.85	28.87	43,000	5,000	1,900	1,400	6,900	--
MW-16	--	Mar-94	30	27.56	0.00	57.85	30.29	31,000	5,600	810	1,100	3,500	--
MW-16	--	Sep-94	30	28.65	0.00	57.85	29.28	1,100	1,900	70	210	400	--
MW-16	--	Dec-94	30	28.34	0.00	57.85	29.51	11,000	2,200	270	430	530	--
MW-16	--	Apr-95	25	23.98	0.00	57.85	33.87	38,000	4,900	1,300	2,600	1,200	--
MW-16	--	Apr-95	25	25.86	0.00	57.85	31.99	32,000	9,600	3,100	2,200	4,800	--
MW-16	3	Apr-95	--	--	--	--	--	32,000	9,600	3,100	2,200	4,800	--
MW-16	--	Jun-95	25	24.80	0.00	57.85	33.05	44,000	12,000	4,100	2,900	7,100	--
MW-16	--	Jul-96	25	23.62	0.00	57.85	34.23	--	--	--	--	--	--
MW-16	1	Sep-98	25	21.53	0.00	57.85	36.32	26,800	5,580	363	1,540	2,300	< 200
MW-16	1	Dec-98	25	23.14	0.00	57.85	34.71	28,400	6,640	360	1,760	1,740	< 200
MW-16	1,3	Dec-98	25	23.14	0.00	57.85	34.71	32,500	6,420	414	2,070	3,020	< 40
MW-16	1	Mar-99	25	21.50	0.00	57.85	36.35	35,000	7,300	310	1,900	2,300	< 500
MW-16	1	Jun-99	26	22.88	0.00	57.85	34.97	31,500	6,650	309	1,940	2,440	< 200
MW-16	1	Sep-99	28	24.55	0.00	57.85	33.30	40,000	8,800	460	2,800	3,700	< 500
MW-16	1	Dec-99	28	25.48	0.00	57.85	32.37	37,800	8,080	350	2,530	2,840	< 500
MW-16	2	Apr-00	22	21.87	0.00	57.85	35.98	68,500	10,900	1,700	3,630	7,880	ND

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>t</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-16	2	Jun-00	--	22.88	0.00	57.85	34.97	40,100	7560	802	2380	3940	ND
MW-16	2	Sep-00	--	24.31	0.00	57.85	33.54	44,000	9,500	990	3,000	5,900	ND
MW-16	2	Dec-00	--	25.17	0.00	57.85	32.68	40,000	8,900	840	3,000	5,700	ND
MW-16	3	Dec-00	--	25.17	0.00	57.85	32.68	38,000	9,100	820	2,900	5,600	ND
MW-16	--	Mar-01	--	--	--	57.85	--	--	--	--	--	--	--
MW-16	2	Jun-01	--	24.88	0.00	57.85	32.97	40,000	6,500	620	2,300	4,600	< 500
MW-16	2	Sep-01	--	26.07	0.00	57.85	31.78	59,000	9,900	1200	3,600	6,700	< 500
MW-16	2	Dec-01	--	26.13	0.00	57.85	31.72	36,000	7,100	660	2,800	4,500	< 500
MW-16	2	Mar-02	--	24.35	0.00	57.85	33.50	36,000	7,300	650	2,800	5,000	< 500
MW-16	2	Jun-02	--	24.72	0.00	57.85	33.13	57,000	9,500	960	3,900	6,600	280
MW-16	2	Sep-02	--	25.96	0.00	57.85	31.89	52,100	10,600	1,390	1,170	8,410	47.8
MW-16	2	Dec-02	--	26.60	0.00	60.28	33.68	38,700	8,210	745	3,050	5,380	53.8
MW-16	2	Mar-03	--	24.40	0.00	60.28	35.88	46,500	11,000	889	4,600	8,020	< 200
MW-16	2	Jun-03	--	23.98	0.00	60.28	36.30	46,400	7,280	620	2,790	4,950	< 200
MW-16	2	Sep-03	--	25.85	0.00	60.28	34.43	32,100	7,430	596	2,800	4,770	< 200
MW-16	2	Dec-03	--	26.24	0.00	60.28	34.04	33,600	6,440	522	2,600	4,690	< 50
MW-16	2	Feb-04	--	24.61	0.00	60.28	35.67	18,200	4,620	370	2,450	4,100	< 50
MW-16	2	May-04	--	24.32	0.00	60.28	35.96	16,200	2,700	218	1,330	2,330	< 50
MW-16	2	Aug-04	--	25.65	0.00	60.28	34.63	26,300	3,560	233	1,620	2,570	< 50
MW-16	2	Nov-04	--	26.33	0.00	60.28	33.95	44,800	6,060	331	3,260	3,510	< 20
MW-16	2	Feb-05	--	24.06	0.00	60.28	36.22	22,600	4,180	312	2,750	3,650	< 50
MW-16	2	May-05	--	21.73	0.00	60.28	38.55	25,700	3,430	295	1,480	2,120	< 50
MW-16	2	Sep-05	--	23.93	0.00	60.28	36.35	26,400	4,410	307	2,710	3,640	< 50
MW-16	2	Nov-05	--	24.64	0.00	60.28	35.64	11,100	2,660	175	1,350	1,920	< 50
MW-17	--	Aug-93	25	24.05	0.00	52.62	28.57	1,300	ND	4.2	2.7	7	--
MW-17	--	Nov-93	25	24.05	0.00	52.62	28.57	470	ND	0.79	1.7	1.6	--
MW-17	--	Mar-94	25	24.50	0.00	52.62	28.12	290	ND	3	ND	ND	--
MW-17	--	Sep-94	25	23.54	0.00	52.62	29.08	180	ND	ND	ND	ND	--
MW-17	--	Dec-94	25	23.25	0.00	52.62	29.37	66	ND	6.1	ND	0.6	--
MW-17	--	Apr-95	20	18.97	0.00	52.62	33.65	ND	0.92	ND	0.57	ND	--
MW-17	--	Jun-95	20	19.56	0.00	52.62	33.06	72.1	ND	3.5	ND	0.6	--
MW-17	--	Sep-95	20	20.75	0.00	52.62	31.87	50	ND	ND	ND	ND	--
MW-17	--	Jul-96	20	18.50	0.00	52.62	34.12	--	--	--	--	--	--
MW-17	1	Sep-98	15	16.60	0.00	52.62	36.02	52.6	< 0.5	< 0.5	< 0.5	< 0.5	< 2
MW-17	2	Sep-98	15	16.60	0.00	52.62	36.02	63	< 0.5	< 0.5	< 0.5	< 0.5	< 2
MW-17	2,3	Sep-98	15	16.60	0.00	52.62	36.02	87.3	< 0.5	< 0.5	< 0.5	< 0.5	< 2
MW-17	1	Dec-98	20	18.07	0.00	52.62	34.55	< 50	1.7	< 0.5	0.657	< 0.5	< 2
MW-17	1	Mar-99	20	16.60	0.00	52.62	36.02	57	< 0.5	< 0.5	< 0.5	< 0.5	< 5
MW-17	1	Jun-99	21	17.83	0.00	52.62	34.79	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2
MW-17	1	Sep-99	22	19.42	0.00	52.62	33.20	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5
MW-17	1	Dec-99	23	20.37	0.00	52.62	32.25	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.5

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>g</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-17	2	Apr-00	17	16.92	0.00	52.62	35.70	87.9	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-17	2,3	Apr-00	17	16.92	0.00	52.62	35.70	67	< 0.5	< 0.5	< 0.5	0.698	ND
MW-17	--	Jun-00	--	17.80	0.00	52.62	34.82	--	--	--	--	--	--
MW-17	1	Sep-00	--	19.23	0.00	52.62	33.39	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-17	--	Dec-00	--	20.08	0.00	52.62	32.54	--	--	--	--	--	--
MW-17	2	Mar-01	--	18.91	0.00	52.62	33.71	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5
MW-17	--	Jun-01	--	19.81	0.00	52.62	32.81	--	--	--	--	--	--
MW-17	2	Sep-01	--	20.95	0.00	52.62	31.67	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-17	--	Dec-01	--	--	--	52.62	--	--	--	--	--	--	--
MW-17	2	Mar-02	--	19.27	0.00	52.62	33.35	52	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-17	2,3	Mar-02	--	19.27	0.00	52.62	33.35	54	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-17	--	Jun-02	--	19.65	0.00	52.62	32.97	--	--	--	--	--	--
MW-17	1	Sep-02	--	20.85	0.00	52.62	31.77	< 50	< 0.5	< 0.5	< 0.5	< 0.5	2.8
MW-17	--	Dec-02	--	21.46	0.00	55.03	33.57	--	--	--	--	--	--
MW-17	2	Mar-03	--	19.31	0.00	55.03	35.72	60	< 1	< 1	< 1	< 2	< 2
MW-17	2	Jun-03	--	18.82	0.00	55.03	36.21	--	--	--	--	--	--
MW-17	2	Sep-03	--	20.55	0.00	55.03	34.48	< 50	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0
MW-17	--	Dec-03	--	21.10	0.00	55.03	33.93	--	--	--	--	--	--
MW-17	2	Feb-04	--	19.63	0.00	55.03	35.40	< 50	< 1	< 1	< 1	< 2	< 2
MW-17	--	May-04	--	19.30	0.00	55.03	35.73	--	--	--	--	--	--
MW-17	2	Aug-04	--	20.59	0.00	55.03	34.44	< 50	< 1	< 1	< 1	< 2	< 2
MW-17	--	Nov-04	--	21.25	0.00	55.03	33.78	--	--	--	--	--	--
MW-17	2	Feb-05	--	19.07	0.00	55.03	35.96	< 50	< 1	< 1	< 1	< 2	< 2
MW-17	--	May-05	--	16.98	0.00	55.03	38.05	--	--	--	--	--	--
MW-17	--	Sep-05	--	18.88	0.00	55.03	36.15	< 50	< 1	< 1	< 1	< 2	< 2
MW-17	--	Nov-05	--	19.50	0.00	55.03	35.53	--	--	--	--	--	--
MW-18	2	Apr-00	20	19.48	0.00	55.02	35.54	30,800	157	1730	759	3,100	ND
MW-18	2	Jun-00	--	20.54	0.00	55.02	34.48	20,000	309	2140	736	2,740	ND
MW-18	2	Sep-00	--	22.02	0.00	55.02	33.00	11,000	220	480	610	1,100	ND
MW-18	2,3	Sep-00	--	22.02	0.00	55.02	33.00	20,000	190	600	710	1,400	ND
MW-18	2	Dec-00	--	23.88	0.00	55.02	31.14	11,000	180	290	630	840	ND
MW-18	2	Mar-01	--	21.20	0.00	55.02	33.82	6,800	< 10	15	78	34	< 100
MW-18	2	Jun-01	--	22.53	0.00	55.02	32.49	15,000	190	300	640	1,000	< 50
MW-18	2	Sep-01	--	23.73	0.00	55.02	31.29	9,600	< 10	66	300	310	< 100
MW-18	2	Dec-01	--	23.63	0.00	55.02	31.39	8,800	75	61	430	440	< 100
MW-18	2	Dec-01	--	23.63	0.00	55.02	31.39	10,000	75	95	490	500	< 100
MW-18	2	Mar-02	--	21.89	0.00	55.02	33.13	21,000	350	2,000	720	1,500	< 130
MW-18	2	Jun-02	--	22.33	0.00	55.02	32.69	21,000	480	2,200	900	2,000	230
MW-18	2	Sep-02	--	23.58	0.00	55.02	31.44	19,200	1,450	736	780	1,860	< 50
MW-18	2	Dec-02	--	24.16	0.00	57.34	33.18	10,500	116	193	501	592	105
MW-18	2	Mar-03	--	19.50	0.00	57.34	37.84	20,500	405	2,950	963	3,160	< 50

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>t</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-18	2	Jun-03	--	21.50	0.00	57.34	35.84	18,200	424	2,690	693	2,620	< 100
MW-18	2	Sep-03	--	23.25	0.00	57.34	34.09	14,600	849	1,590	835	2,500	< 100
MW-18	2	Dec-03	--	23.88	0.00	57.34	33.46	24,200	608	1,220	1,400	3,000	< 40
MW-18	2	Feb-04	--	22.20	0.00	57.34	35.14	19,700	1,120	2,130	1,060	3,130	< 40
MW-18	2	May-04	--	21.24	0.00	57.34	36.10	26,600	722	3,960	1,210	4,430	< 40
MW-18	2	Aug-04	--	23.27	0.00	57.34	34.07	20,400	430	936	810	2,030	< 40
MW-18	2	Nov-04	--	23.90	0.00	57.34	33.44	22,200	337	757	823	2,250	< 10
MW-18	2	Feb-05	--	21.57	0.00	57.34	35.77	26,000	555	3,460	1,390	4,420	< 20
MW-18	2	May-05	--	19.67	0.00	57.34	37.67	25,700	360	3,320	1,280	5,730	< 40
MW-18	2	Sep-05	--	21.55	0.00	57.34	35.79	23,400	633	2,800	1,420	5,070	< 50
MW-18	2	Nov-05	--	22.28	0.00	57.34	35.06	21,000	541	854	1,280	4,070	< 40
MW-18	2,3	Nov-05	--	22.28	0.00	57.34	35.06	21,900	536	940	1,250	4,130	< 40
MW-19	2	Apr-00	20	17.38	0.00	51.67	34.29	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-19	2	Jun-00	--	18.30	0.00	51.67	33.37	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-19	2	Sep-00	--	19.60	0.00	51.67	32.07	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-19	2	Dec-00	--	20.46	0.00	51.67	31.21	< 50	< 0.5	< 0.5	< 0.5	< 0.5	ND
MW-19	2	Mar-01	--	19.28	0.00	51.67	32.39	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-19	2	Jun-01	--	20.16	0.00	51.67	31.51	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-19	2,3	Sep-01	--	21.28	0.00	51.67	30.39	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-19	2	Sep-01	--	21.28	0.00	51.67	30.39	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-19	2	Dec-01	--	21.30	0.00	51.67	30.37	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-19	2	Mar-02	--	19.53	0.00	51.67	32.14	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-19	2	Jun-02	--	20.00	0.00	51.67	31.67	< 50	< 0.3	< 0.3	< 0.3	< 0.6	< 1.0
MW-19	2	Sep-02	--	21.13	0.00	51.67	30.54	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-19	2	Dec-02	--	21.70	0.00	54.08	32.38	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-19	2	Mar-03	--	19.50	0.00	54.08	34.58	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Jun-03	--	19.25	0.00	54.08	34.83	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Sep-03	--	20.88	0.00	54.08	33.20	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Dec-03	--	21.36	0.00	54.08	32.72	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Feb-04	--	19.84	0.00	54.08	34.24	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	May-04	--	19.61	0.00	54.08	34.47	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Aug-04	--	20.85	0.00	54.08	33.23	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Nov-04	--	22.50	0.00	54.08	31.58	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Feb-05	--	19.29	0.00	54.08	34.79	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	May-05	--	17.15	0.00	54.08	36.93	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Sep-05	--	20.22	0.00	54.08	33.86	< 50	< 1	< 1	< 1	< 2	< 2
MW-19	2	Nov-05	--	19.85	0.00	54.08	34.23	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Dec-02	--	29.90	0.00	63.44	33.54	< 50	3.8	5.2	0.6	3.3	< 1
MW-20	2	Mar-03	--	27.60	0.00	63.44	35.84	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2,3	Mar-03	--	27.60	0.00	63.44	35.84	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Jun-03	--	27.15	0.00	63.44	36.29	< 50	< 1	< 1	< 1	< 2	< 2

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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>g</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-20	2	Sep-03	--	28.88	0.00	63.44	34.56	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Dec-03	--	29.46	0.00	63.44	33.98	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Feb-04	--	27.89	0.00	63.44	35.55	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	May-04	--	27.54	0.00	63.44	35.90	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Aug-04	--	28.89	0.00	63.44	34.55	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Nov-04	--	29.56	0.00	63.44	33.88	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Feb-05	--	27.28	0.00	63.44	36.16	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	May-05	--	24.99	0.00	63.44	38.45	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Sep-05	--	27.18	0.00	63.44	36.26	< 50	< 1	< 1	< 1	< 2	< 2
MW-20	2	Nov-05	--	27.84	0.00	63.44	35.60	< 50	< 1	< 1	< 1	< 2	< 2
MW-21	2	Apr-00	28	27.93	0.00	63.72	35.79	79,400	8,740	4,130	3,120	12,200	ND
MW-21	2	Jun-00	--	28.95	0.00	63.72	34.77	56,600	8,300	3,300	2,310	8,640	ND
MW-21	2	Sep-00	--	30.39	0.00	63.72	33.33	38,000	7,800	2,000	1,700	6,700	ND
MW-21	2	Dec-00	--	31.24	0.00	63.72	32.48	46,000	9,300	1,700	2,300	6,800	ND
MW-21	1	Mar-01	--	20.05	0.00	63.72	43.67	30,000	7,700	550	1,400	3,300	< 500
MW-21	2	Jun-01	--	31.00	0.00	63.72	32.72	43,000	10,000	980	1,800	4,400	< 250
MW-21	2,3	Jun-01	--	31.00	0.00	63.72	32.72	41,000	7,500	830	1,500	3,700	< 500
MW-21	2	Sep-01	--	32.06	0.00	63.72	31.66	30,000	6,000	360	1,500	2,200	< 500
MW-21	2	Dec-01	--	26.13	0.00	63.72	37.59	24,000	5,500	170	1,700	1,900	< 500
MW-21	2	Mar-02	--	30.40	0.00	63.72	33.32	28,000	6,800	500	1,700	2,800	< 500
MW-21	2	Jun-02	--	30.80	0.00	63.72	32.92	34,000	8,100	250	1,000	2,300	230
MW-21	2	Sep-02	--	32.07	0.00	63.72	31.65	11,900	4,460	116	149	892	< 50
MW-21	2	Dec-02	--	32.65	0.00	66.17	33.52	39,300	7,080	696	2,940	4,450	96.5
MW-21	2	Mar-03	--	30.44	0.00	66.17	35.73	51,300	12,600	1,350	3,770	6,500	< 200
MW-21	2	Jun-03	--	30.00	0.00	66.17	36.17	21,400	6,840	210	< 1	1,980	< 200
MW-21	2	Sep-03	--	31.70	0.00	66.17	34.47	31,800	8,020	801	2,330	3,660	< 100
MW-21	2	Dec-03	--	32.22	0.00	66.17	33.95	31,700	7,640	616	1,850	3,020	< 100
MW-21	2	Feb-04	--	30.70	0.00	66.17	35.47	33,000	8,030	815	3,020	4,630	< 100
MW-21	2	May-04	--	30.39	0.00	66.17	35.78	20,100	5,590	655	1,990	3,360	< 100
MW-21	2	Aug-04	--	31.71	0.00	66.17	34.46	35,500	5,100	530	1,710	2,760	< 100
MW-21	2	Nov-04	--	32.37	0.00	66.17	33.80	40,600	6,320	453	2,010	2,890	< 100
MW-21	2	Feb-05	--	30.10	0.00	66.17	36.07	51,400	11,700	1,940	3,890	8,490	< 100
MW-21	2,7	May-05	--	27.80	0.00	66.17	38.37	37,800	5,680	852	2,280	4,080	< 100
MW-21	2,7	Sep-05	--	30.00	0.00	66.17	36.17	35,500	7,970	996	3,110	5,170	< 40
MW-21	2,7	Nov-05	--	30.63	0.00	66.17	35.54	28,100	5,060	654	1,760	2,910	< 100
MW-22	2	Dec-01	--	26.13	0.00	54.60	28.47	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-22	2	Mar-02	--	21.62	0.00	54.60	32.98	< 50	< 1.5	< 0.5	< 0.5	< 0.5	< 5.0
MW-22	2	Jun-02	--	21.95	0.00	54.60	32.65	< 50	< 0.3	< 0.3	< 0.3	< 0.6	< 1.0
MW-22	2	Sep-02	--	23.27	0.00	54.60	31.33	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-22	2	Dec-02	--	23.61	0.00	57.16	33.55	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0
MW-22	2	Mar-03	--	21.95	0.00	57.16	35.21	< 50	< 1	< 1	< 1	< 2	< 2



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Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS					
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>s</sub> µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-22	2	Jun-03	—	21.45	0.00	57.16	35.71	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	Sep-03	—	22.94	0.00	57.16	34.22	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	Dec-03	—	23.59	0.00	57.16	33.57	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	Feb-04	—	21.92	0.00	57.16	35.24	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	May-04	—	21.77	0.00	57.16	35.39	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	Aug-04	—	22.57	0.00	57.16	34.59	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	Nov-04	—	23.61	0.00	57.16	33.55	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	Feb-05	—	21.81	0.00	57.16	35.35	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	May-05	—	19.76	0.00	57.16	37.40	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	Sep-05	—	21.25	0.00	57.16	35.91	< 50	< 1	< 1	< 1	< 2	< 2
MW-22	2	Nov-05	—	21.91	0.00	57.16	35.25	< 50	< 1	< 1	< 1	< 2	< 2
MW-23	2	Nov-05	—	23.38	0.00	58.92	35.54	198	6.6	1.2	15.5	18.7	< 2
MW-24	2	Nov-05	—	23.76	0.00	59.38	35.62	5,130	124	384	70.0	1,080	< 10
IW-13	2	Nov-05	—	22.59	0.00	58.20	35.61	125	< 1	< 1	< 1	< 2	< 2
VEW-1	4	Aug-93	25	26.65	0.00	56.97	30.32	22,000	1,900	3,800	570	3,300	—
VEW-1	—	Nov-93	30	27.69	0.00	56.97	29.28	—	—	—	—	—	—
VEW-1	—	Mar-94	25	24.26	0.00	56.97	32.71	—	—	—	—	—	—
VEW-2	—	Aug-93	25	25.21	0.00	55.23	30.02	—	—	—	—	—	—
VEW-2	—	Nov-93	25	26.21	0.00	—	—	—	—	—	—	—	—
VEW-2	—	Mar-94	25	23.18	0.00	—	—	—	—	—	—	—	—
ASV-1	—	Aug-93	25	25.05	0.00	57.40	32.35	—	—	—	—	—	—
ASV-1	—	Nov-93	25	24.54	0.00	57.40	32.86	—	—	—	—	—	—
ASV-1	—	Mar-94	25	23.21	0.00	57.40	34.19	—	—	—	—	—	—
DMSB01	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB02	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB03	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB04	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB05	—	Apr-95	30	—	0.00	—	—	< 500	0.5	3	1.7	23.4	—
DMSB06	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB07	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB08	—	Apr-95	30	—	0.00	—	—	2015	10	4.8	12.6	13.6	—
DMSB09	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB10	—	Apr-95	30	—	0.00	—	—	555	2	1.1	9.6	8.6	—
DMSB11	—	Apr-95	30	—	0.00	—	—	6433	27.3	15.3	17	16.7	—
DMSB12	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	0.6	< 0.5	< 1.5	—
DMSB13	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB14	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB15	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB16	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB21	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—
DMSB22	—	Apr-95	30	—	0.00	—	—	< 500	< 0.5	< 0.5	< 0.5	< 1.5	—

Appendix A  
 Historical Groundwater Monitoring Results  
 Sears Auto Center #1248  
 Hayward, California  
 (Page 28 of 28)

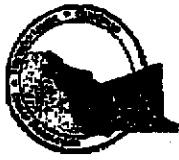
Well No.	Notes	Sample Period	Sample Depth (feet)	GROUNDWATER LEVELS				LABORATORY ANALYTICAL RESULTS				
				Depth to Groundwater (ft bgs)	Standing Product Thickness (ft)	Casing Elevation (ft MSL)	Groundwater Elevation (ft MSL)	TPH <sub>4</sub> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
<b>Notes/Explanations:</b> 1: "Pre-purge" sample 2: "Post-purge" sample 3: Duplicate sample 4: Well samples at pump effluent after 24 hours of pumping. 5: Construction activities altered the top of casing elevation reference point. 6: Passive skimmer installed in well 7: Purged dry and sampled with disposable bailer. Groundwater Elevation = Top of casing elevation - (Depth to Water - (0.8 * Standing Product thickness)). J = Sample analyzed beyond holding time. The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. JS = The detected constituent was qualified as an estimated concentration. MSL = Mean Sea Level ND = Not detected at or above the method detection limit. SP = Seperate-phase petroleum hydrocarbons present, not sampled. < = Analyte not detected above indicated method detection limit -- = Not analyzed/Not available. * = Anomalous data, not used. µg/L = micrograms per liter TPHg = Total petroleum hydrocarbons - gasoline range organics. MTBE = Methyl Tert Butyl Ether												





**APPENDIX B**  
**WELL PERMITS**

**Alameda County Public Works Agency - Water Resources Well Permit**



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 09/15/2005 By Jamesy  
Permits Issued: W2005-0920 to W2005-0927

Receipt Number: WR2005-2115  
Permits Valid from 10/10/2005 to 10/20/2005

Application Id: 1126567794615  
Site Location: 660 W Winton Ave, Hayward, CA 94544 (Sears Auto Center #1248)  
Project Start Date: 10/10/2005  
City of Project Site: Hayward  
Completion Date: 10/20/2005

Applicant: URS - Steve Turner Phone: 714-835-6886  
2020 E 1st St. #400, Santa Ana, CA 92705  
Property Owner: Sears, Roebuck & Co Attn: Bruce Kaye Phone: --  
3333 Beverly Rd., Hoffman Estates, IL 60179  
Client: \*\* same as Property Owner \*\*

Total Due: \$2400.00  
Total Amount Paid: \$2400.00  
Paid By: CHECK PAID IN FULL

**Works Requesting Permits:**

Well Construction-Monitoring-Monitoring - 8 Wells  
Driller: BC2 Environmental - Lic #: 686255 - Method: auger

**Work Total: \$2400.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2005-0820	09/15/2005	01/08/2006	IW10	10.00 in.	4.00 in.	29.00 ft	48.00 ft
W2005-0921	09/15/2005	01/08/2006	IW11	10.00 in.	4.00 in.	29.00 ft	48.00 ft
W2005-0922	09/15/2005	01/08/2006	IW12	10.00 in.	4.00 in.	29.00 ft	48.00 ft
W2005-0923	09/15/2005	01/08/2006	IW13	10.00 in.	4.00 in.	29.00 ft	48.00 ft
W2005-0924	09/15/2005	01/08/2006	IW8	10.00 in.	4.00 in.	29.00 ft	48.00 ft
W2005-0925	09/15/2005	01/08/2006	IW9	10.00 in.	4.00 in.	29.00 ft	48.00 ft
W2005-0926	09/15/2005	01/08/2006	MW23	8.00 in.	2.00 in.	29.00 ft	48.00 ft
W2005-0927	09/15/2005	01/08/2006	MW24	8.00 in.	2.00 in.	29.00 ft	48.00 ft

**Specific Work Permit Conditions**

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.
2. Permittee, permittee's, contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on-or off site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

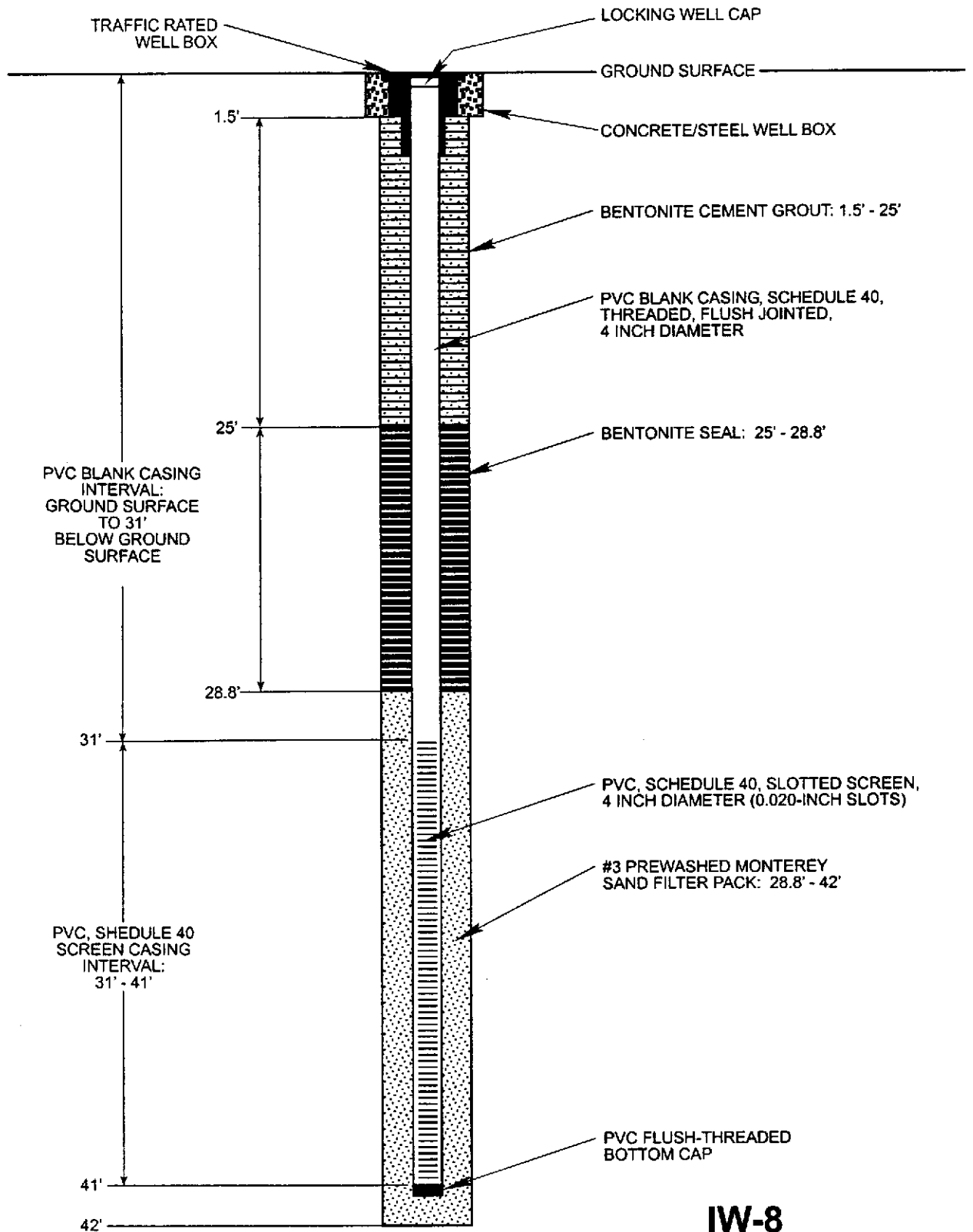
**Alameda County Public Works Agency - Water Resources Well Permit**

3. Prior to any drilling activities shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or to the City and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained.
  4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.
  5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
  6. Applicant shall contact George Bolton for a inspection time at 510-670-5594 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
  7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
  8. Minimum surface seal thickness is two inches of cement grout placed by tremie
  9. Minimum seal depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
-

**APPENDIX C**  
**BORING LOGS**

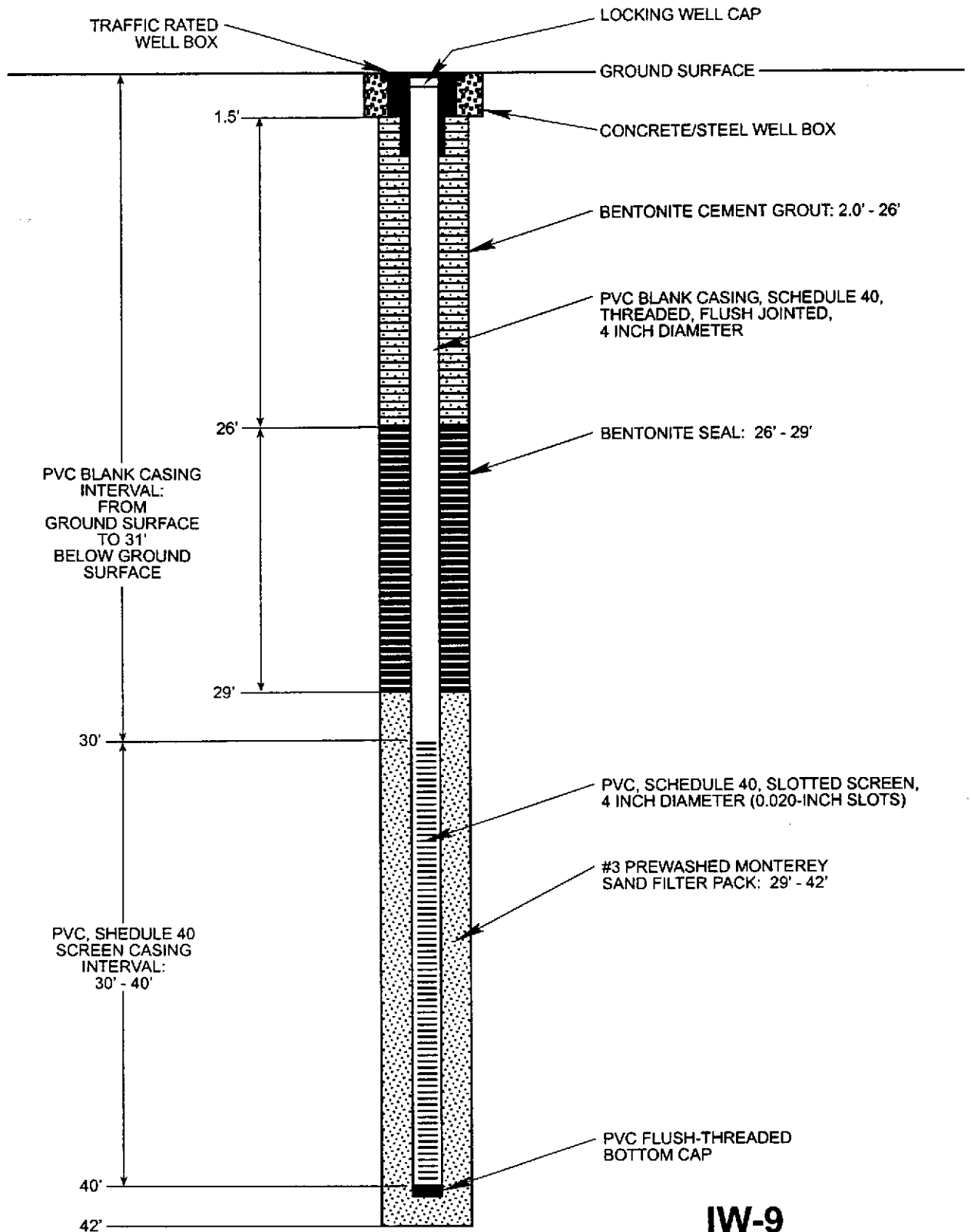


BORING DIAMETER: 10 INCHES, BORING DEPTH: 42 FEET  
CASING DIAMETER: 4 INCHES, CASING/SCREEN DEPTH: 41 FEET



**IW-8**  
**INJECTION WELL**  
**CONSTRUCTION DETAIL**  
SEARS AUTOMOTIVE CENTER #1248  
660 WEST WINTON AVENUE  
HAYWARD, CALIFORNIA

BORING DIAMETER: 10 INCHES, BORING DEPTH: 42 FEET  
CASING DIAMETER: 4 INCHES, CASING/SCREEN DEPTH: 40 FEET



**IW-9**  
**INJECTION WELL**  
**CONSTRUCTION DETAIL**  
SEARS AUTOMOTIVE CENTER #1248  
660 WEST WINTON AVENUE  
HAYWARD, CALIFORNIA

Project: **Sears**  
 Project Location: **Hayward**  
 Project Number: **25363714**

# Log of Boring IW-10

Sheet 1 of 3

Date(s) Drilled	10/10/2005	Logged By	S. Turner	Checked By	K. Russell
Drilling Method	Hollow Stem Auger	Drilling Contractor	BC <sup>2</sup> Environmental	Total Depth of Borehole (ft bgs)	46.5
Drill Rig Type	CME 85	Sampler Type	Modified California Split Spoon	Approx. Surface Elevation (ft msl)	Not Available
Approx. Depth Groundwater Encountered	27.5 feet bgs	Drill Bit Size/Type	10 1/4"	Top of Casing Elevation (ft msl)	Not Available
Borehole Diameter (inches)	10 1/4"	Diameter of Well (inches)	4"	Type of Well Casing	Schedule 40 PVC
Type of Sand Pack	#3 Sand	Type and Depth of Seal(s)	Hydrated 3/8 Chips 25 to 28.5 feet bgs		
Comments	Bore abandoned by tremmie grouting from base (43 ft bgs)				

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
0						5 inches Asphalt Concrete 4 inches Base					
						Very dark brown (10YR 2/2), Sandy CLAY (CL), moist, trace medium sand					
						Brown (10YR 4/3), Sandy SILT (ML), very stiff, moist, trace root fragments					
	5			32	18/18			0.6	0.0	1420	
						Brown (10YR 4/3), Sandy CLAY (CL), very stiff, moist, root fragments, root traces, pin hole voids					
	10			39	18/18			3.5	0.0	1428	
	15										

Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring IW-10

Sheet 2 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
15				37	18/18	↓ Becomes mottled brown (10YR 4/3), and yellowish brown (10YR 5/4)		1.7	0.0	1433	
				33	18/18	↓ Contains trace angular to subrounded coarse sand				1435	
				33	18/18	↓ Same as above				1438	
				38	18/18	↓ Becomes mottled light olive brown (2.5Y 5/3) and gray (2.5Y 5/1)		0.7	0.0	1442	
20				43	18/18	↓ Same as above				1444	
				33	18/18	↓ Same as above				1447	
				29	18/18	↓ Same as above				1452	
25				30	18/18	↓ Same as above		113	0.0	1456	
				25	18/18	Mottled olive gray (5Y 5/2) and gray (5Y 5/1), Sandy SILT (ML), very stiff, moist, burrow traces				1458	
				23	12/18	Olive gray (5Y 4/2), Silty fine SAND (SM), medium dense, wet				1501	
30				26	18/18	Olive gray (5Y 4/2), fine SAND with SILT (SP-SM), medium dense, wet		311	0.0	1504	
				31	18/18	↓ Same as above				1508	
				29	12/18	↓ Same as above				1512	
35				32	12/18	Greenish gray (GLE Y 1 4/10Y), fine GRAVEL with Sand (GP), medium dense, wet, contains trace subrounded coarse gravel		2.8	0.0		

Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring IW-10

Sheet 3 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
	35					Same as above			1517		
				27	18/18	Contains trace silt			1520		
				31	12/18	Olive brown (2.5Y 4/3), Silty fine SAND (SM), medium dense, wet, contains subrounded fine gravel			1545		
				35	12/18	Fine gravel not present			1550		
	40			37	12/18	Contains a 4 inch thick layer of coarse angular sand at 41 feet		16.0	0.0	1557	
				44	12/18	Same as above			1602		
				-	12/18	Same as above			1607		
	45			36	12/18	Yellowish brown (10YR 5/4), Sandy SILT (ML), very stiff, wet		1.4	0.0	1618	
						Completed boring to 46.5 feet bgs.					
	50										
	55										

Project: **Sears**  
 Project Location: **Hayward**  
 Project Number: **25363714**

# Log of Boring IW-11

Sheet 1 of 3

Date(s) Drilled	10/13/2005	Logged By	S. Turner	Checked By	K. Russell
Drilling Method	Hollow Stem Auger	Drilling Contractor	BC <sup>2</sup> Environmental	Total Depth of Borehole (ft bgs)	43.0
Drill Rig Type	CME 85	Sampler Type	Modified California Split Spoon	Approx. Surface Elevation (ft msl)	Not Available
Approx. Depth Groundwater Encountered	28 feet bgs	Drill Bit Size/Type	10 1/4"	Top of Casing Elevation (ft msl)	Not Available
Borehole Diameter (inches)	10 1/4"	Diameter of Well (inches)	4"	Screen Perforation	0.020-inch slot
Type of Sand Pack	#3 Sand	Type and Depth of Seal(s)	Hydrated 3/8 Chips 25.5 to 28.7 feet bgs		
Comments					

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
0						6 inches Asphalt Concrete 4 inches Base				1545	Hand auger to 5 feet bgs
						Yellowish brown (10YR 5/4), Sandy SILT (ML), moist, pin hole voids					
	5			18/18				0.0	0.0	1553	
	10			20	18/18	Contains root fragments and root traces		0.0	0.0	1600	
						Mottled yellowish brown (10YR 5/4) and dark brown (10YR 3/3), Sandy CLAY (CL), stiff, moist, contains pin hole voids and root traces					
15											

Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring IW-11

Sheet 2 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
15				19	18/18	Same as above	0.0	0.0	1604		
						Olive (5Y 5/3), Sandy SILT (ML), stiff, moist, contains root fragments and root traces					
20				20	18/18		0.0	0.0	1606		
				20	18/18	Becomes dark greenish gray (GLEY 1 4/10Y), root fragments not present			1608		
				24	18/24	Mottled light olive brown (2.5Y 5/3) and gray (2.5Y 5/1), Sandy CLAY (CL), very stiff, moist, contains pin hole voids and root traces			1610		
25				23	18/18	Becomes stiff	16.0	0.0	1617		
				22	18/18	Dark greenish gray (GLEY 1 4/10Y), Sandy SILT (ML), stiff, moist, contains pin hole voids			1620		
				29	16/24	Dark greenish gray (GLEY 1 4/10Y), Silty fine SAND (SM), medium dense, wet			1624		
							1104	0.0			
30				14	12/18	Same as above			1630		
				24	18/18	Yellowish brown (10YR 5/4), fine SAND with SILT (SP-SM), medium dense, wet			1632		
				23	16/24	Dark grayish brown (2.5Y 4/2), fine to medium SAND (SP), medium dense, wet, 2 inch thick fine gravel interval at 34 feet			1634		
35											

Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring IW-11

Sheet 3 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
35				22	12/18	Contains coarse subrounded sand			1637		
				18	18/18	Becomes coarse sand, trace fine subrounded gravel			1641		
				17	6/24	Same as above			1700		
40				29	12/18	Same as above	12.2	0.0	1709		
				-	18/18	Light olive brown (2.5Y 5/3), Sandy SILT (ML), moist, trace root fragments, trace medium sand	0.0	0.0	1725		
						Completed boring to 43 feet bgs.					
45											
50											
55											



Project: **Sears**  
 Project Location: **Hayward**  
 Project Number: **25363714**

# Log of Boring IW-12

Sheet 1 of 3

Date(s) Drilled	10/13/2005	Logged By	S. Turner	Checked By	K. Russell
Drilling Method	Hollow Stem Auger	Drilling Contractor	BC <sup>2</sup> Environmental	Total Depth of Borehole (ft bgs)	43.0
Drill Rig Type	CME 85	Sampler Type	Modified California Split Spoon	Approx. Surface Elevation (ft msl)	Not Available
Approx. Depth Groundwater Encountered	28 feet bgs	Drill Bit Size/Type	10 1/4"	Top of Casing Elevation (ft msl)	Not Available
Borehole Diameter (inches)	10 1/4"	Diameter of Well (inches)	4"	Type of Well Casing	Schedule 40 PVC
Type of Sand Pack	#3 Sand	Type and Depth of Seal(s)	Hydrated 3/8 Chips 27.7 to 29.7 feet bgs		
Comments					

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
0						6 inches Asphalt Concrete 4 inches Base				0845	Hand auger to 5 feet bgs
						Brown (10YR 4/3), Silty fine SAND (SM), moist					
5			25	18/18		3 inch thick layer of medium to coarse sand with silt at 5.5 feet Brown (10YR 4/3), Sandy SILT (ML), very stiff, moist	0.0	0.0	0852		
10			27	18/18		Mottled dark gray (2.5Y 4/1) and light olive brown (2.5Y 5/4), Sandy CLAY (CL), very stiff, moist, root traces, burrow traces	0.0	0.0	0858		
15											

Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring IW-12

Sheet 2 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
15				30	18/18	Same as above		0.0	0.0	0911	
20				26	18/18	Same as above		0.0	0.0	0919	
				22	18/18	Contains pin hole voids, stiff				0923	
				30	24/24	Becomes very stiff				0925	
						Becomes olive gray (2.5Y 5/2) and iron stained					
25				30	18/18	Same as above		18.5	0.0	0927	
				22	18/18	Same as above				0930	
				25	24/24	Dark greenish gray (GLE Y 1 4/1), Silty fine SAND (SM), medium dense, wet		10.9	0.0	0935	
						Becomes brown (10YR 4/3)					
30				20	12/18	Becomes iron stained		6.0	0.0	0939	
				18	6/18	Brown (10YR 4/3), fine SAND with SILT (SP-SM), medium dense, wet				0943	
				24	10/24	Contains fine angular gravel				0948	
35											

Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

### Log of Boring IW-12

Sheet 3 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
35				18	12/18	Brown (10YR 4/3), Silty GRAVEL with Sand (GM), medium dense, wet		-	-	0957	
				14	6/18	Brown (10YR 4/3), fine GRAVEL with Silt and Sand (GP-GM), loose, wet				1002	
				32	12/24	Brown (10YR 4/3), medium to coarse SAND (SP), medium dense, wet, trace fine rounded gravel				1015	
40				30	16/18	Same as above Brown (10YR 5/3), Sandy CLAY (CL), very stiff, moist, burrow traces, trace pin hole voids		0.0	0.0	1025	
				-	16/18	Same as above				1032	
						Completed boring to 43 feet bgs.					
45											
50											
55											

Project: **Sears**  
 Project Location: **Hayward**  
 Project Number: **25363714**

# Log of Boring IW-13

Sheet 1 of 3

Date(s) Drilled	10/12/2005	Logged By	S. Turner	Checked By	K. Russell
Drilling Method	Hollow Stem Auger	Drilling Contractor	BC <sup>2</sup> Environmental	Total Depth of Borehole (ft bgs)	43.0
Drill Rig Type	CME 85	Sampler Type	Modified California Split Spoon	Approx. Surface Elevation (ft msl)	Not Available
Approx. Depth Groundwater Encountered	27 feet bgs	Drill Bit Size/Type	10 1/4"	Top of Casing Elevation (ft msl)	Not Available
Borehole Diameter (inches)	10 1/4"	Diameter of Well (inches)	4"	Type of Well Casing	Schedule 40 PVC
Type of Sand Pack	#3 Sand	Type and Depth of Seal(s)	Hydrated 3/8 Chips 23 to 25.5 feet bgs		
Screen Perforation 0.020-inch slot					
Comments					

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
0						4 inches Asphalt Concrete 4 inches Base				1340	Hand augered to 5 feet bgs
						Very dark brown (10YR 2/2), Sandy CLAY (CL), moist					
						Brown (10YR 4/3), Silty fine SAND (SM), moist					
5			28	18/18		Mottled dark gray (2.5Y 4/1) and light olive brown (2.5Y 5/4), Sandy CLAY (CL), very stiff, moist, burrow traces, root traces		0.0	0.0	1347	
10			29	18/18		Burrow traces not present		3.4	0.0	1353	
15											

Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring IW-13

Sheet 2 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
15				25	18/18	Contains pin hole voids		0.0		1359	
20				30	18/18	Contains 4 inch thick layer of light olive brown (2.5Y 5/3), Silty fine SAND at 21 feet, iron stained		10.6		1401	
				26	18/18	Same as above				1404	
				31	24/24	Same as above				1407	
25				26	18/18	Olive gray (2.5Y 4/2), Sandy SILT (ML), very stiff, moist, burrow traces, pin hole voids				1412	
				36	18/18	Dark greenish gray (GLE Y 1 4/10Y), fine SAND with SILT (SP-SM), medium dense, wet		350		1415	
				33	24/24	Becomes olive brown (2.5Y 4/4)		950		1417	
30				-	18/18	Becomes iron stained, contains coarse subrounded sand		0.0		1422	
				20	18/18	Dark yellowish brown (10YR 3/6), Silty fine SAND (SM), medium dense, wet, trace fine rounded gravel				1429	
				25	24/24					1432	
35											

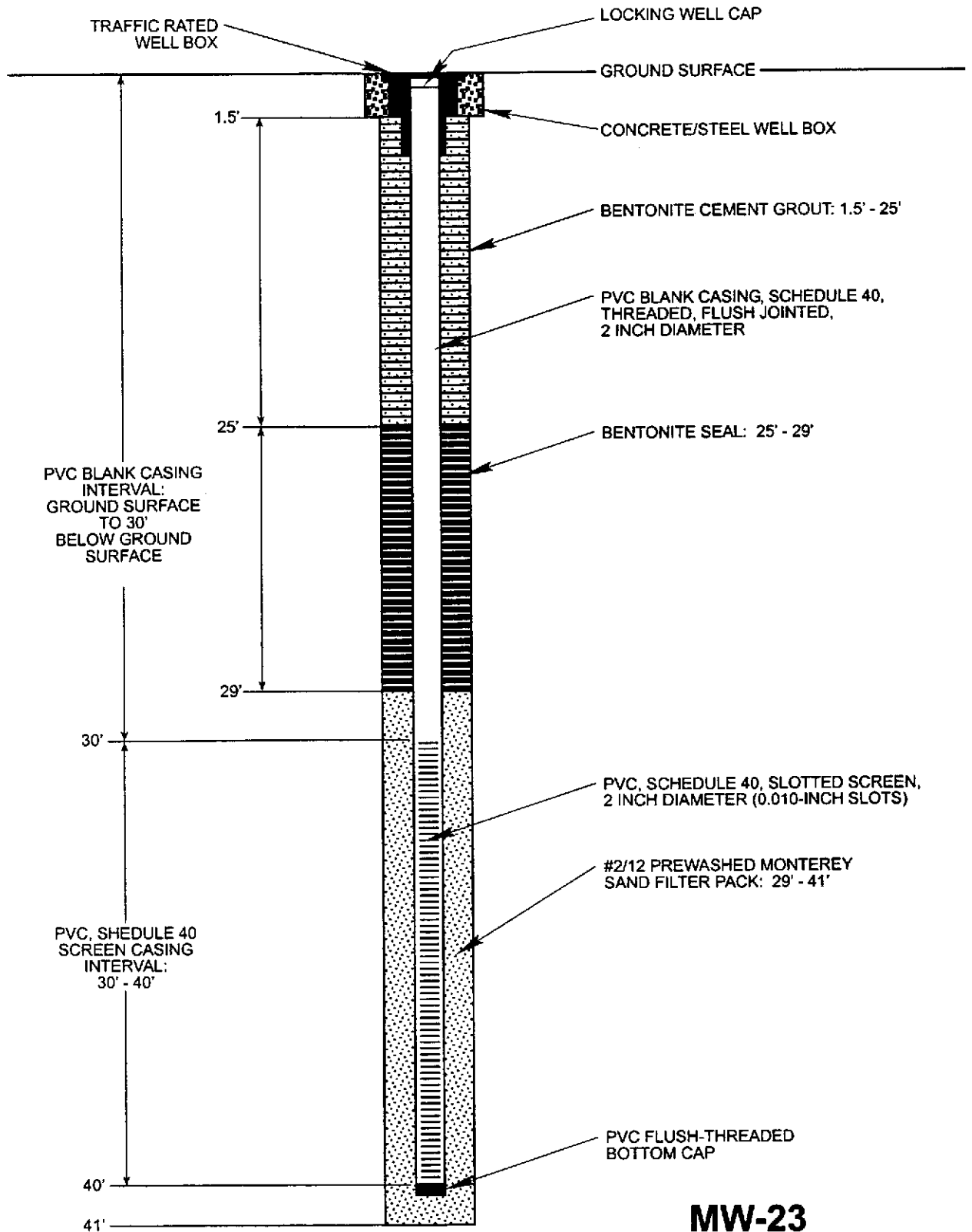
Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring IW-13

Sheet 3 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS	
		Type	Number	Blows/foot	Inches Recovered							
35				17	13/18	Same as above		0.0		1437		
				25	10/18	Mottled grayish brown (2.5Y 5/2) and light yellowish brown (2.5Y 6/4), Sandy CLAY (CL), very stiff, moist				1439		
				22	18/24	Mottled grayish brown (2.5Y 5/2) and light yellowish brown (2.5Y 6/4), Sandy SILT (ML), stiff, moist				1443		
40				20	12/18	Contains 2 inch thick layer of saturated silty fine sand (SM) at 40.5 feet		0.0	0.0	1455		
				19	12/18	Same as above		0.0	0.0	1505		
				Completed boring to 43 feet bgs.								
45												
50												
55												

BORING DIAMETER: 8 INCHES, BORING DEPTH: 41 FEET  
CASING DIAMETER: 2 INCHES, CASING/SCREEN DEPTH: 40 FEET



**MW-23**  
**MONITORING WELL**  
**CONSTRUCTION DETAIL**  
SEARS AUTOMOTIVE CENTER #1248  
660 WEST WINTON AVENUE  
HAYWARD, CALIFORNIA

Project: **Sears**  
 Project Location: **Hayward**  
 Project Number: **25363714**

# Log of Boring MW-24

Sheet 1 of 3

Date(s) Drilled	10/10/2005	Logged By	S. Turner	Checked By	K. Russell
Drilling Method	Hollow Stem Auger	Drilling Contractor	BC <sup>2</sup> Environmental	Total Depth of Borehole (ft bgs)	43.5
Drill Rig Type	CME 85	Sampler Type	Modified California Split Spoon	Approx. Surface Elevation (ft msl)	Not Available
Approx. Depth Groundwater Encountered	27 feet bgs	Drill Bit Size/Type	8 1/4"	Top of Casing Elevation (ft msl)	Not Available
Borehole Diameter (inches)	8 1/4"	Diameter of Well (inches)	2"	Type of Well Casing	Schedule 40 PVC
Type of Sand Pack	#2/12	Type and Depth of Seal(s)	Hydrated 3/8 Chips 25 to 28.5 feet bgs		
Comments					

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
0						6 inches Asphalt Concrete 6 inches Base				0835	Hand augered to 5 feet bgs
						Very dark grayish brown (10YR 3/2), Sandy CLAY (CL), moist, trace angular fine gravel					
						Olive brown (2.5Y 4/3), Silty fine SAND (SM), moist					
						Dark grayish brown (2.5Y 4/2), Sandy SILT (ML), very stiff, moist, trace angular fine gravel, root fragments					
5			28	18/18				2.0	0.0	0840	
						Olive brown (2.5Y 4/4), Silty fine SAND (SM), medium dense, moist, trace medium sand, pin hole voids					
10			27	18/18				38.8	0.0	0844	
						1/2 inch thick fine sand (SP) layer at 11.2 feet					
15											



Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring MW-24

Sheet 2 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
15					18/18	Mottled dark brown (10YR 3/3) and dark greenish gray (GLEY 1 4/10Y), CLAY (CL), moist, trace pin hole voids, burrow traces		8.1	0.0	0850	
					0/18						
					51	Same as above, hard				0856	
					38	Becomes very stiff		20.3	0.0	0901	
20					37	Same as above				0904	
					37	Same as above				0907	
					33	Becomes greenish gray (GLEY 1 4/10Y), trace iron staining				0913	
25					37			890	0.0	0915	
					39	Greenish gray (GLEY 1 4/10Y), Silty fine SAND (SM), medium dense, wet, trace iron staining				0918	
					29					0922	
30					24	Olive gray (5Y 4/2), fine SAND with SILT (SP-SM), medium dense, wet		560	0.0	0926	
					23					0930	
					29	Greenish black (GLEY 1 2.5/5G), medium to coarse SAND (SP), medium dense, wet, contains trace angular fine gravel				0934	
35					23						

Project: Sears  
 Project Location: Hayward  
 Project Number: 25363714

# Log of Boring MW-24

Sheet 3 of 3

Elevation, feet	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Well Completion Log	OVA Headspace (ppm)	OVA Background (ppm)	Sample Time	REMARKS
		Type	Number	Blows/foot	Inches Recovered						
	35					Contains coarse rounded gravel		180	0.0	0937	
						Same as above				0943	
						Grayish brown (10YR 5/1), Silty fine SAND (SM), wet, iron staining in blebs				0949	
						Greenish black (GLY 1 2.5/5G), medium to coarse SAND (SP), trace fine angular gravel, medium dense, wet, contains coarse rounded gravel at 39 feet				0956	
	40					Coarse gravel not present				1000	
						Grayish brown (2.5Y 5/2), Sandy CLAY (CL), very stiff, moist, burrow traces, mottled dark yellowish brown (10YR 4/4)		49.3	0.0	1008	
						Contains 6 inch thick layer of greenish black, coarse sandy clay (CL) with gravel at 43 feet					
	45					Completed boring to 43.5 feet bgs.					
	50										
	55										

**APPENDIX D**  
**SURVEY DATA**

Number	Latitude dec.	Longitude dec.	shot elevation-m	Raw desc	Feature	Desc	diff. To casing	casing elev -m	casing type
151	37.6544324	-122.1036511	17.822	IW13 LID/PAV			-0.084	17.738	4"PVC
152	37.6545122	-122.1037116	17.853	IW12 LID/PAV			-0.100	17.753	4"PVC
153	37.6545952	-122.1037747	17.906	IW11 LID/PAV			-0.094	17.812	4"PVC
154	37.6546787	-122.1038503	18.018	IW10 LID/PAV			-0.086	17.932	4"PVC
155	37.6546979	-122.1039345	18.046	MW23 LID/PAV			-0.090	17.956	2"PVC
156	37.6547582	-122.1038985	18.108	IW9 LID/PAV			-0.124	17.984	4"PVC
157	37.6548392	-122.1039624	18.235	IW8 LID/PAV			-0.164	18.071	4"PVC
158	37.654854	-122.1038284	18.184	MW24 LID/PAV			-0.082	18.102	2"PVC
159	37.6549375	-122.1045495	18.3	IW7 LID/PAV			-0.110	18.190	4"PVC
160	37.6549994	-122.1043948	18.308	IW6 LID/PAV			-0.103	18.205	4"PVC
161	37.6550517	-122.1042014	18.446	IW5 LID			-0.113	18.333	4"PVC
162	37.6550489	-122.1042052	18.336	GS IW5				18.336	GROUND
163	37.6551148	-122.104093	18.458	IW4 LID			-0.117	18.341	4"PVC
165	37.6551173	-122.1040881	18.38	GS IW4				18.380	GROUND
166	37.6551793	-122.1039435	18.557	IW3 LID			-0.090	18.467	4"PVC
167	37.6551773	-122.1039489	18.404	GS IW3				18.404	GROUND
168	37.6552438	-122.1037823	18.592	IW2 LID			-0.109	18.483	4"PVC
169	37.6552415	-122.1037862	18.491	GS IW2				18.491	GROUND
170	37.6553028	-122.1036253	18.623	IW1 LID			-0.100	18.523	4"PVC
171	37.6552996	-122.1036285	18.508	GS IW1				18.508	GROUND

GLOBAL_ID	FIELD_PT_NAME	FIELD_PT_CLASS	XY_SURVEY_DATE	LATITUDE	LONGITUDE	XY_METHOD	XY_DATUM	XY_ACC_VAL	XY_SURVEY_ORG	GPS_EQUIP_TYPE	XY_SURVEY_DESC	SITE
IW13 LID/PAV			12/12/2005	37.6544324	-122.1036511	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW12 LID/PAV			12/12/2005	37.6545122	-122.1037116	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW11 LID/PAV			12/12/2005	37.6545952	-122.1037747	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW10 LID/PAV			12/12/2005	37.6546787	-122.1038503	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
MW23 LID/PAV	MW		12/12/2005	37.6546979	-122.1039345	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW9 LID/PAV			12/12/2005	37.6547582	-122.1039985	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW8 LID/PAV			12/12/2005	37.6548392	-122.1039624	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
MW24 LID/PAV	MW		12/12/2005	37.6548540	-122.1038284	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW7 LID/PAV			12/12/2005	37.6549375	-122.1045495	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW6 LID/PAV			12/12/2005	37.6549994	-122.1043948	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW5 LID			12/12/2005	37.6550517	-122.1042014	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
GS IW5			12/12/2005	37.6550489	-122.1042052	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW4 LID			12/12/2005	37.6551148	-122.1040930	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
GS IW4			12/12/2005	37.6551173	-122.1040881	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW3 LID			12/12/2005	37.6551793	-122.1039435	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
GS IW3			12/12/2005	37.6552438	-122.1039489	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW2 LID			12/12/2005	37.6552415	-122.1037823	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
GS IW2			12/12/2005	37.6552415	-122.1037862	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
IW1 LID			12/12/2005	37.6553028	-122.1036253	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000
GS IW1			12/12/2005	37.6552996	-122.1036285	CGPS	NAD83	0.02 URS	T48	T48	0.0000000	0.0000000

GLOBAL_ID	FIELD_PT_NAME	ELEV_SURVEY_DATE	ELEVATION_m	ELEV_METHOD	ELEV_DATUM	ELEV_ACC_VAL	ELEV_SURVEY_ORG	RISER_HT	ELEV_DESC	SITE
	IW13 LID/PAV	12/12/2005	17.738	CGPS	88	0.02	URS	-0.084	4"PVC	
	IW12 LID/PAV	12/12/2005	17.753	CGPS	88	0.02	URS	-0.100	4"PVC	
	IW11 LID/PAV	12/12/2005	17.812	CGPS	88	0.02	URS	-0.094	4"PVC	
	IW10 LID/PAV	12/12/2005	17.932	CGPS	88	0.02	URS	-0.086	4"PVC	
	MW23 LID/PAV	12/12/2005	17.956	CGPS	88	0.02	URS	-0.090	2"PVC	
	IW9 LID/PAV	12/12/2005	17.994	CGPS	88	0.02	URS	-0.124	4"PVC	
	IW8 LID/PAV	12/12/2005	18.071	CGPS	88	0.02	URS	-0.164	4"PVC	
	MW24 LID/PAV	12/12/2005	18.102	CGPS	88	0.02	URS	-0.082	2"PVC	
	IW7 LID/PAV	12/12/2005	18.190	CGPS	88	0.02	URS	-0.110	4"PVC	
	IW6 LID/PAV	12/12/2005	18.205	CGPS	88	0.02	URS	-0.103	4"PVC	
	IW5 LID	12/12/2005	18.333	CGPS	88	0.02	URS	-0.113	4"PVC	
	GS IW5	12/12/2005	18.336	CGPS	88	0.02	URS	0.000	GROUND	
	IW4 LID	12/12/2005	18.341	CGPS	88	0.02	URS	-0.117	4"PVC	
	GS IW4	12/12/2005	18.380	CGPS	88	0.02	URS	0.000	GROUND	
	IW3 LID	12/12/2005	18.467	CGPS	88	0.02	URS	-0.090	4"PVC	
	GS IW3	12/12/2005	18.404	CGPS	88	0.02	URS	0.000	GROUND	
	IW2 LID	12/12/2005	18.483	CGPS	88	0.02	URS	-0.109	4"PVC	
	GS IW2	12/12/2005	18.491	CGPS	88	0.02	URS	0.000	GROUND	
	IW1 LID	12/12/2005	18.523	CGPS	88	0.02	URS	-0.100	4"PVC	
	GS IW1	12/12/2005	18.508	CGPS	88	0.02	URS	0.000	GROUND	

**APPENDIX E**

**SUMMARY OF GROUNDWATER ZONE INJECTIONS**

**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-1	1/15/2003	1012	24.61	43	4.69
IW-2	1/15/2003	NA	NA	Well Damaged	NA
IW-3	1/15/2003	1100	24.49	24	4.69
IW-4	1/15/2003	1137	24.16	40	4.36
IW-5	1/15/2003	1155	24.13	40	4.36
IW-6	1/15/2003	1230	24.59	33	4.54
IW-7	1/15/2003	1233	23.37	40	4.54
IW-1	1/20/2003	1305	24.61	40	NA
IW-2	1/20/2003	NA	NA	Well Damaged	NA
IW-3	1/20/2003	1400	24.70	26	NA
IW-4	1/20/2003	1320	24.21	40	NA
IW-5	1/20/2003	1145	24.23	40	NA
IW-6	1/20/2003	910	23.89	32	NA
IW-7	1/20/2003	919	23.50	40	NA
IW-1	1/30/2003	900	24.62	40	NA
IW-2	1/30/2003	NA	NA	Well Damaged	NA
IW-3	1/30/2003	951	24.65	22	NA
IW-4	1/30/2003	959	24.27	40	NA
IW-5	1/30/2003	1025	24.28	40	NA
IW-6	1/30/2003	1110	23.95	30	NA
IW-7	1/30/2003	1100	23.55	40	NA
IW-1	2/7/2003	1115	24.40	40	NA
IW-2	2/7/2003	NA	NA	0	NA
IW-3	2/7/2003	NA	NA	0	NA
IW-4	2/7/2003	1031	24.35	40	NA
IW-5	2/7/2003	1000	24.36	40	NA
IW-6	2/7/2003	822	23.96	32	NA
IW-7	2/7/2003	923	23.63	40	NA
IW-1	2/12/2003	900	24.80	40	NA
IW-2	2/12/2003	910	24.65	40	NA
IW-3	2/12/2003	930	24.80	20	NA
IW-3A	2/12/2003	945	24.55	40	NA
IW-4	2/12/2003	1000	24.32	40	NA
IW-5	2/12/2003	1035	24.45	40	NA
IW-6	2/12/2003	1045	24.45	20	NA
IW-7	2/12/2003	1115	24.14	30	NA
IW-1	2/20/2003	1020	24.83	40	NA
IW-2	2/20/2003	1050	24.73	40	NA
IW-3	2/20/2003	1130	24.90	20	NA
IW-3A	2/20/2003	1100	24.60	40	NA
IW-4	2/20/2003	1140	24.40	40	NA
IW-5	2/20/2003	1205	24.35	40	NA
IW-6	2/20/2003	1245	24.00	35	NA
IW-7	2/20/2003	1231	23.73	40	NA
IW-1	2/24/2003	927	24.87	40	NA
IW-2	2/24/2003	1003	24.70	40	NA
IW-3	2/24/2003	1008	24.87	20	NA
IW-3A	2/24/2003	1042	24.55	40	NA
IW-4	2/24/2003	1055	24.33	40	NA
IW-5	2/24/2003	1120	24.35	40	NA
IW-6	2/24/2003	1128	24.00	30	NA
IW-7	2/24/2003	1220	23.70	40	NA



**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-1	3/3/2003	950	24.78	43	NA
IW-2	3/3/2003	1015	24.70	40	NA
IW-3	3/3/2003	1045	24.77	20	NA
IW-3A	3/3/2003	1035	24.55	40	NA
IW-4	3/3/2003	1051	24.30	40	NA
IW-5	3/3/2003	1120	24.30	40	NA
IW-6	3/3/2003	1150	23.95	25	NA
IW-7	3/3/2003	1200	23.56	40	NA
IW-1	3/7/2003	921	24.90	43	NA
IW-2	3/7/2003	950	24.80	40	NA
IW-3	3/7/2003	1035	24.95	20	NA
IW-3A	3/7/2003	1015	24.65	40	NA
IW-4	3/7/2003	1045	24.41	40	NA
IW-5	3/7/2003	1105	24.40	40	NA
IW-6	3/7/2003	1145	24.20	25	NA
IW-7	3/7/2003	1200	23.90	40	NA
IW-1	3/11/2003	930	24.88	40	NA
IW-2	3/11/2003	950	24.80	40	NA
IW-3	3/11/2003	1045	24.95	20	NA
IW-3A	3/11/2003	1015	24.65	40	NA
IW-4	3/11/2003	1100	24.39	40	NA
IW-5	3/11/2003	1111	24.38	40	NA
IW-6	3/11/2003	1120	24.13	25	NA
IW-7	3/11/2003	1155	23.67	40	NA
IW-1	3/17/2003	918	24.93	40	NA
IW-2	3/17/2003	940	24.85	40	NA
IW-3	3/17/2003	1050	24.95	20	NA
IW-3A	3/17/2003	1055	24.60	40	NA
IW-4	3/17/2003	1122	24.45	40	NA
IW-5	3/17/2003	1130	24.46	40	NA
IW-6	3/17/2003	1145	24.21	20	NA
IW-7	3/17/2003	1200	23.71	40	NA
IW-1	3/27/2003	1128	24.86	40	NA
IW-2	3/27/2003	1105	24.80	40	NA
IW-3	3/27/2003	1145	24.85	20	NA
IW-3A	3/27/2003	1200	24.67	40	NA
IW-4	3/27/2003	1215	24.40	40	NA
IW-5	3/27/2003	1230	24.39	40	NA
IW-6	3/27/2003	1250	24.00	20	NA
IW-7	3/27/2003	1255	23.63	40	NA
IW-1	4/2/2003	1130	24.95	45	NA
IW-2	4/2/2003	1200	24.89	40	NA
IW-3	4/2/2003	1210	25.00	20	NA
IW-3A	4/2/2003	1238	24.75	40	NA
IW-4	4/2/2003	1245	24.53	40	NA
IW-5	4/2/2003	1300	24.55	40	NA
IW-6	4/2/2003	1315	24.10	20	NA
IW-7	4/2/2003	1330	23.71	40	NA

**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-1	4/9/2003	1009	24.95	45	5.9
IW-2	4/9/2003	1050	24.88	40	5.6
IW-3	4/9/2003	1115	24.97	20	5.6
IW-3A	4/9/2003	1130	24.75	40	5.6
IW-4	4/9/2003	1130	24.50	40	5.6
IW-5	4/9/2003	1150	24.50	40	5.6
IW-6	4/9/2003	1210	24.10	20	5.5
IW-7	4/9/2003	1210	23.70	40	5.5
MW-20	4/9/2003	1300	NA	NA	6.6
MW-11	4/9/2003	1300	NA	NA	6.5
MW-16	4/9/2003	1300	NA	NA	6.5
MW-3	4/9/2003	1300	NA	NA	6.5
MW-21	4/9/2003	1300	NA	NA	6.5
IW-1	5/6/2003	NA	24.14	100	5.7
IW-2	5/6/2003	NA	24.06	120	5.7
IW-3	5/6/2003	NA	23.95	120	5.6
IW-4	5/6/2003	NA	23.71	120	5.6
IW-5	5/6/2003	NA	23.72	--	NA
IW-6	5/6/2003	NA	23.35	--	NA
IW-7	5/6/2003	NA	--	--	NA
MW-11	5/6/2003	NA	--	--	NA
MW-16	5/6/2003	NA	23.06	--	NA
MW-21	5/6/2003	NA	--	--	NA
IW-1	5/7/2003	NA	--	--	NA
IW-2	5/7/2003	NA	--	160	NA
IW-3	5/7/2003	NA	--	160	NA
IW-4	5/7/2003	NA	--	60	NA
IW-5	5/7/2003	NA	--	150	NA
IW-6	5/7/2003	NA	--	50	NA
IW-7	5/7/2003	NA	--	150	NA
IW-1	8/13/2003	NA	--	120	NA
IW-2	8/13/2003	NA	--	120	NA
IW-3A	8/13/2003	NA	--	120	NA
IW-4	8/13/2003	NA	--	90	NA
IW-5	8/13/2003	NA	--	80	NA
IW-6	8/13/2003	NA	--	--	NA
IW-7	8/13/2003	NA	--	--	NA
MW-21	8/13/2003	735	31.14	--	6.5
MW-16	8/13/2003	755	25.05	--	6.6
MW-11	8/13/2003	809	24.45	--	6.6
IW-1	8/14/2003	NA	--	--	NA
IW-2	8/14/2003	NA	--	140	NA
IW-3	8/14/2003	NA	--	--	NA
IW-3A	8/14/2003	NA	--	120	NA
IW-4	8/14/2003	NA	--	60	NA
IW-5	8/14/2003	NA	--	70	NA
IW-6	8/14/2003	NA	--	40	NA
IW-7	8/14/2003	NA	--	80	NA
MW-21	8/14/2003	1254	31.09	--	6.4
MW-16	8/14/2003	1302	25.10	--	6.9
MW-11	8/14/2003	1243	24.42	--	6.3

**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-1	10/7/2003	1509	--	120	NA
IW-2	10/7/2003	1616	--	150	NA
IW-3A	10/7/2003	1636	--	120	NA
IW-4	10/7/2003	1644	--	120	NA
IW-5	10/7/2003	NA	--	--	NA
IW-6	10/7/2003	NA	--	--	NA
IW-7	10/7/2003	NA	--	--	NA
MW-21	10/7/2003	1355	31.77	--	6.3
MW-16	10/7/2003	1254	27.23	--	6.9
MW-11	10/7/2003	1245	25.11	--	6.5
IW-1	10/8/2003	NA	--	--	NA
IW-2	10/8/2003	1418	--	160	NA
IW-3	10/8/2003	1412	--	10	NA
IW-3A	10/8/2003	1102	--	120	NA
IW-4	10/8/2003	NA	--	--	NA
IW-5	10/8/2003	953	--	120	NA
IW-6	10/8/2003	1000	--	35	NA
IW-7	10/8/2003	1005	--	60	NA
MW-8	10/8/2003	1530	25.82	--	6.9
MW-21	10/8/2003	1533	24.96	--	6.7
MW-16	10/8/2003	1540	25.12	--	6.7
MW-11	10/8/2003	1550	31.95	--	6.7
IW-1	11/4/2003	1630	26.61	30	6.6
IW-2	11/4/2003	1355	26.51	30	6.7
IW-3A	11/4/2003	1710	26.41	30	6.8
IW-4	11/4/2003	1630	26.21	120	5.4
IW-5	11/4/2003	1540	26.24	120	6.5
IW-6	11/4/2003	1635	26.17	60	6.9
IW-7	11/4/2003	1445	25.43	120	7.4
IW-1	11/5/2003	900	26.99	90	NA
IW-2	11/5/2003	1000	26.89	120	NA
IW-3A	11/5/2003	930	--	180	NA
IW-4	11/5/2003	--	26.3	--	NA
IW-5	11/5/2003	--	26.26	--	NA
IW-6	11/5/2003	900	--	41	NA
IW-7	11/5/2003	--	25.54	--	NA
IW-1	11/24/2003	1534	26.70	60	6.4
IW-2	11/24/2003	1509	26.57	90	6.8
IW-3A	11/24/2003	1501	26.48	90	7.0
IW-4	11/24/2003	1452	26.25	60	6.6
IW-5	11/24/2003	1419	26.24	60	6.5
IW-6	11/24/2003	1450	25.95	60	4.1
IW-7	11/24/2003	1407	25.48	60	5.7
IW-1	11/25/2003	920	NA	120	NA
IW-2	11/25/2003	908	NA	190	NA
IW-3A	11/25/2003	903	NA	190	NA
IW-4	11/25/2003	1008	NA	120	NA
IW-5	11/25/2003	1054	NA	120	NA
IW-6	11/25/2003	930	NA	105	NA
IW-7	11/25/2003	1142	NA	120	NA

**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-1	1/7/2004	1536	NA	60	NA
IW-2	1/7/2004	1722	25.04	105	7.0
IW-3A	1/7/2004	1730	NA	105	NA
IW-4	1/7/2004	1612	24.07	60	6.9
IW-5	1/7/2004	1651	NA	60	NA
IW-6	1/7/2004	1700	NA	50	NA
IW-7	1/7/2004	1638	NA	60	NA
IW-1	1/8/2004	1120	NA	60	NA
IW-2	1/8/2004	1400	NA	106	NA
IW-3A	1/8/2004	1410	NA	106	NA
IW-4	1/8/2004	1159	NA	60	NA
IW-5	1/8/2004	1230	NA	60	NA
IW-6	1/8/2004	1400	NA	40	NA
IW-7	1/8/2004	NA	NA	60	NA
IW-1	1/20/2004	1446	NA	60	NA
IW-2	1/20/2004	1728	25.11	97	6.8
IW-3A	1/20/2004	1722	NA	98	NA
IW-4	1/20/2004	1510	24.78	60	7.0
IW-5	1/20/2004	1547	NA	60	NA
IW-6	1/20/2004	1715	NA	45	NA
IW-7	1/20/2004	1630	NA	60	NA
IW-1	1/21/2004	1225	NA	60	NA
IW-2	1/21/2004	1350	NA	99	NA
IW-3A	1/21/2004	1342	NA	99	NA
IW-4	1/21/2004	1110	NA	60	NA
IW-5	1/21/2004	1158	NA	60	NA
IW-6	1/21/2004	1330	NA	42	NA
IW-7	1/21/2004	1326	NA	60	NA
IW-1	2/11/2004	1330	NA	60	NA
IW-2	2/11/2004	1526	NA	100	NA
IW-3A	2/11/2004	1515	NA	100	NA
IW-4	2/11/2004	1450	NA	60	NA
IW-5	2/11/2004	1409	NA	60	NA
IW-6	2/11/2004	1510	NA	50	NA
IW-7	2/11/2004	1441	NA	60	NA
IW-1	2/12/2004	1156	NA	60	NA
IW-2	2/12/2004	1445	NA	102	NA
IW-3A	2/12/2004	1440	NA	102	NA
IW-4	2/12/2004	1310	NA	60	NA
IW-5	2/12/2004	1306	NA	60	NA
IW-6	2/12/2004	1429	NA	26	NA
IW-7	2/12/2004	1453	NA	60	NA
IW-1	3/9/2004	1750	NA	60	NA
IW-2	3/9/2004	1605	23.88	120	6.8
IW-3A	3/9/2004	1500	NA	115	NA
IW-4	3/9/2004	1735	23.52	60	6.7
IW-5	3/9/2004	1700	NA	60	NA
IW-6	3/9/2004	1638	23.17	30	3.9
IW-7	3/9/2004	1625	NA	60	NA
IW-1	3/10/2004	1211	NA	60	NA
IW-2	3/10/2004	1056	NA	146	NA
IW-3A	3/10/2004	1251	NA	125	NA

**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-4	3/10/2004	1141	NA	40	NA
IW-5	3/10/2004	1221	NA	60	NA
IW-6	3/10/2004	1235	NA	35	NA
IW-7	3/10/2004	0955	NA	60	NA
IW-1	4/12/2003	1710	NA	60	NA
IW-2	4/12/2003	1625	24.41	120	6.8
IW-3A	4/12/2003	1650	NA	120	NA
IW-4	4/12/2003	1718	24.07	60	6.7
IW-5	4/12/2003	1738	NA	60	NA
IW-6	4/12/2003	1552	NA	20	NA
IW-7	4/12/2003	1545	NA	60	NA
IW-1	4/13/2004	0937	NA	60	NA
IW-2	4/13/2004	0842	NA	120	NA
IW-3A	4/13/2004	0842	NA	120	NA
IW-4	4/13/2004	0945	NA	60	NA
IW-5	4/13/2004	0809	NA	60	NA
IW-6	4/13/2004	0955	NA	30	NA
IW-7	4/13/2004	1002	NA	50	NA
IW-1	5/25/2004	1744	NA	60	NA
IW-2	5/25/2004	1827	24.99	60	6.8
IW-3A	5/25/2004	1906	NA	120	NA
IW-4	5/25/2004	1936	24.63	60	6.8
IW-5	5/25/2004	1945	NA	60	NA
IW-6	5/25/2004	NA	NA	0	NA
IW-7	5/25/2004	NA	NA	0	NA
IW-1	5/26/2004	NA	NA	0	NA
IW-2	5/26/2004	1646	NA	120	NA
IW-3A	5/26/2004	1655	NA	120	NA
IW-4	5/26/2004	1419	NA	60	NA
IW-5	5/26/2004	1426	NA	60	NA
IW-6	5/26/2004	1656	NA	55	NA
IW-7	5/26/2004	1702	NA	65	NA
IW-1	6/21/2004	1243	25.48	120	NA
IW-2	6/21/2004	1335	NA	120	NA
IW-3A	6/21/2004	1442	25.3	70	NA
IW-4	6/21/2004	1528	NA	120	NA
IW-5	6/21/2004	1545	NA	50	NA
IW-6	6/21/2004	NA	NA	0	NA
IW-7	6/21/2004	NA	NA	0	NA
IW-1	6/22/2004	NA	NA	0	NA
IW-2	6/22/2004	1646	NA	140	NA
IW-3A	6/22/2004	1655	NA	150	NA
IW-4	6/22/2004	NA	NA	0	NA
IW-5	6/22/2004	915	NA	50	NA
IW-6	6/22/2004	953	NA	20	NA
IW-7	6/22/2004	1038	NA	120	NA
IW-1	7/29/2004	1143	25.97	120	7
IW-2	7/29/2004	1215	NA	120	NA
IW-3A	7/29/2004	1342	25.77	80	7.2
IW-4	7/29/2004	1351	NA	90	NA
IW-5	7/29/2004	1254	NA	60	NA
IW-6	7/29/2004	NA	NA	0	NA

**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-7	7/29/2004	NA	NA	0	NA
IW-1	7/30/2004	NA	NA	0	NA
IW-2	7/30/2004	1220	NA	115	NA
IW-3A	7/30/2004	1147	NA	160	NA
IW-4	7/30/2004	1032	NA	30	NA
IW-5	7/30/2004	1134	NA	60	NA
IW-6	7/30/2004	1139	NA	20	NA
IW-7	7/30/2004	1106	NA	120	NA
IW-1	9/16/2004	1517	26.61	60	7
IW-2	9/16/2004	1554	NA	120	NA
IW-3A	9/16/2004	1623	26.41	120	7.1
IW-4	9/16/2004	1526	NA	60	NA
IW-5	9/16/2004	1635	NA	40	NA
IW-6	9/16/2004	1454	NA	40	NA
IW-7	9/16/2004	1449	NA	70	NA
IW-1	9/17/2004	1238	NA	60	NA
IW-2	9/17/2004	1155	NA	120	NA
IW-3A	9/17/2004	1124	NA	120	NA
IW-4	9/17/2004	1246	NA	60	NA
IW-5	9/17/2004	1256	NA	65	NA
IW-6	9/17/2004	1043	NA	20	NA
IW-7	9/17/2004	1051	NA	60	NA
IW-1	10/4/2004	1754	26.82	60	6.7
IW-2	10/4/2004	1802	NA	60	NA
IW-3A	10/4/2004	1833	26.62	60	6.9
IW-4	10/4/2004	1840	NA	60	NA
IW-5	10/4/2004	1914	NA	60	NA
IW-6	10/4/2004	2010	NA	55	NA
IW-7	10/4/2004	1922	NA	60	NA
IW-1	10/5/2004	838	NA	60	NA
IW-2	10/5/2004	1050	NA	180	NA
IW-3A	10/5/2004	1235	NA	180	NA
IW-4	10/5/2004	1047	NA	60	NA
IW-5	10/5/2004	1157	NA	60	NA
IW-6	10/5/2004	1254	NA	20	NA
IW-7	10/5/2004	1302	NA	60	NA
IW-1	10/19/2004	1329	26.95	60	6.3
IW-2	10/19/2004	1408	NA	120	NA
IW-3A	10/19/2004	1505	26.77	120	6.8
IW-4	10/19/2004	1335	NA	60	NA
IW-5	10/19/2004	1551	NA	60	NA
IW-6	10/19/2004	1627	NA	35	NA
IW-7	10/19/2004	1538	NA	60	NA
IW-1	10/20/2004	907	NA	60	NA
IW-2	10/20/2004	955	NA	120	NA
IW-3A	10/20/2004	928	NA	120	NA
IW-4	10/20/2004	918	NA	60	NA
IW-5	10/20/2004	1108	NA	60	NA
IW-6	10/20/2004	1121	NA	20	NA
IW-7	10/20/2004	1101	NA	60	NA
IW-1	11/9/2004	1234	NA	60	NA
IW-2	11/9/2004	1306	NA	120	NA

**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-3A	11/9/2004	1335	NA	120	NA
IW-4	11/9/2004	1241	NA	60	NA
IW-5	11/9/2004	1600	NA	60	NA
IW-6	11/9/2004	1437	NA	30	NA
IW-7	11/9/2004	1406	NA	60	NA
IW-1	11/10/2004	937	NA	60	NA
IW-2	11/10/2004	1029	NA	120	NA
IW-3A	11/10/2004	1102	NA	120	NA
IW-4	11/10/2004	944	NA	60	NA
IW-5	11/10/2004	1133	NA	60	NA
IW-6	11/10/2004	1143	NA	20	NA
IW-7	11/10/2004	1126	NA	60	NA
IW-1	11/29/2004	1244	27.02	60	6.5
IW-2	11/29/2004	1506	NA	90	NA
IW-3A	11/29/2004	1433	26.88	90	7.0
IW-4	11/29/2004	1315	NA	60	NA
IW-5	11/29/2004	1321	NA	60	NA
IW-6	11/29/2004	1454	NA	60	NA
IW-7	11/29/2004	1359	NA	60	NA
IW-1	11/30/2004	1257	NA	60	NA
IW-2	11/30/2004	1339	NA	120	NA
IW-3A	11/30/2004	1353	NA	150	NA
IW-4	11/30/2004	1226	NA	60	NA
IW-5	11/30/2004	1306	NA	60	NA
IW-6	11/30/2004	1137	NA	25	NA
IW-7	11/30/2004	1146	NA	60	NA
IW-1	1/19/2005	1238	24.45	60	7.0
IW-2	1/19/2005	1454	NA	120	NA
IW-3A	1/19/2005	1459	24.26	120	6.8
IW-4	1/19/2005	1309	NA	60	NA
IW-5	1/19/2005	1317	NA	60	NA
IW-6	1/19/2005	1400	NA	30	NA
IW-7	1/19/2005	1439	NA	60	NA
IW-1	1/20/2005	1159	NA	60	NA
IW-2	1/20/2005	1425	NA	120	NA
IW-3A	1/20/2005	1430	NA	120	NA
IW-4	1/20/2005	1237	NA	60	NA
IW-5	1/20/2005	1246	NA	60	NA
IW-6	1/20/2005	1332	NA	30	NA
IW-7	1/20/2005	1413	NA	60	NA
IW-1	3/22/2005	1021	NA	120	NA
IW-2	3/22/2005	1055	NA	120	NA
IW-3A	3/22/2005	1200	NA	120	NA
IW-4	3/22/2005	1206	NA	120	NA
IW-5	3/22/2005	NA	NA	0	NA
IW-6	3/22/2005	NA	NA	0	NA
IW-7	3/22/2005	NA	NA	0	NA
IW-1	3/23/2005	NA	NA	0	NA
IW-2	3/23/2005	1030	NA	120	NA
IW-3A	3/23/2005	1034	NA	90	NA
IW-4	3/23/2005	1104	NA	50	NA
IW-5	3/23/2005	843	NA	120	NA

**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-6	3/23/2005	NA	NA	0	NA
IW-7	3/23/2005	956	NA	120	NA
IW-1	4/7/2005	1730	NA	60	6.8
IW-2	4/7/2005	1704	NA	120	6.4
IW-3A	4/7/2005	1630	NA	120	6.4
IW-4	4/7/2005	1735	NA	60	6.2
IW-5	4/7/2005	1755	NA	60	6.2
IW-6	4/7/2005	1430	NA	30	4.1
IW-7	4/7/2005	1438	NA	60	5.6
IW-1	4/8/2005	824	NA	60	5.4
IW-2	4/8/2005	1020	NA	110	5.2
IW-3A	4/8/2005	948	NA	120	5.0
IW-4	4/8/2005	908	NA	60	5.2
IW-5	4/8/2005	830	NA	60	5.3
IW-6	4/8/2005	NA	NA	0	3.2
IW-7	4/8/2005	916	NA	60	5.0
IW-1	5/5/2005	1753	NA	60	NA
IW-2	5/5/2005	1830	22.11	120	6.7
IW-3A	5/5/2005	1821	NA	120	NA
IW-4	5/5/2005	1706	21.82	60	6.7
IW-5	5/5/2005	1638	NA	60	NA
IW-6	5/5/2005	NA	NA	0	NA
IW-7	5/5/2005	1630	NA	60	NA
IW-1	5/6/2005	929	NA	60	NA
IW-2	5/6/2005	1020	NA	120	5.5
IW-3A	5/6/2005	1012	NA	120	NA
IW-4	5/6/2005	834	NA	60	NA
IW-5	5/6/2005	805	NA	60	NA
IW-6	5/6/2005	NA	NA	0	NA
IW-7	5/6/2005	754	NA	60	NA
IW-1	6/9/2005	1715	NA	60	NA
IW-2	6/9/2005	1705	22.54	120	6.9
IW-3A	6/9/2005	1638	NA	120	NA
IW-4	6/9/2005	1631	22.23	60	7.1
IW-5	6/9/2005	1603	NA	60	NA
IW-7	6/9/2005	1554	NA	60	NA
IW-1	6/10/2005	1026	NA	60	6.4
IW-2	6/10/2005	1032	NA	90	5.5
IW-3A	6/10/2005	1106	NA	90	6.5
IW-4	6/10/2005	1113	NA	60	6.6
IW-5	6/10/2005	1139	NA	60	NA
IW-7	6/10/2005	1148	NA	60	NA
IW-1	7/12/2005	1306	NA	60	NA
IW-2	7/12/2005	1339	23.08	120	6.6
IW-3A	7/12/2005	1405	NA	120	NA
IW-4	7/12/2005	1312	22.77	60	6.7
IW-5	7/12/2005	1442	NA	45	NA
IW-6	7/12/2005	1428	NA	15	NA
IW-7	7/12/2005	1436	NA	60	NA
IW-1	7/13/2005	756	NA	60	5.5
IW-2	7/13/2005	829	NA	120	5.1
IW-3A	7/13/2005	855	NA	120	6.5



**Appendix E**  
**Summary of Groundwater Zone Injections**  
**Sears Auto Center #1248**  
**Hayward, California**

Injection Well	Date	Time Solution Added	Initial DTW (ft. btoc)	Volume of H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O Solution Added (gallons)	pH
IW-4	7/13/2005	805	NA	60	NA
IW-5	7/13/2005	949	NA	110	NA
IW-6	7/13/2005	917	NA	20	NA
IW-7	7/13/2005	923	NA	60	NA
IW-1	8/9/2005	1537	23.68	90	7.0
IW-2	8/9/2005	1509	NA	120	NA
IW-3A	8/9/2005	1443	NA	120	NA
IW-4	8/9/2005	1420	23.21	60	7.0
IW-5	8/9/2005	1413	NA	60	NA
IW-6	8/9/2005	1344	NA	20	NA
IW-7	8/9/2005	1356	NA	100	NA
IW-1	8/10/2005	940	NA	50	5.5
IW-2	8/10/2005	915	NA	120	5.3
IW-3A	8/10/2005	946	NA	120	NA
IW-4	8/10/2005	824	NA	60	NA
IW-5	8/10/2005	818	NA	60	NA
IW-6	8/10/2005	1004	NA	20	NA
IW-7	8/10/2005	1010	NA	20	NA
<b>Total Volume Injected</b>				<b>29017</b>	
Explanations: ft. btoc - feet below top of casing NA - not analyzed/ not measured H <sub>2</sub> O <sub>2</sub> /H <sub>2</sub> O - hydrogen peroxide/water solution					

**APPENDIX F**

**LABORATORY ANALYTICAL REPORT AND CHAIN OF CUSTODY  
DOCUMENTS FOR INJECTION CONTROLS**



LABORATORY REPORT

Prepared For: URS Santa Ana  
2020 East First Street Suite 400  
Santa Ana, CA 92705  
Attention: Scott Rowlands

Project: Sears, Hayward  
25363714-05034

Sampled: 11/09/05  
Received: 11/10/05  
Issued: 11/23/05 15:33

NELAP #01108CA California ELAP#1197 CSDLAC #10117

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.  
This entire report was reviewed and approved for release.*

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IOK0938-01	MW-20	Water
IOK0938-02	MW-11	Water
IOK0938-03	MW-3	Water

Reviewed By:

Del Mar Analytical, Irvine  
Sushmitha Reddy  
Project Manager



URS Santa Ana 2020 East First Street Suite 400 Santa Ana, CA 92705 Attention: Scott Rowlands	Project ID: Sears, Hayward 25363714-05034 Report Number: IOK0938	Sampled: 11/09/05 Received: 11/10/05
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**DISSOLVED GASES BY HEADSPACE EQUILIBRIUM (RSK-175 MOD.)**

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IOK0938-01 (MW-20 - Water)</b>								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5K17059	0.050	ND	1	11/17/2005	11/17/2005	
<b>Sample ID: IOK0938-02 (MW-11 - Water)</b>								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5K17059	0.050	0.33	1	11/17/2005	11/17/2005	
<b>Sample ID: IOK0938-03 (MW-3 - Water)</b>								
Reporting Units: mg/l								
Methane	RSK-175 MOD.	5K17059	0.050	2.9	1	11/17/2005	11/17/2005	

Del Mar Analytical, Irvine  
Sushmitha Reddy  
Project Manager



# Del Mar Analytical

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URS Santa Ana  
 2020 East First Street Suite 400  
 Santa Ana, CA 92705  
 Attention: Scott Rowlands

Project ID: Sears, Hayward  
 25363714-05034  
 Report Number: IOK0938

Sampled: 11/09/05  
 Received: 11/10/05

## INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IOK0938-01 (MW-20 - Water)</b>								
Reporting Units: mg/l								
Ammonia-N	SM4500-NH3,F	5K22133	0.50	ND	1	11/22/2005	11/22/2005	
Biochemical Oxygen Demand	EPA 405.1	5K10105	2.0	ND	1	11/10/2005	11/15/2005	
Carbon Dioxide, Dissolved	SM4500-CO2-C	5K10083	1.0	120	1	11/10/2005	11/10/2005	
Chemical Oxygen Demand	EPA 410.4	5K15092	20	ND	1	11/15/2005	11/15/2005	
Chloride	EPA 300.0	5K10057	2.5	45	5	11/10/2005	11/10/2005	
Inorganic Nitrogen - N	Calculation	5K23084	0.11	16	1	11/23/2005	11/23/2005	
Nitrate-N	EPA 300.0	5K10057	0.75	16	5	11/10/2005	11/10/2005	
Nitrite-N	EPA 300.0	5K10057	0.15	ND	1	11/10/2005	11/10/2005	
Sulfate	EPA 300.0	5K10057	2.5	86	5	11/10/2005	11/10/2005	
<b>Sample ID: IOK0938-02 (MW-11 - Water)</b>								
Reporting Units: mg/l								
Ammonia-N	SM4500-NH3,F	5K22133	0.50	ND	1	11/22/2005	11/22/2005	
Biochemical Oxygen Demand	EPA 405.1	5K10105	2.0	18	1	11/10/2005	11/15/2005	
Carbon Dioxide, Dissolved	SM4500-CO2-C	5K10083	1.0	210	1	11/10/2005	11/10/2005	
Chemical Oxygen Demand	EPA 410.4	5K15092	20	180	1	11/15/2005	11/15/2005	
Chloride	EPA 300.0	5K10057	2.5	48	5	11/10/2005	11/10/2005	
Inorganic Nitrogen - N	Calculation	5K23084	0.11	0.15	1	11/23/2005	11/23/2005	
Nitrate-N	EPA 300.0	5K10057	0.15	0.15	1	11/10/2005	11/10/2005	
Nitrite-N	EPA 300.0	5K10057	0.15	ND	1	11/10/2005	11/10/2005	
Sulfate	EPA 300.0	5K10057	0.50	1.8	1	11/10/2005	11/10/2005	
<b>Sample ID: IOK0938-03 (MW-3 - Water)</b>								
Reporting Units: mg/l								
Ammonia-N	SM4500-NH3,F	5K22133	0.50	ND	1	11/22/2005	11/22/2005	
Biochemical Oxygen Demand	EPA 405.1	5K10105	2.0	19	1	11/10/2005	11/15/2005	K-1
Carbon Dioxide, Dissolved	SM4500-CO2-C	5K10083	1.0	220	1	11/10/2005	11/10/2005	
Chemical Oxygen Demand	EPA 410.4	5K15092	20	180	1	11/15/2005	11/15/2005	
Chloride	EPA 300.0	5K10057	5.0	95	10	11/10/2005	11/10/2005	
Inorganic Nitrogen - N	Calculation	5K23084	0.11	ND	1	11/23/2005	11/23/2005	
Nitrate-N	EPA 300.0	5K10057	0.15	ND	1	11/10/2005	11/10/2005	
Nitrite-N	EPA 300.0	5K10057	1.5	ND	10	11/10/2005	11/10/2005	RL-1
Sulfate	EPA 300.0	5K10057	0.50	0.87	1	11/10/2005	11/10/2005	

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 Sushmitha Reddy  
 Project Manager

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URS Santa Ana  
2020 East First Street Suite 400  
Santa Ana, CA 92705  
Attention: Scott Rowlands

Project ID: Sears, Hayward  
25363714-05034  
Report Number: IOK0938

Sampled: 11/09/05  
Received: 11/10/05

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: MW-20 (IOK0938-01) - Water</b>					
EPA 300.0	2	11/09/2005 08:56	11/10/2005 08:30	11/10/2005 15:00	11/10/2005 16:18
<i>Nitrite-N</i>				11/10/2005 15:00	11/10/2005 15:08
EPA 405.1	2	11/09/2005 08:56	11/10/2005 08:30	11/10/2005 16:30	11/15/2005 12:00
SM4500-CO2-C	1	11/09/2005 08:56	11/10/2005 08:30	11/10/2005 09:00	11/10/2005 10:00
<b>Sample ID: MW-11 (IOK0938-02) - Water</b>					
EPA 300.0	2	11/09/2005 10:19	11/10/2005 08:30	11/10/2005 15:00	11/10/2005 15:22
EPA 405.1	2	11/09/2005 10:19	11/10/2005 08:30	11/10/2005 16:30	11/15/2005 12:00
SM4500-CO2-C	1	11/09/2005 10:19	11/10/2005 08:30	11/10/2005 09:00	11/10/2005 10:00
<b>Sample ID: MW-3 (IOK0938-03) - Water</b>					
EPA 300.0	2	11/09/2005 11:34	11/10/2005 08:30	11/10/2005 15:00	11/10/2005 15:36
<i>Nitrite-N</i>				11/10/2005 15:00	11/10/2005 17:32
EPA 405.1	2	11/09/2005 11:34	11/10/2005 08:30	11/10/2005 16:30	11/15/2005 12:00
SM4500-CO2-C	1	11/09/2005 11:34	11/10/2005 08:30	11/10/2005 09:00	11/10/2005 10:00

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Sushmitha Reddy  
Project Manager



URS Santa Ana 2020 East First Street Suite 400 Santa Ana, CA 92705 Attention: Scott Rowlands	Project ID: Sears, Hayward 25363714-05034 Report Number: IOK0938	Sampled: 11/09/05 Received: 11/10/05
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**METHOD BLANK/QC DATA**

**DISSOLVED GASES BY HEADSPACE EQUILIBRIUM (RSK-175 MOD.)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits RPD	RPD Limit	Data Qualifiers
<b>Batch: SK17059 Extracted: 11/17/05</b>									
<b>Blank Analyzed: 11/17/2005 (SK17059-BLK1)</b>									
Methane	ND	0.050	mg/l						
<b>LCS Analyzed: 11/17/2005 (SK17059-BS1)</b>									
Methane	1.32	0.050	mg/l	1.36		97	80-120		
<b>Matrix Spike Analyzed: 11/17/2005 (SK17059-MS1)</b>									
Methane	1.61	0.050	mg/l	1.36	0.025	117	80-120		
<b>Matrix Spike Dup Analyzed: 11/17/2005 (SK17059-MSD1)</b>									
Methane	1.74	0.050	mg/l	1.36	0.025	126	80-120	8	25 R-3

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URS Santa Ana 2020 East First Street Suite 400 Santa Ana, CA 92705 Attention: Scott Rowlands	Project ID: Sears, Hayward 25363714-05034 Report Number: IOK0938	Sampled: 11/09/05 Received: 11/10/05
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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 5K10057 Extracted: 11/10/05</b>									
<b>Blank Analyzed: 11/10/2005 (5K10057-BLK1)</b>									
Chloride	ND	0.50	mg/l						
Nitrate-N	ND	0.15	mg/l						
Nitrite-N	ND	0.15	mg/l						
Sulfate	ND	0.50	mg/l						
<b>LCS Analyzed: 11/10/2005 (5K10057-BS1)</b>									
Chloride	4.73	0.50	mg/l	5.00		95 90-110			M-3
Nitrate-N	1.14	0.15	mg/l	1.13		101 90-110			
Nitrite-N	1.51	0.15	mg/l	1.52		99 90-110			
Sulfate	9.42	0.50	mg/l	10.0		94 90-110			M-3
<b>Matrix Spike Analyzed: 11/10/2005 (5K10057-MS1)</b>					<b>Source: IOK1020-01</b>				
Nitrate-N	1.19	0.15	mg/l	1.13	ND	105 80-120			
Nitrite-N	2.42	0.15	mg/l	1.52	ND	159 80-120			MI
<b>Matrix Spike Dup Analyzed: 11/10/2005 (5K10057-MSD1)</b>					<b>Source: IOK1020-01</b>				
Nitrate-N	1.21	0.15	mg/l	1.13	ND	107 80-120	2	20	
Nitrite-N	2.43	0.15	mg/l	1.52	ND	160 80-120	0	20	MI
<b>Batch: 5K10083 Extracted: 11/10/05</b>									
<b>Duplicate Analyzed: 11/10/2005 (5K10083-DUP1)</b>					<b>Source: IOK0938-01</b>				
Carbon Dioxide, Dissolved	106	1.0	mg/l		120		12	20	
<b>Batch: 5K10105 Extracted: 11/10/05</b>									
<b>Blank Analyzed: 11/15/2005 (5K10105-BLK1)</b>									
Biochemical Oxygen Demand	ND	2.0	mg/l						

Del Mar Analytical, Irvine  
 Sushmitha Reddy  
 Project Manager

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URS Santa Ana 2020 East First Street Suite 400 Santa Ana, CA 92705 Attention: Scott Rowlands	Project ID: Sears, Hayward 25363714-05034 Report Number: IOK0938	Sampled: 11/09/05 Received: 11/10/05
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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 5K10105 Extracted: 11/10/05</b>										
<b>LCS Analyzed: 11/15/2005 (5K10105-BS1)</b>										
Biochemical Oxygen Demand	199	100	mg/l	198		101	85-115			
<b>LCS Dup Analyzed: 11/15/2005 (5K10105-BSD1)</b>										
Biochemical Oxygen Demand	198	100	mg/l	198		100	85-115	1	20	
<b>Batch: 5K15092 Extracted: 11/15/05</b>										
<b>Blank Analyzed: 11/15/2005 (5K15092-BLK1)</b>										
Chemical Oxygen Demand	ND	20	mg/l							
<b>LCS Analyzed: 11/15/2005 (5K15092-BS1)</b>										
Chemical Oxygen Demand	502	20	mg/l	500		100	90-110			
<b>Matrix Spike Analyzed: 11/15/2005 (5K15092-MS1)</b>										
Chemical Oxygen Demand	660	20	mg/l	500	Source: IOK0896-03 350	62	70-120			M2
<b>Matrix Spike Dup Analyzed: 11/15/2005 (5K15092-MSD1)</b>										
Chemical Oxygen Demand	667	20	mg/l	500	Source: IOK0896-03 350	63	70-120	1	15	M2
<b>Batch: 5K22133 Extracted: 11/22/05</b>										
<b>Blank Analyzed: 11/22/2005 (5K22133-BLK1)</b>										
Ammonia-N	ND	0.50	mg/l							
<b>LCS Analyzed: 11/22/2005 (5K22133-BS1)</b>										
Ammonia-N	1.08	0.50	mg/l	1.00		108	85-115			

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 5K22133 Extracted: 11/22/05</b>										
<b>Matrix Spike Analyzed: 11/22/2005 (SK22133-MS1)</b>					<b>Source: IOK1023-04</b>					
Ammonia-N	2.05	0.50	mg/l	2.00	0.26	90	75-125			
<b>Matrix Spike Dup Analyzed: 11/22/2005 (SK22133-MSD1)</b>					<b>Source: IOK1023-04</b>					
Ammonia-N	1.99	0.50	mg/l	2.00	0.26	86	75-125	3	15	

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URS Santa Ana  
2020 East First Street Suite 400  
Santa Ana, CA 92705  
Attention: Scott Rowlands

Project ID: Sears, Hayward  
25363714-05034  
Report Number: IOK0938

Sampled: 11/09/05  
Received: 11/10/05

### DATA QUALIFIERS AND DEFINITIONS

- K-1 The sample dilutions set up for the BOD analysis failed to meet the criteria of a residual dissolved oxygen of at least 1 mg/l. Therefore the reported result is an estimated value only.
- M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-3 Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- R-3 The RPD exceeded the method control limit due to sample matrix effects.
- RL-1 Reporting limit raised due to sample matrix effects.
- ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD Relative Percent Difference

Del Mar Analytical, Irvine  
Sushmitha Reddy  
Project Manager



URS Santa Ana 2020 East First Street Suite 400 Santa Ana, CA 92705 Attention: Scott Rowlands	Project ID: Sears, Hayward 25363714-05034 Report Number: IOK0938	Sampled: 11/09/05 Received: 11/10/05
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**Certification Summary**

**Del Mar Analytical, Irvine**

Method	Matrix	Nelac	California
Calculation	Water	X	X
EPA 300.0	Water	X	X
EPA 405.1	Water	X	X
EPA 410.4	Water	X	X
RSK-175 MOD.	Water	N/A	N/A
SM4500-CO2-C	Water	N/A	N/A
SM4500-NH3,F	Water	X	X

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at [www.dmalabs.com](http://www.dmalabs.com).*

**Del Mar Analytical, Irvine**  
Sushmitha Reddy  
Project Manager

# URS CORPORATION

2020 East First Street, Suite 400  
 Santa Ana, CA 92705  
 (714) 835-6886  
 FAX (714) 667-7147

## CHAIN OF CUSTODY RECORD

Date: 11/9/05

Page 1 of 1

**I0K0938**

Data Requested in GISKey Format

Lab Name		URS Project/PO Number		Requested Analyses:										Special Instructions:													
DEL MAN		25363714. 05034		BOD DISSOLVED CO <sub>2</sub> CHLORIDE (300.0) AMMONIA-N (300.0) AMMONIA-N (30.0) AMMONIA-N (30.0) SULFATE (500.0) AMMONIA-N (500.0) COD CHL (RSK-175)										NOTE SHORT HOLD ON CO <sub>2</sub>													
Client Name/Project Name/Location		GeoTracker Information		EDF Reporting		COELT Log Number																					
SEARS, HAYWARD				Y N Global ID																							
URS Project Manager		Sampler Name and Signature		Sample Name		Sample Date		Sample Time		Preserved		Matrix:		Container Type:		# of Cont:											
JOE LILES		S. TURNER		MW-20		11/9/05		0956		Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		7											
				MW-11		..		1017		Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		7											
				MW-3		..		1134		Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		7											
				TO-4		..		-		Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA		3		X									
										Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA													
										Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA													
										Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA													
										Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA													
										Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA													
										Y N		S L G		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA													

RECEIVED

Relinquished by: <i>[Signature]</i>	Date: 11/10/05 0830	Received By: <i>[Signature]</i>	Date/Time: 11/10/05 0830	Turnaround Time: (Check)		Lab Use Only	
Relinquished by:	Date:	Received By:	Date/Time:	Same Day: _____	72 Hour: _____	Cooler Temperature: 6°C	
Relinquished by:	Date:	Received By:	Date/Time:	24 Hour: _____	5 Day: _____	*Record upon arrival	
Relinquished by:	Date:	Received By:	Date/Time:	48 Hour: _____	Standard: X	<b>URS</b>	

S=Solid L=Liquid G=Gas

White Copy in Final Report, Yellow to File, Pink to URS at Dropoff

**APPENDIX G**

**QUARTERLY GROUDWATER SAMPLING SCHEDULE**

Appendix G  
Quarterly Groundwater Sampling Schedule  
Sears Auto Center #1248  
Hayward, California  
1 of 2

Well No.	Notes	Annual Quarter	Sample Collection (Y/N)	Field Parameters (Y/N)							Laboratory Analyses (Y/N)								
				Temp	pH	Cond	D.O.	Fe <sup>++</sup>	ORP	TPHg	BTEX	MTBE	ETBE	DIPE	TAME	TBA	Nitrate	Sulfate	Methane
MW-1	--	4	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-2		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-2		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-2		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-3		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-3		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-3		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-3		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-4		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-4		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-4		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-4		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-5		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-5		2	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5		3	Y	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-5		4	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N
MW-6		2	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6		3	Y	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N
MW-6		4	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N
MW-7		2	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7		3	Y	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N
MW-7		4	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-8		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-8		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-8		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-9		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-9		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-9		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-9		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-10		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-10		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-10		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-10		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-11		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-11		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-11		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-11		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-12		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-12		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-12		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-12		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-13		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-13		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-13		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-13		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-14		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-14		2	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-14		3	Y	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-14		4	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-15		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-15		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix G  
 Quarterly Groundwater Sampling Schedule  
 Sears Auto Center #1248  
 Hayward, California  
 2 of 2

Well No.	Notes	Annual Quarter	Sample Collection (Y/N)	Field Parameters (Y/N)						Laboratory Analyses (Y/N)									
				Temp	pH	Cond	D.O.	Fe <sup>2+</sup>	ORP	TPHg	BTEX	MTBE	ETBE	DIPE	TAME	TBA	Nitrate	Sulfate	Methane
MW-15		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-15		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-16		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-16		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-16		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-16		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-17		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N
MW-17		2	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-17		3	Y	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N
MW-17		4	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-18		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-18		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-18		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-18		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-19		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-19		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-19		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-19		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-20	2	1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-20	2	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-20	2	3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-20	2	4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-21		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-21		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-21		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-21		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-22		1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-22		2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-22		3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-22		4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-23	3	1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-23	3	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-23	3	3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-23	3	4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-24	3	1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-24	3	2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-24	3	3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MW-24	3	4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

**Notes:**

- 1 = Perform testing only if free-phase product is absent.
- 2 = Well installed during 2002 fourth quarter.
- 3 = Well installed during 2005 fourth quarter.

**Explanation:**

- Y = Yes (action performed for period noted)
- N = No (action not performed for period noted)
- P = Purge well prior to sampling
- NP = "Non Purge" sample collection
- D.O. = Dissolved Oxygen field testing
- Fe<sup>2+</sup> = Ferrous iron field testing
- ORP = Oxygen/Reduction potential field testing

**Laboratory Analyses:**

- TPHg = Total Petroleum Hydrocarbons as gasoline-range organics by EPA 8015-modified
- BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes by EPA 8020
- MTBE = Methyl Tertiary Butyl Ether by EPA 8260B
- ETBE = Ethyl Tertiary Butyl Ether by 8260B
- DIPE = DI-isopropyl Ether by 8260B
- TAME = Tertiary Amyl Methyl Ether by 8260B
- TBA = Tertiary Butyl Alcohol by 8260B
- Nitrate = Nitrate by EPA 300.0
- Sulfate = Sulfate by EPA 300.0
- Methane = Methane by headspace



**APPENDIX H**  
**GROUNDWATER PURGE LOGS**



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-1	Date: 11- 7-05	Project: Sears Hayward Auto Center	Project No. : 25363714
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### -Gauging Data from Top of Casing (Reference Point)

Depth to Water: 24.42	Total Well Depth:	Water Column Height (H):	Top of Casing Elevation: 18.30
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Gauging Time: 0921	Casing diameter (D)= 3 in.	1 casing volume= $(D^2)(H)(0.0408)=$	gal 3 casing volumes= gal.
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### Groundwater Purge Data

Purge Method: Standard Purge	Low-Flow/Micro-Purge	Purge Equipment: Redi Flo 2" w/ disposable tubing	Pump Set @ BGS
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Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity ( $\mu$ S/cm)	Turbidity (NTU)	Temp. ( $^{\circ}$ C)	DO (mg/L)	ORP (mV)	Remarks
<p style="transform: rotate(-30deg); font-weight: bold;">NOT SAMPLED DUE TO ACTIVE PRODUCT RECOVERY EFFORTS</p>											
										Fe <sup>++</sup> : _____	
										Gallons = ml's/3781	
										Sample Rate: _____	
										Total Casing Volumes Removed: _____	
										Total Gallons Removed: _____	

Sample ID.(time): \_\_\_\_\_ ( ) Dup ID.: \_\_\_\_\_ ( ) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B) Sampler: S.T.



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-2		Date: 11-8-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 24.01		Total Well Depth: 30.30		Water Column Height (H): 6.29			Top of Casing Elevation: 18.15				
Gauging Time: 1513		Casing diameter (D)= 3 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.3 gal			3 casing volumes= 6.9 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @ 28.3' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
24.61	1516	0.5	139.0	0.0							INITIAL
25.02	1517	0.5	139.0	0.5	6.60	1668	42.0	21.43	3.44	-87.8	CLEAR & COLORLESS
25.37	1520	0.5	139.0	2.0	6.58	1707	51.5	21.78	2.72	-93.1	"
25.46	1523	0.5	139.0	3.5	6.58	1693	46.3	21.76	2.11	-96.7	)
25.50	1526	0.5	139.0	5.0	6.59	1671	33.9	21.72	1.90	-97.8	)
25.52	1530	0.5	139.0	7.0	6.59	1665	24.7	21.77	1.46	-99.3	)
	1532										SAMPLE
24.29	1536										POST SAMPLE
											Fe <sup>++</sup> : 5.4
											Gallons = ml's/3781
											Sample Rate: 2200ml/min
											Total Casing Volumes Removed: 3
											Total Gallons Removed: 7

Sample ID.(time): MW-2 (1532) Dup ID.: DUP-2 (1542) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B); METHANE, NITRATE, SULFATE Sampler: SAB



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-3	Date: 11-9-05	Project: Sears Hayward Auto Center	Project No. : 25363714
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### -Gauging Data from Top of Casing (Reference Point)

Depth to Water: 23.31	Total Well Depth: 31.25	Water Column Height (H): 7.94	Top of Casing Elevation: 17.92
Gauging Time: 1112	Casing diameter (D)= 3 in.	1 casing volume= $(D^2)(H)(0.0408) = 2.9$ gal	3 casing volumes= 8.7 gal.

### Groundwater Purge Data

Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge	Purge Equipment: Redi Flo 2" w/ disposable tubing	Pump Set @ 29.3' BGS
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Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
23.99	1114	0.5									Initial
24.29	1115	0.5	146.1	0.5	6.64	2003	54.7	21.84	3.44	-90.7	clear colorless
24.72	1118	0.5	146.5	2.0	6.56	2014	33.9	22.33	1.57	-93.6	)
24.90	1121	0.5	147.2	3.5	6.54	2026	26.3	22.34	1.01	-96.4	)
24.99	1124	0.5	147.2	5.0	6.53	2028	22.8	22.32	0.84	-97.8	)
25.02	1127	0.5	147.2	6.5	6.53	2027	14.7	22.28	0.77	-99.1	)
25.04	1130	0.5	147.6	8.0	6.52	2027	16.2	22.28	0.70	-98.8	)
25.07	1132	0.5	147.6	9.0	6.52	2026	11.4	22.29	0.66	-99.3	)
	1134										SAMPLE
24.03	1143										Post sample
											Fe <sup>++</sup> : 2.0
											Gallons = ml's/3781
											Sample Rate: 4200 ml/min
											Total Casing Volumes Removed: 34
											Total Gallons Removed: 9.0

Sample ID.(time): MW-3 ( ) Dup ID.: ( ) Rinsate ID.: ( )

Analytical Methods: TPHg (8015M); VOCs (8260B) + Physical State (DCI Mgr) Sampler: SAB



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-4		Date: 11-8-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 22.98		Total Well Depth: 31.25		Water Column Height (H): 8.27			Top of Casing Elevation: 17.77				
Gauging Time: 1032		Casing diameter (D)= 3 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 3.0 gal			3 casing volumes= 9.1 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @ 29.3 BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
23.50	1030	0.5	141.2								Initial
24.11	1041	0.5	139.0	0.5	6.54	1730	25.3	22.68	0.73	-92.0	clear colorless
24.15	1045	0.5	137.5	2.5	6.49	1727	12.2	22.86	0.57	-95.2	"))
24.19	1049	0.5	137.5	4.5	6.48	1725	7.5	22.89	0.55	-96.6	"))
24.20	1053	0.5	137.5	6.5	6.48	1724	5.7	22.91	0.53	-97.3	"))
24.22	1057	0.5	137.5	8.5	6.47	1716	5.0	22.96	0.53	-97.6	"))
24.23	1059	0.5	137.5	9.5	6.47	1721	5.5	22.93	0.53	-97.5	"))
	1101										SAMPLE
23.01	1115										Post SAMPLE
											Fe <sup>++</sup> : 3.5
											Gallons = ml's/3781
											Sample Rate: 5200 ml/min
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 9.5

Sample ID.(time): MW-4 ( 1101 ) Dup ID.: \_\_\_\_\_ ( \_\_\_\_\_ ) Rinsate ID.: \_\_\_\_\_ ( \_\_\_\_\_ )

Analytical Methods: TPHg (8015M); VOCs (8260B) methane, sulfate, Nitrate Sampler: SAB



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-8		Date: 11-7-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 23.41		Total Well Depth: 31.30		Water Column Height (H): 7.89			Top of Casing Elevation: 17.89				
Gauging Time: 1558		Casing diameter (D)= 3 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.9 gal			3 casing volumes= 8.7 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @29.3' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
24.00	1602	0.5	136.3	0.0							INITIAL
24.05	1603	0.5	136.3	0.5	6.59	1355	94.1	19.69	1.00	-126.4	CLOUDY, CRAY
24.22	1606	0.5	138.6	2.0	6.56	1352	129.5	20.30	0.50	-130.0	"
24.27	1609	0.5	138.6	3.5	6.56	1348	75.1	20.42	0.49	-132.1	"
24.30	1612	0.5	138.6	5.0	6.56	1350	46.2	20.43	0.46	-132.0	CLEAR & COLORLESS
24.31	1615	0.5	138.6	6.5	6.55	1350	37.2	20.46	0.42	-132.9	"
24.32	1618	0.5	138.6	8.0	6.55	1348	33.9	20.43	0.39	-131.8	"
24.34	1620	0.5	138.6	9.0	6.55	1348	30.5	20.46	0.39	-134.0	" FINISH PURGE
	1622										SAMPLE
23.68	1625										POST SAMPLE
											Fe <sup>++</sup> : 5.8
											Gallons = ml's/3781
											Sample Rate: 200ml/min
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 9

Sample ID.(time): MW-8 (1622) Dup ID.: ( ) Rinsate ID.: ( )

Analytical Methods: TPHg (8015M); VOCs (8260B); SULFATE; NITRATE; Sampler: S.T.



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-9		Date: 11-7-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 20.76		Total Well Depth: 28.70			Water Column Height (H): 7.94		Top of Casing Elevation: 17.05				
Gauging Time: 1326		Casing diameter (D)= 3 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.9 gal			3 casing volumes= 8.7 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u>		Low-Flow/Micro-Purge			Purge Equipment: Redi Flo 2" w/ disposable tubing			Pump Set @ 26.7' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
21.07	1329	0.5	133.3	0.0							INITIAL
21.29	1330	0.5	133.7	0.5	6.49	1550	15.2	23.53	1.72	-125.5	CLEAR & COLORLESS
21.41	1334	0.5	133.7	2.5	6.49	1558	12.3	23.57	2.08	-123.4	"
21.46	1338	0.5	133.7	4.5	6.49	1582	7.9	23.64	1.51	-115.2	"
21.49	1342	0.5	133.7	6.5	6.49	1590	5.6	23.64	1.09	-109.0	"
21.50	1345	0.5	133.6	9.0	6.49	1603	4.6	23.65	0.88	-104.2	"
	1347										SAMPLE
21.04	1353										POST SAMPLE
											Fe <sup>++</sup> : 0.8 mg/L
											Gallons = ml's/3781
											Sample Rate: 2200
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 9.0

Sample ID.(time): MW-9 ( 1347 ) Dup ID.: \_\_\_\_\_ ( ) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B); METHANE; SULFATE; NITRATE Sampler: ST



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-10		Date: 11-7-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 22.06		Total Well Depth: 30.00		Water Column Height (H): 7.94			Top of Casing Elevation: 17.44				
Gauging Time: 0912		Casing diameter (D)= 3 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.9 gal			3 casing volumes= 8.7 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @ 28' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
22.59	0920	0.5	135.2								Initial
22.85	0921	0.5	135.2	0.5	6.62	1497	190.9	21.90	0.74	-124.9	clear colorless
23.05	0925	0.5	135.2	2.5	6.62	1685	30.2	22.52	0.53	-128.2	"
23.09	0929	0.5	135.2	4.5	6.62	1757	23.2	22.54	0.51	-125.4	"
23.09	0933	0.5	135.2	6.5	6.61	1764	14.1	22.58	0.49	-124.6	"
23.10	0937	0.5	135.2	8.5	6.60	1757	10.2	22.55	0.49	-125.3	"
23.11	0938	0.5	135.2	9.0	6.60	1756	10.8	22.57	0.49	-124.8	"
	0940										SAMPLE
23.11	0942										Post SAMPLE
											Fe <sup>++</sup> : 6.0
											Gallons = ml's/3781
											Sample Rate: 200 ml/min
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 9.0

Sample ID.(time): MW-10 ( 0940 ) Dup ID.: \_\_\_\_\_ ( ) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B) Methane, Sulfate, Nitrate Sampler: SAB





## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-11      Date: 11-9-05      Project: Sears Hayward Auto Center      Project No. : 25363714

### -Gauging Data from Top of Casing (Reference Point)

Depth to Water: 24.01      Total Well Depth: 33.50      Water Column Height (H): 9.49      Top of Casing Elevation: 18.12

Gauging Time: 0940      Casing diameter (D)= 3 in.      1 casing volume =  $(D^2)(H)(0.0408) = 3.5$  gal      3 casing volumes = 10.5 gal.

### Groundwater Purge Data

Purge Method: Standard Purge      Low-Flow/Micro-Purge      Purge Equipment: Redi Flo 2" w/ disposable tubing      Pump Set @ 31.5 BGS

Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
24.46	0942	0.5									Initial
24.78	0943	0.5	145.7	0.5	6.62	1536	28.1	20.28	2.48	-115.5	Clear colorless
25.27	0947	0.5	152.3	2.5	6.57	1502	103.2	20.65	1.50	-112.1	"
25.59	0951	0.5	150.6	4.5	6.57	1541	133.1	20.75	1.00	-114.6	"
25.53	0953	0.5	146.5	6.5	6.57	1557	32.5	20.78	0.75	-111.4	⊙ " PUMP FAILED
25.20	0954	0.5	110.5	8.5	6.57	1569	16.4	21.07	0.65	-111.7	⊙ " PUMP FAILED
	1003	0.5		10.5							⊙
	1005	0.5	149.1	4.5							SAMPLE RE START
25.60	1009	0.5	149.1	6.5	6.56	1552	14.6	20.76	0.52	-102.9	POST SAMPLE
25.64	1013	0.5	149.2	8.5	6.56	1558	12.9	20.79	0.48	-105.7	clear & colorless
25.67	1018	0.5	149.1	11.0	6.56	1578	10.4	20.75	0.48	-105.4	" FINISH PURGE
	1019										SAMPLE
24.78	1027										POST SAMPLE      Fe <sup>++</sup> : 4.4
											Gallons = ml's/3781
											Sample Rate: 4200 ml/min
											Total Casing Volumes Removed: 34
											Total Gallons Removed: 11

Sample ID. (time): MW-11 (<sup>1019</sup>~~1005~~) Dup ID.: \_\_\_\_\_ ( ) Rinsate ID.: EB-2 (1053)

Analytical Methods: TPHg (8015M); VOCs (8260B) + Physical Suite (Del Mar)      Sampler: SAB



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-12		Date: 11-7-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 22.74		Total Well Depth: 36.75		Water Column Height (H): 14.01			Top of Casing Elevation: 17.80				
Gauging Time: 1411		Casing diameter (D)= 3 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 5.1 gal			3 casing volumes= 15.3 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @ 34.7' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
24.02	1426	1.0	157.7								SPECIAL
24.65	1427	1.0	157.7	1.0	6.65	1345	11.2	20.73	3.85	47.6	CLEAR & COLORLESS
25.15	1430	<del>1.0</del> 1.0	157.7	4.0	6.63	1328	8.0	20.78	3.17	45.2	"
25.19	1433	<del>1.0</del> 2.0	157.7	7.0	6.62	1324	13.0	20.77	2.42	39.3	"
25.20	1436	<del>1.0</del> 10.0	157.7	10.0	6.61	1322	10.2	20.77	1.98	38.7	"
25.21	1439	<del>1.0</del> 12.0	157.7	13.0	6.61	1317	6.9	20.77	1.61	40.7	"
25.21	1442	<del>1.0</del> 16.0	157.7	16.0	6.61	1315	4.8	20.77	1.32	41.6	"
	1444										SAMPLE
23.15	1450										POST SAMPLE
											Fe <sup>++</sup> : 0.0 mg/L
											Gallons = ml's/3781
											Sample Rate: 200 ml/min
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 16.0

Sample ID.(time): MW-12 (1444) Dup ID.: \_\_\_\_\_ ( ) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B); METHANE; NITRATE; SULFATE Sampler: ST



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-13		Date: 11-7-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 23.27		Total Well Depth: 35.36		Water Column Height (H): 12.09			Top of Casing Elevation: 17.98				
Gauging Time: 1151		Casing diameter (D)= 2 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2 gal			3 casing volumes= 6 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @33.4' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
23.38	1156	0.5	139.7	0.0							INSTEAD, CLOUDY, BROWN
23.39	1157	0.5	139.7	0.5	6.65	776	234.6	19.22	0.81	105.7	SLIGHTLY CLOUDY, BROWN
23.40	1200	0.5	139.7	2.0	6.61	772	84.6	19.34	0.43	104.2	"
23.41	1203	0.5	139.7	3.5	6.62	771	54.4	19.72	0.35	100.8	CLEAR & COLORLESS
23.41	1206	0.5	139.7	5.0	6.61	771	35.1	19.86	0.32	98.6	"
23.41	1208	0.5	139.7	6.0	6.61	770	31.3	19.84	0.31	98.4	" , FINISH PURGE
	1210										SAMPLE
23.31	1213										POST SAMPLE
											Fe <sup>++</sup> : 0.0mg/L
											Gallons = ml's/3781
											Sample Rate: 200ml/min
											Total Casing Volumes Removed: 3
											Total Gallons Removed: 6.0

Sample ID.(time): MW-13 ( 1210 ) Dup ID.: \_\_\_\_\_ ( \_\_\_\_\_ ) Rinsate ID.: \_\_\_\_\_ ( \_\_\_\_\_ )

Analytical Methods: TPHg (8015M); VOCs (8260B); METHANE, NITRATE, SULFATE Sampler: ST



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-15    Date: 11-7-05    Project: Sears Hayward Auto Center    Project No. : 25363714

### -Gauging Data from Top of Casing (Reference Point)

Depth to Water: 19.04    Total Well Depth: 33.82    Water Column Height (H): 14.78    Top of Casing Elevation: 16.41

Gauging Time: 1505    Casing diameter (D)= 2 in.    1 casing volume= (D<sup>2</sup>)(H)(0.0408)= 2.4 gal    3 casing volumes= 7.2 gal.

### Groundwater Purge Data

Purge Method: Standard Purge    Low-Flow/Micro-Purge    Purge Equipment: Redi Flo 2" w/ disposable tubing    Pump Set @ 31.8' BGS

Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
19.38	1513	0.5	131.8	0.0							INITIAL
19.40	1514	0.5	131.8	0.5	6.70	1158	643.0	20.96	1.01	-133.7	CLOUDY, GRAY
19.74	1517	0.5	131.8	2.0	6.70	1150	428.1	21.33	0.49	-128.8	SLIGHTLY CLOUDY
19.75	1520	0.5	131.8	3.5	6.71	1147	348.5	21.46	0.41	-126.5	"
19.76	1523	0.5	131.8	5.0	6.70	1145	210.7	21.45	0.37	-125.11	"
19.77	1526	0.5	131.8	6.5	6.70	1142	231.3	21.51	0.35	-124.6	"
19.78	1528	0.5	131.8	7.5	6.70	1140	200.4	21.47	0.35	-124.5	"
	1530										SAMPLE
19.29	1533										POST SAMPLE
											Fe <sup>++</sup> : 2.4 mg/L
											Gallons = ml's/3781
											Sample Rate: 2.00 ml/min
											Total Casing Volumes Removed: 3.4
											Total Gallons Removed: 7.5

Sample ID.(time): MW-15 ( 1530 ) Dup ID.: \_\_\_\_\_ ( ) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B); METHANE; SULFATE; NITRATE    Sampler: ST



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-16		Date: 11-8-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 24.64		Total Well Depth: 37.45		Water Column Height (H): 12.81			Top of Casing Elevation: 18.37				
Gauging Time: 0802		Casing diameter (D)= 2 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.1 gal			3 casing volumes= 6.3 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @ 355' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
25.40	0804	0.5	138.6				113.7				Initial
25.79	0810	0.5	139.7	0.5	6.58	2147	<del>175.3</del>	19.58	2.93	-51.4	cloudy Brownish
26.14	0813	0.5	140.0	<del>0.5</del>	6.58	2202	13.8	20.04	1.50	-61.9	)
26.28	0816	0.5	140.1	3.5	6.58	2195	13.9	20.08	1.06	-65.7	)
26.31	0819	0.5	140.1	5.0	6.58	2189	732.2	20.13	0.83	-67.2	slightly cloudy
26.36	0822	0.5	140.1	6.5	6.58	2178	622.1	20.08	0.74	-68.4	)
	0824										SAMPLE
25.65	0830										POST SAMPLE
											Fe <sup>++</sup> : 3.8
											Gallons = ml's/3781
											Sample Rate: 4200ml/min
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 6.5

Sample ID.(time): MW-16 0824 (55) (0824) Dup ID.: \_\_\_\_\_ ( ) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B); METHANE; SULFATE; NITRATE Sampler: SAB



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-18		Date: 11-7 -05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: <u>22.29</u> <del>22.49</del> <b>ST</b>		Total Well Depth: 35.00			Water Column Height (H): <u>12.71</u>			Top of Casing Elevation: 17.48			
Gauging Time: 1647		Casing diameter (D)= 2 In.			1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.1 gal			3 casing volumes= 6.3 gal.			
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u>		Low-Flow/Micro-Purge			Purge Equipment: Redi Flo 2" w/ disposable tubing			Pump Set @ 33' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
22.65	1655	0.5	1355	0.0							VENETIAN
22.71	1656	0.5	1352	0.5	6.59	1018	125.3	19.53	0.63	-90.9	SLIGHTLY CLOUDY
22.76	1659	0.5	135.2	2.0	6.54	1044	88.6	19.93	0.47	-95.6	"
<del>22.77</del> <u>22.77</u> <b>ST</b>	1702	0.5	135.2	3.5	6.56	1051	33.1	20.15	0.42	-99.0	CLEAR & COLORLESS
22.78	1705	0.5	135.2	<del>5.0</del> <u>5.0</u> <b>ST</b>	6.56	1051	23.7	20.23	0.39	-99.9	"
22.80	1708	0.5	135.2	6.5	6.54	1053	17.7	20.18	0.38	-100.8	" FRESH PURGE
	1710										SAMPLE
22.42	1712										POST SAMPLE
											Fe <sup>++</sup> : <u>3.2</u>
											Gallons = ml's/3781
											Sample Rate: <u>4.200ml/min</u>
											Total Casing Volumes Removed: <u>3+</u>
											Total Gallons Removed: <u>6.5</u>

Sample ID.(time): MW-18 (1710) Dup ID.: DUP-1 (VOC ONLY) (1720) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B); METHANE; SULFATE; NITRATE Sampler: ST



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-19		Date: 11-7-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 19.85		Total Well Depth: 28.55		Water Column Height (H): 8.70			Top of Casing Elevation: 16.48				
Gauging Time: 1044		Casing diameter (D) = 2 in.		1 casing volume = $(D^2)(H)(0.0408) = 1.4$ gal			3 casing volumes = 4.2 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @ 17.5' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity ( $\mu$ S/cm)	Turbidity (NTU)	Temp. ( $^{\circ}$ C)	DO (mg/L)	ORP (mV)	Remarks
20.30	1055	0.25	122.1	0.0							INITIAL
20.40	1056	0.25	122.1	0.25	6.64	1274	58.3	22.19	0.74	136.5	CLEAR & COLORLESS
20.72	1100	0.25	122.1	1.25	6.68	1318	22.4	23.03	0.60	117.6	"
20.89	1104	0.25	122.1	2.25	6.68	1320	9.5	23.27	0.49	109.9	"
21.00	1108	0.25	122.8	3.25	6.67	1317	5.7	23.38	0.46	103.7	"
21.15	1112	0.25	122.8	4.25	6.67	1315	4.5	23.32	0.44	100.0	" FEWES PURGE
	1114										SAMPLE
20.73	1118										POST SAMPLE
											Fe <sup>++</sup> : 0.0
											Gallons = ml's/3781
											Sample Rate: 250ml/min
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 4.25

Sample ID.(time): MW-19 ( 1114 ) Dup ID.: \_\_\_\_\_ ( \_\_\_\_\_ ) Rinsate ID.: \_\_\_\_\_ ( \_\_\_\_\_ )

Analytical Methods: TPHg (8015M); VOCs (8260B); CH<sub>4</sub>, NO<sub>3</sub>, SO<sub>4</sub> Sampler: ST



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-20      Date: 11-9 -05      Project: Sears Hayward Auto Center      Project No. : 25363714

### -Gauging Data from Top of Casing (Reference Point)

Depth to Water: 27.89      Total Well Depth: 44.50      Water Column Height (H): 16.61      Top of Casing Elevation: 19.34

Gauging Time: 0830      Casing diameter (D)= 2 in.      1 casing volume= (D<sup>2</sup>)(H)(0.0408)= 2.7 gal      3 casing volumes= 8.1 gal.

### Groundwater Purge Data

Purge Method: Standard Purge      Low-Flow/Micro-Purge      Purge Equipment: Redi Flo 2" w/ disposable tubing      Pump Set @ 47.5' BGS

Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
27.91	0837	0.5	152.9	0.0							Initial
27.92	0838	0.5	153.2	0.5	6.64	1408	9.0	19.46	1.62	156.6	Cloudy Brown
27.93	0841	0.5	153.8	2.0	6.67	1399	9.1	19.75	1.38	154.1	slightly <sup>cloudy</sup> Brownish
	0844			3.5							
27.93	0847	0.5	153.6	5.0	6.68	1390	37.5	19.81	1.30	141.2	Clear colorless
27.91	0850	0.5	154.0	6.5	6.68	1384	25.8	19.81	1.30	136.3	)
27.91	0854	0.5	153.9	8.5	6.67	1382	19.7	19.83	1.30	132.7	)
	0856										SAMPLE
27.88	0902										POST SAMPLE
											Fe <sup>++</sup> : 0.0
											Gallons = ml's/3781
											Sample Rate: 4200 ml/min
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 8.5

Sample ID.(time): MW-20 (0856) Dup ID.: \_\_\_\_\_ ( ) Rinsate ID.: \_\_\_\_\_ ( )

Analytical Methods: TPHg (8015M); VOCs (8260B); + PHYSICAL SUITE (DEL MAR)      Sampler: SAB





## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-21		Date: 11-8-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 30.65		Total Well Depth: 38.90		Water Column Height (H): 8.25			Top of Casing Elevation: 20.17				
Gauging Time: 1315		Casing diameter (D)= 2 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 1.3 gal			3 casing volumes= 3.9 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: Standard Purge		Low-Flow/Micro-Purge		Purge Equipment: Redi-Flow 2" w/ disposable tubing DISPOSABLE GATEVAL					Pump Set @ BGS NA		
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
32.63	1322	—	—	0.5	6.62	2582	19.2	19.21	2.49	-110.1	Slightly cloudy
33.95	1324	—	—	1.0	6.62	2599	21.5	18.84	3.04	-97.7	)
34.60	1327	—	—	1.5	6.60	2596	13.3	18.94	2.28	-90.3	)
35.85	1331	—	—	2.0	6.60	2596	26.2	18.90	2.79	-82.9	)
37.65	1335	—	—	2.5	6.58	2577	167.7	18.81	2.29	-91.9	)
38.30	1337	—	—	2.75							
											80% SWL = 32.30 FT BTOL
33.80	1520										
33.46	1551										SAMPLE W/D.B.
34.59	1615										POST SAMPLE
											Fe <sup>++</sup> : 3.4
											Gallons = ml's/3781
											Sample Rate: —
											Total Casing Volumes Removed: ~2
											Total Gallons Removed: 2.75

Sample ID.(time): MW-21 ( 1551 ) Dup ID.: \_\_\_\_\_ ( \_\_\_\_\_ ) Rinsate ID.: \_\_\_\_\_ ( \_\_\_\_\_ )

Analytical Methods: TPHg (8015M); VOCs (8260B) SwiRate, Methane, Nitrate Sampler: SAB



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-22		Date: 11-7-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 22.00		Total Well Depth: 35.10		Water Column Height (H): 13.10			Top of Casing Elevation: 17.42				
Gauging Time: 1240		Casing diameter (D)= 2 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.1 gal			3 casing volumes= 6.3 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @ 33.1' BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
22.37	1245	0.5	138.6	0.0							INITIAL
22.45	1246	0.5	138.6	0.5	6.79	909	1166.8	18.84	5.21	104.9	SLIGHTLY TURBID. VERY CLOUDY, BROWN
22.54	1249	0.5	138.6	2.0	6.77	906	460.7	19.06	4.38	107.0	SLIGHTLY CLOUDY
22.54	1252	0.5	138.6	3.5	6.77	904	123.8	19.10	4.04	109.2	"
22.55	1255	0.5	138.6	5.0	6.76	903	60.5	19.11	3.77	109.9	CLEAR & COLORLESS
22.56	1258	0.5	138.6	6.5	6.76	901	46.2	19.11	3.59	109.9	" FRESH PURGE
	1300										SAMPLE
22.08	1303										POST SAMPLE
											Fe <sup>++</sup> : 0.0mg/L
											Gallons = ml's/3781
											Sample Rate: 200 ml/min
											Total Casing Volumes Removed: 3
											Total Gallons Removed: 6.5

Sample ID.(time): MW-22 ( 1300 ) Dup ID.: \_\_\_\_\_ ( \_\_\_\_\_ ) Rinsate ID.: \_\_\_\_\_ ( \_\_\_\_\_ )

Analytical Methods: TPHg (8015M); VOCs (8260B); METHANE; NITRATE; SULFATE Sampler: ST



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-23		Date: 11-8-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 23.39		Total Well Depth: 40.72		Water Column Height (H): 17.33			Top of Casing Elevation: NA				
Gauging Time: 1350		Casing diameter (D)= 2 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.8 gal			3 casing volumes= 8.4 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u>		Low-Flow/Micro-Purge			Purge Equipment: Redi Flo 2" w/ disposable tubing			Pump Set @ BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
23.54	1354	1.0									Initial
23.56	1400	1.0	156.6	1.0	6.84	1254	183.1	21.05	2.62	21.1	clear colorless
23.56	1402	1.0	156.6	3.0	6.78	1255	54.6	21.22	1.62	-7.3	"
23.57	1404	1.0	156.6	5.0	6.76	1255	21.3	21.24	1.20	-14.5	"
23.58	1406	1.0	156.6	7.0	6.75	1255	13.6	21.26	0.93	-19.2	"
23.58	1408	1.0	156.6	9.0	6.74	1255	8.8	21.25	0.76	-21.7	"
	1410										SAMPLE
23.42	1414										Post Sample
											Fe <sup>++</sup> : 1.0
											Gallons = ml's/3781
											Sample Rate: < 200 ml/min
											Total Casing Volumes Removed: 3+
											Total Gallons Removed: 9.0

Sample ID. (time): MW-23 ( 1410 ) Dup ID.: \_\_\_\_\_ ( \_\_\_\_\_ ) Rinsate ID.: EB-1 ( 1511 )

Analytical Methods: TPHg (8015M); VOCs (8260B) Methane, Sulfate, Nitrate Sampler: SAB



## Groundwater Monitoring Program Gauging Log & Development / Sampling Log

Well Number: MW-24		Date: 11-8-05		Project: Sears Hayward Auto Center			Project No. : 25363714				
<b>-Gauging Data from Top of Casing (Reference Point)</b>											
Depth to Water: 23.81		Total Well Depth: 40.00		Water Column Height (H): 16.19			Top of Casing Elevation:				
Gauging Time: 1559		Casing diameter (D)= 2 in.		1 casing volume= (D <sup>2</sup> )(H)(0.0408)= 2.6 gal			3 casing volumes= 7.8 gal.				
<b>Groundwater Purge Data</b>											
Purge Method: <u>Standard Purge</u> Low-Flow/Micro-Purge				Purge Equipment: Redi Flo 2" w/ disposable tubing				Pump Set @ 3% BGS			
Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
24.16	1615	1.0	149.8	0.0							INITIAL, VERY CLOUDY, BROWN
24.17	1616	1.0	149.8	1.0	6.80	1249	1175.1?	20.55	3.47	33.0	VERY CLOUDY, BROWN
24.27	1618	1.0	160.3	3.0	6.77	1249	960.7	20.62	2.24	41.2	CLOUDY, BROWN
24.30	1620	1.0	160.3	5.0	6.75	1249	675.5	20.64	2.02	46.8	"
24.30	1622	1.0	160.3	7.0	6.74	1244	520.9	20.63	1.85	50.8	"
24.32	1624	1.0	160.3	9.0	6.72	1249	443.2	20.62	1.71	52.5	" AGITATE PUMP & BTH CONTINUE PURGING
24.25	1628	1.0	160.3	13.0	6.72	1240	525.0	20.54	1.75	49.1	"
24.05	1634	1.0	160.3	17.0	6.71	1247	108.9	20.70	1.41	59.9	SLIGHTLY CLOUDY
24.27	1632										PUMP AT 37'
24.27	1640	1.0	160.3	24.0	6.70	1246	87.0	20.74	1.11	60.5	SAMPLE
	1642										POST SAMPLE
23.89	1644										
											Fe <sup>2+</sup> : 0.0 mg/L
											Gallons = ml's/3781
											Sample Rate: <math>\frac{2.6 \text{ gal}}{1 \text{ min}}</math>
											Total Casing Volumes Removed: 9.2
											Total Gallons Removed: 24

Sample ID.(time): MW-24 ( 1644 ) Dup ID.: \_\_\_\_\_ ( \_\_\_\_\_ ) Rinsate ID.: \_\_\_\_\_ ( \_\_\_\_\_ )

Analytical Methods: TPHg (8015M); VOCs (8260B); SULFATE; NITRATE; METHANE Sampler: ST



# Groundwater Monitoring Program

## Gauging Log & Development / Sampling Log

IW-13

Well Number: **MW-13**    Date: **11-8-05**    Project: **Sears Hayward Auto Center**    Project No.: **25363714**

### -Gauging Data from Top of Casing (Reference Point)

Depth to Water: **22.62**    Total Well Depth: **35.02**    Water Column Height (H): **12.4**    Top of Casing Elevation:

Gauging Time: **1150**    Casing diameter (D)= **4** in.    1 casing volume=  $(D^2)(H)(0.0408) = 8.1$  gal    3 casing volumes= **24.3** gal.

### Groundwater Purge Data

Purge Method: **Standard Purge**    Low-Flow/Micro-Purge    Purge Equipment: **Red Flo 2" w/ disposable tubing DISPOSABLE BAFLE**    Pump Set @ **33' BGS**

Depth to Water (ft)	Time	Purge Rate (gpm)	Hz	Volume Removed (gallons)	pH (Units)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp. (°C)	DO (mg/L)	ORP (mV)	Remarks
23.11	1157	0.5	135.9								Initial
23.60	1158	0.5	137.2	0.5	7.17	1696	34.6	21.32	0.59	-49.0	clear colorless
24.63	1200	0.5	138.6	1.5	7.11	1682	50.4	21.64	0.46	-20.1	"
25.55	1202	0.5	141.6	2.5	7.06	1658	59.6	21.90	0.39	-9.4	"
26.25	1204	0.5	141.6	3.5	7.00	1596	73.9	21.99	0.38	9.3	" / 90% SWL = 25.10 BTDC
27.00	1206	0.5	143.1	4.5	6.94	1554	70.1	22.01	0.36	22.5	"
27.75	1208	0.5	145.7	5.5	6.91	1522	51.0	22.01	0.37	18.8	"
28.30	1211	0.5	145.7	7.0	6.88	1496	38.2	22.11	0.44	21.4	"
28.57	1215	0.5	145.7	9.0	6.86	1481	26.4	22.25	0.59	32.5	slightl' Brown
29.42	1221	0.5	148.0	12.0	6.85	1486	161.1	22.05	0.52	40.1	"
30.38	1227	0.5	149.8	15.0	6.83	1501	335.7	22.01	0.46	45.3	cloudy Brownish
31.17	1233	0.5	150.4	18.0	6.81	1476	228.1	22.05	0.43	52.4	lowered Pump 1.0' to 34 FT BTDC
31.93	1239	0.5	151.7	21.0	6.84	1489	392.1	21.86	0.52	54.7	" Fe <sup>++</sup> : 0.2 mg/L
32.50	1244	0.5	153.2	23.5	6.83	1453	1065.0	21.75	0.72	57.4	" Gallons = ml's/3781
32.84	1246	0.5	154.3	24.5	6.84	1452	1191.0	21.79	0.84	57.9	" Sample Rate: <200 ml/min
											Total Casing Volumes Removed: 3+
22.67	1435										Total Gallons Removed: 24.5

Sample ID. (time): IW-13 (<sup>1440</sup>/<sub>+3</sub>) Dup ID.: \_\_\_\_\_ Rinsate ID.: \_\_\_\_\_

Analytical Methods: TPHg (8015M); VOCs (8260B) Methane, Sulfate, Nitrate    Sampler: SAB

**APPENDIX I**

**LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTS  
FOR 2005 FOURTH QUARTER GROUNDWATER SAMPLES**



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

Mr. Joe Liles  
URS Corporation  
2020 E. First Street, Suite 400  
Santa Ana, CA 92705

Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Sample Date: 11-07-2005  
Lab Job No.: UR511044

Dear Mr. Liles:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 11-08-2005 and analyzed for the following parameters:

Gasoline Range TPH (EPA 8015M)  
BTEX & Oxygenates by GC/MS (EPA 8260B)  
Methane (GC/FID)  
Nitrate (EPA 352.1)  
Sulfate (EPA 375.4)

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled at 4°C, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (323) 888-0728 if our laboratory can be of further service to you.

Sincerely,

Roger Wang, Ph. D.  
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Matrix: Water  
Batch No.: CMK08-GW1

Lab Job No.: UR511044  
Date Sampled: 11-07-2005  
Date Received: 11-08-2005  
Date Analyzed: 11-08-2005

**EPA Method 8015M (TPH-Gasoline)**  
**Reporting Unit: µg/L (ppb)**

Sample ID	Lab ID	DF	Gasoline Range TPH (C4-C12)	Surrogate (BFB) Rec. %
Method Detect. Limit (MDL)			50	
Method Blank		1	ND	96
MW-8	UR511044-1	2	8,290	106
MW-9	UR511044-2	1	ND	105
MW-12	UR511044-3	1	ND	100
MW-13	UR511044-4	1	ND	101
MW-15	UR511044-5	1	2,090	107
MW-18	UR511044-6	20	21,000	110
MW-19	UR511044-7	1	ND	99
MW-22	UR511044-8	1	ND	101
DUP-1	UR511044-9	20	21,900	110
TB-1	UR511044-10	1	ND	103

DF: Dilution Factor (**DF × MDL = Reporting Limit** for the sample).

ND: Not Detected (at the specified limit);

Note: Surrogate recovery acceptance limits are 70-130%.

Checked & approved by:

Roger Wang, Ph.D.  
Laboratory Director.





# Southland Technical Services, Inc.

## Environmental Laboratories

11-15-2005

Client: URS Corporation  
 Project: 25363714/Sears Hayward  
 Project Site: Hayward, CA  
 Matrix: Water  
 Batch No.: 1108-VOCW1

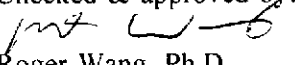
Lab Job No.: UR511044  
 Date Sampled: 11-07-2005  
 Date Received: 11-08-2005  
 Date Analyzed: 11-08-2005

**EPA 8260B (BTEX & Oxygenates by GC/MS)**  
**Reporting Units: µg/L (ppb)**

Lab ID	Method Blank	UR511044-1	UR511044-2	UR511044-3	UR511044-4	UR511044-5	UR511044-6	MDL
Sample ID		MW-8	MW-9	MW-12	MW-13	MW-15	MW-18	
DF	1	2	1	1	1	1	20	1
Benzene	ND	37.5	ND	ND	ND	1	541	1
Toluene	ND	ND	ND	ND	ND	ND	854	1
Ethylbenzene	ND	168	ND	ND	ND	23.0	1,280	1
Total Xylenes	ND	27.7	ND	ND	ND	44.2	4,070	2
MTBE	ND	ND	ND	ND	ND	ND	ND	2
ETBE	ND	ND	ND	ND	ND	ND	ND	2
DIPE	ND	6.0	ND	ND	ND	ND	ND	2
TAME	ND	ND	ND	ND	ND	ND	ND	2
T-Butyl Alcohol	ND	ND	ND	ND	ND	ND	ND	10
SURRO-GATE	MB %RC	%RC	%RC	%RC	%RC	%RC	%RC	Accept Limit%
Dibromofluoro-methane	116	88	92	90	97	86	80	79-126
Toluene-d8	97	113	108	106	109	105	103	79-121
Bromofluoro-benzene	93	103	102	97	99	105	107	71-131

MDL=Method Detection Limit, DF=Dilution Factor (**DF × MDL = Reporting Limit** for the sample),  
 ND=Not Detected (at the specified limit),%RC=Percent Recovery, MB=Method Blank.

Note: Surrogate spike concentrations are 25 µg/L for all the compounds.

Checked & approved by:  
  
 Roger Wang, Ph.D.  
 Laboratory Director.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Matrix: Water  
Batch No.: 1108-VOCW1

Lab Job No.: UR511044  
Date Sampled: 11-07-2005  
Date Received: 11-08-2005  
Date Analyzed: 11-08-2005

**EPA 8260B (BTEX & Oxygenates by GC/MS)**  
**Reporting Units: µg/L (ppb)**

Lab ID	Method Blank	UR511044-7	UR511044-8	UR511044-9	UR511044-10			MDL
Sample ID		MW-19	MW-22	DUP-1	TB-1			
DF	1	1	1	20	1			1
Benzene	ND	ND	ND	536	ND			1
Toluene	ND	ND	ND	940	ND			1
Ethylbenzene	ND	ND	ND	1,250	ND			1
Total Xylenes	ND	ND	ND	4,130	ND			2
MTBE	ND	ND	ND	ND	ND			2
ETBE	ND	ND	ND	ND	ND			2
DIPE	ND	ND	ND	ND	ND			2
TAME	ND	ND	ND	ND	ND			2
T-Butyl Alcohol	ND	ND	ND	ND	ND			10
SURRO-GATE	MB %RC	%RC	%RC	%RC	%RC			Accept Limit%
Dibromofluoro-methane	116	105	99	83	102			79-126
Toluene-d8	97	107	109	105	108			79-121
Bromofluoro-benzene	93	97	98	107	100			71-131

MDL=Method Detection Limit, DF=Dilution Factor (DF × MDL = Reporting Limit for the sample), ND=Not Detected (at the specified limit),%RC=Percent Recovery, MB=Method Blank.

Note: Surrogate spike concentrations are 25 µg/L for all the compounds.

Checked & approved by:

Roger Wang, Ph.D.  
Laboratory Director.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

Client: URS Corporation  
 Project: 25363714/Sears Hayward  
 Project Site: Hayward, CA  
 Matrix: Water  
 Batch No. for CH4: FK11A  
 Batch No. for Nitrate&Sulfate: 1108-NSW1

Lab Job No.: UR511044  
 Date Sampled: 11-07-2005  
 Date Received: 11-08-2005  
 Date Analyzed: 11-11-2005  
 Date Analyzed: 11-08-2005

**Analytical Test Results**

Analyte	Analytical Method	Reporting Unit	Sample Results					Reporting Limit
			Method Blank	MW-8	W-9	MW-12	MW-13	
				UR511044-1	UR511044-2	UR511044-3	UR511044-4	
CH4	GC/FID	ug/L	ND	1,210	ND	ND	ND	5 ug/L
Nitrate	352.1	mg/L	ND	2.6	6.7	17.2	13.2	0.01ppm
Sulfate	375.4	mg/L	ND	3.7	22.9	79.7	18.9	1.0 ppm

Analyte	Analytical Method	Reporting Unit	Sample Results					Reporting Limit
			MW-15	MW-18	MW-19	MW-22		
			UR511044-5	UR511044-6	UR511044-7	UR511044-8		
CH4	GC/FID	ug/L	192	ND	ND	ND		5 ug/L
Nitrate	352.1	mg/L	8.4	2.1	20.2	19.8		0.01ppm
Sulfate	375.4	mg/L	6.8	1.3	62.4	45.9		1.0 ppm

ND: Not Detected (at the specified limit).

Checked & approved by:

Roger Wang, Ph.D.  
Laboratory Director.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

**EPA Method 8015M (TPH)  
Batch QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No: CMK08-GW1

Lab Job No.: UR511044  
Lab Sample ID: UR511044-2  
Date Analyzed: 11-08-2005

**I. MS/MSD Report  
Unit: ppb**

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
TPH-g	ND	1,000	946	929	94.6	92.9	1.8	30	70-130

**II. LCS Result  
Unit: ppb**

Analyte	LCS Report Value	True Value	Rec.%	Accept. Limit
TPH-g	965	1,000	96.5	80-120

ND: Not Detected (at the specified limit).



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

**EPA 8260B (BTEX)  
Batch QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No: 1108-VOCW1

Lab Job No.: UR511044  
Lab Sample ID: UR511044-2  
Date Analyzed: 11-08-2005

**I. MS/MSD Report  
Unit: ppb**

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
Benzene	ND	20	22	18	110.0	90.0	20.0	30	70-130
Toluene	ND	20	21	17	105.0	85.0	21.1	30	70-130

**II. LCS Result  
Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
Benzene	22.2	20	111.0	80-120
Toluene	21.3	20	106.5	80-120

ND: Not Detected.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

**CH<sub>4</sub> (by GC/FID)**  
**Batch QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No.: FK11A

Lab Job No.: UR511044  
Lab Sample ID: UR511050-7  
Date Analyzed: 11-15-2005

**I. Sample/Sample Dup Report**  
Reporting Units: µg/L

Analyte	MB	Sample Conc.	Sample Duplicate	% RPD	%RPD Accept. Limit
CH <sub>4</sub>	ND	356	371	4.1	30

**II. LCS Result**  
Reporting Units: µg/L

Analyte	LCS Report Value	True Value	Rec.%	Accept. Limi
CH <sub>4</sub>	1.067	1.070	99.7	80-120

ND: Not Detected.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

**EPA 352.1(Nitrate) & EPA 375.4(Sulfate)  
QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No: 1108-NSW1

Lab Job No.: UR511044  
Lab Sample ID: LCS  
Date Analyzed: 11-08-2005

**LCS/LCSD Report**

Analyte	MB Conc.	LCS %Rec.	LCSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
Nitrate (352.1)	ND	101.0	98.0	3.0	30	70-130
Sulfate (375.4)	ND	105.0	106.0	0.9	30	70-130

ND: Not Detected. Date Analyzed:







**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

Mr. Joe Liles  
URS Corporation  
2020 E. First Street, Suite 400  
Santa Ana, CA 92705

Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Sample Date: 11-08-2005  
Lab Job No.: UR511050

Dear Mr. Liles:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 11-09-2005 and analyzed for the following parameters:

Gasoline Range TPH (EPA 8015M)  
BTEX & Oxygenates by GC/MS (EPA 8260B)  
Methane (GC/FID)  
Nitrate (EPA 352.1)  
Sulfate (EPA 375.4)

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled at 4°C, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (323) 888-0728 if our laboratory can be of further service to you.

Sincerely,

Roger Wang, Ph. D.  
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Matrix: Water  
Batch No.: AMK08-GW2

Lab Job No.: UR511050  
Date Sampled: 11-08-2005  
Date Received: 11-09-2005  
Date Analyzed: 11-09-2005

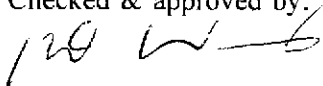
**EPA Method 8015M (TPH-Gasoline)**  
**Reporting Unit: µg/L (ppb)**

Sample ID	Lab ID	DF	Gasoline Range TPH (C4-C12)	Surrogate (BFB) Rec. %
Method Detect. Limit (MDL)			50	
Method Blank		1	ND	102
MW-2	UR511050-1	100	54,600	95
MW-4	UR511050-2	50	34,900	100
MW-10	UR511050-3	25	14,200	104
IW-13	UR511050-4	1	125	95
MW-16	UR511050-5	25	11,100	101
MW-21	UR511050-6	50	28,100	109
MW-23	UR511050-7	1	198	95
MW-24	UR511050-8	1	5,130	101
DUP-2	UR511050-9	100	56,900	98
EB-1	UR511050-10	1	ND	99
TB-2	UR511050-11	1	ND	95

DF: Dilution Factor ( $DF \times MDL = \text{Reporting Limit}$  for the sample).

ND: Not Detected (at the specified limit);

Note: Surrogate recovery acceptance limits are 70-130%.

Checked & approved by:  


Roger Wang, Ph.D.  
Laboratory Director.



# Southland Technical Services, Inc.

## Environmental Laboratories

11-15-2005

Client: URS Corporation  
 Project: 25363714/Sears Hayward  
 Project Site: Hayward, CA  
 Matrix: Water  
 Batch No.: 1108-VOAW2

Lab Job No.: UR511050  
 Date Sampled: 11-08-2005  
 Date Received: 11-09-2005  
 Date Analyzed: 11-09-2005

### EPA 8260B (BTEX & Oxygenates by GC/MS) Reporting Units: µg/L (ppb)

Lab ID	Method Blank	UR511050-1	UR511050-2	UR511050-3	UR511050-4	UR511050-5	UR511050-6	MDL
Sample ID		MW-2	MW-4	MW-10	IW-13	MW-16	MW-21	
DF	1	50	50	25	1	25	50	1
Benzene	ND	7,310	2,690	630	ND	2,660	5,060	1
Toluene	ND	12,000	441	399	ND	175	654	1
Ethylbenzene	ND	1,990	1,490	1,720	ND	1,350	1,760	1
Total Xylenes	ND	9,500	2,860	2,990	ND	1,920	2,910	2
MTBE	ND	ND	ND	ND	ND	ND	ND	2
ETBE	ND	ND	ND	ND	ND	ND	ND	2
DIPE	ND	ND	ND	ND	ND	ND	ND	2
TAME	ND	ND	ND	ND	ND	ND	ND	2
T-Butyl Alcohol	ND	ND	ND	ND	ND	ND	ND	10
SURRO-GATE	MB %RC	%RC	%RC	%RC	%RC	%RC	%RC	Accept Limit%
Dibromofluoro-methane	82	85	93	82	83	88	70m	79-126
Toluene-d8	106	101	101	97	99	96	110	79-121
Bromofluoro-benzene	97	91	95	99	90	97	105	71-131

MDL=Method Detection Limit, DF=Dilution Factor (**DF × MDL = Reporting Limit** for the sample),  
 ND=Not Detected (at the specified limit),%RC=Percent Recovery, MB=Method Blank.  
 Note: Surrogate spike concentrations are 25 µg/L for all the compounds.

Checked & approved by:

Roger Wang, Ph.D.  
 Laboratory Director



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Matrix: Water  
Batch No.: 1109-VOAW1

Lab Job No.: UR511050  
Date Sampled: 11-08-2005  
Date Received: 11-09-2005  
Date Analyzed: 11-09-2005


**EPA 8260B (BTEX & Oxygenates by GC/MS)**  
**Reporting Units: µg/L (ppb)**

Lab ID	Method Blank	UR511050-7	UR511050-8	UR511050-9	UR511050-10	UR511050-11		MDL
Sample ID		MW-23	MW-24	DUP-2	EB-1	TB-2		
DF	1	1	5	50	1	1		1
Benzene	ND	6.6	124	7,340	ND	ND		1
Toluene	ND	1.2	384	11,900	ND	ND		1
Ethylbenzene	ND	15.5	70.0	1,900	ND	ND		1
Total Xylenes	ND	18.7	1,080	9,630	ND	ND		2
MTBE	ND	ND	ND	ND	ND	ND		2
ETBE	ND	ND	ND	ND	ND	ND		2
DIPE	ND	ND	ND	ND	ND	ND		2
TAME	ND	ND	ND	ND	ND	ND		2
T-Butyl Alcohol	ND	ND	ND	ND	ND	ND		10
<b>SURRO-GATE</b>	<b>MB %RC</b>	<b>%RC</b>	<b>%RC</b>	<b>%RC</b>	<b>%RC</b>	<b>%RC</b>		<b>Accept Limit%</b>
Dibromofluoro-methane	82	84	79	86	79	80		79-126
Toluene-d8	106	92	102	100	108	101		79-121
Bromofluoro-benzene	97	91	96	94	95	91		71-131

MDL=Method Detection Limit, DF=Dilution Factor (DF × MDL = **Reporting Limit** for the sample),  
ND=Not Detected (at the specified limit),%RC=Percent Recovery, MB=Method Blank.

Note: Surrogate spike concentrations are 25 µg/L for all the compounds.

Checked & approved by:

  
Roger Wang, Ph.D.  
Laboratory Director.



# Southland Technical Services, Inc.

## Environmental Laboratories

11-15-2005

Client: URS Corporation  
 Project: 25363714/Sears Hayward  
 Project Site: Hayward, CA  
 Matrix: Water  
 Batch No. for CH4: FK11A  
 Batch No. for Nitrate&Sulfate: 1109-NSW1

Lab Job No.: UR511050  
 Date Sampled: 11-08-2005  
 Date Received: 11-09-2005  
 Date Analyzed: 11-11-2005  
 Date Analyzed: 11-09-2005

### Analytical Test Results

Analyte	Analytical Method	Reporting Unit	Sample Results					Reporting Limit
			Method Blank	MW-2	MW-4	MW-10	IW-13	
				UR511050-1	UR511050-2	UR511050-3	UR511050-4	
CH4	GC/FID	ug/L	ND	9,450	4,020	11,300	ND	5 ug/L
Nitrate	352.1	mg/L	ND	1.72	1.64	1.81	25.6	0.01ppm
Sulfate	375.4	mg/L	ND	ND	1.05	ND	83.4	1.0 ppm

Analyte	Analytical Method	Reporting Unit	Sample Results					Reporting Limit
			MW-16	MW-21	MW-23	MW-24		
			UR511050-5	UR511050-6	UR511050-7	UR511050-8		
CH4	GC/FID	ug/L	858	ND	356	ND		5 ug/L
Nitrate	352.1	mg/L	12.3	2.02	27.0	22.3		0.01ppm
Sulfate	375.4	mg/L	5.4	ND	62.4	77.6		1.0 ppm

ND: Not Detected (at the specified limit).

Checked & approved by:

Roger Wang, Ph.D.  
 Laboratory Director.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

**EPA Method 8015M (TPH)  
Batch QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No.: AMK08-GW2

Lab Job No.: UR511050  
Lab Sample ID: AI511046-2  
Date Analyzed: 11-09-2005

**I. MS/MSD Report  
Unit: ppb**

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
TPH-g	ND	1,000	1,050	878	105.0	87.8	17.8	30	70-130

**II. LCS Result  
Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
TPH-g	832	1,000	83.2	80-120

ND: Not Detected.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

**EPA 8260B (BTEX)  
Batch QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No: 1108-VOAW2

Lab Job No.: UR511050  
Lab Sample ID: AI511046-2  
Date Analyzed: 11-09-2005

**I. MS/MSD Report  
Unit: ppb**

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
Benzene	ND	20	22.2	22.5	111.0	112.5	1.3	30	70-130
Toluene	ND	20	21.1	20.5	105.5	102.5	2.9	30	70-130

**II. LCS Result  
Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
Benzene	23.6	20	118.0	80-120
Toluene	23.1	20	115.5	80-120

ND: Not Detected.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

**CH<sub>4</sub> (by GC/FID)**  
**Batch QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No.: FK11A

Lab Job No.: UR511050  
Lab Sample ID: UR511050-7  
Date Analyzed: 11-11-2005

**I. Sample/Sample Dup Report**

Reporting Units: µg/L

Analyte	MB	Sample Conc.	Sample Duplicate	% RPD	%RPD Accept. Limit
CH <sub>4</sub>	ND	356	371	4.1	30

**II. LCS Result**

Reporting Units: µg/L

Analyte	LCS Report Value	True Value	Rec.%	Accept. Limi
CH <sub>4</sub>	1.067	1.070	99.7	80-120

ND: Not Detected.





**Southland Technical Services, Inc.**  
Environmental Laboratories

11-15-2005

**EPA 352.1(Nitrate) & EPA 375.4(Sulfate)  
QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No: 1109-NSW1

Lab Job No.: UR511050  
Lab Sample ID: LCS  
Date Analyzed: 11-09-2005

**LCS/LCSD Report**

Analyte	MB Conc.	LCS %Rec.	LCSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
Nitrate (352.1)	ND	95.0	92.0	3.2	30	70-130
Sulfate (375.4)	ND	106.0	105.0	0.9	30	70-130

ND: Not Detected. Date Analyzed:



# URS CORPORATION

2020 East First Street, Suite 400  
 Santa Ana, CA 92705  
 (714) 835-6886  
 FAX (714) 667-7147

Date: 11/8/05

## CHAIN OF CUSTODY RECORD

Page 2 of 2

Data Requested in GISKey Format

UR511050

Lab Name <b>Southern Technical Services</b>		URS Project/PO Number <b>25365714.05034</b>		Requested Analyses:										Special Instructions:			
Client Name/Project Name/Location <b>SEARS, HAYWARD</b>		Geo Tracker Information:															
URS Project Manager <b>See Labels</b>		EDF Reporting: Y N Global ID															
Sample Name and Signature <b>A.S. TURNER</b>		COELT Log Number															
Sample Name:	Sample Date:	Sample Time:	Preserved:	Matrix:	Container Type:	# of Cont.:											HOLD
1 TB-2	11/8/05	-	Y N	S L G	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass <u>VOA</u>	1											X UR511050-11
<del>2</del>																	
<del>3</del>																	
<del>4</del>																	
<del>5</del>																	
<del>6</del>																	
<del>7</del>																	
<del>8</del>																	
<del>9</del>																	
<del>10</del>																	
Relinquished by: <i>[Signature]</i>		Date: 11/8/05 1725		Received By: <i>[Signature]</i>		Date/Time: 11/8/05		Turnaround Time: (Check)				Lab Use Only					
Relinquished by:		Date:		Received By: <i>[Signature]</i>		Date/Time: 11/8/05		Same Day: _____		72 Hour: _____		Cooler Temperature*: <u>4°C</u>					
Relinquished by:		Date:		Received By: <i>[Signature]</i>		Date/Time: <i>[Signature]</i>		24 Hour: _____		5 Day: _____		*Record upon arrival					
Relinquished by:		Date:		Received By:		Date/Time:		48 Hour: _____		Standard: <u>X</u>		<b>URS</b>					



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-18-2005

Mr. Joe Liles  
URS Corporation  
2020 E. First Street, Suite 400  
Santa Ana, CA 92705

Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Sample Date: 11-09-2005  
Lab Job No.: UR511065

Dear Mr. Liles:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 11-10-2005 and analyzed for the following parameters:

Gasoline Range TPH (EPA 8015M)  
BTEX & Oxygenates by GC/MS (EPA 8260B)

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled at 4°C, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (323) 888-0728 if our laboratory can be of further service to you.

Sincerely,

Roger Wang, Ph. D.  
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-18-2005

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Matrix: Water  
Batch No.: CMK11-GW1

Lab Job No.: UR511065  
Date Sampled: 11-09-2005  
Date Received: 11-10-2005  
Date Analyzed: 11-11-2005

**EPA Method 8015M (TPH-Gasoline)**  
**Reporting Unit:  $\mu\text{g/L}$  (ppb)**

Sample ID	Lab ID	DF	Gasoline Range TPH (C4-C12)	Surrogate (BFB) Rec. %
Method Detect. Limit (MDL)			50	
Method Blank		1	ND	99
MW-3	UR511065-1	50	32,800	105
MW-11	UR511065-2	50	38,500	107
MW-20	UR511065-3	1	ND	93
EB-2	UR511065-4	1	ND	101
TB-3	UR511065-5	1	ND	98

DF: Dilution Factor ( $DF \times MDL = \text{Reporting Limit}$  for the sample).  
ND: Not Detected (at the specified limit);  
Note: Surrogate recovery acceptance limits are 70-130%.

Checked & approved by:

Roger Wang, Ph.D.  
Laboratory Director



# Southland Technical Services, Inc.

## Environmental Laboratories

11-18-2005

Client: URS Corporation  
 Project: 25363714/Sears Hayward  
 Project Site: Hayward, CA  
 Matrix: Water  
 Batch No.: 1111-VOCW1

Lab Job No.: UR511065  
 Date Sampled: 11-09-2005  
 Date Received: 11-10-2005  
 Date Analyzed: 11-11-2005

**EPA 8260B (BTEX & Oxygenates by GC/MS)**  
**Reporting Units: µg/L (ppb)**

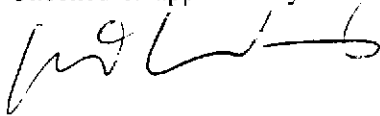
Lab ID	Method Blank	UR511065-1	UR511065-2	UR511065-3	UR511065-4	UR511065-5		MDL
Sample ID		MW-3	MW-11	MW-20	EB-2	TB-3		
DF	1	50	50	1	1	1		1
Benzene	ND	8,590	3,130	ND	ND	ND		1
Toluene	ND	694	2,690	ND	1.1c	ND		1
Ethylbenzene	ND	3,160	2,140	ND	ND	ND		1
Total Xylenes	ND	8,970	10,800	ND	3.5c	ND		2
MTBE	ND	ND	ND	ND	ND	ND		2
ETBE	ND	ND	ND	ND	ND	ND		2
DIPE	ND	ND	ND	ND	ND	ND		2
TAME	ND	ND	ND	ND	ND	ND		2
T-Butyl Alcohol	ND	ND	ND	ND	ND	ND		10
SURRO-GATE	MB %RC	%RC	%RC	%RC	%RC	%RC		Accept Limit%
Dibromofluoro-methane	98	90	88	96	88	96		79-126
Toluene-d8	108	96	98	104	104	106		79-121
Bromofluoro-benzene	96	102	104	91	98	95		71-131

MDL=Method Detection Limit, DF=Dilution Factor (**DF × MDL = Reporting Limit** for the sample),  
 ND=Not Detected (at the specified limit),%RC=Percent Recovery, MB=Method Blank.

c: Result confirmed by Sample Re-analysis

Note: Surrogate spike concentrations are 25 µg/L for all the compounds.

Checked & approved by:



Roger Wang, Ph.D.  
 Laboratory Director



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-18-2005

**EPA 8260B (BTEX)  
Batch QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No: 1111-VOCW1

Lab Job No.: UR511065  
Lab Sample ID: UR511065-3  
Date Analyzed: 11-11-2005

**I MS/MSD Report  
Unit: ppb**

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
Benzene	ND	20	26.0	23.5	130.0	117.5	10.1	30	70-130
Toluene	ND	20	25.2	22.5	126.0	112.5	11.3	30	70-130

**II. LCS Result  
Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
Benzene	22.2	20	111.0	80-120
Toluene	22.3	20	111.5	80-120

ND: Not Detected.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-18-2005

**EPA 8015M (TPH)  
Batch QA/QC Report**

Client: URS Corporation  
Project: 25363714/Sears Hayward  
Matrix: Water  
Batch No: CMK11-GW1

Lab Job No.: UR511065  
Lab Sample ID: UR511065-3  
Date Analyzed: 11-11-2005

**I MS/MSD Report  
Unit: ppb**

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
TPH-g	ND	1,000	788	867	78.8	86.7	9.5	30	70-130

**II. LCS Result  
Unit: ppb**

Analyte	LCS Report Value	True Value	Rec.%	Accept. Limit
TPH-g	1,060	1,000	106.0	80-120

ND: Not Detected (at the specified limit)





**APPENDIX J**

**URS DATA VALIDATION REPORTS FOR GROUNDWATER**

### Level III Data Validation Summary

**PROJECT:** Sears Hayward  
**LABORATORY:** Southland Technical Services, Inc. (STS)  
**MATRIX:** Groundwater  
**LAB PROJECT #:** UR511065  
**SAMPLES:** See table below

Field ID	QC Designations	Lab ID	TPH-Gasoline	BTEX, MTBE, Fuel Oxygenates
MW-20		UR511065-3	X	X
MW-11		UR511065-2	X	X
MW-3		UR511065-1	X	X
EB-2	Equipment Blank	UR511065-4	X	X
TB-3	Trip Blank	UR511065-5	X	X

Date Sampled: 11/9/05  
 BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes.      TPH-Gasoline = Total petroleum hydrocarbons, gasoline range (C<sub>4</sub>-C<sub>12</sub>).  
 Fuel Oxygenates = t-butyl alcohol (TBA), t-amyl methyl ether (TAME), di - isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE).      MTBE = Methyl tertiary butyl ether.  
 STS is certified by California Department of Health Services (Certificate Number 1986)

### DATA REVIEW MATRIX

QC Parameter	TPH-Gasoline EPA 8015M	BTEX, MTBE, Fuel Oxygenates EPA 8260B
Chain-of-custody (COC)	✓	✓
Sample Receipt	✓	✓
Holding Times	✓	✓
Method Blank	✓	✓
Surrogate Recovery	✓	✓
Laboratory Control Sample	✓	✓
Matrix Spike	✓(1)	✓(1)
Duplicate or Spike Duplicate	✓(1)	✓(1)
Equipment Blank	✓	(2)
Trip Blank	✓	✓

✓ = Quality control evaluation criteria met.      NA = Not Applicable or Not Analyzed

**Notes:**

- MS/MSD was conducted on sample MW-20. The results were within acceptance criterion.
- Two target analytes (toluene, and total xylenes) were reported as present in the equipment blank (EB) at concentrations of 1.1 µg/L, and 3.5µg/L indicating potential high bias. Data qualification was not considered necessary because the toluene and total xylenes results for the associated field samples were either reported as non-detect or were greater than five times the EB concentrations.

Summary: Based on this limited validation covering the QC parameters listed in the table above, these data are considered to be useable for meeting project objectives. However, the data user must evaluate the ultimate usability of the data obtained based on the reporting limits obtained. The table below lists the detection limits obtained for undiluted samples.

Analyte	Detection Limits Obtained
TPH-Gasoline	50
Benzene	1
Toluene	1
Ethylbenzene	1
Total Xylenes	2
MTBE	2
TBA	10
TAME, DIPE, ETBE	2

Aqueous units are micrograms per liter ( $\mu\text{g/L}$ ).

Two samples (MW-3, MW-11) required dilution for the 8260B analysis in order to quantitate detected target analytes due to the high concentration of target analytes. For these samples, there are also non-detect fuel oxygenates results with elevated reporting limits. The data user must evaluate the utility of non-detect fuel oxygenates results with elevated reporting limits.

### Level III Data Validation Summary

**PROJECT:** Sears Hayward  
**LABORATORY:** Southland Technical Services, Inc. (STS)  
**MATRIX:** Groundwater  
**LAB PROJECT #:** UR511050  
**SAMPLES:** See table below

Field ID	QC Designations	Lab ID	TPH-Gasoline	BTEX, MTBE, Fuel Oxygenates	Nitrate, Sulfate	Methane
MW-23		UR511050-7	X	X	X	X
MW-10		UR511050-3	X	X	X	X
MW-21		UR511050-6	X	X	X	X
EB-1	Equipment Blank	UR511050-10	X	X		
MW-16		UR511050-5	X	X	X	X
IW-13		UR511050-4	X	X	X	X
MW-2		UR511050-1	X	X	X	X
Dup-2	Field Duplicate of MW-2	UR511050-9	X	X		
MW-4		UR511050-2	X	X	X	X
MW-24		UR511050-8	X	X	X	X
TB-2	Trip Blank	UR511050-11	X	X		

Date Sampled: 11/8/05

TPH-Gasoline = Total petroleum hydrocarbons, gasoline range (C<sub>4</sub>-C<sub>12</sub>).

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes.

MTBE = Methyl tertiary butyl ether.

Fuel Oxygenates = t-butyl alcohol (TBA), t-amyl methyl ether (TAME), di - isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE)

STS is certified by California Department of Health Services (Certificate Number 1986)

### DATA REVIEW MATRIX

QC Parameter	TPH-Gasoline EPA 8015M	BTEX, MTBE, Fuel Oxygenates EPA 8260B	Nitrate, Sulfate EPA 352.1 / 375.4	Methane GC-FID
Chain-of-custody (COC)	✓	✓	✓	✓
Sample Receipt	✓	✓	✓	✓
Holding Times	✓	✓	✓	✓
Method Blank	✓	✓	✓	✓
Surrogate Recovery	✓	✓(3)	NA	NA
Laboratory Control Sample	✓	✓	✓	✓
Matrix Spike	(1)	(1)	NA	NA
Duplicate or Spike Duplicate	(1)	(1)	NA	✓(2)
Field Duplicate	✓	✓	✓	✓
Trip Blank	✓	✓	NA	NA
Equipment Blank	✓	✓	NA	NA

✓ = Quality control evaluation criteria met.

NA = Not Applicable or Not Analyzed

**Notes:**

- MS/MSD was conducted on non-site related sample matrix; therefore, the MS/MSD results obtained may not be fully representative of the accuracy and precision of the analysis on the site-specific sample matrix.
- Laboratory Duplicate analysis was conducted on sample MW-23. The results were within acceptance criterion.

3. One surrogate recovery for sample MW-21 was slightly below the laboratory's acceptance criterion. However data qualification was not considered necessary since the results for the other two surrogates were within the laboratory's acceptance criterion.

Summary: Based on this limited validation covering the QC parameters listed in the table above, these data are considered to be useable for meeting project objectives. However, the data user must evaluate the ultimate usability of the data obtained based on the reporting limits obtained. The table below lists the detection limits obtained for undiluted samples.

Analyte	Detection Limits Obtained
TPH-Gasoline	50
Benzene	1
Toluene	1
Ethylbenzene	1
Total Xylenes	2
MTBE	2
TBA	10
TAME, DIPE, ETBE	2
Nitrate	10
Sulfate	1000
Methane	5

Aqueous units are micrograms per liter ( $\mu\text{g/L}$ ).

Seven samples (MW-2, MW-4, MW-10, MW-16, MW-21, MW-24, and Dup-2) required dilution for the EPA 8015M and/or 8260B analyses in order to quantitate detected target analytes. For these samples, there are also non-detect fuel oxygenates results with elevated reporting limits. The data user must evaluate the utility of non-detect fuel oxygenates results with elevated reporting limits.

### Level III Data Validation Summary

**PROJECT:** Sears Hayward  
**LABORATORY:** Southland Technical Services, Inc. (STS)  
**MATRIX:** Groundwater  
**LAB PROJECT #:** UR511044  
**SAMPLES:** See table below

Field ID	QC Designations	Lab ID	TPH-Gasoline	BTEX, MTBE, Fuel Oxygenates	Nitrate, Sulfate	Methane
MW-19		UR511044-7	X	X	X	X
MW-13		UR511044-4	X	X	X	X
MW-22		UR511044-8	X	X	X	X
MW-9		UR511044-2	X	X	X	X
MW-12		UR511044-3	X	X	X	X
MW-15		UR511044-5	X	X	X	X
MW-8		UR511044-1	X	X	X	X
MW-18		UR511044-6	X	X	X	X
Dup-1	Field Duplicate of MW-18	UR511044-9	X	X		
TB-1	Trip Blank	UR511044-10	X	X		

Date Sampled: 11/7/05

TPH-Gasoline = Total petroleum hydrocarbons, gasoline range (C<sub>4</sub>-C<sub>12</sub>).

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes.

MTBE = Methyl tertiary butyl ether.

Fuel Oxygenates = t-butyl alcohol (TBA), t-amyl methyl ether (TAME), di - isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE)

STS is certified by California Department of Health Services (Certificate Number 1986)

### DATA REVIEW MATRIX

QC Parameter	TPH-Gasoline EPA 8015M	BTEX, MTBE, Fuel Oxygenates EPA 8260B	Nitrate, Sulfate EPA 352.1 / 375.4	Methane GC-FID
Chain-of-custody (COC)	✓	✓	✓	✓
Sample Receipt	✓	✓	✓	✓
Holding Times	✓	✓	✓	✓
Method Blank	✓	✓	✓	✓
Surrogate Recovery	✓	✓	NA	NA
Laboratory Control Sample	✓	✓	✓	✓
Matrix Spike	✓(1)	✓(1)	NA	NA
Duplicate or Spike Duplicate	✓(1)	✓(1)	NA	✓(2)
Field Duplicate	✓	✓	NA	NA
Trip Blank	✓	✓	NA	NA
Equipment Blank	✓	✓	NA	NA

✓ = Quality control evaluation criteria met.

NA = Not Applicable or Not Analyzed

**Notes:**

- MS/MSD was conducted on sample MW-9. The results were within acceptance criterion.
- Laboratory duplicate analysis was conducted on sample MW-23 (UR511050). The results were within acceptance criterion.

Summary: Based on this limited validation covering the QC parameters listed in the table above, these data are considered to be useable for meeting project objectives. However, the data user must evaluate the ultimate usability of the data obtained based on the reporting limits obtained. The table below lists the detection limits obtained for undiluted samples.

Analyte	Detection Limits Obtained
TPH-Gasoline	50
Benzene	1
Toluene	1
Ethylbenzene	1
Total Xylenes	2
MTBE	2
TBA	10
TAME, DIPE, ETBE	2
Nitrate	10
Sulfate	1000
Methane	5

Aqueous units are micrograms per liter ( $\mu\text{g/L}$ ).

Three samples (MW-8, MW-18, and DUP-1) required dilution for the 8015M and 8260B analyses in order to quantitate detected target analytes. For these samples, there are also non-detect BTEX and/or fuel oxygenates results with elevated reporting limits. The data user must evaluate the utility of non-detect BTEX and/or fuel oxygenates results with elevated reporting limits.



**APPENDIX K**

**LABORATORY REPORT AND CHAIN OF CUSTODY DOCUMENT  
FOR 2005 FOURTH QUARTER SOIL GAS SAMPLES**



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-18-2005

Mr. Joe Liles  
URS Corporation  
2020 E. First Street, Suite 400  
Santa Ana, CA 92705

Project: 25363714/Sears Hayward  
Project Site: Hayward, CA  
Sample Date: 11-08/09-2005  
Lab Job No.: UR511065V

Dear Mr. Liles:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 11-10-2005 and analyzed for the following parameters:

Gasoline Range TPH (EPA 8015M)  
BTEX & MTBE by GC/MS (EPA 8260B)

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions and with a chain of custody record attached.

STS Environmental Laboratory is certified by CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at (323) 888-0728 if our laboratory can be of further service to you.

Sincerely,

Roger Wang, Ph. D.  
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-18-2005

Client:	URS Corporation	Lab Job No.:	UR511065V
Project:	25363714/Sears Hayward		
Project Site:	Sears Hayward	Date Sampled:	11-08-2005
Matrix:	Vapor samples in Summa Canisters	Date Received:	11-10-2005
Batch No. for TPH-g:	AMK11-GV	Date Analyzed:	11-11-2005
Batch No. for 8260B:	1111-VOAV	Date Analyzed:	11-11-2005

**EPA 8260B (BTEX, MTBE) & 8015M (Gasoline)**

Reporting Units:  $\mu$ L/L (ppm-Vol)

Sample ID	Lab ID	DF	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Gasoline Range TPH*	Surrog. (BFB) Rec%
Method Detect. Limit (MDL)			0.033	0.033	0.033	0.033	0.033	1.3	
Method Blank		1	ND	ND	ND	ND	ND	ND	105
VW-1	UR511065-6	1	ND	ND	ND	ND	ND	ND	105
VW-2	UR511065-7	1	ND	ND	ND	ND	ND	ND	101
VW-3	UR511065-8	1	ND	ND	ND	ND	ND	ND	103
VW-4	UR511065-9	1	ND	ND	ND	ND	ND	ND	99
VW-5	UR511065-10	1	ND	ND	ND	ND	ND	ND	101

\* Gasoline Range TPH are hydrocarbons in carbon range C4 - C12.

DF: Dilution Factor ( $DF \times MDL = \text{Reporting Limit}$  for the sample).

ND: Not Detected (at the specified limit)

Note: Surrogate Spike Conc.: 20 ppb. Recovery acceptable limit: 70-130%.



**Southland Technical Services, Inc.**  
Environmental Laboratories

11-18-2005

**EPA 8015M & 8260B (BTEX)  
Batch QA/QC Report**

Client: URS Corporation  
Project: Sears Hayward  
Matrix: Vapor samples  
Batch No. for TPH-g: AMK11-GV  
Batch No. for 8260B: 1111-VOAV

Lab Job No.: UR511065V  
Lab Sample ID: G511073-7  
Date Analyzed: 11-11-2005  
Date Analyzed: 11-11-2005

**I. Sample/Sample Dup Report  
Reporting Units:  $\mu$ L/L (ppm-Vol)**

Analyte	MB	Sample Conc.	Sample Duplicate	% RPD	%RPD Accept. Limit
MTBE	ND	ND	ND	0	30
Benzene	ND	ND	ND	0	30
Toluene	ND	ND	ND	0	30
Ethyl Benzene	ND	ND	ND	0	30
Total Xylenes	ND	ND	ND	0	30
TPH-g	ND	ND	ND	0	30

**II. LCS Result  
Unit: ppb**

Analyte	LCS Value	True Value	Rec.%	Accept. Limit
Benzene	24	20	120.0	80-120
Toluene	24	20	120.0	80-120
TPH-g	854	1000	85.4	80-120

ND: Not Detected.

# URS CORPORATION

2020 East First Street, Suite 400  
 Santa Ana, CA 92705  
 (714) 835-6886  
 FAX (714) 667-7147

Date: 11 / 9 / 05

## CHAIN OF CUSTODY RECORD

Page 1 of 1

22R511065V

Data Requested in GISKey Format

Lab Name:		URS Project/PO Number:		Requested Analyses:										Special Instructions:									
SOUTHLAND TECHNICAL SERVICES		25363714.05034																					
Client Name/Project Name/Location:		GeoTracker Information:																					
SEARS, HARWARD																							
URS Project Manager:		EDF Reporting: Y N Global ID:																					
JOE LESLES																							
Sampler Name and Signature		COELT Log Number:																					
S. TURNER																							
Sample Name:	Sample Date:	Sample Time:	Preserved:	Matrix:	Container Type:	# of Cont.:	TPH <sub>9</sub> (8015M)	BTEX FUEL OIL (82205)	TPH <sub>9</sub> , BTEX (103)											HOLD			
MW-20 UR511065-3	11/9/05	0856	Y N	HCl	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	3	X	X															
MW-11 -2	"	1019	Y N	HCl	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	3	X	X															
MW-3 -1	"	1134	Y N	HCl	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	3	X	X															
EB-2 -4	"	1053	Y N	HCl	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	3	X	X															
TO-3 -5	"	—	Y N	HCl	Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA	1																	X
VW-1 -6	11/8/05	1025	Y N		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA SUMMA	1			X														
VW-3 -8	11/8/05	1311	Y N		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA SUMMA	1			X														
VW-4 -9	11/9/05	1340	Y N		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA SUMMA	1			X														
VW-5 -10	11/9/05	1401	Y N		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA SUMMA	1			X														
VW-2 -7	11/9/05	1107	Y N		Acetate SS. Brass Jar Encore ml Amb. Plas. Glass VOA SUMMA	1			X														
Relinquished by:		Date:	Received By:		Date/Time:	Turnaround Time: (Check)		Lab Use Only															
[Signature]		11/10/05	[Signature]		11/10/05 9:30	Same Day: _____ 72 Hour: _____		Cooler Temperature*: 4°C															
Relinquished by:		Date:	Received By:		Date/Time:	24 Hour: _____ 5 Day: _____		*Record upon arrival															
Relinquished by:		Date:	Received By:		Date/Time:	48 Hour: _____ Standard: X		URS															

**APPENDIX L**

**URS DATA VALIDATION REPORT FOR SOIL GAS**

### Level III Data Validation Summary

**PROJECT:** Sears Hayward  
**LABORATORY:** Southland Technical Services, Inc. (STS)  
**MATRIX:** Vapor  
**LAB PROJECT #:** UR511065V  
**SAMPLES:** See table below

Field ID	Lab ID	TPH-Gasoline / BTEX/MTBE
VW-1	UR511065-6	X
VW-2	UR511065-7	X
VW-3	UR511065-8	X
VW-4	UR511065-9	X
VW-5	UR511065-10	X

Date Sampled: 11/8, 9/05  
 BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes.  
 STS is certified by California Department of Health Services (Certificate Number 1986)

TPH-Gasoline = Total petroleum hydrocarbons, gasoline range (C<sub>4</sub>-C<sub>12</sub>).  
 MTBE = Methyl tertiary butyl ether.

### DATA REVIEW MATRIX

QC Parameter	TPH-Gasoline / BTEX/MTBE EPA 8015M, 8260B
Chain-of-custody (COC)	✓
Sample Receipt	✓
Holding Times	✓
Method Blank	✓
Surrogate Recovery	✓
Laboratory Control Sample	✓
Matrix Spike	NA
Duplicate or Spike Duplicate	✓(1)
Field Duplicate	NC
Trip Blank	NC
Equipment Blank	NC

✓ = Quality control evaluation criteria met.

NA = Not Applicable or Not Analyzed

NC = Not Collected

**Notes:**

1. Non-project sample was utilized for the laboratory duplicate analysis.

**Summary:** Based on this limited validation covering the QC parameters listed in the table above, these data are considered to be useable for meeting project objectives. However, the data user must evaluate the ultimate usability of the data obtained based on the reporting limits obtained. The table below lists the detection limits obtained for undiluted samples.

Analyte	Detection Limits Obtained
TPH-Gasoline	1.3
Benzene	0.033
Toluene	0.033
Ethylbenzene	0.033
Total Xylenes	0.033
MTBE	0.033

Vapor units are in parts per million – µL/L (ppm- Vol).

**APPENDIX M**  
**WASTE MANIFESTS FOR SOIL**



**TPS Technologies Soil Recycling**  
Non-Hazardous Soils

Date of Shipment: **11-04-05**      Responsible for Payment: **Transporter**      Transporter Track #: **508-210T**      Facility #: **AD7**      Given by TPS: **25944**      Load #: **10.01**

Generator's Name and Billing Address: **Sears Roebuck and Company**  
**3333 Beverly Rd. Hoffman Estates, Ill. 60179**  
**Ms. Dawn Jess, Dept. 768EV, A2-242A Env. Tech Serv.**

Generator's Phone #: \_\_\_\_\_      Generator's US EPA ID No. \_\_\_\_\_  
 Person to Contact: \_\_\_\_\_  
 FAX#: \_\_\_\_\_      Customer Account Number with TPS: \_\_\_\_\_

Consultant's Name and Billing Address: **CRS**  
**911 Wilshire Blvd, #700**  
**Los Angeles, CA 90017**

Consultant's Phone #: **714 648-2793**  
 Person to Contact: **Scott Rowlands**  
 FAX#: \_\_\_\_\_      Customer Account Number with TPS: \_\_\_\_\_

Generation Site (Transport from): (name & address)  
**Sears Maintenance Shop**  
**660 W. Winton Ave.**  
**Hayward, Ca.**

Site Phone #: \_\_\_\_\_      BTEX Levels \_\_\_\_\_  
 Person to Contact: \_\_\_\_\_      TPH Levels \_\_\_\_\_  
 FAX#: \_\_\_\_\_      AVG. Levels \_\_\_\_\_

Designated Facility (Transport to): (name & address)  
**TPS Technologies**  
**12328 Hibiscus Rd.**  
**Adelanto, CA 92301-1700**

Facility Phone #: **(800) 862-8001**      Facility Permit Numbers \_\_\_\_\_  
 Person to Contact: **Dellene Jeffrey**  
 FAX#: **(760) 246-8004**

Transporter Name and Billing Address:  
**American Integrated Services, Inc.**  
**P.O. Box 92316**  
**Long Beach, CA 90809-2316**

Transporter's Phone #: **(310) 522-1188**      Transporter's US EPA ID No.: **CAR000148338**  
 Person to Contact: **Melynda Borrego**      Transporter's DOT No.: \_\_\_\_\_  
 FAX#: **(310) 522-0474**      Customer Account Number with TPS: **7704908**

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>	<b>24 DM</b> <b>12 PAINTS</b>		<b>12,000</b> <b>(2,000)</b>	<b>31580</b>	<b>5700</b>
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>	<b>360</b>		<b>10,000</b>		

List any exception to items listed above:  
**AIS Project # 26001-71**      **26596**

Generator's and/or consultant's certification: *I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.*


Print or Type Name: **On behalf of Generator - M Borrego**      Generator       Consultant       Signature and date:       Month **11** Day **3** Year **05**

Transporter's certification: *I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.*

Print or Type Name: **George R. Baird**      Signature and date:       Month **11** Day **04** Year **05**

Discrepancies: \_\_\_\_\_

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: \_\_\_\_\_      Signature and date:       **11-11-05**

Generator and/or Consultant

Transporter

Recycling Facility

# TPS Technologies Soil Recycling

## Non-Hazardous Soils

Date of Shipment: \_\_\_\_\_ Responsible for Payment: **Transporter** Transporter Track #: \_\_\_\_\_ Facility #: **A07** Given by TPS: **25944** Load #: **112**

Generator's Name and Billing Address:  
**Steve Rosouck and Company**  
**3333 Beverly Rd. Hoffman Estates, Ill. 80179**  
**ms. Dawn Jess, Dept. 768EV, A2-242A Env. Tech Serv.**

Generator's Phone #: \_\_\_\_\_ Generator's US EPA ID No. \_\_\_\_\_  
Person to Contact: \_\_\_\_\_  
FAX#: \_\_\_\_\_ Customer Account Number with TPS: \_\_\_\_\_

Consultant's Name and Billing Address:  
**URS**  
**911 Wilshire Blvd, #700**  
**Los Angeles, CA 90017**

Consultant's Phone #: **714 848-2793**  
Person to Contact: **Scott Rowlands**  
FAX#: **714-667-7147** Customer Account Number with TPS: \_\_\_\_\_

Generation Site (Transport from): (name & address)  
**Soils Remediation Group**  
**680 W. Winton Ave.**  
**Hayward, Ca.**

Site Phone #: \_\_\_\_\_ BTEX Levels \_\_\_\_\_  
Person to Contact: \_\_\_\_\_ TPH Levels \_\_\_\_\_  
FAX#: \_\_\_\_\_ AVG. Levels \_\_\_\_\_

Designated Facility (Transport to): (name & address)  
**TPS Technologies**  
**12328 Hibiscus Rd.**  
**Adelanto, CA 92301-1700**

Facility Phone #: **(800) 982-8001** Facility Permit Numbers \_\_\_\_\_  
Person to Contact: **Dellena Jeffrey**  
FAX#: **(760) 246-8004**

Transporter Name and Billing Address:  
**American International Services, Inc.**  
**P.O. Box 92318**  
**Long Beach, CA 90809-2318**

Transporter's Phone #: **(310) 522-1168** Transporter's US EPA ID No.: **CAR000148338**  
Person to Contact: **Melynda Borrego** Transporter's DOT No.: \_\_\_\_\_  
FAX#: **(310) 522-0474** Customer Account Number with TPS: **7704808**

Description of Soil	Molsture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>	<b>12 drums</b>		<b>116600</b>	<b>8820</b>	<b>7780</b>
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					<b>3.89</b>

List any exception to items listed above:  
**AIS Project # 26001-71** **128968**


Generator's and/or consultant's certification: *I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.*

Print or Type Name: \_\_\_\_\_ Generator  Consultant  Signature and date:  Month: **11** Day: **7** Year: **5**

Transporter's certification: *I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.*

Print or Type Name: \_\_\_\_\_ Signature and date: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

Discrepancies: \_\_\_\_\_

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:  
Print or Type Name: \_\_\_\_\_ Signature and date:  **11-14-5**

Generator and/or Consultant

Transporter

Recycling Facility