



RECEIVED

3:29 pm, Feb 05, 2009

Alameda County
Environmental Health

January 21, 2009

Mr. Muhammad Jamil
40092 Davis Street
Fremont, California 94538

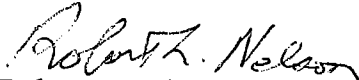
Re: Groundwater Monitoring Well Installation Report
Eagle Gas Station
4301 San Leandro Street
Oakland, California

Dear Mr. Jamil:

Enclosed is your copy of the Groundwater Monitoring Well Installation Report, Eagle Gas Station, for your review. If you concur with the report, please sign and date the enclosed perjury statement and return the statement to me using the enclosed Fed Ex letter packet.

Please do not hesitate to call me if you have any questions, at 510-307-9943 Ext. 237.

Sincerely,
CLEARWATER GROUP


Robert L. Nelson, PG, CEG
Senior Geologist

Mr. Jerry Wickham
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Eagle Gas Station
4301 San Leandro Street
Oakland, California 94601

LOP SID# 2118
Fuel Leak Case No. RO0000096
USTCF Claim No. 014551
Clearwater Group Project # ZP046K

Dear Mr. Wickham,

As the legally authorized representative of the above-referenced project location, I have reviewed the *Groundwater Monitoring Well Installation Report* prepared by my consultant of record, Clearwater Group. I declare, under penalty of perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Sincerely,



Mr. Muhammad Jamil
40092 Davis Street
Fremont, California 94538

Date: 2-5-09



January 21, 2009

Mr. Jerry Wickham, PG, CEG, CHG
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Groundwater Monitoring Well Installation Report
Eagle Gas Station
4301 San Leandro Street
Oakland, California 94601

Fuel Leak Case No. RO0000096
Clearwater Group Project Number ZP046K

Dear Mr. Wickham:

Clearwater Group (Clearwater) is pleased to present this Groundwater Monitoring Well Installation Report, for the installation of onsite well MW-11D and offsite wells MW-9/MW-9D and MW-10/MW-10D, for the Eagle Gas Station, 4301 San Leandro Street, in Oakland (**Figure 1**). The work was performed in accordance with Clearwater's *2008 Soil and Groundwater Investigation Work Plan* (Work Plan) dated July 2, 2008. The ACEH approved the Work Plan in a letter dated September 4, 2008 (**Attachment A**). This work was completed under Alameda County Public Works Agency permit numbers W2008-0846 to W2008-0850 (**Attachment A**).

Access agreements were obtained from the offsite property owners prior to installing the offsite wells. Offsite well pair MW-10 and MW-10D was installed at the north end of the alley (former railroad spur) at the Vulcan Lofts, 4401 San Leandro Street, on December 2, 2008. Offsite well pair MW-9 and MW-9D was installed in front of Creative Iron, at 926 High Street, on December 3, 2008. Deep-zone well (MW-11D) was installed onsite on December 1, 2009. The locations of the new wells, along with the previously installed wells, are shown on **Figures 2 and 3**.

Each well location was pre-drilled on November 20, 2008, by RSI Drilling of Woodland, California, using a Geoprobe® 6600 direct-push drill and a dual-tube continuous soil sampler. The well locations were pre-drilled in order to determine the optimum well screen depth intervals, prior to installing the wells. The well borings were logged, by a California



Professional Geologist, according to the Unified Soils Classification System. **Attachment B** presents the lithologic descriptions and well construction of the wells.

Onsite, deep-zone, well MW-11D was relocated approximately 15 feet due south, away from its boring location, due to overhead power lines. In the Work Plan this planned well was originally numbered MW-3D; however, since its location was moved a significant distance away from existing shallow-zone well MW-3, its well name was changed from the proposed name to MW-11D.

The five new wells were drilled and installed using hollow-stem augers, by HEW Drilling, of Menlo Park, California, from December 1 through December 3, 2008. All the wells were installed using the same general construction, consisting of 2-inch diameter PVC well casings with 0.010-inch machine cut slots, and filter packs consisting of #2/12 sand. The well seals consisted of 2-foot thick layers of 3/8-inch diameter bentonite pellets. All the wells were installed as ground level completions. **Table 1** and **Attachment B** present the well construction details.

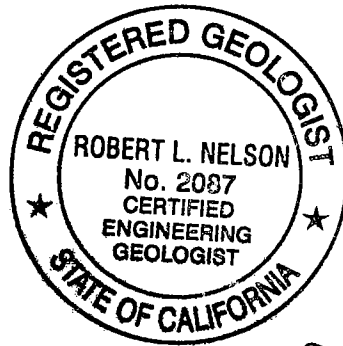
The new wells were surveyed, by Kister, Savio & Rei, of Richmond, California. **Table 2** presents the well locations, in northings and eastings (California Coordinate System NAD 83, Zone III), along with their top of casing elevations referenced to the North American Vertical Datum of 1988 (NAVD 88).

The wells were developed on December 5, 2008, by Blaine Tech Services (Blaine), of San Jose, California. Blaine used a combination of surge blocking and pumping with a submersible pump to remove loose sediment from each well and develop the wells. Approximately 10 well volumes were purged from the wells, except for well MW-10D, which was purged of approximately 6.25 well volumes, due to a calculation error. Blaine's field notes for the well developments are presented in **Attachment C**. The investigation derived wastes from the well installations have been disposed of at an appropriate disposal facility.

Clearwater will submit Well Completion Records (Form 188) to the California Department of Water Resources and the Alameda County Department of Public Works.

The new wells were initially sampled on December 9, 2008, along with selected site wells, for the Fourth Quarter 2008 Groundwater Monitoring Event. The *Fourth Quarter 2008 Groundwater Monitoring Report* is in preparation. Please do not hesitate to contact me if you have any questions, or concerns, at rnelson@clearwatergroup.com or at 510-307-9943, extension 237.

Sincerely,
CLEARWATER GROUP

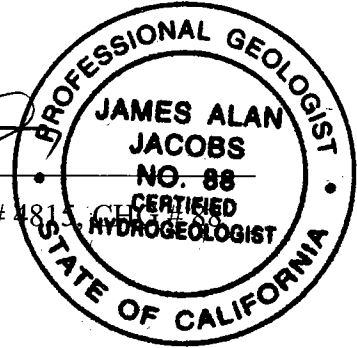


Robert L. Nelson

Robert L. Nelson, PG #6270, CEG #2087
Senior Geologist

James A. Jacobs

James A. Jacobs, PG # 4813, CEG # 88
Chief Hydrogeologist



CC: Mr. Muhammad Jamil
4301 Davis Street
Fremont, California 94538-2605

Figures:

Figure 1: Site Vicinity Map
Figure 2: Site Plan
Figure 3: Offsite Groundwater Monitoring Well Locations

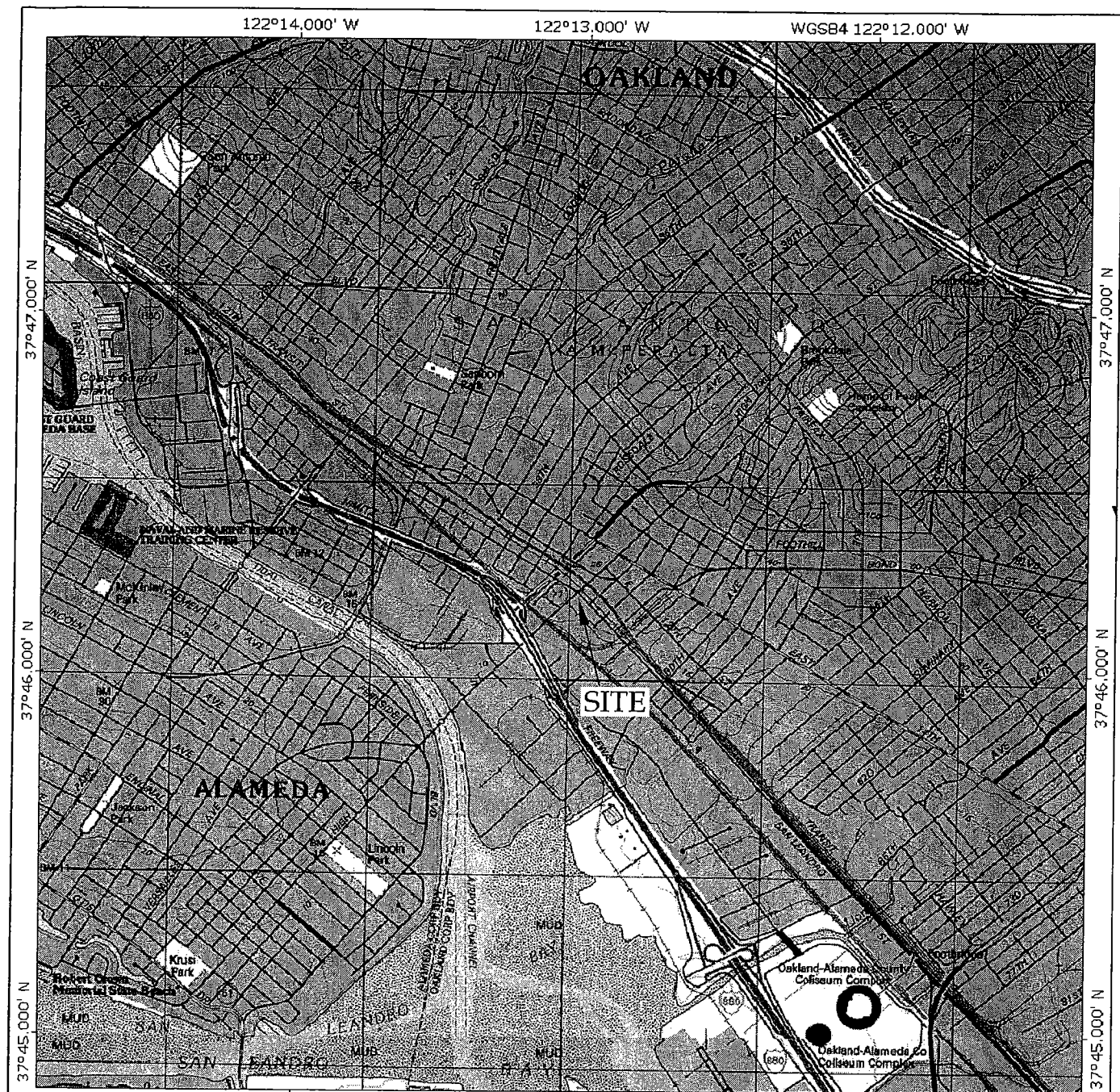
Tables:

Table 1: Well Construction Details
Table 2: Well Locations and Top of Casing Elevations

Attachments:

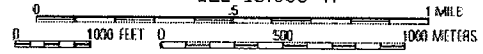
Attachment A: Alameda County Environmental Health Services letter, dated September 4, 2008
Alameda County Public Works Agency – Water Resources Well Permit Number 1226104201610
Attachment B: Well Construction Logs
Attachment C: Blaine Tech Services, Well Development Field Notes, dated December 5, 2008

FIGURES

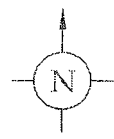


TN* / MN
15°

122°14.000' W 122°13.000' W WGS84 122°12.000' W



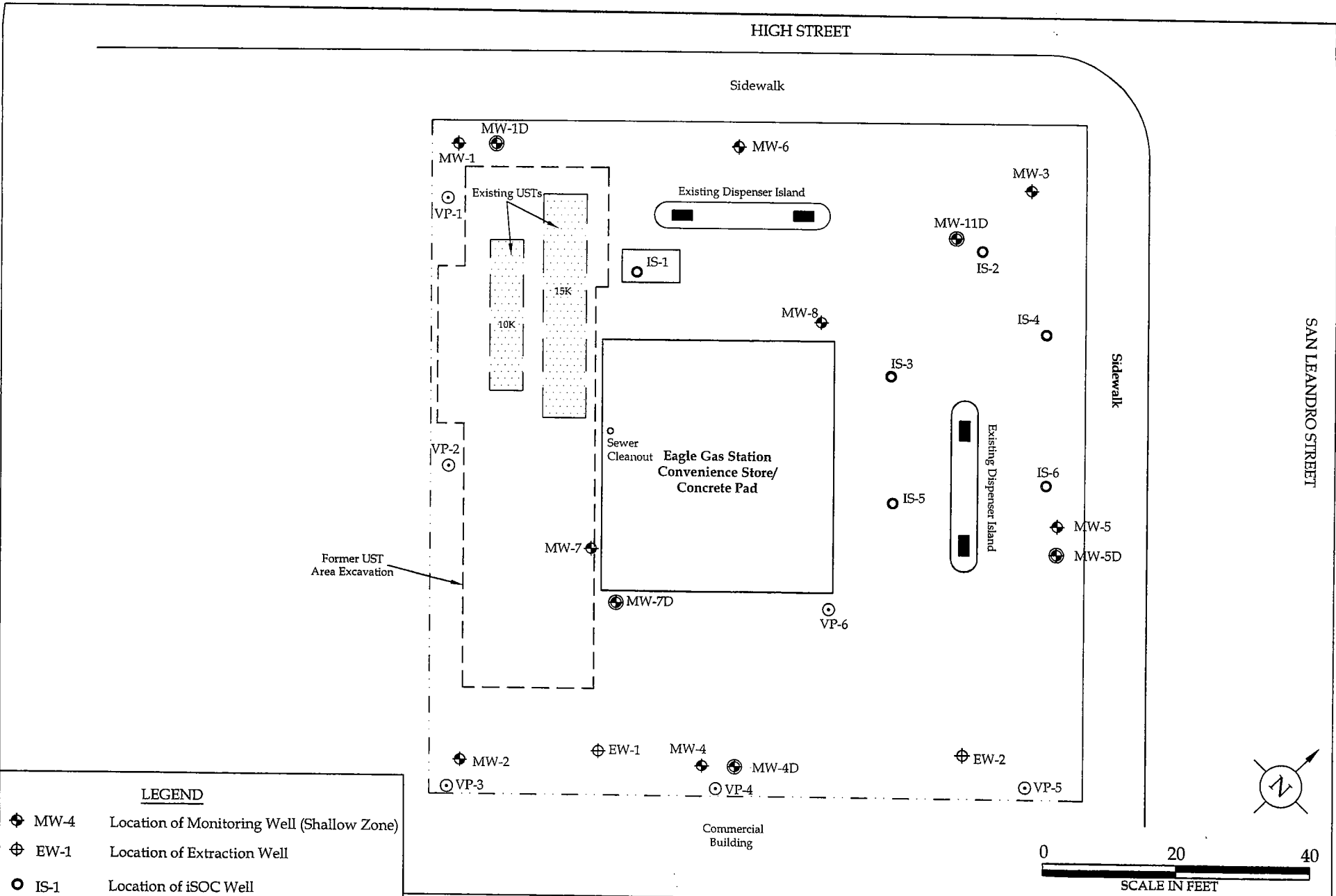
Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)



SITE VICINITY MAP
Eagle Gas
4301 San Leandro Street
Oakland, California

CLEARWATER GROUP

Project No. ZP046	Figure Date 1/08	Figure 1
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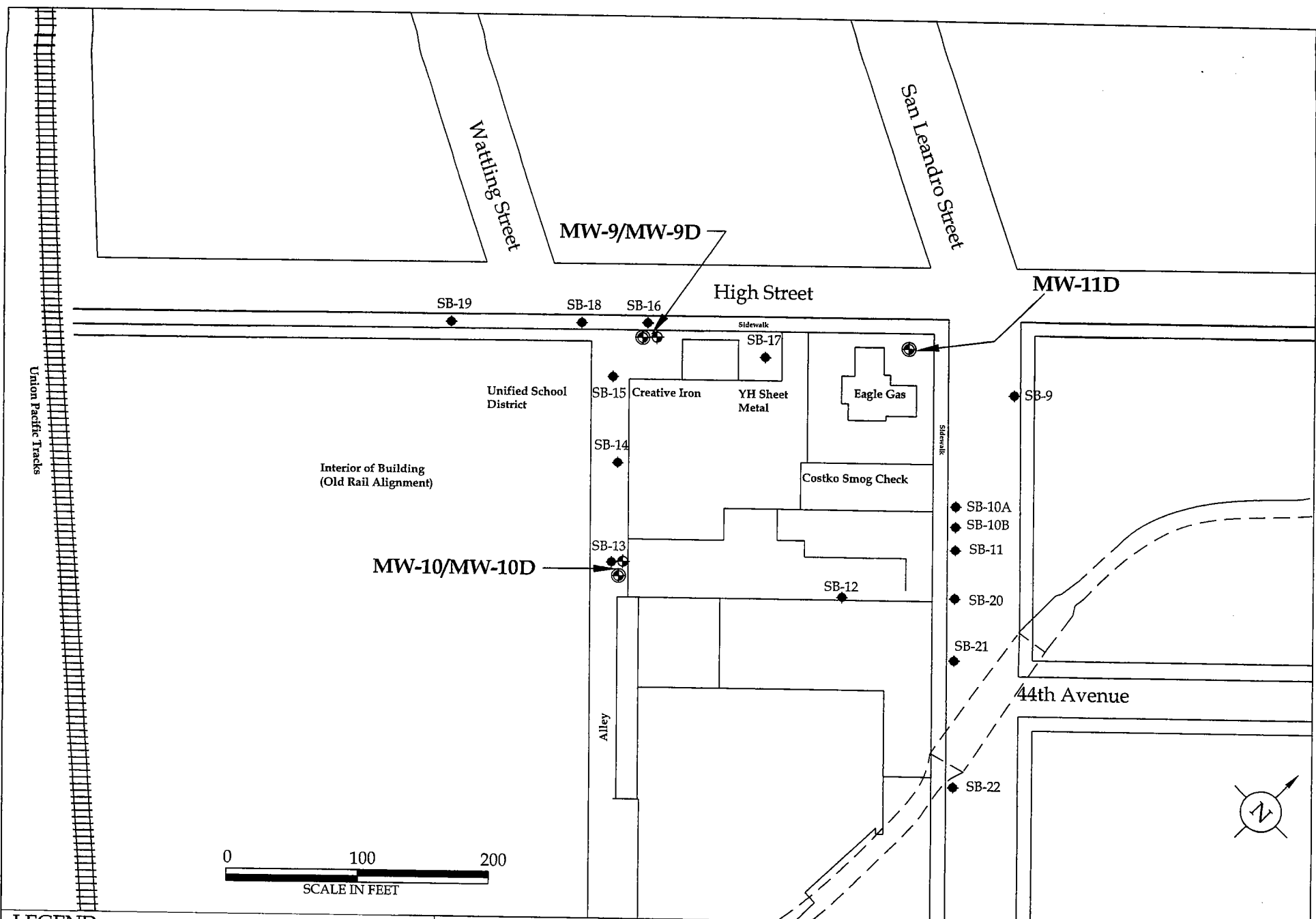
LEGEND

- ⊕ MW-4 Location of Monitoring Well (Shallow Zone)
- ⊕ EW-1 Location of Extraction Well
- IS-1 Location of iSOC Well
- ⊕ MW-1D Location of Monitoring Well (Deep Zone)
- ⊙ VP-1 Soil Vapor Well Location
- — — Property Line

Site Plan
 Eagle Gas
 4301 San Leandro Street
 Oakland, California

CLEARWATER GROUP

Project No. ZP046K	Figure Date 1/09	Figure 2
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LEGEND	
	Shallow (Zone A) Groundwater Monitoring Well Location
	Deep (Zone B) Groundwater Monitoring Well
	2007 Soil Boring Location

Offsite Groundwater Monitoring Well Locations
 Eagle Gas
 4301 San Leandro Street
 Oakland, California

CLEARWATER GROUP		
Project No. ZP046K	Figure Date 12/08	Figure 3

TABLES

TABLE 1
WELL CONSTRUCTION DETAILS
Eagle Gas
4301 San Leandro Street
Oakland, California
Clearwater Group Project No. ZP046

Well I.D.	Date Installed	Installed by	Borehole Diameter (inches)	Casing Diameter (inches)	Depth of Borehole (feet bgs)	Cement (feet bgs)	Bentonite Seal (feet bgs)	Filter Pack (feet bgs)	Filter Pack Material	Screened Interval (feet bgs)	Slot Size (inches)
MW-1	9/26/2000	Western Hazmat	8	2	25	0-5	5-7	7-25	#2/12 sand	10-25	0.01
MW-1D	10/4/2007	Gregg Drilling	8	2	45	0-31	31-33	33-45	#2/12 sand	35-45	0.01
MW-2	9/26/2000	Western Hazmat	8	2	25	0-5	5-7	7-25	#2/12 sand	10-25	0.01
MW-3	9/26/2000	Western Hazmat	8	2	25	0-5	5-7	7-25	#2/12 sand	10-25	0.01
MW-4	12/19/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
MW-4D	12/19/2005	HEW Drilling	8	2	45	0-30	30-33	33-45	#3 sand	35-45	0.02
MW-5	12/15/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
MW-5D	12/15/2005	HEW Drilling	8	2	45	0-30	30-33	33-45	#3 sand	35-45	0.02
MW-6	12/20/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
MW-7	12/19/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
MW-7D	10/4/2007	Gregg Drilling	8	2	45	0-31	31-33	33-45	#2/12 sand	35-45	0.01
MW-8	12/21/2005	HEW Drilling	8	2	25	0-5	5-8	8-25	#3 sand	10-25	0.02
IS-1	12/20/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-2	12/20/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-3	12/21/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-4	12/20/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-5	12/21/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
IS-6	12/20/2005	HEW Drilling	8	2	25	0-3	3-6	6-25	#3 sand	10-25	0.02
EW-1	12/16/2005	HEW Drilling	8	4	25	0-3	3-6	6-25	#3 sand	10-25	0.02
EW-2	12/16/2005	HEW Drilling	8	4	25	0-3	3-6	6-25	#3 sand	10-25	0.02
MW-9	12/3/2008	HEW Drilling	8	2	15	0-2	2-4	4-15	#2/12 sand	5-15	0.01
MW-9D	12/3/2008	HEW Drilling	8	2	40	0-24	24-26*	28-40	#2/12 sand	30-40	0.01
MW-10	12/2/2008	HEW Drilling	8	2	15	0-2	2-4	4-15	#2/12 sand	5-15	0.01
MW-10D	12/2/2008	HEW Drilling	8	2	52	0-36	36-38*	40-52	#2/12 sand	42-52	0.01
MW-11D	12/1/2008	HEW Drilling	8	2	45	0-30	30-32*	38-45	#2/12 sand	40-45	0.01

Note: All depths and intervals are below ground surface (bgs)
* = Borehole partially caved after setting filter pack

Table 2
 Well Locations and Top of Casing Elevations
 Well Installation Report
 Eagle Gas Station
 4301 San Leandro Street
 Oakland, California

Well Number	Northing	Easting	Top of Casing Elevation	Ground surface Elevation
MW-9	2107428.32	6065221.17	25.35	25.73
MW-9D	2107430.09	6065219.91	25.49	25.71
MW-10	2107278.00	6065318.30	25.23	25.57
MW-10D	2107279.90	6065316.30	25.29	25.63
MW-11D	2107548.94	6065375.91	27.23	27.52

Survey performed by Kister, Savio & Rei, of Richmond, California on January 12 and 20, 2009. Elevations are referenced to North American Vertical Datum of 1988. The horizontal datum is the California Coordinate System NAD 83, Zone III

ATTACHMENTS

ATTACHMENT A

Alameda County Environmental Health Services
Letter dated September 4, 2008

Alameda County Public Works Agency
Water Resources Well Permit No. 1226104201610

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 4, 2008

Ms. Farah Naz c/o
Mr. Muhammad Jamil
40092 Davis Street
Fremont, CA 94538

Subject: Fuel Leak Case No. RO0000096 and Geotracker Global ID T0600143649, Eagle Gas,
4301 San Leandro Street, Oakland, CA 94601

Dear Ms. Naz:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted document entitled, "2008 Soil and Groundwater Investigation Work Plan," dated July 2, 2008 and received by ACEH on July 17, 2008. The Work Plan proposes:

- conducting an off-site passive soil vapor survey;
- installing off-site wells and one on-site well;
- determining whether the 42nd Avenue freeway on-ramp is a groundwater discharge area;
- performing a high-vacuum dual phase extraction (DPE) pilot test.

The proposed scope of work is generally acceptable with the exception of the proposed off-site passive soil vapor survey. As discussed in technical comment 1, we do not concur with the implementation of the proposed passive soil vapor survey. Well installation, determining whether the 42nd Avenue freeway on-ramp is a groundwater discharge area, and the DPE pilot test may be implemented provided that the technical comments below are addressed and incorporated during field implementation of the proposed activities. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Proposed Passive Soil Vapor Sampling (Gore Sorber[®]) Survey.** The proposed passive soil vapor sampling (Gore Sorber[®]) survey is proposed largely within areas where soil and groundwater sampling was previously conducted. The purpose of many of the proposed lines of passive soil vapor samples appears to be corroboration of previous soil and groundwater sampling results. Since the soil and grab groundwater sample data provide much more direct evidence of contamination than the proposed passive soil vapor sampling survey, corroboration of the soil and grab groundwater sample data does not appear to add significant value to the investigation. Therefore, we do not concur with the proposed passive soil vapor sampling (Gore Sorber[®]) survey. If you choose to implement the passive soil vapor survey, we recommend that the State Water Resources Control Board UST Cleanup Fund not reimburse you for the costs.

2. **Proposed Monitoring Wells.** The proposed locations for monitoring wells MW-3D, MW-9, MW-9D, MW-10, and MW-10D are acceptable. Pilot soil borings that are continuously sampled for logging purposes or CPT borings are to be used to select filter pack and screen intervals for the wells. In order to prevent the potential for cross-contamination, filter packs and screen intervals must not extend between shallow first-encountered groundwater and lower permeable intervals. In no case shall the filter pack or screen interval for the shallow wells extend below a depth of 25 feet bgs. The deeper wells shall be installed within the lower permeable unit typically encountered at depths of approximately 35 to 45 feet bgs and must not have screen intervals longer than 10 feet. Please present documentation of the well installation in the DPE Pilot Test Report below. Groundwater sampling results are to be incorporated into the quarterly groundwater monitoring reports requested below.
3. **Groundwater Monitoring Program.** The proposed elimination of quarterly groundwater sampling of wells MW-6, IS-1, IS-2, IS-3, IS-6, and EW-1 is approved. Please submit future groundwater monitoring results in the reports requested below.
4. **Dual-Phase Extraction Pilot Test.** The proposal to install one extraction well and three observation wells to conduct a DPE pilot test is generally acceptable and may be implemented. We concur with the proposal to install one extraction well and three observation wells for the proposed dual-phase extraction (DPE) pilot test. Targeting the clayey gravel layer for the DPE pilot testing is acceptable. However, our previous January 10, 2008 requested further discussion of the rationale for installation of the screen interval for the extraction well as shallow as 3.5 feet bgs. Review of historical soil analytical data indicates that most of the mass of contamination appears to be in the zone of seasonal water table fluctuations between depths of approximately 8 to 14 feet bgs. We request that the top of the screen interval for the DPE extraction and observation wells be no shallower than 5 feet bgs. If you disagree with this request and wish to proceed with installation of extraction and observation wells with well screens as shallow as 3.5 feet bgs, you must provide further justification including a discussion of the shallow contamination that is being targeted, how the potential for short circuiting with the surface will be addressed, and any additional steps that will be taken to assure the integrity of the surface seal. Please present results from the DPE pilot test in the Well Installation and DPE Pilot Test Report requested below.
5. **Sewer System Leaks.** As discussed in Appendix H of the 2007 Soil and Groundwater Investigation Report, two leaks were found in the sewer line from the station building. Please report on progress in repairing the leaks in the reports requested below.
6. **Potential Discharge to 42nd Avenue.** Please present the drawings of the 42nd Avenue On-ramp and your plans for evaluating whether contaminated groundwater from the site is discharging to this area in the Well Installation and DPE Pilot Test Report requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **November 5, 2008** – Third Quarter 2008 Groundwater Monitoring Report

Farah Naz
RO0000096
September 4, 2008
Page 3

- **January 11, 2009** – Well Installation and DPE Pilot Test Report
- **February 5, 2009** – Fourth Quarter 2008 Groundwater Monitoring Report
- **May 5, 2009** – First Quarter 2009 Groundwater Monitoring Report
- **August 5, 2009** – Second Quarter 2009 Groundwater Monitoring Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic%20reporting)).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or

Farah Naz
RO0000096
September 4, 2008
Page 4

certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,



Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

Robert Nelson, Clearwater Group, 229 Tewksbury Avenue, Point Richmond, CA 94801

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective January 31, 2006, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is preferable that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements must be included and have either original or electronic signature.
- Do not password protect the document. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. Documents with password protection will not be accepted.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in Excel format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:

- a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to dehloptoxic@acgov.org
 - or
 - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
- b) In the subject line of your request, be sure to include "ftp PASSWORD REQUEST" and in the body of your request, include the Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.

2) Upload Files to the ftp Site

- a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape and Firefox browsers will not open the FTP site.
- b) Click on File, then on Login As.
- c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
- d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
- e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs

- a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
- b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
- c) The subject line of the e-mail must start with the RO# followed by Report Upload. (e.g., Subject: RO1234 Report Upload)

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: 11/10/2008 By jamesy

Permit Numbers: W2008-0846 to W2008-0850
Permits Valid from 12/01/2008 to 12/05/2008

Application Id: 1226104201610
Site Location: 4301 San Leandro Street
Project Start Date: 12/01/2008
Requested Inspection: 12/02/2008
Scheduled Inspection: 12/02/2008 at 3:00 PM (Contact your inspector, Vicky Hamlin)

City of Project Site:Oakland

Compl

Applicant: Clearwater Group - Robert Nelson
229 Tewksbury Avenue, Richmond, CA 94801
Property Owner: Mohammad Jamil
40092 Davis Street, Fremont, CA 94538
Client: ** same as Property Owner **
Contact: Robert Nelson

Receipt Number: WR2008-0405 Total Due: \$1725.00
Payer Name : Olivia Jacobs Total Amount Paid: \$1725.00
Paid By: MC PAID IN FULL

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 5 Wells
Driller: HEW Drilling - Lic #: 604987 - Method: hstem

Work Total: \$1725.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2008-0846	11/10/2008	03/01/2009	MW-10	10.00 in.	2.00 in.	13.00 ft	25.00 ft
W2008-0847	11/10/2008	03/01/2009	MW-10D	10.00 in.	2.00 in.	33.00 ft	45.00 ft
W2008-0848	11/10/2008	03/01/2009	MW-3D	10.00 in.	2.00 in.	33.00 ft	45.00 ft
W2008-0849	11/10/2008	03/01/2009	MW-9	10.00 in.	2.00 in.	13.00 ft	25.00 ft
W2008-0850	11/10/2008	03/01/2009	MW-9D	10.00 in.	2.00 in.	33.00 ft	45.00 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, properly 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.
3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required

Alameda County Public Works Agency - Water Resources Well Permit

for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. 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 construction or 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 Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org 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 (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
 10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
-

PROGRAMS AND SERVICES

Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at:

399 Elmhurst Street

Hayward, CA 94544

For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org

For Drilling Permit information and process contact James Yoo at

Phone: 510-670-6633

FAX: 510-782-1939

Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88 . The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

Drilling Permit Jurisdictions in Alameda County: There are four jurisdictions in Alameda County.

Location: Agency with Jurisdiction Contact Number

Berkeley City of Berkeley Ph: 510-981-7460

Fax: 510-540-5672

Fremont, Newark, Union City Alameda County Water District Ph: 510-668-4460

Fax: 510-651-1760

Pleasanton, Dublin, Livermore, Sunol Zone 7 Water Agency Ph: 925-454-5000

Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of **Oakland, Alameda, Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley, and Hayward** . The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

Permits are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application (30 Kb)* , along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Fees

Beginning April 11, 2005 , the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells (*Horizontal hillside dewatering and dewatering for construction period only), shall cost \$300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost \$200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: **Treasurer, County of Alameda**

Permit Fees are exempt to State & Federal Projects

Applicants shall submit a letter from the agency requesting the fee exemption.

Scheduling Work/Inspections:

Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **James Yoo at 510-670-6633** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

Request for Permit Extension:

Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

Cancel a Drilling Permit:

Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

Refunds/Service Charge:

A service charge of \$25.00 dollars for the first check returned and \$35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of \$50.00 (fifty Dollars).

To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed \$500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is \$1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors. The forms to request for refunds under \$500.00 (Five Hundred Dollars) are available at this office or any County Offices. If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

Enforcement

Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars (\$500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such

violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

Enforcement actions will be determined by this office on a case-by-case basis

Drilling without a permit shall be the cost of the permit(s) and a fine of \$500.00 (Five Hundred Dollars).

Well Completion Reports (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies.

See our website (www.acgov.org/pwa/wells/index.shtml) for links to additional forms.

ATTACHMENT B

Well Construction Logs

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. ZP046K

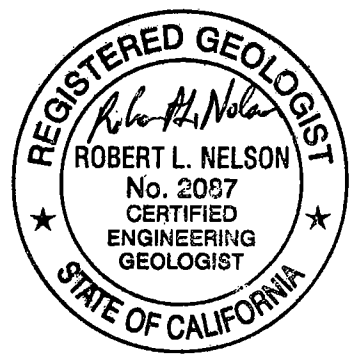
Sheet 1 of 1

FIELD LOCATION OF BORING: 	CLIENT/LOCATION: Eagle Gas 4301 San Leandro Blvd. Oakland Ca.	JOB NO.: ZP046K	PROJ. MANAGER: Robert L. Nelson	BORING/WELL NO.: MW-9
	DRILLING CONTRACTOR: RSI Drilling/ HEW Drilling	DRILL RIG TYPE: GeoProbe 6600/RSI CME 75/HEW	WELL DEPTH: 15'	BORING DIAMETER: 8.0"
	DRILL RIG OPERATOR: Jose Abrizz/RSI Perfecto/HEW	WELL MATERIAL: Sch 40 PVC	BORING DEPTH: 15'	FILTER PACK: #2/12 Sand
	Each location was predrilled by RSI Drilling of Woodland, CA, on November 20, 2008, using a Geoprobe Direct Push drill. The boring was drilled out by HEW Drilling of Palo Alto, CA, using a Hollow Stem auger drill to install the well.			DRILLING DATE: 11/20/2008

WELL CONSTRUCTION DETAIL	SAMPLE DEPTH	SAMPLE TYPE	BLOWS/6' INTERVAL	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	MONITORING INSTRUMENT: Photoionization Detector
										1	2" Asphalt 6" Baserock		
										2	Hand auger to 4'		
										3	Clayey sand with gravel (SC), dark yellowish brown (10YR 4/4), soft, moist, 50% fine to medium sand, 20% clay, 20% silt, 10% fine subangular deeply weathered gravel.		
			48	48	G		NO	0		4			
										5			
										6			
							YES	130		7			
			48	46	G		YES	150		8	Sandy lean clay (CL), yellowish brown (10YR 5/4), stiff, moist to wet, slight to moderate plasticity, 60% clay, 40% very fine to fine sand, light iron oxide stain.		
										9			
			36	30	G		YES	0		12	Sandy fat clay (CH), yellowish brown (10YR 5/4), medium stiff, moist to wet, 55% clay, 30% fine to medium sand, 15% fine subangular deeply weathered gravel, gravels are primarily chert and sandstone, colluviated texture.		
										13	12'-13' stained dark greenish gray (5GY 4/1) and moderate odor.		
										14	Clayey gravel with sand (GC), yellowish brown (10YR 5/4), loose, wet, 55% deeply weathered subangular fine gravel (primarily red-brown sandstone and chert), 30% fine to medium sand, 15% clay.		
										15	Total depth 15' bgs.		
										16			
										17	Well construction: 2" diameter SCH 40 PVC Well screen 5'-15'; 0.10" slots 0-2'; lean cement grout 2'-4'; 3/8" diameter bentonite pellets 4'-15'; #2/12 sand Ground level well completion 8.0" diameter borehole		
										18			
										19			
										20			
										21			
										22			
										23			
										24			
										25			
										26			
										27			
										28			
										29			
										30			

LOGGED BY: Robert L. Nelson, PG, CEG

APPROVED BY:



SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. ZP046K

Sheet 1 of 2

FIELD LOCATION OF BORING:										CLIENT/LOCATION:	JOB NO#:	PROJ. MANAGER:	BORING/WELL NO.:	
										Eagle Gas 4301 San Leandro Blvd. Oakland Ca.	ZP046K	Robert L. Nelson	MW-9D	
										RSI Drilling/ HEW Drilling	DRILL RIG TYPE: GeoProbe 6600/RSI CME 75/HEW	WELL DEPTH: 40'	BORING DIAMETER: 8.0"	
										Jose Abrizz/RSI Perfecto/HEW	WELL MATERIAL: Sch 40 PVC	BORING DEPTH: 40'	FILTER PACK: #2/12 Sand	
										Each location was predrilled by RSI Drilling of Woodland, CA, on November 20, 2008, using a Geoprobe Direct Push drill. The boring was drilled out by HEW Drilling of Palo Alto, CA, using a Hollow Stem auger drill to install the well.				
WELL CONSTRUCTION DETAIL	SAMPLE DEPTH	SAMPLE TYPE	BLOWS/6' INTERVAL	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core/2" Dia. California Modified Sample		
												MONITORING INSTRUMENT: Photoionization Detector		
2" Asphalt 6" Baserock														
Hand auger to 4'														
Clayey sand with gravel (SC), dark yellowish brown (10YR 4/4), soft, moist, 50% fine to medium sand, 20% clay, 20% silt, 10% fine subangular deeply weathered gravel.														
48 48 G NO 0														
48 46 G YES 130														
48 42 G YES 150														
48 42 G YES 0														
12-13' stained dark greenish gray (5GY 4/1) and moderate odor.														
Clayey gravel with sand (GC), yellowish brown (10YR 5/4), loose, wet, 55% deeply weathered subangular fine gravel (primarily red-brown sandstone and chert), 30% fine to medium sand, 15% clay.														
48 42 G NO 0														
Sandy lean clay (CL) yellowish brown (10YR 5/4), very stiff, wet, moderately plastic, 70% lean clay, 30% very fine to fine sand, trace black speckling (manganese oxide?), gradational color change to light olive brown (2.5Y 5/3) by 23'.														
36 36 G NO 0														
36 36 G														
NO 0														
24 36 G														
10 6 6 NO 0														
13 6 6														
16 6 6														
Silty sand (SM), yellowish brown (10YR 5/4), dense, wet, 70% fine to very fine sand, 25% silt, 5% clay.														
CAVING														

LOGGED BY: Robert L. Nelson, PG, CEG

APPROVED BY:

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

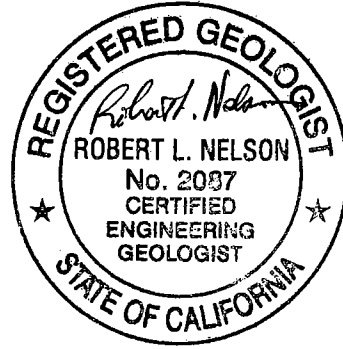
Project No. ZP046K

Sheet 2 of 2

<p>FIELD LOCATION OF BORING:</p>		CLIENT/LOCATION: Eagle Gas 4301 San Leandro Blvd. Oakland Ca.		JOB NO#: ZP046K	PROJ. MANAGER: Robert L. Nelson	BORING/WELL NO.: MW-9D							
		DRILLING CONTRACTOR: RSI Drilling/ HEW Drilling		DRILL RIG TYPE: GeoProbe 6600/RSI CME 75/HEW	WELL DEPTH: 40'	BORING DIAMETER: 8.0"							
		DRILL RIG OPERATOR: Jose Abrizz/RSI Perfecto/HEW		WELL MATERIAL: Sch 40 PVC	BORING DEPTH: 40'	FILTER PACK: #2/12 Sand							
		Each location was predrilled by RSI Drilling of Woodland, CA, on November 20, 2008, using a Geoprobe Direct Push drill. The boring was drilled out by HEW Drilling of Palo Alto, CA, using a Hollow Stem auger drill to install the well.					DRILLING DATE: 11/20/2008						
WELL CONSTRUCTION DETAIL	SAMPLE DEPTH	SAMPLE TYPE	BLOWS/6" INTERVAL	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core/2" Dia. California Modified Sample	
												MONITORING INSTRUMENT: Photoionization Detector	
												<p>Clayey gravel with sand (GC), yellowish brown (10YR 5/4), loose, wet, 60% fine subangular and subrounded gravel (primarily chert and sandstone), 25% fine to coarse sand, 15% clay, gravels coarsen below 35' to 15% coarse gravel, 50% fine gravel, gravels are red chert, subrounded to subangular.</p>	
												<p>Total depth 40' bgs.</p>	
												<p>Boring driven to 28' by RSI, refusal at 28'. Boring drilled out and sampled to 40' by HEW Drilling using 8" hollow stem augers.</p>	
												<p>Well construction: 2" diameter SCH 40 PVC Well screen 30'-40'; 0.10" slots 0-24'; lean cement grout 24'-26'; caving 26'-28'; 3/8" diameter bentonite pellets 28'-40'; #2/12 sand Ground level well completion 8.0" diameter borehole</p>	

LOGGED BY: Robert L. Nelson, PC, CEG

APPROVED BY:



SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. ZP046K

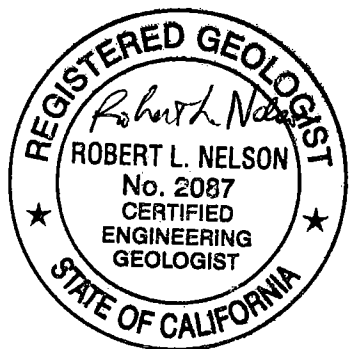
Sheet 1 of 1

FIELD LOCATION OF BORING: 		CLIENT/LOCATION: Eagle Gas 4301 San Leandro Blvd. Oakland Ca.	JOB NO#: ZP046K	PROJ. MANAGER: Robert L. Nelson	BORING/WELL NO.: MW-10
		DRILLING CONTRACTOR: RSI Drilling/ HEW Drilling	DRILL RIG TYPE: GeoProbe 6600/RSI CME 75/HEW	WELL DEPTH: 15'	BORING DIAMETER: 8.0"
		DRILL RIG OPERATOR: Jose Abrizz/RSI Perfecto/HEW	WELL MATERIAL: Sch 40 PVC	BORING DEPTH: 15'	FILTER PACK: #2/12 Sand
Each location was predrilled by RSI Drilling of Woodland, CA, on November 20, 2008, using a Geoprobe Direct Push drill. The boring was drilled out by HEW Drilling of Palo Alto, CA, using a Hollow Stem auger drill to install the well.					DRILLING DATE: 11/20/2008

WELL CONSTRUCTION DETAIL	SAMPLE DEPTH	SAMPLE TYPE	BLOWS/6" INTERVAL	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG
				48	38	F		NO	0	1	2" Asphalt Sandy lean clay (CL), yellowish brown (10YR 5/4), soft, wet, low plasticity, 60% clay, 40% very fine to fine sand, trace of fine gravel. 4'-6" No recovery. Color change to olive gray (5Y 4/2) at 9'. Clayey gravel with sand (GC), olive brown (2.5Y 4/4), loose to medium dense, wet, 60% fine to medium sand, 20% fine rounded gravel, 20% fines, mostly clay. Sandy lean clay (CL), yellowish brown (10YR 5/4) very stiff, wet, 70% lean clay, 30% very fine to fine sand. Total depth 15' bgs. Well construction: 2" diameter SCH 40 PVC Well screen 5'-15'; 0.10" slots 0-2'; lean cement grout 2'-4'; 3/8" diameter bentonite pellets 4'-15'; #2/12 sand Ground level well completion 8.0" diameter borehole
										2	
										3	
				48	24	P		NO	0	4	
										5	
								NO	0	6	
										7	
				48	48	G		NO	0	8	
								FAINT	0	9	
								WOODBRN	0	10	
				48	46	G		FAINT	0	12	
				48	48	G		NO	0	14	
										15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
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										28	
										29	
										30	

LOGGED BY: Robert L. Nelson, PG, CEG

APPROVED BY:



**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. ZP046K

Sheet 1 of 2

FIELD LOCATION OF BORING:										CLIENT/LOCATION:		JOB NO.:	PROJ. MANAGER:	BORING/WELL NO.:
Alley Costko Smog Check Fence MW-10D MW-10 Alley Vulcan Lofts Sidewalk San Leandro Street										Eagle Gas 4301 San Leandro Blvd. Oakland Ca.		ZP046K	Robert L. Nelson	MW-10D
WELL CONSTRUCTION DETAIL										DRILLING CONTRACTOR:		DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
SAMPLING METHOD: Continuous Core/2" Dia. California Modified Sample										RSI Drilling/ HEW Drilling		GeoProbe 6600/RSI CME 75/HEW	52'	8.0"
MONITORING INSTRUMENT: Photoionization Detector										DRILL RIG OPERATOR:		WELL MATERIAL:	BORING DEPTH:	FILTER PACK:
SAMPLING METHOD: Continuous Core/2" Dia. California Modified Sample										Jose Abrizz/RSI Perfecto/HEW		Sch 40 PVC	52'	#2/12 Sand
SAMPLING METHOD: Continuous Core/2" Dia. California Modified Sample										Each location was predrilled by RSI Drilling of Woodland, CA, on November 20, 2008, using a Geoprobe Direct Push drill. The boring was drilled out by HEW Drilling of Palo Alto, CA, using a Hollow Stem auger drill to install the well.				
MONITORING INSTRUMENT: Photoionization Detector										DRILLING DATE: 11/20/2008				
WELL CONSTRUCTION DETAIL	SAMPLE DEPTH	SAMPLE TYPE	BLOWS/6" INTERVAL	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	ODOR	PTD	DEPTH (FEET)	GRAPHIC LOG			
				48	38	F		NO	0	1		2" Asphalt		
										2		Sandy lean clay (CL), yellowish brown (10YR 5/4), soft, wet, low plasticity, 60% clay, 40% very fine to fine sand, trace of fine gravel.		
										3				
								NO	0	4				
			48	24	P					5		4'-6' No recovery.		
										6				
								NO	0	7				
								NO	0	8				
			48	48	G					9				
								FAINT	0	10		Color change to olive gray (5Y 4/2) at 9'.		
								MODERATE	5	11				
			48	46	G			FAINT	3	12				
										13		Clayey gravel with sand (GC), olive brown (2.5Y 4/4), loose to medium dense, wet, 60% fine to medium sand, 20% fine rounded gravel, 20% fines, mostly clay.		
										14		Sandy lean clay (CL), yellowish brown (10YR 5/4) very stiff, wet, 70% lean clay, 30% very fine to fine sand.		
										15				
			48	48	G			NO	0	16				
										17				
										18				
										19				
										20				
										21				
										22		Slower drilling below 24'		
										23				
										24				
										25				
										26				
										27				
										28				
										29				
										30				

LOGGED BY: Robert L. Nelson, PG, CEG

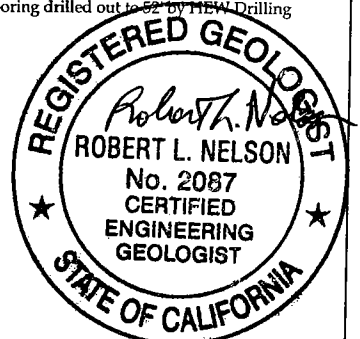
APPROVED BY:

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. ZP046K
 Sheet 2 of 2

FIELD LOCATION OF BORING: Alley Costco Smog Check MW-10D MW-10 Alley Vulcan Lofts San Leandro Street Sewer 		CLIENT/LOCATION: Eagle Gas 4301 San Leandro Blvd. Oakland Ca.	JOB NO.: ZP046K	PROJ. MANAGER: Robert L. Nelson	BORING/WELL NO.: MW-10D
		DRILLING CONTRACTOR: RSI Drilling/ HEW Drilling	DRILL RIG TYPE: GeoProbe 6600/RSI CME 75/HEW	WELL DEPTH: 52.0'	BORING DIAMETER: 8.0"
		DRILL RIG OPERATOR: Jose Abrizz/RSI Perfecto/HEW	WELL MATERIAL: Sch 40 PVC	BORING DEPTH: 52.0'	FILTER PACK: #2/12 Sand
Each location was predrilled by RSI Drilling of Woodland, CA, on November 20, 2008, using a Geoprobe Direct Push drill. The boring was drilled out by HEW Drilling of Palo Alto, CA, using a Hollow Stem auger drill to install the well.					DRILLING DATE: 11/20/2008

WELL CONSTRUCTION DETAIL	SAMPLE DEPTH	SAMPLE TYPE	BLOWS/6" INTERVAL	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG
				48	38	F		NO	0	31	
										32	
										33	
										34	
										35	
				24	24	G		NO	0	36	
										37	
				24	24	G		NO	0	38	
										39	
				24	24	G		NO	0	40	
										41	
										42	
										43	<p>Soft and wet from 35'</p> <p>Sandy lean clay (CL) brown (10YR 4/3) very stiff, wet, 60% lean clay, 40% very fine to fine sand, trace tan infilling along closely spaced irregular soil joints.</p> <p>Poorly graded sand (SP), light olive brown (2.5Y 5/3), loose, wet, 85% fine sand, 15% silt.</p> <p>49'-49.5': Well graded sand (SW), dark yellowish brown (10YR 4/4), loose, wet, 90% fine to coarse sand, 10% fine subangular to subrounded gravel.</p> <p>Well graded sand (SW) as above, gravels are primarily white quartz and chert, subrounded to rounded.</p> <p>Total depth 52' bgs. Boring driven to 42' by RSI, refused at 42'. Boring drilled out to 52' by HEW Drilling using 8" hollow stem augers</p> <p>Well construction: 2" diameter SCH 40 PVC Well screen 42'-52'; 0.10" slots 0-36'; lean cement grout 36'-38'; 3/8" diameter bentonite pellets 38'-40'; caving 40'-52'; #2/12 sand Ground level well completion 8.0" diameter borehole</p>
										44	
										45	
										46	
										47	
										48	
										49	
										50	
										51	
										52	



LOGGED BY: Robert L. Nelson, PG, CEG

APPROVED BY:

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. ZP046K

Sheet 1 of 2

FIELD LOCATION OF BORING:										CLIENT/LOCATION:	JOB NO#:	PROJ. MANAGER:	BORING/WELL NO.:
										Eagle Gas 4301 San Leandro Blvd. Oakland Ca.	ZP046K	Robert L. Nelson	MW-11D
										DRILLING CONTRACTOR:	DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
RSI Drilling/ HEW Drilling	GeoProbe 6600/RSI CME 75/HEW	45'	8.0"										
DRILL RIG OPERATOR:	WELL MATERIAL:	BORING DEPTH:	FILTER PACK:	Each location was predrilled by RSI Drilling of Woodland, CA, on November 20, 2008, using a Geoprobe Direct Push drill. The boring was drilled out by HEW Drilling of Palo Alto, CA, using a Hollow Stem auger drill to install the well.	DRILLING DATE: 11/20/2008								
Jose Abrizz/RSI Perfecto/HEW	Sch 40 PVC	45'	#2/12 Sand										
WELL CONSTRUCTION DETAIL	SAMPLE DEPTH	SAMPLE TYPE	BLOWS/6" INTERVAL	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min/ft)	ODOR	PTD	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core/2" Dia. California Modified Sample	
												MONITORING INSTRUMENT: Photoionization Detector	
								NO	0	1	+	3" Asphalt	
										2	+	Hand Auger to 5'. Silty sand to clayey sand (SM-SC), dark olive gray (5Y 3/2), soft, moist, 50% very fine sand, 25% silt, 25% lean clay.	
								MODERATE	5	3		Silty sand with gravel (SM), dark olive gray (5Y 3/2), loose, moist, 50% fine to medium sand, 40% silt, 10% fine subrounded gravel.	
				36	24	F				4			
								STRONG	200	6			
				48	38	F-G		STRONG	400	8			
										10			
				48	45	G		MODERATE	5	12		Sandy fat clay (CH), olive (5Y 4/3), soft, wet, very plastic, 70% fat clay, 20% very fine to fine sand, 10% fine subangular gravel.	
										13			
				48	48	G		NO	0	16		Sandy lean clay (CL), yellowish brown (10YR 5/4), very stiff, moist to wet, low plasticity, 60% lean clay, 20% fine sand, 20% very fine sand, light iron oxide mottling.	
										17			
				48	48	G		NO	0	20			
										21			
				48	48	G		NO	0	24		Sandy lean clay (CL), light olive brown (2.5Y 5/4), very stiff, wet, light iron oxide stain, 70% lean clay, 30% very fine sand.	
										25			
				48	48	F		NO	0	28		Fat clay (CH), yellowish brown (10YR 5/4), stiff, wet, moderately plastic, 10% very fine sand, 90% fat clay.	
										29			
										30			

LOGGED BY: Robert L. Nelson, PG, CEG

APPROVED BY:

ATTACHMENT C

Blaine Tech Services, Well Development
Field Notes, date December 5, 2008

WELL GAUGING DATA

Project # 081205-01 Date 12/05/08 Client clear water group

Site 4301 Sun Leandro Ave Oakland CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-10	910	2					8.20	14.95	↓	
MW-10	1057	2				14.98	51.00			
MW-9	1304	2				7.12	15.10			
MW-9D	1355	2				15.05	39.41			
MW-11	1537	2				17.47	41.80			

WELL DEVELOPMENT DATA SHEET

Project #: 081205-J01	Client: Clearwater Group
Developer: JD	Date Developed:
Well I.D. MW-100	Well Diameter: (circle one) <u>(2)</u> 3 4 6
Total Well Depth: Before 51.00 After 55 52.30	Depth to Water: Before 14.98 After 15.02
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
 $(12 \times (d^2/4) \times \pi) / 231$
 where
 12 = in / foot
 d = diameter (in.)
 $\pi = 3.1416$
 231 = in³/gal

Well dia.	VCF
2" =	0.16
3" =	0.37
4" =	0.65
6" =	1.47
10" =	4.08
12" =	6.87

3.6 5.76 3.6	x	<u>10</u>	=	<u>36 57.6</u> 36
1 Case Volume		Specified Volumes		gallons

- Purging Device: Bailer Electric Submersible
 Suction Pump Positive Air Displacement

Type of Installed Pump _____
 Other equipment used _____

TIME	TEMP (F)	pH	Cond. (mS or μ S)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1127	64.5	7.26	1800	1000C	3.6	Brown silty
1134	64.6	7.57	1027	1000C	7.2	Brown surge w/ pump
1139	64.8	7.42	1000	1000C	10.8	Brown silty
1145	64.7	7.31	988	1000C	14.4	Brown silty
1150	64.9	7.41	974	984	18.0	Brown surge with pump
1155	65.0	7.52	965	881	21.6	Brown surge with pin
1200	65.1	7.51	960	810	25.2	Light Brown surge with pump
1205	65.1	7.55	955	714	28.8	Light Brown
1210	65.4	7.56	956	656	32.4	Light Brown surge with pump
1215	64.9	7.53	940	660	36	Light Brown hard Bottom
Well under surged client called in and said under surge was ok calculation correct						
Did Well Dewater? If yes, note above. Gallons Actually Evacuated:						

Site or Purge Water Drum Log

Client: Clear Water Group
 Site Address: 4201 Sun Leandro Ave

STATUS OF DRUM(S) UPON ARRIVAL

Date	12/05/08				
Number of drum(s) empty:	0				
Number of drum(s) 1/4 full:					
Number of drum(s) 1/2 full:					
Number of drum(s) 3/4 full:					
Number of drum(s) full:	6				
Total drum(s) on site:	6				
Are the drum(s) properly labeled?	Y				
Drum ID & Contents:	Purge (20)				
If any drum(s) are partially or totally filled, what is the first use date:	NA not checked				

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.
- If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.
- All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE

Date	12/05/08				
Number of drums empty:	0				
Number of drum(s) 1/4 full:					
Number of drum(s) 1/2 full:					
Number of drum(s) 3/4 full:	1				
Number of drum(s) full:	8				
Total drum(s) on site:	9				
Are the drum(s) properly labeled?	Y				
Drum ID & Contents:	Purge (20)				

LOCATION OF DRUM(S)

Describe location of drum(s): Back wall of gas station

FINAL STATUS

Number of new drum(s) left on site this event	1 (BTS)				
Date of inspection:	12/05/08				
Drum(s) labelled properly:	Y				
Logged by BTS Field Tech:	JO				
Office reviewed by:	S				