Allterra Environmental, Inc.
849 Almar Avenue, Suite C
No. 281
Santa Cruz, California 95060

Client: Manwel and Samira Shuwayhat

Project Location: 160 Holmes Street, Livermore, California

Subject: Work Plan for Additional Soil and Groundwater Remediation

Report Date: July 16, 2012

To Whom It May Concern:

I have reviewed the report referenced above and approve its distribution to the necessary regulatory agencies. Should any of the regulatory agencies require it, "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached proposal or report is true and correct to the best of my knowledge."

Sincerely,

Manwel Shuwayhat

Work Plan for Additional Soil and Groundwater Remediation for Fuel Leak Case No. RO0000324 Livermore Gas Mini-Mart 160 Holmes Street, Livermore, California

Date:
July 16, 2012

Prepared For:
Manwel and Samira Shuwayhat
54 Wolfe Canyon Road
Kentfield, California 94904

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July 16, 2012

Manwel and Samira Shuwayhat
54 Wolfe Canyon Road
Kentfield, California 94904

Subject: Work Plan for Additional Soil and Groundwater Remediation for Fuel Leak Case No. RO0000324, Livermore Gas and Mini-Mart, 160 Holmes Street, Livermore, California

Dear Mr. and Mrs. Shuwayhat:

On your behalf, Allterra Environmental, Inc. (Allterra) has prepared this *Work Plan for Additional Soil and Groundwater Remediation* for the property located at 160 Holmes Street in Livermore, California (Site). The purpose of the proposed work scope is to remediate residual petroleum hydrocarbon-impacted soil and groundwater in the source area beneath the Site. This work plan was prepared pursuant to discussions with Alameda County Environmental Health (ACEH) during our meeting on June 12, 2012 and in accordance with recommendations made in Allterra's Second Quarter 2012 Groundwater Monitoring Report dated July 9, 2012. All work will be performed in compliance with guidelines established by ACEH, Zone 7 Water Agency (Zone 7), and Regional Water Quality Control Board (RWQCB), and Allterra's field protocol presented in Appendix A.

Site Location and Description
The Site is located at the northeast intersection of Holmes Street and Second Street in Livermore, California (Figure 1). A gasoline fuel station currently occupies the Site and the surrounding area is primarily residential with scattered retail businesses along 1st and 2nd Streets. The approximate surface elevation at the Site is 465 feet above mean sea level (MSL) and the surface slightly slopes to the northwest. Pertinent site features, including the locations of the former underground storage tanks (USTs), existing monitoring and extraction wells, and previous soil borings, are presented on Figure 2.

Site Geology and Hydrogeology
Subsurface sediments encountered beneath the Site consist of primarily clayey sand and silty clay fill material from surface grade to approximately eight (8) feet below ground surface (bgs), underlain by fine-grained native material consisting of silty clay, sandy silt, and silty sand to approximately 28 feet bgs. A generally continuous coarse-grained deposit consisting of sandy gravel with varying amounts of silt and clay occurs from approximately 28 feet bgs to depths ranging from approximately 54 to 69 feet bgs, where a sandy to silty clay layer exists. The thickness of this clay layer has not been determined; however, a thickness of at least five feet was confirmed in previous boring MW-1B.

First-encountered groundwater beneath the Site has fluctuated between depths of approximately 28 and 44 feet bgs. Historic groundwater elevations are presented in Table 1. The fluctuating groundwater elevation appears to be largely dependent upon regional factors including, but not limited to, regional groundwater pumping, seasonal drought conditions, and government managed groundwater recharge programs. Based on recent quarterly groundwater monitoring data, shallow groundwater generally flows to the northwest at an approximate gradient of 0.0067 feet per foot (ft/ft).

Site Background

Previous Site Investigations

Extensive soil and groundwater investigation work has been performed at the Site since 2000, including the advancement of more than forty-three (43) soil borings and the installation of 19 monitoring wells on-site and off-site. Site investigation work has resulted in full characterization of the lateral and vertical extent of petroleum constituents in soil and groundwater beneath and downgradient of the Site. The locations of previous soil borings and monitoring wells are presented on Figure 2, and associated groundwater and soil analytical data is presented in Tables 2 and 3, respectively.

In addition to characterizing the extent of petroleum impacts, previous site investigation activities have identified a subsurface area of the Site containing the majority of high-level concentrations of petroleum constituents in soil and groundwater. The highest levels of soil and groundwater contamination were detected in samples collected from previous Geoprobe® borings installed in the area between the northwestern fuel dispenser and USTs. This source area is generally located between borings GP-8, GP-9, GP-14, and well EW-3 at depths between approximately 24 and 34 feet bgs. This area of the Site has been the primary target for pilot scale and in-situ remedial efforts conducted at the Site.

Previous Site Remediation

Pilot-Scale Remedial Activities in 2010

During second and fourth quarters of 2010, Allterra completed pilot scale soil vapor extraction (SVE) and groundwater extraction (GWE) using on-site extraction wells EW-1 and EW-3. Pilot-scale remediation activities varied from more SVE focused to GWE focused as groundwater elevations beneath the Site changed and remedial performance data was gathered. Data collected during pilot-scale operations was used to evaluate remedial effectiveness and determine the best approach for completing remediation in this area of the Site. Based on low observed extraction and contaminant recovery rates, pilot-scale remedial activities were discontinued in November 2010. A total of approximately 13 pounds of total petroleum hydrocarbons as gasoline (TPHg) and 45 pounds of methyl tert-butyl ether (MTBE) were removed from the subsurface through SVE and GWE activities in 2010.

In-Situ Remedial Activities in 2011

After SVE and GWE remedial efforts at the Site were no longer effective, Allterra developed an in-situ remedial work scope designed to aggressively treat residual soil and groundwater impacts in the source area. During the second quarter of 2011, Allterra completed in-situ remedial activities at the Site involving the pressure injection of approximately 4,000 lbs of RegenOx™

and 600 lbs of ORC Advanced™ into the subsurface during three separate injection events. A full description of in-situ remedial activities is presented in Allterra's In-Situ Soil and Groundwater Remedial Implementation Report dated August 19, 2011.

Following remedial implementation activities, data currently indicates residual contaminants in shallow groundwater beneath and down-gradient of the Site have been significantly reduced and continue to exhibit decreasing trends, with the exception of tert-butyl alcohol (TBA) in select wells. Recent increases in dissolved TBA concentrations are likely attributed to the degradation of MTBE resulting from in-situ remedial efforts as well as natural processes. Although contaminate levels in groundwater in the vicinity of source area well EW-3 have decreased significantly, residual concentrations of MTBE (9,300 µg/L) and TBA (66,000 µg/L) were detected in EW-3 during the second quarter of 2012.

Proposed Groundwater Cleanup Levels

The proposed corrective action described in this work plan is focused on treating contaminant mass in soil and groundwater in the source area to minimize continued degradation of groundwater, minimize future offsite migration of contaminants, and reduce contaminant concentrations to levels at which natural processes will provide further attenuation of contaminants to the ultimate cleanup goals.

The ultimate cleanup goals for groundwater quality at this Site are the San Francisco Bay Regional Water Quality Control Board (RWQCB) environmental screening levels (ESLs) when groundwater is a current or potential source of drinking water. These final screening levels generally use the most conservative published criterion and consider gross contamination, ecotoxicity, human health, vapor intrusion, and groundwater protection. The applicable groundwater ESLs for this Site are listed below:

TPHg	100 µg/L
TPHd	100 µg/L
Benzene	1.0 µg/L
Toluene	40 µg/L
Ethylbenzene	30 µg/L
Xylenes	20 µg/L
MTBE	5.0 µg/L
TBA	12 µg/L

To achieve the groundwater goals specified, active remedial efforts may cease once contaminant concentrations are reduced to levels at which at which natural attenuation will allow further reduction of concentrations to the ultimate cleanup levels within a reasonable timeframe.

Proposed Scope of Work

To maximize use of available Underground Storage Tank Cleanup Fund (USTCF) funds, Allterra plans to implement a strategic approach to streamline and concentrate remedial efforts at the Site. The first step will involve the installation of an additional injection/extraction well (EW-3B) adjacent to existing well EW-3 in the source area. Based on the effectiveness of in-situ

remedial efforts in 2011, Option 1 of our proposed remedial approach will be implemented at the Site first. Option 1 will involve the pressure injection of the chemical oxidant RegenOx™ into wells EW-1 and EW-3B to further desorb and treat bound and dissolved contaminates in the target area. If Option 1 does not result in significant contaminant reduction in the source area, Option 2 of our proposed remedial approach will be initiated. Option 2 will involve groundwater extraction and treatment using source area wells EW-1 and EW-3B. If Option 1 results in adequate contaminant reduction in the source area, Option 2 will not be implemented.

The following sections provide a detailed discussion of well installation activities, in-situ remedial action (Option 1), and groundwater extraction and treatment activities (Option 2) proposed at the Site to immediately reduce residual contaminate mass, stabilize and reduce the size of the residual contaminant plume, satisfy requirements for low threat case closure, and ultimately attain the proposed groundwater cleanup goals for the Site.

Well Installation Activities

Permitting and Underground Utility Locating

Prior to drilling activities, a well installation permit will be acquired from the Zone 7 Water Agency. A private utility locating contractor will be retained to identify underground utilities at the proposed well location. Additionally, the Underground Service Alert (USA) will be notified at least 48 hours prior to the commencement of drilling activities to identify the public service utilities in the work area. Allterra field personnel will also hand clear the borehole to approximately five feet bgs to reduce the risk of encountering fuel dispenser piping.

Well Drilling and Construction

To facilitate effective remedial injection and/or extraction activities and to obtain representative samples from the "A" water-bearing zone (15-40 feet bgs) in the source area, proposed extraction well EW-3B will be installed adjacent to existing well EW-3, which is screened from 25 to 30 feet bgs. EW-3B will be drilled to a total depth of approximately 40 feet bgs using a truck-mounted drill rig equipped with continuous flight hollow-stem augers. EW-3B will be constructed of 4-inch diameter schedule 80 polyvinyl chloride (PVC) casing with 0.040-inch slotted screen from 15 to 40 feet bgs. An extraction well construction diagram is presented as Figure 3. Allterra's field protocols are described in Appendix A.

Soil Classification and Sample Collection

During drilling activities, soil lithology will be described and classified under the Unified Soil Classification System (USCS). Soil samples will be field screed for volatile organic compounds (VOCs) using a photoionization detector (PID) and samples will also be collected from select depths from approximately 20 to 40 feet bgs for laboratory analysis.

Well Development and Groundwater Sampling

At least 72 hours following installation activities, the newly installed well (EW-3B) will be developed using a combined surging and purging technique. The well will be purged until the groundwater is relatively free of sediment and turbidity, and until groundwater parameters such as pH, temperature, conductivity, and turbidity have stabilized or until at least ten casing volumes have been removed.

Groundwater sampling from the newly installed well will be performed at least 48 hours following well development activities. Sampling activities will include the measurement of static groundwater levels, an evaluation of groundwater in the well for the presence of petroleum hydrocarbons, well purging, field parameter testing, and groundwater quality sampling. Allterra's field protocols are described in Appendix A.

Laboratory Analysis

Soil and Groundwater samples collected during well installation and sampling activities will be submitted for chemical testing under chain-of-custody protocol to McCampbell Analytical, Inc., of Pittsburgh, California, a State of California certified laboratory (ELAP #1644). Samples will be analyzed for TPHg and total petroleum hydrocarbons as diesel (TPHd) by EPA method 8015C, for benzene, toluene, ethylbenzene, and xylenes (BTEX) and MTBE by EPA Method 8021B, and for fuel oxygenates tert-amyl methyl ether (TAME), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), TBA, and MTBE by EPA Method 8260B.

Land Surveying

Upon completion of well installation and development activities, the latitude and longitude, elevation relative to mean sea level (MSL), and spatial relationship with existing monitoring wells for EW-3B will be determined in the field by a licensed land surveyor. EW-3B will be surveyed in accordance with electronic submittal requirements for the SWRCB GeoTracker database.

Remedial Action – Option 1

In-Situ Treatment Activities

To aggressively treat residual contaminates in soil and groundwater beneath the Site, a remedial solution consisting of approximately 2,000 pounds of RegenOx™ will be pressure injected into the source area using wells EW-1 and EW-3B. The RegenOx™ application process enables the two-part product to be combined and then pressure injected into the zone of contamination and moved out into the unsaturated zone and aquifer media. Based on the lithology and hydrogeologic characteristics of native sediments beneath the Site, multiple injection events will likely be required to facilitate the injection of the designed volume of RegenOx™ and to minimize potential adverse affects at the ground surface (i.e. surfacing, high back pressure). Using pressure injection techniques to ensure thorough distribution across heterogeneous soils, the remedial solution will be delivered to the subsurface in a series of three injection events spaced approximately one to two weeks apart. Detailed RegenOx™ application procedures using fixed wells are presented in Appendix B.

RegenOx™ is an in-situ chemical oxidation process using a solid oxidant complex (sodium percarbonate/catalytic formulation) and an activator complex (a composition of ferrous salt embedded in a micro-scale catalyst gel). RegenOx™ is an aggressive, fast acting oxidative technology capable of treating a broad range of soil and groundwater contaminants. It was engineered as an easily handled and applied high contaminant concentration mass reduction product that can also facilitate a seamless transition to "polishing" with passive in-situ bioremediation.

Remedial Data Collection and Monitoring

Allterra plans to implement a data collection program to provide information that can be used to evaluate the effectiveness of in-situ remedial efforts. Data that will be collected includes the following:

- Groundwater samples collected during the third quarter 2012 groundwater monitoring event will be used to establish baseline conditions for petroleum constituents in groundwater prior to the proposed remedial implementation. A list of laboratory analytes tested for during monitoring activities is presented in the following section.
- Visual observations at select well locations (EW-1, EW-3, EW-3B, MW-1A, and MW-7A/B) will be recorded between each injection event to monitor potential adverse affects of each event prior to proceeding with subsequent events. No groundwater samples will be collected for laboratory analysis between injection events.
- For the first three months following remedial implementation, monthly groundwater samples and field parameter measurements (see list of parameters below) will be collected from select monitoring wells (EW-1, EW-3, EW-3B, MW-1A, and MW-7A/B). Samples and field measurements will be collected from all monitoring wells quarterly thereafter. A list of laboratory analytes tested for during monthly and quarterly monitoring activities is presented in the following section.
- Field parameters measured during remedial monitoring activities will include dissolved oxygen, pH, temperature, specific conductivity, turbidity, and oxidation-reduction potential.

During and following in-situ remedial activities performed in 2011, select monitoring wells were analyzed for additional laboratory parameters not included in the groundwater monitoring program to detect potential adverse affects caused by the injection activities. These samples were submitted to a state-certified laboratory and tested for dissolved oxygen, methane, carbon dioxide, total dissolved solids (TDS), sulfate, sodium, ferrous iron, manganese, total iron, total chromium, hexavalent chromium, arsenic, and alkalinity. No adverse affects were revealed during any of the previous remedial sampling events; consequently these additional laboratory parameters and sampling frequencies (between injection events) are not included in the currently proposed remedial data collection program.

Laboratory Analysis

Groundwater samples collected during monthly and quarterly remedial monitoring activities will be submitted for chemical testing under chain-of-custody protocol to McCampbell Analytical, Inc., of Pittsburgh, California, a State of California certified laboratory (ELAP #1644). Samples will be analyzed for TPHg by EPA method 8015C, and for benzene, toluene, ethylbenzene, and xylenes (BTEX) and MTBE by EPA Method 8021B. Additionally, select samples will also be tested for total petroleum hydrocarbons as diesel (TPHd) by EPA method 8015B, fuel oxygenates tert-amyl methyl ether (TAME), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), TBA, and MTBE, and lead scavengers 1,2-dibromoethane (EDB) and 1,2-dichloroethane (1,2-DCA) by EPA Method 8260B.

Remedial Action – Option 2

If remedial monitoring data indicates in-situ remedial efforts did not achieve the desired level of contaminate reduction in the target area, Option 2 of our proposed remedial approach will be initiated as described below.

Groundwater Extraction and Treatment

To further address residual contaminates in groundwater beneath the Site, petroleum-impacted groundwater will be removed from extraction wells EW-1 and EW-3B using submersible pumps and treated on-site prior to permitted discharge to the sanitary sewer. To facilitate remedial activities, a temporary remediation compound will be constructed along the northeastern edge of the Site. The compound will consist of above-ground conveyance piping, two 55-gallon granular activated carbon (GAC) treatment vessels, and low-profile storage tanks to contain extracted and treated groundwater prior to batch discharge to the sanitary sewer.

Following the construction of new source area well EW-3B, this remedial option will be more viable at the Site than previous GWE efforts performed in 2010. Based on the measured sustainable pumping rate of 5.0 gallon per minute (gpm) during previous extraction from EW-1, we anticipate a similar extraction rate from EW-3B, which will be screened through the same depth interval as EW-1 (15-40 feet bgs). Also, the location of new extraction well EW-3B (adjacent to current well EW-3) will allow us to remove the highest dissolved contaminant concentrations currently detected in the source area.

Waste Disposal

Soil cuttings generated during drilling will be temporarily stored on-site in labeled, DOT-approved 55-gallon drums. Soil drums will be sampled, analyzed, and profiled for disposal under waste manifest at an appropriate disposal facility.

Wastewater generated during well development, purging, and remedial extraction activities will be contained in on-site holding tanks pending laboratory analysis and permitted discharge to the sanitary sewer.

Health and Safety

During drilling and injection field activities, field personnel will wear modified Level D personal protective equipment (PPE) consisting of hardhats, chemical resistant gloves, safety goggles or face shield, NIOSH-approved dust and mist respirator, long sleeve clothing or Tyvek® suit, and steel-toed boots. On-site health and safety issues will be the responsibility of the Project Manager and Site Health and Safety Officer and are summarized in Allterra's Site-Specific Health and Safety Plan (see Appendix C). The Site Health and Safety Officer is responsible to inform all field personnel of current health and safety issues and will conduct daily health and safety tailgate meetings.

Updated Well Survey

Allterra will perform an updated well survey to identify and verify the location of existing water production wells located within a ½ mile radius of the Site. Nearby well information reported

will include well designation, location, diameter, total depth, screen interval, date of installation, current status, historic use, and well owner.

Reporting

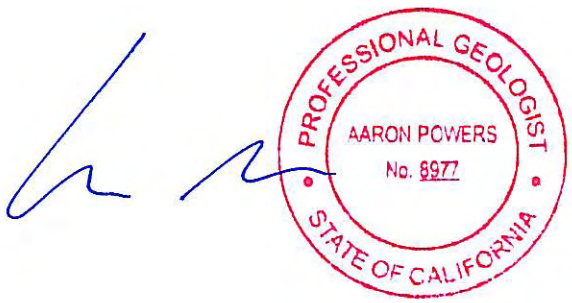
Upon completion of field activities, Allterra will prepare a technical report summarizing completed well installation and remedial activities, the results of remedial verification sampling, and our conclusions and recommendations regarding Site conditions. The report will also include an updated site map, contaminant trend plots, and copies of laboratory analytical reports.

Limitations

The data, information, interpretation, and recommendations contained in this Work Plan are presented solely as preliminary to the existing environmental conditions at 160 Holmes Street. Site conditions can change over time; therefore, data, information, interpretation, and recommendations presented in this work plan are only applicable to the timeframe of this study. The conclusions and professional opinions presented herein were developed by Allterra in accordance with environmental principles and practices generally accepted at this time and location, no warranties are expressed or implied.

If you have any questions, please call Allterra at (831) 425-2608.

Sincerely,
Allterra Environmental, Inc.



Aaron Powers, P.G. 8977
Project Geologist

Joe Mangine, P.G. 8423
Senior Geologist

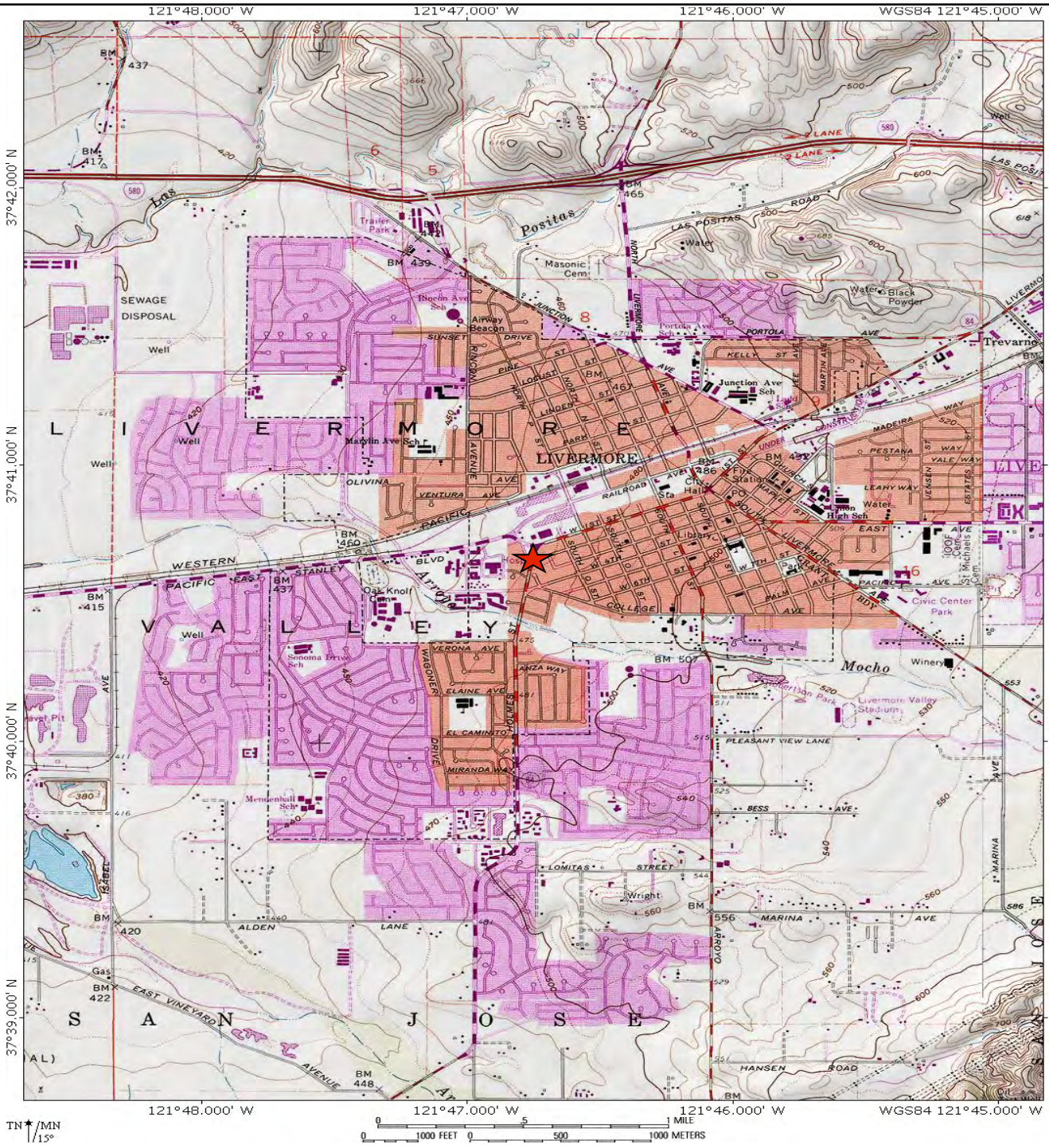
Attachments:
Figure 1, Site Vicinity Map
Figure 2, Site Plan and Proposed Well Location
Figure 3, EW-3B Well Construction Details

Table 1, Groundwater Elevation Data
Table 2, Groundwater Analytical Results
Table 3, Historical Soil Analytical Data

Appendix A: Site Investigation Field Protocol
Appendix B: Regenesis Product Application Procedures
Appendix C: Site-Specific Health and Safety Plan

cc: Mr. Jerry Wickham, ACEHS

FIGURES 1 - 3



Site Vicinity Map

Livermore Gas and Minimart
160 Holmes Street
Livermore, California

Figure 1

7/13/12

ALLTERRA
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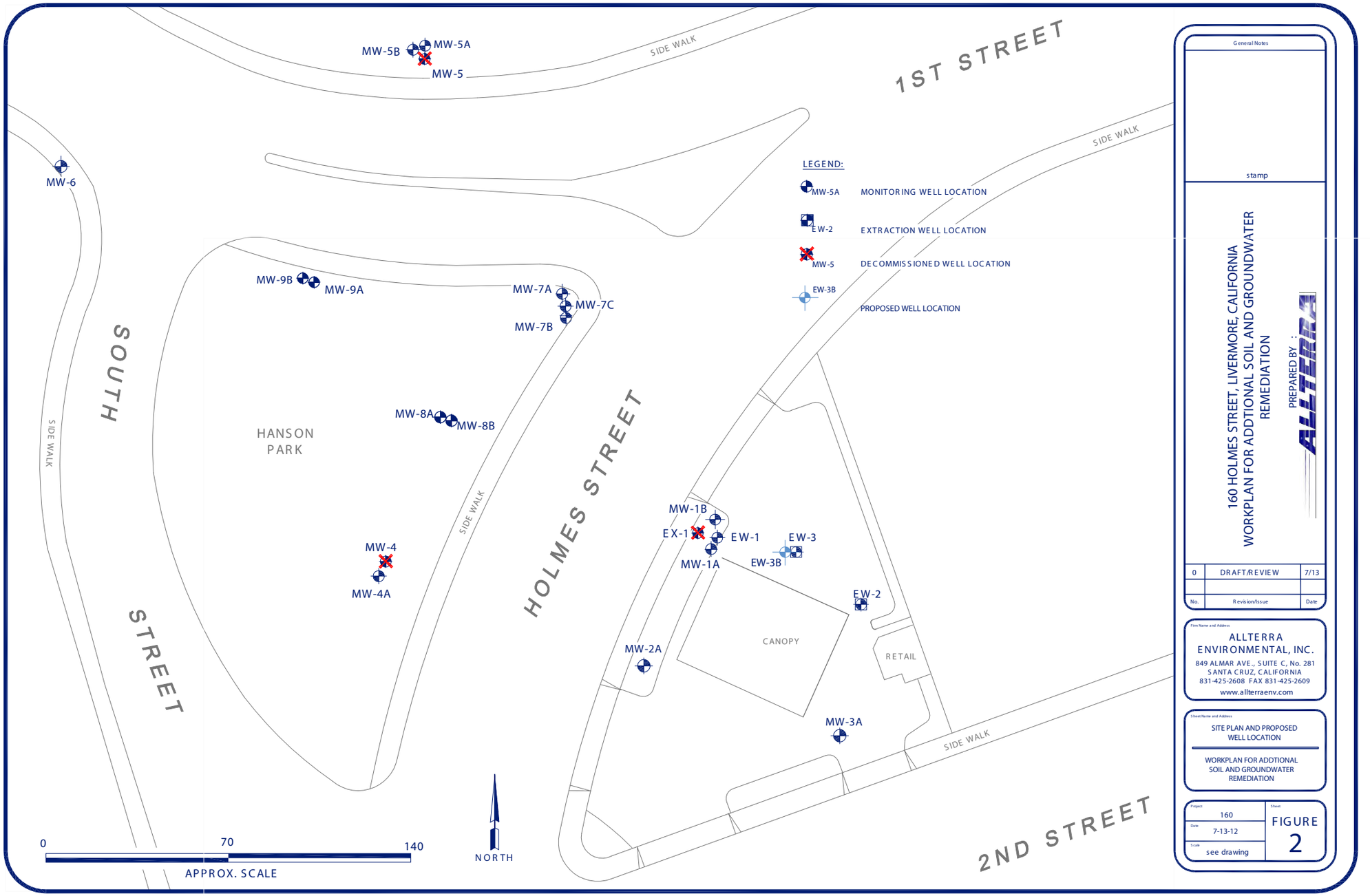

General Notes

stamp

160 HOLMES STREET, LIVERMORE, CALIFORNIA
WORKPLAN FOR ADDTIONAL SOIL AND GROUNDWATER REMEDIATION

PREPARED BY :

No.	Revision/Issue	Date
0	DRAFT/REVIEW	7/13

Firm Name and Address
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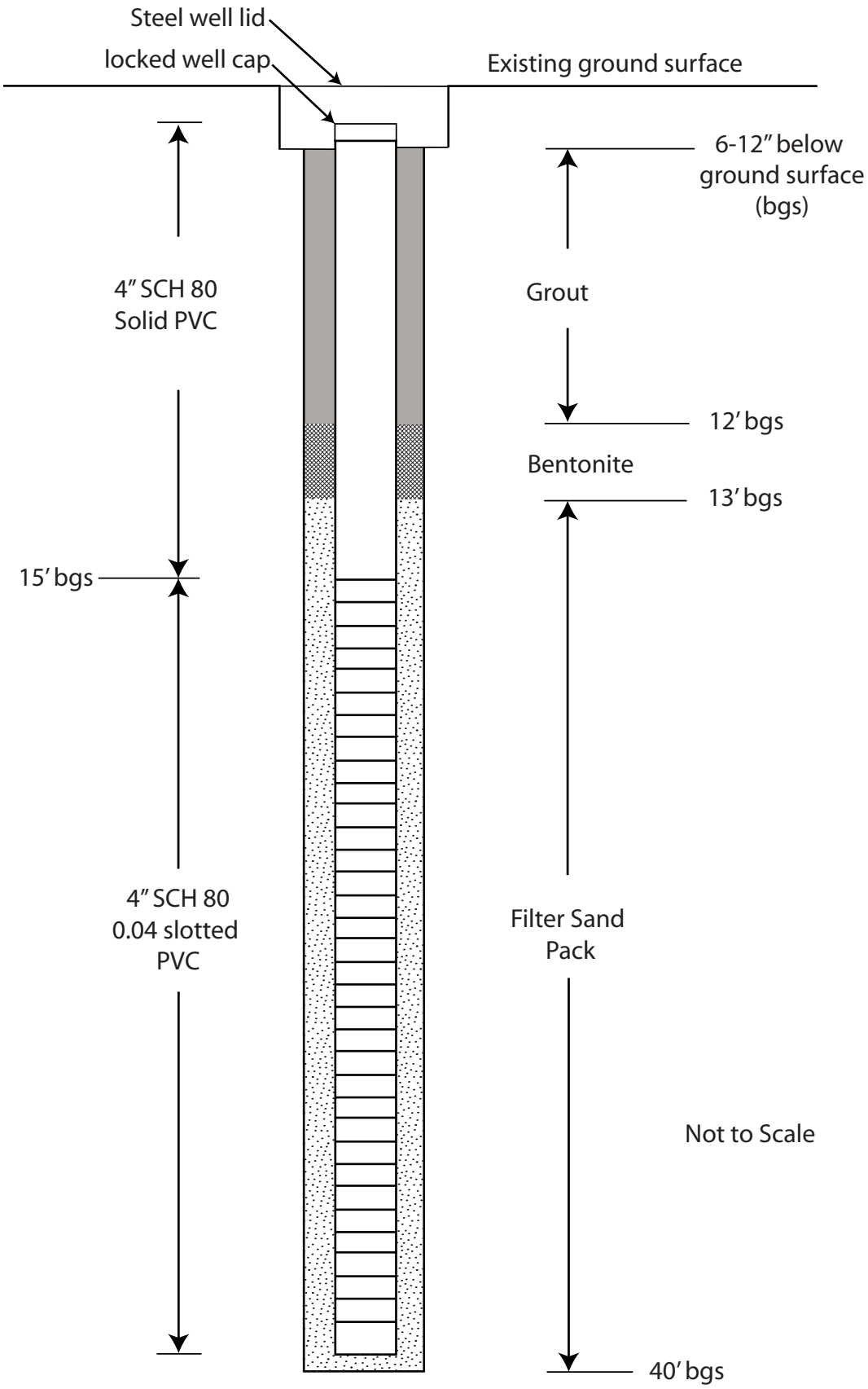
Sheet Name and Address
SITE PLAN AND PROPOSED WELL LOCATION

WORKPLAN FOR ADDTIONAL SOIL AND GROUNDWATER REMEDIATION

Project	Sheet
160	FIGURE 2
Date: 7-13-12	
Scale: see drawing	



ALLTERRA
207 McPherson Street
Santa Cruz, CA 95060

EW-3B Well Construction Details
160 Holmes St, Livermore, CA

FIGURE #
3

160 Holmes

TABLES 1 - 3

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore, California

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-1*	8/11/00	465.03	15-30	NM	NC
	10/19/00	465.03	15-30	21.94	443.09
	2/22/01	465.03	15-30	22.91	442.12
	5/30/01	465.03	15-30	Dry	NC
	11/14/01	465.03	15-30	Dry	NC
	5/7/02	465.03	15-30	Dry	NC
	9/11/02	465.03	15-30	26.16	438.87
	12/1/02	465.03	15-30	27.55	437.48
	3/14/03	465.03	15-30	22.63	442.40
	6/25/03	465.03	15-30	22.10	442.93
	9/16/03	465.03	15-30	24.91	440.12
	12/22/03	465.03	15-30	21.75	443.28
	3/10/04	465.03	15-30	17.45	447.58
	6/15/04	465.03	15-30	22.38	442.65
	9/17/04	465.03	15-30	25.61	439.42
	12/10/04	465.03	15-30	22.18	442.85
	3/2/05	465.03	15-30	16.95	448.08
	5/27/05	465.03	15-30	18.42	446.61
	7/21/05	465.03	15-30	21.38	443.65
	10/10/05	465.03	15-30	22.49	442.54
	1/9/06	465.03	15-30	18.05	446.98
MW-1A*	4/6/06	465.03	15-30	15.60	449.43
	7/27/06	465.03	15-30	22.42	442.61
	10/12/06	465.03	15-30	23.46	441.57
	1/3/07	465.03	15-30	21.00	444.03
	4/13/07	465.03	15-30	23.24	441.79
	7/16/07	465.03	15-30	Dry	NC
	10/29/07	465.03	15-30	Dry	NC
	2/1/08	465.03	15-30	Dry	NC
	4/18/08	465.03	15-30	27.34	437.69
	7/28/08	465.03	15-30	Dry	NC
	11/18/08	465.03	15-30	Dry	NC
	2/4/09	465.03	15-30	Dry	NC
	4/21/09	465.03	15-30	Dry	NC
	9/24/09	465.03	15-30	35.00	430.03
	3/4/10	465.03	15-30	28.05	436.98
	7/19/10	465.03	15-30	23.85	441.18
	1/19/11	465.03	15-30	23.12	441.91
	4/6/11	465.03	15-30	18.40	446.63
	4/18/11	465.03	15-30	18.70	446.33
	5/9/11	465.03	15-30	19.26	445.77
	6/1/11	465.03	15-30	20.10	444.93
	6/15/11	465.03	15-30	20.44	444.59
	6/30/11	465.03	15-30	20.73	444.30
	9/19/11	465.03	15-30	22.91	442.12
	11/4/11	465.03	15-30		#VALUE!
	2/1/12	465.03	15-30	Dry	NC
	6/13/12	**465.03**	**15-30**	**26.90**	**438.13**
MW-1B**	4/6/06	465.02	50-55	15.59	449.43
	7/27/06	465.02	50-55	22.47	442.55
	10/12/06	465.02	50-55	23.51	441.51
	1/3/07	465.02	50-55	21.04	443.98
	4/13/07	465.02	50-55	23.30	441.72
	7/16/07	465.02	50-55	35.57	429.45
	10/29/07	465.02	50-55	47.32	417.70
	2/1/08	465.02	50-55	33.90	431.12
	4/18/08	465.02	50-55	27.35	437.67
	7/28/08	465.02	50-55	44.03	420.99
	11/18/08	465.02	50-55	48.50	416.52
	2/4/09	465.02	50-55	46.83	418.19
	4/21/09	465.02	50-55	37.10	427.92
	9/24/09	465.02	50-55	37.76	427.26
	3/4/10	465.02	50-55	27.41	437.61
	7/19/10	465.02	50-55	NM	NC
	1/19/11	465.02	50-55	23.10	441.92
	4/6/11	465.02	50-55	18.40	446.62
	4/18/11	465.02	50-55	18.60	446.42
	5/9/11	465.02	50-55	19.11	445.91
	6/1/11	465.02	50-55	20.10	444.92
	6/15/11	465.02	50-55	20.44	444.58
	6/30/11	465.02	50-55	20.74	444.28
	9/19/11	465.02	50-55	22.92	442.10
	11/4/11	465.02	50-55	22.95	442.07
	2/2/12	465.02	50-55	33.00	432.02
	6/13/12	**465.02**	**50-55**	**26.99**	**438.03**

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore, California

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-2*	8/11/00	464.94	15-30	NM	NC
	10/19/00	464.94	15-30	21.80	443.14
	2/22/01	464.94	15-30	22.87	442.07
	5/30/01	464.94	15-30	Dry	NC
	11/14/01	464.94	15-30	Dry	NC
	5/7/02	464.94	15-30	26.70	438.24
	9/11/02	464.94	15-30	25.96	438.98
	12/11/02	464.94	15-30	27.56	437.38
	3/14/03	464.94	15-30	22.41	442.53
	6/25/03	464.94	15-30	21.97	442.97
	9/16/03	464.94	15-30	24.70	440.24
	12/22/03	464.94	15-30	21.58	443.36
	3/10/04	464.94	15-30	17.31	447.63
	6/15/04	464.94	15-30	22.18	442.76
	9/17/04	464.94	15-30	25.44	439.50
	12/10/04	464.94	15-30	22.00	442.94
	3/2/05	464.94	15-30	16.75	448.19
	5/27/05	464.94	15-30	18.29	446.65
	7/21/05	464.94	15-30	20.46	444.48
	10/10/05	464.94	15-30	22.30	442.64
	1/9/06	464.94	15-30	17.67	447.27
MW-2A*	4/6/06	464.94	15-30	15.47	449.47
	7/27/06	464.94	15-30	22.27	442.67
	10/12/06	464.94	15-30	23.35	441.59
	1/3/07	464.94	15-30	20.90	444.04
	4/13/07	464.94	15-30	23.16	441.78
	7/16/07	464.94	15-30	Dry	NC
	10/29/07	464.94	15-30	Dry	NC
	2/1/08	464.94	15-30	Dry	NC
	4/18/08	464.94	15-30	27.26	437.68
	7/28/08	464.94	15-30	Dry	NC
	11/18/08	464.94	15-30	Dry	NC
	2/4/09	464.94	15-30	Dry	NC
	4/21/09	464.94	15-30	Dry	NC
	9/24/09	464.94	15-30	Dry	NC
	3/4/10	464.94	15-30	25.12	439.82
	7/20/10	464.94	15-30	25.90	439.04
	1/19/11	464.94	15-30	25.30	439.64
	4/6/11	464.94	15-30	18.30	446.64
	9/19/11	464.94	15-30	22.45	442.49
	11/4/11	464.94	15-30	22.77	442.17
	2/1/12	464.94	15-30	Dry	NC
	6/12/12	**464.94**	**15-30**	**26.79**	**438.15**
MW-3*	8/11/00	465.84	15-30	NM	NC
	10/19/00	465.84	15-30	22.45	443.39
	2/22/01	465.84	15-30	23.51	442.33
	5/30/01	465.84	15-30	Dry	NC
	11/14/01	465.84	15-30	Dry	NC
	5/7/02	465.84	15-30	Dry	NC
	9/11/02	465.84	15-30	26.61	439.23
	12/11/02	465.84	15-30	28.18	437.66
	3/14/03	465.84	15-30	23.04	442.80
	6/25/03	465.84	15-30	22.59	443.25
	9/16/03	465.84	15-30	25.33	440.51
	12/22/03	465.84	15-30	22.37	443.47
	3/10/04	465.84	15-30	17.88	447.96
	6/15/04	465.84	15-30	22.82	443.02
	9/17/04	465.84	15-30	26.09	439.75
	12/10/04	465.84	15-30	22.65	443.19
	3/5/05	465.84	15-30	17.33	448.51
	5/27/05	465.84	15-30	18.89	446.95
	7/21/05	465.84	15-30	21.10	444.74
	10/10/05	465.84	15-30	22.94	442.90
	1/9/06	465.84	15-30	18.24	447.60

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore, California

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-3A*	4/6/06	465.84	15-30	16.02	449.82
	7/27/06	465.84	15-30	22.90	442.94
	10/12/06	465.84	15-30	23.99	441.85
	1/3/07	465.84	15-30	21.52	444.32
	4/13/07	465.84	15-30	23.78	442.06
	7/16/07	465.84	15-30	Dry	NC
	10/29/07	465.84	15-30	Dry	NC
	2/1/08	465.84	15-30	Dry	NC
	4/18/08	465.84	15-30	27.86	437.98
	7/28/08	465.84	15-30	Dry	NC
	11/18/08	465.84	15-30	Dry	NC
	2/4/09	465.84	15-30	Dry	NC
	4/21/09	465.84	15-30	Dry	NC
	9/24/09	465.84	15-30	Dry	NC
	3/4/10	465.84	15-30	27.95	437.89
	7/19/10	465.84	15-30	26.55	439.29
	1/19/11	465.84	15-30	23.63	442.21
	4/6/11	465.84	15-30	18.90	446.94
	9/19/11	465.85	15-30	23.40	442.45
	11/4/11	465.85	15-30	23.60	442.25
	2/1/12	465.85	15-30	Dry	NC
	6/12/12	**465.85**	**15-30**	**27.47**	**438.38**
MW-4***	11/14/01	465.15	15-30	33.84	431.31
	5/7/02	465.15	15-30	26.75	438.40
	9/11/02	465.15	15-30	26.66	438.49
	12/11/02	465.15	15-30	28.39	436.76
	3/14/03	465.15	15-30	23.14	442.01
	6/25/03	465.15	15-30	22.72	442.43
	9/16/03	465.15	15-30	25.39	439.76
	12/22/03	465.15	15-30	22.42	442.73
	3/4/04	465.15	15-30	18.20	446.95
	6/15/04	465.15	15-30	22.95	442.20
	9/17/04	465.15	15-30	26.12	439.03
	12/10/04	465.15	15-30	22.73	442.42
	3/2/05	465.15	15-30	17.60	447.55
	5/27/05	465.15	15-30	19.14	446.01
	7/21/05	465.15	15-30	21.25	443.90
	10/10/05	465.15	15-30	22.85	442.30
	1/9/06	465.15	15-30	18.54	446.61
MW-4A**	4/6/06	464.96	15-30	16.19	448.77
	7/27/06	464.96	15-30	22.87	442.09
	10/12/06	464.96	15-30	23.90	441.06
	1/3/07	464.96	15-30	21.52	443.44
	4/13/07	464.96	15-30	23.78	441.18
	7/16/07	464.96	15-30	Dry	NC
	10/29/07	464.96	15-30	Dry	NC
	2/1/08	464.96	15-30	Dry	NC
	4/18/08	464.96	15-30	27.91	437.05
	7/28/08	464.96	15-30	Dry	NC
	11/18/08	464.96	15-30	Dry	NC
	2/4/09	464.96	15-30	Dry	NC
	9/24/09	464.96	15-30	Dry	NC
	4/21/09	464.96	15-30	Dry	NC
	3/4/10	464.96	15-30	25.66	439.30
	7/20/10	464.96	15-30	24.25	440.71
	1/19/11	464.96	15-30	23.64	441.32
	4/6/11	464.96	15-30	18.90	446.06
	9/19/11	464.96	15-30	23.43	441.53
	11/4/11	464.96	15-30	23.40	441.56
	2/1/12	464.96	15-30	Dry	NC
	6/12/12	**464.96**	**15-30**	**27.27**	**437.69**

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore, California

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-5***	11/14/01	464.65	20-50	34.94	429.71
	5/7/02	464.65	20-50	27.90	436.75
	9/11/02	464.65	20-50	27.99	436.66
	12/11/02	464.65	20-50	29.50	435.15
	3/14/03	464.65	20-50	24.26	440.39
	6/25/03	464.65	20-50	24.01	440.64
	9/16/03	464.65	20-50	26.83	437.82
	12/22/03	464.65	20-50	23.68	440.97
	3/10/04	464.65	20-50	19.22	445.43
	6/15/04	464.65	20-50	24.20	440.45
	9/17/04	464.65	20-50	27.68	436.97
	12/10/04	464.65	20-50	23.93	440.72
	3/2/05	464.65	20-50	18.56	446.09
	5/27/05	464.65	20-50	20.15	444.50
	7/21/05	464.65	20-50	22.55	442.10
	10/10/05	464.65	20-50	23.35	441.30
	1/9/06	464.65	20-50	19.53	445.12
MW-5A**	4/6/06	464.64	20-35	17.35	447.29
	7/27/06	464.64	20-35	24.40	440.24
	10/12/06	464.64	20-35	25.58	439.06
	1/3/07	464.64	20-35	22.53	442.11
	4/13/07	464.64	20-35	24.77	439.87
	7/16/07	464.64	20-35	Dry	NC
	10/29/07	464.64	20-35	Dry	NC
	2/1/08	464.64	20-35	34.03	430.61
	4/18/08	464.64	20-35	28.13	436.51
	7/28/08	464.64	20-35	Dry	NC
	11/18/08	464.64	20-35	33.82	430.82
	2/4/09	464.64	20-35	Dry	NC
	4/21/09	464.64	20-35	Dry	NC
	9/24/09	464.64	20-35	Dry	NC
	3/4/10	464.64	20-35	28.77	435.87
	7/20/10	464.64	20-35	24.57	440.07
	1/19/11	464.64	20-35	24.52	440.12
	4/6/11	464.64	20-35	19.98	444.66
	9/19/11	464.64	20-35	24.62	440.02
	11/4/11	464.64	20-35	24.50	440.14
	2/1/12	464.64	20-35	Dry	NC
	6/12/12	**464.64**	**20-35**	**28.39**	**436.25**
MW-5B**	4/6/06	464.59	50-55	17.44	447.15
	7/27/06	464.59	50-55	24.09	440.50
	10/12/06	464.59	50-55	25.17	439.42
	1/3/07	464.59	50-55	22.44	442.15
	4/13/07	464.59	50-55	25.33	439.26
	7/16/07	464.59	50-55	36.50	428.09
	10/29/07	464.59	50-55	47.90	416.69
	2/1/08	464.59	50-55	33.25	431.34
	4/18/08	464.59	50-55	28.77	435.82
	7/28/08	464.59	50-55	44.76	419.83
	11/18/08	464.59	50-55	51.65	412.94
	2/4/09	464.59	50-55	47.63	416.96
	4/21/09	464.59	50-55	37.00	427.59
	9/24/09	464.59	50-55	39.73	424.86
	3/4/10	464.59	50-55	28.97	435.62
	7/19/10	464.59	50-55	25.40	439.19
	1/19/11	464.59	50-55	24.52	440.07
	4/6/11	464.59	50-55	20.05	444.54
	9/19/11	464.59	50-55	24.50	440.09
	11/4/11	464.59	50-55	24.40	440.19
	2/1/12	464.59	50-55	33.96	430.63
	6/12/12	**464.59**	**50-55**	**28.65**	**435.94**

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore, California

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-6	11/14/01	464.13	20-50	33.88	430.25
	5/7/02	464.13	20-50	27.01	437.12
	9/11/02	464.13	20-50	27.03	437.10
	12/11/02	464.13	20-50	28.77	435.36
	3/14/03	464.13	20-50	23.46	440.67
	6/25/03	464.13	20-50	23.08	441.05
	9/16/03	464.13	20-50	25.77	438.36
	12/22/03	464.13	20-50	22.59	441.54
	3/10/04	464.13	20-50	18.65	445.48
	6/15/04	464.13	20-50	23.31	440.82
	9/17/04	464.13	20-50	26.56	437.57
	12/10/04	464.13	20-50	23.09	441.04
	3/2/05	464.13	20-50	18.04	446.09
	5/27/05	464.13	20-50	19.57	444.56
	7/21/05	464.13	20-50	21.60	442.53
	10/10/05	464.13	20-50	22.21	441.92
	1/9/06	464.13	20-50	18.99	445.14
	4/6/06	464.13	20-50	17.00	447.13
	7/27/06	464.13	20-50	23.45	440.68
	10/12/06	464.13	20-50	24.36	439.77
	1/3/07	464.13	20-50	22.03	442.10
	4/13/07	464.13	20-50	24.40	439.73
	7/16/07	464.13	20-50	NM	NC
	10/29/07	464.13	20-50	Dry	NC
	2/1/08	464.13	20-50	33.05	431.08
	4/18/08	464.13	20-50	28.20	435.93
	7/28/08	464.13	20-50	Dry	NC
	11/18/08	464.13	20-50	Dry	NC
	2/4/09	464.13	20-50	Dry	NC
	4/21/09	464.13	20-50	38.71	425.42
	9/24/09	464.13	20-50	38.26	425.87
	3/4/10	464.13	20-50	26.02	438.11
	7/19/10	464.13	20-50	24.65	439.48
	1/19/11	464.13	20-50	24.00	440.13
	4/6/11	464.13	20-50	21.76	442.37
	9/19/11	464.13	20-50	23.76	440.37
	11/4/11	464.13	20-50	23.00	441.13
	2/1/12	464.13	20-50	33.43	430.70
	6/12/12	**464.13**	**20-50**	**27.62**	**436.51**
MW-7A**	4/6/06	465.32	15-30	16.61	448.71
	7/27/06	465.32	15-30	23.40	441.92
	10/12/06	465.32	15-30	24.50	440.82
	1/3/07	465.32	15-30	21.80	443.52
	4/13/07	465.32	15-30	24.05	441.27
	7/16/07	465.32	15-30	Dry	NC
	10/29/07	465.32	15-30	Dry	NC
	2/1/08	465.32	15-30	Dry	NC
	4/18/08	465.32	15-30	28.16	437.16
	7/28/08	465.32	15-30	Dry	NC
	11/18/08	465.32	15-30	Dry	NC
	2/4/09	465.32	15-30	Dry	NC
	4/21/09	465.32	15-30	Dry	NC
	9/24/09	465.32	15-30	Dry	NC
	3/4/10	465.32	15-30	26.30	439.02
	7/19/10	465.32	15-30	24.78	440.54
	1/19/11	465.32	15-30	23.60	441.72
	4/6/11	465.32	15-30	19.35	445.97
	4/18/11	465.32	15-30	19.59	445.73
	5/9/11	465.32	15-30	21.15	444.17
	6/1/11	465.32	15-30	21.01	444.31
	6/15/11	465.32	15-30	21.45	443.87
	6/30/11	465.32	15-30	21.87	443.45
	9/19/11	465.32	15-30	23.96	441.36
	11/4/11	465.32	15-30	23.45	441.87
	2/1/12	465.32	15-30	Dry	NC
	6/13/12	**465.32**	**15-30**	**27.93**	**437.39**

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore, California

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-7B**	4/6/06	465.39	45-50	16.85	448.54
	7/27/06	465.39	45-50	23.72	441.67
	10/12/06	465.39	45-50	24.74	440.65
	1/3/07	465.39	45-50	22.18	443.21
	4/13/07	465.39	45-50	24.41	440.98
	7/16/07	465.39	45-50	36.40	428.99
	10/29/07	465.39	45-50	Dry	NC
	2/1/08	465.39	45-50	33.84	431.55
	4/18/08	465.39	45-50	28.52	436.87
	7/28/08	465.39	45-50	44.92	420.47
	11/18/08	465.39	45-50	Dry	NC
	2/4/09	465.39	45-50	46.65	418.74
	4/21/09	465.39	45-50	36.83	428.56
	9/24/09	465.39	45-50	39.26	426.13
	3/4/10	465.39	45-50	28.63	436.76
	7/19/10	465.39	45-50	25.05	440.34
	1/19/11	465.39	45-50	24.15	441.24
	4/6/11	465.39	45-50	21.78	443.61
	4/18/11	465.39	45-50	19.75	445.64
	5/9/11	465.39	45-50	20.40	444.99
	6/1/11	465.39	45-50	21.25	444.14
	6/15/11	465.39	45-50	21.45	443.94
	6/30/11	465.39	45-50	21.65	443.74
	9/19/11	465.39	45-50	24.10	441.29
	11/4/11	465.39	45-50	24.10	441.29
	2/2/12	465.39	45-50	33.91	431.48
	6/13/12	**465.39**	**45-50**	**28.14**	**437.25**
MW-7C**	4/6/06	465.39	65-70	17.18	448.21
	7/27/06	465.39	65-70	24.15	441.24
	10/12/06	465.39	65-70	24.74	440.65
	1/3/07	465.39	65-70	22.53	442.86
	4/13/07	465.39	65-70	24.73	440.66
	7/16/07	465.39	65-70	36.70	428.69
	10/29/07	465.39	65-70	48.25	417.14
	2/1/08	465.39	65-70	34.00	431.39
	4/18/08	465.39	65-70	28.75	436.64
	7/28/08	465.39	65-70	45.00	420.39
	11/18/08	465.39	65-70	49.62	415.77
	2/4/09	465.39	65-70	47.89	417.50
	4/21/09	465.39	65-70	36.98	428.41
	9/24/09	465.39	65-70	39.49	425.90
	3/4/10	465.39	65-70	26.66	438.73
	7/19/10	465.39	65-70	25.38	440.01
	1/19/11	465.39	65-70	24.50	440.89
	4/6/11	465.39	65-70	19.88	445.51
	9/19/11	465.39	65-70	23.50	441.89
	11/4/11	465.39	65-70	24.40	440.99
	2/2/12	465.39	65-70	34.14	431.25
	6/13/12	**465.39**	**65-70**	**28.54**	**436.85**
EW-1**	4/6/06	465.45	15-40	15.99	449.46
	7/27/06	465.45	15-40	23.85	441.60
	10/12/06	465.45	15-40	23.51	441.94
	1/3/07	465.45	15-40	21.45	444.00
	4/13/07	465.45	15-40	23.69	441.76
	10/29/07	465.45	15-40	NM	NC
	2/1/08	465.45	15-40	NM	NC
	4/18/08	465.45	15-40	27.83	437.62
	7/28/08	465.45	15-40	NM	NC
	11/18/08	465.45	15-40	Dry	NC
	2/4/09	465.45	15-40	Dry	NC
	4/21/09	465.45	15-40	Dry	NC
	9/24/09	465.45	15-40	Dry	NC
	3/4/10	465.45	15-40	27.87	NC
	7/20/10	465.45	15-40	24.35	441.10
	1/19/11	465.45	15-40	23.58	441.87
	4/6/11	465.45	15-40	18.85	446.60
	4/18/11	465.45	15-40	19.70	445.75
	5/9/11	465.45	15-40	19.69	445.76
	6/1/11	465.45	15-40	20.52	444.93
	6/15/11	465.45	15-40	21.11	444.34
	6/30/11	465.45	15-40	21.41	444.04
	9/19/11	465.45	15-40	22.35	443.10
	11/4/11	465.45	15-40	23.35	442.10
	2/2/12	465.45	15-40	33.38	432.07
	6/13/12	**465.45**	**15-40**	**27.38**	**438.07**

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore, California

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
EW-2**	4/6/06	465.99	15-40	16.20	449.79
	7/27/06	465.99	15-40	23.10	442.89
	10/12/06	465.99	15-40	21.48	444.51
	1/3/07	465.99	15-40	21.66	444.33
	4/13/07	465.99	15-40	23.93	442.06
	10/29/07	465.99	15-40	Dry	NC
	2/1/08	465.99	15-40	NM	NC
	4/18/08	465.99	15-40	28.04	437.95
	7/28/08	465.99	15-40	NM	NC
	11/18/08	465.99	15-40	Dry	NC
	2/4/09	465.99	15-40	Dry	NC
	4/21/09	465.99	15-40	Dry	NC
	9/24/09	465.99	15-40	Dry	NC
	3/4/10	465.99	15-40	25.89	NC
	7/20/10	465.99	15-40	24.45	441.54
	1/19/11	465.99	15-40	23.72	442.27
	4/6/11	465.99	15-40	19.00	446.99
	4/18/11	465.99	15-40	19.19	446.80
	5/9/11	465.99	15-40	19.67	446.32
	6/1/11	465.99	15-40	20.71	445.28
	6/15/11	465.99	15-40	21.00	444.99
	6/30/11	465.99	15-40	21.31	444.68
	9/19/11	465.99	15-40	23.55	442.44
	11/4/11	465.99	15-40	23.60	442.39
	2/2/12	465.99	15-40	33.66	432.33
	6/13/12	**465.99**	**15-40**	**27.64**	**438.35**
EW-3 [(a)]	11/18/08	NC	25-30	Dry	NC
	2/4/09	NC	25-30	33.80	NC
	4/21/09	NC	25-30	Dry	NC
	9/24/09	NC	25-30	Dry	NC
	3/4/10	NC	25-30	28.02	NC
	7/20/10	NC	25-30	NM	NC
	1/19/11	NC	25-30	23.50	NC
	4/6/11	NC	25-30	18.30	NC
	4/18/11	NC	25-30	19.40	NC
	5/9/11	NC	25-30	19.67	NC
	6/1/11	NC	25-30	20.72	NC
	6/15/11	NC	25-30	20.92	NC
	6/30/11	NC	25-30	21.11	NC
	9/19/11	NC	25-30	23.25	NC
	11/4/11	NC	25-30	23.30	NC
	2/2/12	NC	25-30	28.76	NC
	6/13/12	**NC**	**25-30**	**27.31**	**NC**
MW-8A	7/28/08	NC	16-36	Dry	NC
	11/18/08	NC	16-36	35.40	NC
	2/4/09	NC	16-36	Dry	NC
	4/21/09	NC	16-36	Dry	NC
	9/24/09	NC	16-36	Dry	NC
	3/4/10	NC	16-36	26.33	NC
	7/20/10	NC	16-36	25.00	NC
	1/19/11	NC	16-36	24.30	NC
	4/6/11	NC	16-36	19.22	NC
	9/19/11	NC	16-36	24.05	NC
	11/4/11	NC	16-36	24.10	NC
	2/2/12	NC	16-36	33.99	NC
	6/12/12	**NC**	**16-36**	**28.01**	**NC**

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore, California

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-8B	7/28/08	NC	46-51	44.90	NC
	11/18/08	NC	46-51	49.85	NC
	2/4/09	NC	46-51	47.95	NC
	4/21/09	NC	46-51	38.75	NC
	9/24/09	NC	46-51	38.47	NC
	3/4/10	NC	46-51	28.24	NC
	7/20/10	NC	46-51	24.70	NC
	1/19/11	NC	46-51	24.05	NC
	4/6/11	NC	46-51	19.42	NC
	9/19/11	NC	46-51	23.80	NC
	11/4/11	NC	46-51	23.50	NC
	2/2/12	NC	46-51	33.73	NC
	6/13/12	**NC**	**46-51**	**27.75**	**NC**
MW-9A	7/28/08	NC	14-36	Dry	NC
	11/18/08	NC	14-36	48.97	NC
	2/4/09	NC	14-36	Dry	NC
	4/21/09	NC	14-36	Dry	NC
	9/24/09	NC	14-36	Dry	NC
	3/4/10	NC	14-36	27.86	NC
	7/20/10	NC	14-36	24.15	NC
	1/19/11	NC	14-36	23.40	NC
	4/6/11	NC	14-36	21.50	NC
	9/19/11	NC	14-36	23.25	NC
	11/4/11	NC	14-36	23.50	NC
	2/1/12	NC	14-36	33.10	NC
	6/12/12	**NC**	**14-36**	**27.30**	**NC**
MW-9B	7/28/08	NC	47-52	44.05	NC
	11/18/08	NC	47-52	38.28	NC
	2/4/09	NC	47-52	47.03	NC
	4/21/09	NC	47-52	35.94	NC
	9/24/09	NC	47-52	37.93	NC
	3/4/10	NC	47-52	27.68	NC
	7/20/10	NC	47-52	24.30	NC
	1/19/11	NC	47-52	23.55	NC
	4/6/11	NC	47-52	21.21	NC
	9/19/11	NC	47-52	23.12	NC
	11/4/11	NC	47-52	23.35	NC
	2/1/12	NC	47-52	33.13	NC
	6/12/12	**NC**	**47-52**	**27.19**	**NC**
EX-1***	11/14/01	465.30	30-55	33.41	431.89
	5/7/02	465.30	30-55	27.58	437.72
	9/11/02	465.30	30-55	NM	NC
	12/11/02	465.30	30-55	27.98	437.32
	3/14/03	465.30	30-55	23.02	442.28
	6/25/03	465.30	30-55	22.41	442.89
	9/16/03	465.30	30-55	24.65	440.65
	3/10/04	465.30	30-55	17.99	447.31
	6/15/04	465.30	30-55	22.48	442.82
	9/17/04	465.30	30-55	25.91	439.39
	12/10/04	465.30	30-55	NM	NC
	3/2/05	465.30	30-55	NM	NC
	5/27/05	465.30	30-55	18.68	446.62
	7/21/05	465.30	30-55	21.55	443.75
	10/10/05	465.30	30-55	22.73	442.57
	1/9/06	465.30	30-55	18.05	447.25

Notes:
msl: mean sea level
bgs: below ground surface
NA: well not accessible
NC: elevation not calculated
NM: well not measured
* = Well MW-1, 2, and 3 renamed MW-1A, 2A, and 3A respectively
** = Well installed on 2/22/06-2/28/06
*** = Well destroyed on 2/22/06-2/28/06
(a) = Well EW-3 is 35 feet deep with a screen interval from 25 to 30 feet bgs.

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-1A*	8/11/00	NC	170,000	57,000	6,400	7,600	4,200	9,700	320,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/19/00	443.09	170,000	17,000	8,400	3,200	2,700	10,000	200,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/22/01	442.12	82,000	11,000	5,100	1,000	13,000	8,700	190,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/30/01	NC	NS	NS		not sampled - well dry			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/14/01	NC	NS	NS		not sampled - well dry			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/7/02	NC	NS	NS		not sampled - well dry			NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/02	438.87	130,000	NA	7,700	1,100	NS	1,500	<5000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	437.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/03	442.40	180,000	3,800	7,100	3,200	4,300	6,000	220,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	442.93	71,000	3,100	7,500	4,700	4,800	8,900	210,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	440.12	37,000	3,600	4,600	220	3,600	930	150,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	443.28	44,000	4,000	6,800	1,500	4,000	3,800	180,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	447.58	72,000	3,100	6,000	11,000	3,900	10,000	260,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	442.65	42,000	4,300	5,000	1,800	3,700	6,000	210,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.42	24,000	2,900	2,800	<33	2,900	500	83,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	442.85	31,000	2,700	4,600	190	4,400	2,800	200,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	448.08	58,000	2,800	4,000	2,500	4,500	7,800	230,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.61	79,000	4,600	4,300	6,200	5,100	13,000	240,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	443.65	80,000	NS	4,300	5,300	5,400	14,000	300,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.54	58,000	NS	4,300	240	5,600	8,300	170,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	446.98	47,000	3,700	3,100	1,100	4,400	5,900	180,000	<2,500	<25,000	<2,500	<2,500	240,000	<250,000	<2,500,000	<2,500	<2,500
	4/6/06	449.43	18,000	1,900	1,200	280	2,400	2,200	110,000	<2,500	<25,000	<2,500	<2,500	87,000	<250,000	<2,500,000	<2,500	<2,500
	7/27/06	442.61	24,000	2,400	2,100	350	3,400	5,300	130,000	<5000	<50,000	<5000	<5000	160,000	NA	NA	NA	NA
	10/12/06	441.57	19,000	1,700	1,000	26	2,000	1,000	68,000	<1,200	<12,000	<1,200	<1,200	84,000	<120,000	<1,200,000	NA	NA
	1/3/07	444.03	27,000	2,300	1,300	53	2,500	1,900	120,000	<1,700	<1,7000	<1,700	<1,700	110,000	<170,000	<1,700,000	<1,700	<1,700
	4/13/07	441.79	28,000	3,000	1,600	74	3,700	1,800	190,000	<5,000	<50,000	<5,000	<5,000	200,000	<500,000	<5,000,000	<5,000	<5,000
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.69	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	430.03	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	436.98	1,300	NA	140	<5.0	26	6.0	16,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/10	441.18	400	NA	1.2	1.3	<0.5	0.76	880	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	441.91	150	130	1.4	0.6	<0.5	1.4	300	<250	40,000	<250	<250	330	NA	NA	<250	<250
	4/8/11	442.37	200	180	2.0	1.9	<0.5	4.4	1,300	<120	24,000	<120	<120	2,300	NA	NA	<120	<120
	4/18/11	446.33	140	130	0.56	<0.5	<0.5	4.2	1,500	<50	11,000	<50	<50	1,200	NA	NA	<0.5	<50
	5/9/11	445.77	<50	<50	<0.5	<0.5	<0.5	<0.5	880	<50	12,000	<50	<50	1,000	NA	NA	<50	<50
	6/1/11	444.93	<50	52	<0.5	<0.5	<0.5	<0.5	350	<50	12,000	<50	<50	480	NA	NA	<50	<50
	6/15/11	444.59	<50	70	<0.5	<0.5	<0.5	<0.5	310	<100	9,000	<100	<100	330	NA	NA	<100	<100
	6/30/11	444.30	<50	54	<0.5	<0.5	<0.5	<0.5	150	<50	6,200	<50	<50	170	NA	NA	<50	<50
	9/20/11	442.12	96	200	<0.5	0.6	<0.5	0.55	140	<120	19,000	<120	<120	150	NA	NA	<120	<120
	11/8/11	442.03	100	150	1.3	0.99	<0.5	1.1	110	<100	21,000	<100	<100	150	NA	NA	<100	<100
	2/1/12	NC	NS	NS		not sampled - well dry			NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	6/13/12	**438.13**	**65**	**300**	**0.96**	**0.70**	**<0.5**	**<0.5**	**5.5**	**<50**	**10,000**	**<50**	**<50**	**<50**	**NA**	**NA**	**<0.5**	**<0.5**

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-1B	3/13/06	446.44	<50	<50	<0.5	<0.5	<0.5	<0.5	8.2	<0.5	<5.0	<0.5	<0.5	7.9	<50	<500	<0.5	<0.5
	4/6/06	449.43	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	1.0	<50	<500	<0.5	<0.5
	7/27/06	442.55	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
	10/12/06	441.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	NA	NA
	1/3/07	443.98	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/13/07	441.72	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/16/07	429.45	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
	10/29/07	417.70	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	2/1/08	431.12	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/18/08	437.67	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/29/08	420.99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	418.19	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/09	427.92	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/09	427.26	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	1.1	NA	NA	NA	NA
	3/4/10	437.61	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	441.92	<50	130	<0.5	<0.5	<0.5	<0.5	<5.0	<250	40,000	<250	<250	330	NA	NA	<250	<250
	4/8/11	446.62	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	4/18/11	446.42	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	5/9/11	445.91	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	6/1/11	444.92	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	6/15/11	444.58	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	6/30/11	444.28	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	9/20/11	442.10	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	11/8/11	442.07	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	2/2/12	432.02	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	6/13/12	**438.03**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**<0.5**	**<0.5**
MW- 2A*	8/11/00	NC	4,500	1,900	220	52	160	170	3,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/19/00	443.14	3,400	1,300	150	21	100	70	1,900	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/22/01	442.07	7,600	880	25	<10	69	25	2,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/30/01	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/14/01	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/7/02	438.24	400	86	5.4	<0.5	1.9	2.3	230	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	438.98	260	NA	1.3	<0.5	0.57	0.77	200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	437.38	250	120	7.9	1.6	13	9.9	180	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	442.53	830	110	56	<0.5	<0.5	<1.0	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	442.97	260	180	0.92	2.9	3.1	8.1	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	440.24	420	260	3.6	3.4	5.2	2.4	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	443.36	240	120	0.82	3.1	7.8	3.9	1,400	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	447.63	280	210	9.4	4.2	14	11	1,400	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	442.76	150	150	2.1	2.4	2.2	1.3	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.50	61	70	<0.5	1.0	<0.5	<0.5	730	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-2A cont.	12/10/04	442.94	84	110	<0.5	1.2	<0.5	1.5	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	448.19	63	91	0.55	<0.5	0.63	0.51	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.65	270	59	14	3.9	19	6.8	1,100	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	444.48	280	NS	8.6	2.5	17	2.5	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.64	<50	NS	<.5	<.5	<.5	<.5	680	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	447.27	1,700	890	4.4	1.3	120	18	530	<10	330	<10	<10	590	<1,000	<10,000	<10	<10
	4/7/06	449.47	110	160	0.61	0.8	4.1	<0.5	270	<5.0	660	<5.0	<5.0	240	<500	<5,000	<5.0	<5.0
	7/27/06	442.67	<50	120	<0.5	0.84	<0.5	<0.5	87	<5.0	870	<5.0	<5.0	110	NA	NA	NA	NA
	10/12/06	441.59	<50	70	<0.5	<0.5	<0.5	<0.5	29	<5.0	480	<5.0	<5.0	30	<500	<5,000	NA	NA
	1/3/07	444.04	55	60	0.57	<0.5	<0.5	<0.5	8.5	<2.5	590	<2.5	<2.5	7.8	<250	<2,500	<2.5	<2.5
	4/13/07	441.78	86	130	<0.5	0.6	<0.5	<0.5	16	<5.0	740	<5.0	<5.0	16	<500	<5,000	<5.0	<5.0
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	439.82	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	439.09	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/21/11	439.64	<50	<50	<0.5	<0.5	<0.5	<0.5	2.8	<5.0	<5.0	<5.0	<5.0	2.8	NA	NA	<5.0	<5.0
	4/8/11	446.64	<50	<50	<0.5	0.77	<0.5	6.2	<5.0	<0.5	15	<0.5	<0.5	3.3	NA	NA	<0.5	<0.5
	9/20/11	442.49	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	7.9	<0.5	<0.5	2.8	NA	NA	<0.5	<0.5
	11/8/11	442.17	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	2.3	NA	NA	<0.5	<0.5
	2/1/12	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/12	**438.15**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**5.4**	**<0.5**	**<0.5**	**1.1**	**NA**	**NA**	**<0.5**	**<0.5**
MW- 3A*	8/11/00	NC	59	260	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/19/00	443.39	<50	<65	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/22/01	442.33	<50	100	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/30/01	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	11/14/01	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	5/7/02	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	9/11/02	439.23	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	437.66	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	3/14/03	442.80	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	443.25	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	440.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	443.47	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	447.96	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	443.02	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.75	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	443.19	<50	<50	<0.5	<0.5	<0.5	<0.5	7.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	448.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.95	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	444.74	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.90	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	447.60	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-3A cont.	4/7/06	449.82	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/27/06	442.94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
	10/12/06	441.85	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	NA	NA
	1/3/07	444.32	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/13/07	442.06	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	437.89	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/20	439.29	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	442.21	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/8/11	446.94	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/20/11	442.45	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/8/11	442.25	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/1/12	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	6/12/12	**438.38**	**<50**	**NS**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
MW-4**	11/14/01	431.31	510	90	4.0	<0.5	<0.5	<0.5	14	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	438.40	150	<50	3.5	0.5	<0.5	<0.5	48	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	438.49	<50	NA	<0.5	<0.5	<0.5	<0.5	15	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	436.76	<50	<50	<0.5	<0.5	<0.5	<0.5	24	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	442.01	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	442.43	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	439.76	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	442.73	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	446.95	<50	<50	<0.5	<0.5	<0.5	<0.5	37	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	442.20	<50	<50	<0.5	<0.5	<0.5	<0.5	7.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	442.42	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	447.55	<50	<50	<0.5	<0.5	<0.5	<0.5	14	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.01	<50	<50	<0.5	<0.5	<0.5	<0.5	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	443.90	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.30	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	446.61	<50	<50	<0.5	<0.5	<0.5	<0.5	0.86	<0.5	<5.0	<0.5	<5.0	0.86	<50	<500	<5.0	<5.0
MW-4A	3/13/06	445.87	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.70	<50	<500	<0.5	<0.5
	4/7/06	448.77	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	1.1	<50	<500	<0.5	<0.5
	7/28/06	442.09	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	3.0	NA	NA	NA	NA
	10/13/06	441.06	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	2.0	<50	<500	NA	NA
	1/4/07	443.44	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.79	<50	<500	<0.5	<0.5
	4/16/07	441.18	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.51	<50	<500	<0.5	<0.5
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-4A cont.	4/18/08	437.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	439.30	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	440.71	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	441.32	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/7/11	436.16	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/19/11	441.53	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/11	441.56	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/1/12	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	6/12/12	**437.69**	**<50**	**NA**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
MW-5**	11/14/01	429.71	<50	<66	<0.5	<0.5	<0.5	<0.5	8.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	436.75	140	<50	<0.5	<0.5	<0.5	<0.5	110	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	436.66	<50	NA	<0.5	<0.5	<0.5	<0.5	6.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	435.15	73	<50	<0.5	<0.5	<0.5	<0.5	160	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	440.39	110	<50	<0.5	<0.5	<0.5	<0.5	170	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	440.64	<50	<50	<0.5	<0.5	<0.5	<0.5	89	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	437.82	630	<50	<0.5	3.50	<0.5	2.6	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	440.97	<0.5	<50	<0.5	<0.5	<0.5	<0.5	630	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	445.43	57	<50	<0.5	<0.5	<0.5	<0.5	1,100	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	440.45	<50	<50	<0.5	<0.5	<0.5	<0.5	750	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	436.97	<50	<50	<0.5	<0.5	<0.5	<0.5	780	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	440.72	<50	<50	<0.5	<0.5	<0.5	<0.5	120	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	446.09	<50	<50	<0.5	<0.5	<0.5	<0.5	320	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	444.50	<50	<50	<0.5	<0.5	<0.5	<0.5	120	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	442.10	<50	NS	<0.5	<0.5	<0.5	<0.5	97	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	441.30	<50	NS	<0.5	<0.5	<0.5	<0.5	41	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	445.12	<50	<50	<0.5	<0.5	<0.5	<0.5	37	<0.5	<5.0	<0.5	<5.0	<5.0	<50	<500	<0.5	<0.5
MW-5A	3/13/06	444.48	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/7/06	447.29	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/28/06	440.24	<50	62	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
	10/13/06	439.06	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	6.3	<0.5	<0.5	0.61	<50	<500	NA	NA
	1/4/07	442.11	<50	320	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/16/07	439.87	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	430.61	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.3	<50	<500	<0.5	<0.5
	4/18/08	436.51	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	464.64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	435.87	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	440.07	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/19/11	440.12	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-5A cont.	4/7/11	436.16	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/19/11	440.02	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/11	440.14	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/1/12	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	6/12/12	**436.25**	**<50**	**NA**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**NA**	**NA**
MW-5B	3/13/06	444.46	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.69	<50	<500	<0.5	<0.5
	4/7/06	447.15	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.98	<50	<500	<0.5	<0.5
	7/28/06	440.50	<50	<50	<0.5	<0.5	<0.5	<0.5	6.8	<0.5	6.3	<0.5	<0.5	0.61	NA	NA	NA	NA
	10/13/06	439.42	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	3.6	<50	<500	NA	NA
	1/4/07	442.15	<50	89	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	1.3	<50	<500	<0.5	<0.5
	4/16/07	439.26	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	1.5	<50	<500	<0.5	<0.5
	7/17/07	428.09	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	1.4	NA	NA	NA	NA
	10/29/07	416.69	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	2/1/08	431.34	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.9	<50	<500	<0.5	<0.5
	4/18/08	435.82	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.5	<50	<500	<0.5	<0.5
	7/29/08	419.83	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	11/18/08	412.94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.2	<50	<500	<0.5	<0.5
	2/4/09	416.96	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/22/09	427.59	<50	NA	<0.5	<0.5	<0.5	<0.5	48	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/09	424.86	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.3	<50	<500	<0.5	<0.5
	3/4/10	435.62	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/10	439.19	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/19/11	440.07	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/6/11	444.66	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/19/11	440.09	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/11	440.19	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/1/12	430.63	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/12/12	**435.94**	**<50**	**NA**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**NA**	**NA**
MW-6	11/14/01	430.25	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	437.12	<50	<67	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	437.10	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	435.36	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	440.67	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	441.05	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	438.36	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	441.54	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	445.48	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	440.82	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	437.57	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	441.04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	446.09	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	444.56	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	442.53	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	441.92	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	445.14	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	0.86	<50	<500	<0.5	<0.5
	4/6/06	447.13	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	7/28/06	440.68	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
	10/13/06	439.77	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	NA	NA
	1/4/07	442.10	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-6	4/16/07	439.73	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
cont.	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	431.08	<50	<50	<0.5	<0.5	<0.5	0.91	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/18/08	435.93	<50	<50	<0.5	<0.5	<0.5	0.91	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/22/09	425.42	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/09	425.87	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	3/4/10	438.11	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/20	439.48	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/19/11	440.13	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/6/11	442.37	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/19/11	440.37	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/11	441.13	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/1/12	430.70	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/12/12	**436.51**	**<50**	**NA**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**NA**	**NA**
MW-7A	3/13/06	445.85	6,200	1,800	140	21	200	560	6,900	<100	4,400	<100	<100	6,300	<10,000	<100,000	<100	<100
	4/7/06	448.71	5,300	1,700	130	26	330	420	5,900	<100	7,500	<100	<100	6,600	<10,000	<100,000	<100	<100
	7/28/06	441.92	2,200	470	28	18	60	0.85	240	<25	4,700	<25	<25	240	NA	NA	NA	NA
	10/12/06	440.82	6,500	2,400	83	38	300	160	980	<17	4,700	<10	<17	1200	<1,700	<17,000	NA	NA
***	11/21/06	NM	1,400	NA	25	17	65	<0.5	45	<10	1,400	<10	<10	42	<1,000	<10,000	<10	<10
	1/4/07	443.52	1,000	440	12	18	48	8.3	75	<5.0	1,100	<5.0	<5.0	73	<500	<5,000	<5.0	<5.0
	4/16/07	441.27	520	470	17	5.6	2.6	0.88	140	<12	2,500	<12	<12	170	<1,200	<12,000	<12	<12
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	439.02	83	NA	<0.5	0.81	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/10	440.54	680	NA	<0.5	10	4.9	4.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	441.72	580	310	<0.5	7.3	7.2	1.5	<5.0	<2.5	490	<2.5	<2.5	5.8	NA	NA	<2.5	<2.5
	4/11/11	445.97	140	<50	<0.5	1.7	<0.5	<0.5	<5.0	<2.5	540	<2.5	<2.5	5.8	NA	NA	<2.5	<2.5
	4/18/11	445.73	91	90	<0.5	0.94	<0.5	<0.5	8.5	400	400	<2.5	<2.5	5.8	NA	NA	<2.5	<2.5
	5/9/11	444.17	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0	<1.7	350	<1.7	<1.7	5.9	NA	NA	<1.7	<1.7
	6/1/11	444.31	58	77	<0.5	0.76	0.79	0.97	5.2	<1.7	250	<1.7	<1.7	5.5	NA	NA	<1.7	<1.7
	6/15/11	443.87	<50	80	<0.5	<0.5	<0.5	<0.5	<5.0	<1.0	190	<1.0	<1.0	3.8	NA	NA	<1.0	<1.0
	6/30/11	443.45	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	81	<0.5	<0.5	2.5	NA	NA	<0.5	<0.5
	9/19/11	441.36	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	4.4	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	11/7/11	441.87	<50	<50	<0.5	0.64	<0.5	<0.5	<5.0	<0.5	3.3	<0.5	<0.5	0.67	NA	NA	<0.5	<0.5
	2/1/12	NC	NS	NS	not sampled - well dry				NS	NS	NS	NS	NS	NS	NS	NS	NA	NA
	6/13/12	**437.39**	**390**	**1,200**	**<0.5**	**9.9**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**4.6**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**<0.5**	**<0.5**

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-7B	3/13/06	445.64	230	<50	1.8	4.7	<0.5	2.2	1,500	<50	7,300	<50	<50	1,300	<5,000	<50,000	<50	<50
	4/7/06	448.54	81	<50	1.9	1.6	1.1	0.58	1,000	<50	9,200	<50	<50	930	<5,000	<50,000	<50	<50
	7/28/06	441.67	150	<50	<0.5	1.9	<0.5	<0.5	1,500	<50	16,000	<50	<50	1,900	NA	NA	NA	NA
	10/12/06	440.65	110	<50	<0.5	1.3	<0.5	<0.5	900	<17	15,000	<17	<17	860	<1700	<17,000	NA	NA
***	11/21/06	NM	61	NA	<0.5	0.76	<0.5	<0.5	740	<50	10,000	<50	<50	680	<5,000	<50,000	<50	<50
	1/4/07	443.21	91	<50	<0.5	2.1	<0.5	<0.5	200	<50	11,000	<50	<50	180	<5,000	<50,000	<50	<50
	4/16/07	440.98	94	<50	<0.5	2.6	<0.5	<0.5	35	<50	10,000	<50	<50	<50	<5,000	<50,000	<50	<50
	7/17/07	428.99	<50	<50	0.61	0.63	<0.5	<0.5	13	<17	4,000	<17	<17	<17	NA	NA	NA	NA
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	431.55	420	<50	0.77	17	<0.5	0.97	45	<25	4,000	<25	<25	49	<2,500	<25,000	<25	<25
	4/18/08	436.87	650	100	3.4	15	8.3	<0.5	150	<25	3,800	<25	<25	140	<2,500	<25,000	<25	<25
	7/28/08	420.47	<50	<50	<0.5	0.56	<0.5	<0.5	17	<5.0	760	<5.0	<5.0	22	<500	<5,000	<5.0	<5.0
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	418.74	620	NA	<0.5	23	<0.5	2.7	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/09	428.56	170	NA	2.1	5.8	<0.5	0.78	190	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/09	426.13	<50	NA	<0.5	1.8	<0.5	<0.5	210	<5.0	470	<5.0	<5.0	220	<500	<5,000	<5.0	<5.0
	3/4/10	436.76	140	NA	<0.5	2.1	<0.5	<0.5	25	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/10	440.34	74	NA	<0.5	1.3	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	441.24	190	69	<0.5	4.1	<0.5	<0.5	<5.0	<25.0	4,400	<25.0	<25.0	<25.0	NA	NA	<25.0	<25.0
	4/11/11	443.61	110	<50	<0.5	2.7	<0.5	<0.5	<5.0	<17	2,900	<17	<17	<17	NA	NA	<17	<17
	4/18/11	445.64	160	<50	<0.5	4.3	<0.5	0.6	<5.0	<17	3,300	<17	<17	<17	NA	NA	<17	<17
	5/9/11	444.99	79	<50	<0.5	2.0	<0.5	<0.5	<5.0	<17	3,000	<17	<17	<17	NA	NA	<17	<17
	6/1/11	444.14	72	<50	<0.5	1.9	<0.5	<0.5	<5.0	<50	3,100	<50	<50	<50	NA	NA	<50	<50
	6/15/11	443.94	100	<50	<0.5	2.2	<0.5	<0.5	<5.0	<50	2,700	<50	<50	<50	NA	NA	<50	<50
	6/30/11	443.74	100	<50	<0.5	2.4	<0.5	<0.5	<5.0	<25	2,900	<25	<25	<25	NA	NA	<25	<25
	9/19/11	441.29	<50	56	<0.5	1.1	<0.5	<0.5	<5.0	<17	3,300	<17	<17	<17	NA	NA	<17	<17
	11/8/11	465.39	98	<50	<0.5	2.6	<0.5	<0.5	<5.0	<12	1,600	<12	<12	<12	NA	NA	<12	<12
	2/2/12	431.48	74	<50	<0.5	1.8	<0.5	<0.5	<5.0	<12	1,800	<12	<12	<12	NA	NA	<12	<12
	6/13/12	**437.25**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<12**	**2,400**	**<12**	**<12**	**<12**	**NA**	**NA**	**<12**	**<12**
MW-7C	3/13/06	445.34	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.60	<50	<500	<0.5	<0.5
	4/7/06	448.21	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/28/06	441.24	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
	10/13/06	440.65	89	<50	<0.5	1.4	<0.5	<0.5	900	<17	12,000	<17	<17	820	<1700	<17,000	NA	NA
***	11/21/06	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	24	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	1/4/07	442.86	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	24	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/16/07	440.66	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/17/07	428.69	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
	10/29/07	417.14	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	2/1/08	431.39	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/18/08	436.64	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/28/08	420.39	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	11/18/08	415.77	97	<50	<0.5	<0.5	<0.5	<0.5	<90	<1.0	<4.0	<1.0	<1.0	<1.0	<100	<1,000	<1.0	<1.0
	2/4/09	417.50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/22/09	428.41	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/09	425.90	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	3/4/10	438.73	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/19/10	440.01	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-7C cont.	1/20/11	440.89	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/7/11	445.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/20/11	441.89	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	11/8/11	440.99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	2/2/12	431.25	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	6/13/12	**436.85**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**<0.5**	**<0.5**
MW-8A	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	67	<50	<0.5	2.6	<0.5	1.6	<5.0	<0.5	<2.0	<0.5	<0.5	4.9	<50	<500	<0.5	<0.5
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/7/11	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/19/11	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	5.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/11	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/2/12	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	9.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/12/12	**NC**	**<50**	**NA**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**NA**	**NA**
MW-8B	7/28/08	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	2.5	<50	<500	<0.5	<0.5
	11/18/08	NC	<50	120	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	5.1	<50	<500	<0.5	<0.5
	2/4/09	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/22/09	NC	50	NA	<0.5	<0.5	<0.5	<0.5	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/09	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	3/4/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/7/11	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/19/11	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/11	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/2/12	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/13/12	**NC**	**<50**	**NA**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**NA**	**NA**
MW-9A	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	74	<0.5	<0.5	1.1	<50	<500	<0.5	<0.5
	4/7/11	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	65	<0.5	<0.5	0.74	NA	NA	<0.5	<0.5
	9/19/11	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	120	<0.5	<0.5	1.6	NA	NA	<0.5	<0.5
	11/7/11	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	2.9	<0.5	<0.5	<0.5	NA	NA	<0.5	<0.5
	2/1/12	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<1.0	200	<1.0	<1.0	1.2	NA	NA	<1.0	<1.0
	6/12/12	**NC**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**<0.5**	**NA**	**NA**	**<0.5**	**<0.5**

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Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
MW-9B	7/29/08	NC	<50	63	<0.5	<0.5	<0.5	<0.5	100	<10	2,800	<10	<10	160	<1,000	<10,000	<10	<10
	11/18/08	NC	<50	1000	<0.5	<0.5	<0.5	<0.5	7.0	<0.5	4.6	<0.5	<0.5	7.5	<50	<500	<0.5	<0.5
	2/4/09	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/22/09	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	470	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/24/09	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	5.4	<0.5	<2.0	<0.5	<0.5	7.2	<50	<500	<0.5	<0.5
	3/4/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	8.9	<0.5	<0.5	0.65	<50	<500	<0.5	<0.5
	4/7/11	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	22	<0.5	<0.5	1.2	NA	NA	<0.5	<0.5
	9/19/11	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.2	NA	NA	<0.5	<0.5
	11/7/11	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.7	NA	NA	<0.5	<0.5
	2/1/12	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	89	<0.5	<0.5	3.3	NA	NA	<0.5	<0.5
	6/12/12	**NC**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<2.0**	**<0.5**	**<0.5**	**1.6**	**NA**	**NA**	**<0.5**	**<0.5**
EX-1**	11/14/01	431.89	13,000	2,000	180	1,000	330	3,200	2,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	437.72	7,700	560	320	<25	66	150	6,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	NC	2,800	NA	32	<13	14	<13	2,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	437.32	3,000	100	81	<0.5	44	<1.0	4,800	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	442.28	750	50	<0.5	<0.5	7.7	13	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	442.89	120	<50	3.2	3.7	4.2	7.6	260	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	440.65	170	<50	0.5	1.5	<0.5	0.9	1,600	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	447.31	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	442.82	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.39	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	NC	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	NC	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.62	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	443.75	<50	NS	<0.5	<0.5	<0.5	<0.5	610	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.57	<50	NS	<0.5	<0.5	<0.5	<0.5	31	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	447.25	580	55	40	25	45	43	4,200	<170	<1,700	<170	<170	5,200	<170,000	<17,000	<170	<170
EW-1	3/13/06	446.47	210	120	5.0	4.10	7.5	12	3,400	<50	<100	<50	<50	2,300	<5,000	<50,000	<50	<50
	4/7/06	449.46	1,900	190	66	170	110	380	7,900	<100	<1000	<100	<100	6,400	<10,000	<100,000	<100	<100
	7/27/06	441.60	280	100	7.4	5.5	12	28	8,400	<500	<5,000	<500	<500	12,000	NA	NA	NA	NA
	10/12/06	441.94	2,100	130	86	19	100	310	2,400	<50	1,400	<50	<50	2,800	<5,000	180,000	NA	NA
	1/4/07	444.00	1,600	150	56	27	110	240	5,000	<50	2,900	<50	<50	4,900	<5,000	<50,000	<50	<50
	4/13/07	441.76	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.62	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
EW-1 cont.	3/4/10	NC	4,400	NA	460	<25	380	<25	31,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	441.10	400	NA	4.4	6.6	1.8	4.4	590	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/11	441.87	570	190	21	6.4	14	57	3,500	<50	15,000	<50	<50	3,300	NA	NA	<50	<50
	4/8/11	446.60	410	220	11	4.2	3.1	43	2,400	<50	8,200	<50	<50	3,300	NA	NA	<50	<50
	4/18/11	445.75	200	130	<0.5	1.7	1.1	3.0	4,400	<50	14,000	<50	<50	3,600	NA	NA	<50	<50
	5/9/11	445.76	62	<50	1.2	1.4	<0.5	<0.5	520	<25	4,800	<25	<25	390	NA	NA	<25	<25
	6/2/11	444.93	83	<50	1.3	2.1	<0.5	0.6	180	<100	9,600	<100	<100	240	NA	NA	<100	<100
	6/15/11	444.34	60	<50	<0.5	1.8	<0.5	<0.5	97	<100	6,300	<100	<100	100	NA	NA	<100	<100
	6/30/11	444.04	74	<50	<0.5	2.0	<0.5	<0.5	200	<50	5,700	<50	<50	200	NA	NA	<50	<50
	9/20/11	443.10	63	52	<0.5	2.1	<0.5	<0.5	210	<50	11,000	<50	<50	190	NA	NA	<50	<50
	11/8/11	442.10	78	<50	<0.5	1.8	<0.5	<0.5	76	<50	7,600	<50	<50	97	NA	NA	<50	<50
	2/2/12	432.07	59	57	<0.5	1.1	<0.5	<0.5	270	<500	50,000	<500	<500	<500	NA	NA	<500	<500
	6/13/12	**438.07**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<50**	**13,000**	**<50**	**<50**	**<50**	**NA**	**NA**	**<50**	**<50**
EW-2	3/13/06	446.81	<250	69	<2.5	<2.5	<2.5	<2.5	5,400	<100	<1,000	<100	<100	5,100	<10,000	<100,000	<100	<100
	4/7/06	449.79	470	160	15	2.5	24	13	2,000	<50	<500	<50	<50	1,800	<5,000	<50,000	<50	<50
	7/27/06	442.89	260	350	2.2	1.7	6.1	3.0	8,700	<500	<5,000	<500	<500	12,000	NA	NA	NA	NA
	10/12/06	444.51	110	<50	2.0	1.0	3.1	3.9	620	<12	<120	<12	<12	680	<1,200	<12,000	NA	NA
	1/4/07	444.33	<500	<50	5.3	<5.0	16	7.1	4,500	<50	<500	<50	<50	4,200	<5,000	<50,000	<50	<50
	4/13/07	442.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	NC	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	441.54	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/21/11	442.27	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	2.8	<0.5	<0.5	2.1	NA	NA	<0.5	<0.5
	4/11/11	446.99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	2.1	<0.5	<0.5	0.65	NA	NA	<0.5	<0.5
	4/18/11	446.80	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	0.7	NA	NA	<0.5	<0.5
	5/9/11	446.32	<50	<50	<0.5	<0.5	<0.5	<0.5	15	<0.5	2.8	<0.5	<0.5	12	NA	NA	<0.5	<0.5
	6/2/11	445.28	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	12	<0.5	<0.5	6.2	NA	NA	<0.5	<0.5
	6/15/11	444.99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	2.3	NA	NA	<0.5	<0.5
	6/30/11	444.68	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	2.4	NA	NA	<0.5	<0.5
	9/20/11	441.44	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.3	NA	NA	<0.5	<0.5
	11/8/11	442.39	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.0	NA	NA	<0.5	<0.5
	2/2/12	432.33	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	490	<5.0	<5.0	<5.0	NA	NA	<5.0	<5.0
	6/13/12	**438.35**	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<5.0**	**<2.0**	**<5.0**	**<5.0**	**0.89**	NA	NA	**<5.0**	**<5.0**

Table 2
Groundwater Analytical Results
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)							Lead Scavengers (µg/L)	
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
EW-3 [(a)]	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/4/09	NC	<10,000	NA	<100	<100	<100	<100	420,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/21/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/09	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/4/10	NC	140,000	NA	240	900	320	28,000	340,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/10	NC	23,000	NA	240	940	760	3,100	150,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/21/11	NC	15,000	5,200	230	93	1,100	1,900	150,000	<2,500	72,000	<2,500	<2,500	150,000	NA	NA	<2,500	<2,500
	4/11/11	NC	8,400	590	110	37	690	820	68,000	<2,500	67,000	<2,500	<2,500	79,000	NA	NA	<2,500	<2,500
	4/18/11	NC	7,300	1,300	81	100	350	870	85,000	<1,700	50,000	<1,700	<1,700	72,000	NA	NA	<1,700	<1,700
	5/9/11	NC	5,400	2,200	56	<50	160	350	79,000	<1,000	40,000	<1,000	<1,000	62,000	NA	NA	<1,000	<1,000
	6/1/11	NC	4,800	3,700	53	<25	170	300	50,000	<1,000	43,000	<1,000	<1,000	76,000	NA	NA	<1,000	<1,000
	6/15/11	NC	8,200	2,200	66	<50	270	360	93,000	<2,500	47,000	<2,500	<2,500	85,000	NA	NA	<2,500	<2,500
	6/30/11	NC	8,000	1,900	64	<50	260	260	100,000	<2,500	51,000	<2,500	<2,500	100,000	NA	NA	<2,500	<2,500
	9/20/11	NC	<5,000"	1,700	<50"	64	74	100	80,000	<2,500	91,000	<2,500	<2,500	78,000	NA	NA	<2,500	<2,500
	11/8/11	NC	<6,000"	860	<50"	<50	60	130	82,000	<2,500	49,000	<2,500	<2,500	67,000	NA	NA	<2,500	<2,500
	2/2/12	NC	1,600	510	<5.0"	13	10	35	24,000	<500	62,000	<500	<500	26,000	NA	NA	<500	<500
	6/13/12	**NC**	**490**	**870**	**<0.5**	**2.3**	**3.0**	**7.9**	**8,600**	**<250**	**66,000**	**<250**	**<250**	**9,300**	**NA**	**NA**	**<250**	**<250**
"Grab" Groundwater Samples:																		
Exxon1	2/26/99	--	100,000	NA	6,100	16,000	2,500	11,000	60,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
B1	2/2/01	--	650,000	13,000	6,300	10,000	<2,500	12,000	290,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
B2	2/2/01	--	56	<0.5	<0.5	<0.5	<0.5	<0.5	47	NA	NA	NA	NA	NA	NA	NA	NA	NA
B3	2/2/01	--	6,200	NA	<50	<50	<50	<50	3,800	NA	NA	NA	NA	NA	NA	NA	NA	NA
B4	2/2/01	--	12,000	NA	<50	<50	<50	<50	6,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
B5	2/2/01	--	<25,000	960	<250	<250	<250	<250	16,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-1-A	11/9/01	--	<50	230	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	28	NA	NA	NA	NA
B-2-A	11/9/01	--	25,000	6,200	900	<50	2,000	2,600	NA	<1,700	<17,000	<1,700	<1,700	80,000	NA	NA	NA	NA
B-3-A	11/9/01	--	42,000	14,000	530	140	2,400	7,800	NA	<500	<5,000	<500	<500	19,000	NA	NA	NA	NA
MB-1-A	11/10/01	--	21,000	4,300	970	<25	3,300	1200	NA	<2,500	<25,000	<2,500	<2,500	100,000	NA	NA	NA	NA
MB-1-B	11/10/01	--	470	210	7.8	0.97	31	48	NA	<25	<250	<25	<25	1,500	NA	NA	NA	NA
MB-1-C	11/10/01	--	990	NA	17	1.3	89	160	NA	<25	<250	<25	<25	1,200	NA	NA	NA	NA
MB-2-A	11/9/01	--	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
MB-2-B	11/10/01	--	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
MB-3-A	11/10/01	--	40,000	41,000	120	130	1,700	2,800	NA	<50	2,500	<50	<50	<4,500	NA	NA	NA	NA
MB-3-B	11/13/01	--	1,400	210	0.93	9.3	14	27	NA	<50	6,200	<50	<50	190	NA	NA	NA	NA
MB-3-C	11/13/01	--	930	260	1.7	3.8	33	100	NA	<100	16,000	<100	<100	330	NA	NA	NA	NA
DB-1-A	11/9/01	--	160	NA	<0.5	<0.5	<0.5	<0.5	NA	<1.7	<17	<1.7	<1.7	86	NA	NA	NA	NA
DB-2-A	11/10/01	--	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
DB-3-A	11/13/01	--	<50	51	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
DB-4-A	11/13/01	--	<50	57	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
DB-5-A	11/10/01	--	<50	910	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
HP-1-A	11/13/01	--	<50	NA	<0.5	<0.5	<0.5	0.80	NA	<50	24	<50	<50	12	NA	NA	NA	NA

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			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	Ethanol	Methanol	EDB	1,2-DCA
GP-1	1/10/07	--	270	NA	<0.5	<0.5	2.6	0.85	61	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-2	1/10/07	--	2,000	NA	61	46	93	280	2,600	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-3	1/10/07	--	11,000	NA	38	27	1,100	980	37,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-4	1/10/07	--	20,000	NA	820	260	1,400	3,200	35,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-5	1/10/07	--	4,100	NA	64	6.6	13	550	780	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-6A	1/11/07	--	11,000	NA	360	150	1,500	480	6,100	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-8	1/10/07	--	61,000	NA	2,800	490	2,600	4,400	190,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-9	1/10/07	--	100,000	NA	5,600	3,400	3,500	24,000	260,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-10	1/10/07	--	44,000	NA	2,400	590	3,600	3,300	92,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-11	1/11/07	--	550	NA	1.4	1.3	2.1	36	110	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-12	1/11/07	--	15,000	NA	68	20	1,800	94	6,600	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-13	1/11/07	--	88,000	NA	5,100	<50	5,500	7,400	87,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-14	1/11/07	--	210,000	NA	11,000	26,000	4,600	21,000	1,500,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-16	1/11/07	--	160	NA	5.2	3.2	18	7.5	210	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-17	1/11/07	--	460	NA	7.7	4.8	8.0	7.4	790	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-18	1/11/07	--	35,000	NA	250	72	2,800	380	13,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-19	1/11/07	--	430	NA	8.9	1.6	24	31	430	NA	NA	NA	NA	NA	NA	NA	NA	NA
GP-21	7/9/08	--	<50	NA	<0.5	<0.5	0.73	3.3	9.2	<0.5	4.5	<0.5	<0.5	7.9	NA	NA	NA	NA
GP-22	7/8/08	--	<50	NA	<0.5	<0.5	<0.5	0.55	8.3	<0.5	31	<0.5	<0.5	8.7	NA	NA	NA	NA
GP-23	7/7/08	--	220	NA	7.1	9.1	7.0	30	61	<2.5	<10	<2.5	<2.5	76	NA	NA	NA	NA
GP-24	7/7/08	--	800	NA	4.3	0.89	39	180	1,100	<50	<200	<50	<50	1,300	NA	NA	NA	NA
GP-25	7/8/08	--	210	NA	4.9	18	7.2	19	63	<2.5	<10	<2.5	<2.5	69	NA	NA	NA	NA
GP-26	7/8/08	--	<50	NA	1.6	<0.5	2.6	5.1	<50	<0.5	2.2	<0.5	<0.5	24	NA	NA	NA	NA

Notes:
Samples analyzed for TPHg and TPHd by EPA Method 8015Bm, BTEX by EPA Method 8021B, MTBE by EPA Method 8021B and/or 8260B, and the fuel oxygenates TBA, DIPE, ETBE, TAME, EDB, 1,2-DCA, ethanol, and methanol by EPA Method 8260.
µg/L = micrograms per liter
-- = Not Applicable
NS = Not Sampled
NA = Not Analyzed
EDB = 1,2-Dibromoether
1,2-DCA = 1,2-Dichloroethane
MTBE = methyl tertiary butyl ether
DIPE =Di-isoprpopyl Ether
ETBE = Ethyl tert-Butyl Ether
TAME - tert-Amyl Methyl Ether
TBA = tert-Butanol
" = High concentrations of MTBE resulted in high reporting limits, both TPHg and benzene were estimated just below the listed reporting limits by laboratory
* = Well MW-1 renamed MW-1A, well MW-2 renamed MW-2A, Well MW-3 renamed MW-3A in February 2006
** = Well destroyed in February 2006
*** = Anomalous data observed in MW-7C from October 12, 2006 sample. Therfore, wells MW-7A, MW-7B, and MW-7C were resampled on November 21, 2006.
(a) = Well EW-3 is 35 feet deep with a screen interval from 25 to 30 feet bgs.

Table 3
Historic Soil Analytical Data
160 Holmes Street, Livermore, California

Sample ID	Sample Depth	Sample Date	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Fuel Oxygenates				
										TAME	TBA	DIPE	ETBE	MTBE
T1-West	NA	4/5/99	<20	<1.0	<1.2	<1.2	<1.2	<1.2	24	--	--	--	--	--
T2-West	NA	4/5/99	<100	--	<6.2	<6.2	<6.2	<6.2	47	--	--	--	--	--
T3-West	NA	4/5/99	<200	--	<12	<12	<12	<12	41	--	--	--	--	--
T4-West	NA	4/5/99	<200	--	<12	<12	<12	<12	100	--	--	--	--	--
T1-East	NA	5/6/99	17	<1.0	<0.62	<0.62	<0.62	<0.62	7.7	--	--	--	--	--
T2-East	NA	5/6/99	31	--	<0.62	<0.62	<0.62	<0.62	28	--	--	--	--	--
T3-East	NA	5/6/99	<50	--	<3.1	<3.1	<3.1	<3.1	41	--	--	--	--	--
T4-East	NA	5/6/99	14	--	<0.62	<0.62	<0.62	<0.62	20	--	--	--	--	--
Dispenser 1	NA	5/20/99	49	--	0.015	0.084	0.033	0.041	<0.0050	--	--	--	--	--
Dispenser 2	NA	5/20/99	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--
Dispenser 3	NA	5/20/99	6,500	--	<31	81	120	940	<31	--	--	--	--	--
Dispenser 4	NA	5/20/99	--	--	--	--	--	--	--	--	--	--	--	--
Dispenser 5	NA	5/20/99	32	--	0.040	0.62	0.29	3.0	<0.0050	--	--	--	--	--
Dispenser 6	NA	5/20/99	<1.0	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--
Diesel-D	NA	5/20/99	160	1,300	0.032	0.20	0.089	15	<0.62	--	--	--	--	--
MW-1	15	7/26/00	<10	--	<0.62	<0.62	<0.62	<0.62	0.93	--	--	--	--	--
MW-1	19	7/26/00	800	--	<6.2	36	18	100	21	--	--	--	--	--
MW-2	15	7/26/00	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--
MW-2	20	7/26/00	1.1	--	0.0092	0.013	0.053	0.13	0.11	--	--	--	--	--
MW-3	15	7/26/00	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--
MW-3	20	7/26/00	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--
MB-1	18	11/11/05	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
MB-1	22	11/11/05	78	23	0.028	0.073	1.0	4.8	2.3	--	--	--	--	--
MB-1	26	11/11/05	110	18	0.27	0.51	2.0	1.7	14	--	--	--	--	--
MB-3	20	11/11/05	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
MB-3	28	11/11/05	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
MB-3	32	11/11/05	1,400	100	<0.5	5.0	20	67	<5.0	--	--	--	--	--
B-1	28	11/10/05	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
B-2	16	11/10/05	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
B-2	20	11/10/05	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
B-2	24	11/10/05	5.7	9.5	<0.005	0.018	0.076	0.25	1.7	--	--	--	--	--
B-2	28	11/10/05	11	2.4	0.075	0.073	0.26	0.14	7.2	--	--	--	--	--
B-3	16	11/10/05	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
B-3	20	11/10/05	<1.0	--	<0.005	0.0058	0.0071	0.024	<0.05	--	--	--	--	--
B-3	24	11/10/05	9.0	1.4	0.077	0.037	0.32	1.1	<1.0	--	--	--	--	--
B-3	28	11/10/05	48	6.1	0.053	0.20	0.53	0.49	<1.0	--	--	--	--	--
DB-1	26	11/10/05	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
MW-1B	61	2/23/06	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
MW-5B	55	2/27/06	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
MW-7C	70	2/27/06	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
EW-2	41.5	2/24/06	1.4	--	<0.005	<0.005	<0.005	<0.005	0.22	--	--	--	--	--
GP-1	8	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-1	24	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-1	28	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-2	8	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-2	24	1/10/07	51	--	<0.050	<0.050	0.13	0.20	<0.50	--	--	--	--	--
GP-3	8	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-3	24	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-3	28	1/10/07	100	--	<0.050	0.40	2.1	3.2	2.6	--	--	--	--	--
GP-4	8	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-4	16	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	
GP-4	28	1/10/07	13	--	0.021	0.096	0.24	0.32	4.4	--	--	--	--	--
GP-5	8	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-5	20	1/10/07	5.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-5	28	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-6	8	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.090	--	--	--	--	--
GP-6	18	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-6	24	1/10/07	<1.0	--	<0.005	<0.005	<0.005	0.013	0.11	--	--	--	--	--
GP-6	28	1/10/07	23	--	0.0057	0.021	0.052	0.16	0.056	--	--	--	--	--
GP-6A	4	1/11/07	11	--	<0.005	<0.005	0.0081	<0.005	<0.10	--	--	--	--	--
GP-6A	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	0.011	<0.10	--	--	--	--	--
GP-6A	16	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-6A	20	1/11/07	1.6	--	<0.005	<0.005	0.0052	0.0065	0.066	--	--	--	--	--
GP-6A	24	1/11/07	2.0	--	<0.005	0.013	0.0062	0.015	0.44	--	--	--	--	--
GP-6A	28	1/11/07	17	--	<0.010	<0.010	0.40	0.028	0.34	--	--	--	--	--

Table 3
Historic Soil Analytical Data
160 Holmes Street, Livermore, California

Sample ID	Sample Depth	Sample Date	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Fuel Oxygenates				
										TAME	TBA	DIPE	ETBE	MTBE
GP-7	4	1/11/07	2.0	--	<0.005	0.014	0.0080	0.092	0.086	--	--	--	--	--
GP-7	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-7	14	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.062	--	--	--	--	--
GP-8	8	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-8	24	1/10/07	30	--	0.030	0.19	0.46	2.4	9.6	--	--	--	--	--
GP-9	8	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-9	12	1/10/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-9	24	1/10/07	110	--	0.27	1.2	1.6	9.5	22	--	--	--	--	--
GP-10	21	1/10/07	35	--	0.033	0.35	0.56	3.6	1.5	--	--	--	--	--
GP-10	24	1/10/07	2.2	--	0.0081	0.011	0.023	0.12	3.9	--	--	--	--	--
GP-11	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-11	24	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-11	28	1/11/07	3.7	--	<0.005	<0.005	<0.005	<0.005	0.057	--	--	--	--	--
GP-12	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.072	--	--	--	--	--
GP-12	24	1/11/07	15	--	<0.005	<0.005	0.13	0.14	0.092	--	--	--	--	--
GP-12	28	1/11/07	11	--	0.0061	<0.005	0.47	0.014	0.36	--	--	--	--	--
GP-13	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-13	24	1/11/07	9.1	--	<0.005	<0.005	<0.005	0.014	<0.05	--	--	--	--	--
GP-13	28	1/11/07	100	--	0.17	0.39	2.6	6.7	8.9	--	--	--	--	--
GP-14	8	1/11/07	6.4	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-14	12	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-14	16	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-14	24	1/11/07	320	--	0.43	14	7.0	40	50	--	--	--	--	--
GP-14	28	1/11/07	120	--	0.47	3.3	2.0	11	140	--	--	--	--	--
GP-15	12	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.078	--	--	--	--	--
GP-15	19	1/11/07	1.5	--	<0.005	0.012	0.026	0.054	0.49	--	--	--	--	--
GP-15	24	1/11/07	1.6	--	<0.005	0.0077	0.015	0.11	0.40	--	--	--	--	--
GP-15	28	1/11/07	6.7	--	0.047	0.24	0.13	0.72	9.5	--	--	--	--	--
GP-16	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.061	--	--	--	--	--
GP-16	24	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.10	--	--	--	--	--
GP-16	28	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-17	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-17	24	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-17	28	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-18	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-18	16	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	0.070	--	--	--	--	--
GP-18	24	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-18	28	1/11/07	110	--	<0.010	0.16	0.37	1.3	0.20	--	--	--	--	--
GP-19	8	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-19	21	1/11/07	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
GP-19	24	1/11/07	5.8	--	<0.005	0.0072	0.12	0.23	0.074	--	--	--	--	--
GP-21	32	7/9/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.050	4.6	<0.050	<0.050	<0.050
GP-21	36	7/9/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.010	1.1	<0.010	<0.010	<0.010
GP-21	40	7/9/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.010	0.72	<0.010	<0.010	<0.010
GP-21	44	7/9/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005
GP-21	48	7/9/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005
GP-21	52	7/9/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005
GP-22	32	7/8/08	1.2	--	<0.005	<0.005	0.0059	<0.005	<0.05	<0.025	2.9	<0.025	<0.025	0.051
GP-22	36	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.050	3.6	<0.050	<0.050	<0.050
GP-22	40	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.010	1.3	<0.010	<0.010	<0.010
GP-22	44	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005
GP-22	47	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005
GP-23	32	7/7/08	56	--	0.093	0.089	0.73	0.61	7.0	<0.33	<3.3	<0.33	<0.33	8.5
GP-23	36	7/7/08	<1.0	--	<0.005	<0.005	0.010	0.0067	0.081	<0.050	3.0	<0.050	<0.050	0.063
GP-23	40	7/7/08	<1.0	--	<0.005	<0.005	0.0087	<0.005	<0.05	<0.005	0.34	<0.005	<0.005	0.010
GP-23	44	7/7/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	0.010
GP-23	50	7/7/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005
GP-24	32	7/7/08	<1.0	--	<0.005	<0.005	0.015	<0.005	0.12	<0.010	1.2	<0.010	<0.010	0.23
GP-24	36	7/7/08	<1.0	--	<0.005	<0.005	0.016	<0.005	<0.05	<0.025	1.7	<0.025	<0.025	<0.025
GP-24	40	7/7/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.010	0.91	<0.010	<0.010	0.088
GP-24	44	7/7/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005
GP-24	48	7/7/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005

Table 3
Historic Soil Analytical Data
160 Holmes Street, Livermore, California

Sample ID	Sample Depth	Sample Date	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Fuel Oxygenates				
										TAME	TBA	DIPE	ETBE	MTBE
GP-25	32	7/8/08	4.5	--	0.18	0.015	0.18	<0.005	3.3	<0.25	<2.5	<0.25	<0.25	2.8
GP-25	36	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.010	0.85	<0.010	<0.010	0.85
GP-25	40	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	0.014
GP-25	44	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	0.012
GP-25	50	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	0.015
GP-26	32	7/8/08	3.1	--	0.0074	0.015	0.082	0.012	4.6	<0.33	<3.3	<0.33	<0.33	5.1
GP-26	36	7/8/08	3.4	--	0.023	0.0087	0.053	0.010	1.7	<0.33	<3.3	<0.33	<0.33	2.0
GP-26	40	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	0.013
GP-26	44	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	0.0061
GP-26	48	7/8/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.005	<0.005	0.010
MW-8B	28	7/16/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--
MW-8B	32	7/16/08	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.05	--	--	--	--	--

Notes:
All results are in milligrams per kilogram (mg/kg)
-- = not analyzed
NA = not available
TPHg was analyzed by EPA Method 8015CM
BTEX and MTBE were analyzed by EPA Method 8021B
MTBE, TAME, ETBE, TBA, and DIPE were analyzed by EPA Method 8260B
Refusal met in borings GP-20 and GP-27, therfore no samples collected
Data compiled from other consultants was not subject to Allterra's standard of quality control

TPHg: Total Petroleum Hydrocarbons as gasoline
MTBE = methyl tertiary butyl ether
TAME = tert-amyl methyl ether
TBA = tert-butyl alcohol
DIPE = di-isopropyl ether
ETBE = ethyl tert-butyl ether

ALLTERRA

APPENDIX A
Site Investigation Field Protocol

APPENDIX A
Allterra's Site Investigation Field Protocol

Geoprobe Boring Installations and Sampling: A truck-mounted Geoprobe rig hydraulically pushes a 4-foot steel core barrel (usually 2.5-inch diameter) equipped with an acetate liner into undisturbed soil. Four-foot core soil samples are collected in the acetate liner. The core barrel is extracted from the boring and the liner is removed. Soil samples from the necessary depth is cut from the acetate liner and capped with Teflon® sheets and plastic caps. The sample is labeled and stored on ice in an ice chest. The remainder of the acetate liner is then cut open and examined for lithology according to the Unified Soil Classification System. Job location, boring location, boring name, date, soil types, observations and activities are recorded on the boring logs. A portion of each sample is field screened using portable photo-ionization detector (PID). The core barrel is decontaminated between each boring. If groundwater samples are not necessary, the hole is filled with a cement grout and bentonite mixture from the bottom of the boring to surface grade.

Once the borings are advanced to the necessary depth, water samples are collected using a clean stainless steel bailer. If the boring does not stay open, a temporary well casing and screen is lowered into the boring to aid in water sample collection. Recovered water is transferred into labeled sample containers placed on ice. After the water samples are collected, the temporary well casing and screen are removed from the boring and is filled with a cement grout and bentonite mixture from the bottom of the boring to surface grade.

Soil Gas Probe Installation/Construction: Using a Geoprobe rig or hand auger equipment, approximately 3-inch diameter boreholes are advanced to depths of approximately 5- and 10-feet bgs, depending on site-specific conditions. The soil gas probes are constructed with ¼-inch diameter Teflon® tubing and a screened probe tip emplaced midway within a one (1) foot sand filter pack at the bottom of each borehole. At least one foot of dry granular bentonite will be placed on top of the sand pack to avoid infiltration of hydrated bentonite grout. The probes will be properly marked at the surface to identify their location and depth and will be completed and secured within locked well boxes. The soil gas probes are left for at least 48 hours following installation to facilitate re-equilibration prior to the initial sampling event. Following re-equilibration, leak and purge volume tests will also be performed prior to the initial sampling event. The soil gas probes are constructed in accordance with the DTSC and Cal-EPA Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air revised February 7, 2005 and the updated Draft Advisory for Active Soil Gas Investigations dated March 3, 2010.

Soil Gas Sampling: Using permanent soil vapor probes, soil gas samples will be collected by attaching the ¼-inch diameter Teflon® tubing to a flow regulator, vacuum gauge, and then a 1L-Suma® canister. The tubing is initially purged using a designated purge canister; subsequently, the purge canister is closed and the vapors are collected in the sample canister. The internal surfaces of the stainless steel canisters will be passivated using the "Summa" process and are therefore referred to as Summa Canisters. A vacuum gage will be used to measure the initial vacuum of the canister before sampling and the final vacuum upon completion. The gages typically have ranges from 0 to 30 inches of mercury (in. Hg). The canisters vacuums are used to draw the sample, which is referred to as passive sampling (instead of using pumps). After confirming an initial pressure of -30 in. Hg, the canister is left open until the pressure increases to approximately -5 in. Hg. One replicate soil gas sample is also collected during field activities. The filled canister is sealed with a brass cap, placed into the original shipping container, and shipped to a state-certified analytical laboratory, using Chain-of-Custody procedures. Soil gas samples are collected in accordance with the DTSC and Cal-EPA Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air revised February 7, 2005 and the updated Draft Advisory for Active Soil Gas Investigations dated March 3, 2010.

Monitoring Well Installation/Construction and Soil Sampling: A truck-mounted, hollow-stem auger drill rig is used to drill boreholes for monitoring wells. The borehole diameter is a minimum of 4-inches larger than the outside diameter of the casing when installing well screen. The hollow-stem auger provides minimal interruption of drilling while permitting soil sampling at desired intervals. An Allterra geologist or engineer will continuously log each borehole during drilling and will constantly check drill cuttings for indications of both the first recognizable

occurrence of groundwater and volatile organic compounds using a portable photoionization detector (PID).

During drilling, soil samples are collected in 2-inch by 6-inch brass sleeves. Three brass tubes are placed in an 18-inch long split-barrel (spoon) sampler of the appropriate inside-diameter. The split-barrel sampler is driven its entire length using a 140-pound hammer, or until refusal. The sampler is extracted from the borehole and the bottom brass sleeve is capped with Teflon® sheets and plastic caps, labeled, and stored on ice. The two other brass sleeves are used for soil lithology classification (according to the Unified Soil Classification System) and field screening using a PID.

All soil borings not converted into monitoring wells are backfilled with a mixture of neat cement with 5% bentonite powder to surface grade.

Monitoring wells are constructed with blank and factory-perforated Schedule 40 polyvinyl chloride (PVC). The perforated interval consists of slotted casing, generally with 0.02-inch wide by 1.5-inch long slots, with 42 slots per foot. A threaded PVC cap is secured to the bottom of the casing. After setting the casing inside the hollow-stem auger, sand or gravel filter material is poured into the annular space to fill from boring bottom to generally 1 to 2 feet above the screened interval. A 1- to 2-foot thick bentonite seal is set above this sand/gravel pack. Neat cement containing approximately 5% bentonite is then tremmied into the annular space from the top of the bentonite plug to approximately 0.5 feet below ground surface. A traffic-rated well box is installed around each wellhead.

Monitoring Well Development: After installation, the wells are thoroughly developed to remove residual drilling materials from the wellbore and fine material from the filter pack. Typically, 10 well volumes are removed from the well and field parameters, such as pH, temperature, and conductivity, are recorded between each well volume. Well development techniques used may include surging, swabbing, bailing, and/or pumping All development water is collected either in drums or tanks for temporary storage, and properly disposed of pending laboratory analytical results. Following development, the well is typically allowed to stand undisturbed for a minimum of 48 hours before its first sampling.

Well Monitoring and Sample Collection: A Teflon bailer or submersible pump was used to purge a minimum of three well volumes of groundwater from each well. After each well volume is purged, field parameters such as pH, temperature, and conductivity are recorded. Wells are purged until field parameters have stabilized or a maximum of 10 well volumes of groundwater have been removed. If the well yield is low and the well was dewatered, the well is allowed to recharge to 80% of its original volume prior to sample collection. Field parameter measurements and pertinent qualitative observations, such as groundwater color and odor, are recorded in Groundwater Sampling Field Logs. Groundwater samples are collected in appropriate bottles and stored on ice for delivery, under chain-of-custody documentation, to a state-certified laboratory for analysis.

Sample Identification and Chain-Of-Custody Procedures: Each sample container submitted for analysis is labeled to identify the job number, date, time of sample collection, a sample number unique to the sample, any in-field measurements made, sampling methodology, name(s) of on-site personnel, and any other pertinent field observations also recorded on the field excavation or boring log. During shipment, the person with custody or the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time.

Equipment Decontamination: All drilling, sampling, well construction, and well development equipment is cleaned in a solution of laboratory grade detergent and distilled water or steam cleaned before use at each sampling point.

Field Personnel: During groundwater sampling activities, sampling personnel will wear pertinent attire to minimize risks to health and safety. Field personnel will also use a pair of clean, powderless, surgical gloves for each successive sampling point. Used surgical gloves will be placed into waste drums for future disposal.

Waste Disposal: Soil generated during drilling will be stored in DOT-approved 55-gallon waste drums pending proper disposal. Water generated during well development, purging, and sampling activities will be placed into DOT-approved 55-gallon waste drums pending disposal and/or permitted discharge to the sanitary sewer.

APPENDIX B
Regenesis Product Application Procedures

REGENESIS

RegenOx™

CHEMICAL OXIDATION REDEFINED

RegenOx™ *In Situ* Chemical Oxidation Application Instructions

Using Fixed Wells (Overview of Methods)

On some projects, it may appropriate to apply RegenOx using fixed wells. This will allow the RegenOx to be reapplied multiple times and reduce a large mass of contaminant incrementally over time.

Application of RegenOx via a series of fixed wells can be accomplished most effectively by separate application of RegenOx Part A and Part B via multiple separate application events. **Most sites require 3-4 applications to ensure contact and minimize rebound.** NOTE: for the purposes of this discussion, it is assumed that the hydraulic conductivity of this aquifer is sufficient to accept the volumes of material associated with this approach.

Well Installation:
It is critical that the delivery wells associated with this application are installed across the appropriate vertical application interval. These wells should be constructed using 2 or 4-inch diameter Schedule 80 PVC and preferably with the screened section composed of wire-wound PVC with a slot size >0.02 inch. The surrounding filter pack should be composed of an appropriately sized sand/gravel that is a reasonable match to the surrounding soil type. An adequate seal above the screen zone is critical. When possible we recommend a least a one-foot bentonite seal above the filter pack and an addition 3 feet or more or a cement-bentonite(<10%) grout to the surface.

Hydraulic Testing of Wells:
A hydraulic test should be performed prior to implementation of the RegenOx application. This testing consists of the injection of clear water at a volume equivalent to 1.3x the designed injection volume of the RegenOx Part A material.

It is critical that you understand the hydraulic conductivity/volumetric limitation of the aquifer prior to installation of the RegenOx material. Each sites aquifer conductivity and capacity will directly affect the volume of RegenOx applied and the application rate.

RegenOx - Part A Estimation/Application:
Using a designed application rate of 5,970 pounds of Part A material per event, a 5% solution will result in an application volume of 14,214 gallons of total fluids per event.

682 gals Part A + 13,532 gals H_2O = 14,214 gals of fluid

Detailed steps for estimation of this volume are provided below. Using a five well application array results an application volume of 2,843gallons/well/event.

14,214 gals of fluid/5 wells = 2,843 gals/well/event

Hydraulic Test Volume Estimation:
The hydraulic test volume per well is estimated based on the above application rate (2,843 gallons) x (application factor of 1.3). This yields a total clear water test volume of 3,696 gallons/well.

RegenOx – Part B Application:
This method is significantly different from a direct-push application. This method requires application of a solution of the catalyst material separately and prior to application of the Part A oxidant material. As discussed previously, application of Part B is typically installed at a low concentration, spread over two events and is followed by a clear water chaser equal to 1.5-3x the wells borehole volume.

Step 1:
Mix Part B at solution that is 3-8% by weight, see Table 1 (below) for a volumetric estimation per bucket of material for each percentage solution. This range in volume is provided to allow for variations in aquifer types and specifically to adjust for each site's aquifer hydraulic conductivity and effective porosity. The aquifers hydraulic characteristics should dictate the solution percentage.

For example, Part B application in a fine grained aquifer (hydraulic conductivity of 10^{-5} to 10^{-6}cm/sec) should be mixed at approximately a 7% solution by weight while a coarse grained aquifer (10^{-2} to 10^{-3}cm/sec) should be mixed at approximately a 3% solution by weight.

TABLE 1.

No. of Buckets	Weight of Material (lbs.)	Desired Solution (%)	Volume of Water (gals.)
1	30	3	116
1	30	4	86
1	30	5	68
1	30	6	56
1	30	7	48
1	30	8	41

Example:
Based on application into a silty sand aquifer (10^{-4} cm/sec) the Part B solution should be mixed at 5%.
Using the previous example, this application will require a total of 5,970 pounds of Part B applied via two events of 2,985 pounds or 100 bucket/event

2,985 lbs./30 lbs./bucket = 100 buckets

Thus, for each of the two Part B applications, the water volume necessary is calculated using the following equation:

100 buckets Part B x 68 gallons water/bucket = 6,800 gallons of water

This yields a total solution application per event estimation of:

(6,800 gals of H_2O + 260 gals Part B)/5 wells = 1,412 gals Part B Solution/well/event

Step 2:
Clear Part B material from the injection well and surrounding well pack by application of a clear water chaser equivalent to the volume of 1.5-3x the borehole volume.

Example:
For a 2-inch diameter well with a 6-inch borehole diameter, a total depth of 20 feet (10 feet of blank and 10 feet of screen). A single borehole volume with an assumed sand pack void space of 30% would be the sum of the following:
Borehole Volume = (screened interval borehole volume + blank casing volume)

[(10 feet x 0.543 gals/ft) + (10 feet x 0.163 gals/ft)] = 7 gals

Using a clear water chaser application factor of 1.5-3x yields a total clear water chaser volume ranging from 11 to 21 gallons/well.

For a 4-inch diameter well with a 8.25-inch borehole diameter, a total depth of 20 feet (10 feet of blank and 10 feet of screen). A single borehole volume using an assumed sand pack void space of 30% would be the sum of the following:
Borehole Volume = (screened interval borehole volume + blank casing volume)

[(10 feet x 1.23 gals/ft) + (10 feet x 0.65)] = 19 gals

Using a clear water chaser application factor of 1.5-3x yields a total clear water chaser volume ranging from 28 to 57 gallons/well.

Step 3:
Mix Part A at a solution of between 3-5%. As discussed previously the transmissivity and reactivity of a particular aquifer as well as hydraulic testing should be factored into the application volume decision. The stability of RegenOx Part A is optimal at approximately 3%. In coarse grained aquifers it is best to apply Part A at or near a 3% solution. In fine grained aquifers it may be necessary to decrease the water content to near a 5% solution. NOTE: Do not apply a Part A that is >5% solution.

Example:
Based on application of Part A solution into a silty sand aquifer, the Part A solution should be mixed at 5%. As discussed previously this application is designed for application of 5,970 pounds of Part A per event via a 5 well application array. Using Table 1 the number of buckets of Part A is required is estimated as follows:

5,970 lbs Part A/30 lbs/bucket = 199 buckets

The volume of water necessary to create a 5% Part A solution is calculated using Table 1 and the following equation:

199 buckets Part A x 68 gallons H_2O/bucket = 13,532 gallons of H_2O

This yields a total solution application per event estimation of:

(13,532 gals of H_2O + 682 gals Part A)/5 wells = 2,843 gals Part A Solution/well/event

Step 4:
Clear the Part A solution from the injection well and some of the surrounding well pack by application of a clear water chaser equivalent to the volume of 1.5-3x the borehole volume.

Example:
For a 2-inch diameter well with a 6-inch borehole diameter, a total depth of 20 feet (10 feet of blank and 10 feet of screen). A single borehole volume with an assumed sand pack void space of 30% would be the sum of the following:
Borehole Volume = (screened interval borehole volume + blank casing volume)

[(10 feet x 0.543 gallons/ft) + (10 feet x 0.163)] = 7.1 gallons

Using a clear water chaser application factor of 1.5-3x yields a total clear water chaser volume ranging from 11 to 21 gallons/well.

For a 4-inch diameter well with a 8.25-inch borehole diameter, a total depth of 20 feet (10 feet of blank and 10 feet of screen). A single borehole volume using an assumed sand pack void space of 30% would be the sum of the following:
Borehole Volume = (screened interval borehole volume + blank casing volume)

[(10 feet x 1.23 gallons/ft) + (10 feet x 0.65)] = 19 gallons.

Using a clear water chaser application factor of 1.5-3x yields a total clear water chaser volume ranging from 28 to 57 gallons/well.

Repeat the above series of steps as needed. As discussed previously the first two injection events will consist of application of Part B followed by Part A and thereafter as a series of Part A only injections.

Pump Selection (Wells)

It stands to reason that application of RegenOx via a series of wells is best accomplished using a pump that can deliver high volumes of fluids in a relatively low pressure setting. Regenesis has evaluated a number of pumps that are capable of delivery of these volumes of RegenOx in a reasonably efficient manner. These pumps are typically the positive displacement pumps and the diaphragm pumps. The positive displacement pumps are generally a stader driven (auger) and are electrically driven via a generator while the diaphragm pump is composed of one or two diaphragms that use pneumatic pressure to drive the pump. Both of these types of pumps can provide a relatively high volume of reagent while allowing significant control of volume and pressure.

Pressure Gauge System:
It is critical that application of RegenOx by preformed with proper pressure gauge set up. The gauges used should be configured to read PSI at the pump effluent and either along the delivery line or at the well head. This provides on-site personnel with adequate information on the pumps working pressure as well as the well delivery pressure. The difference in the two is the result of line loss. It is critical that application of RegenOx not exceed the burst pressure of the application well casing.

Pump Cleaning (Wells)

For best results, flush all moving parts and hoses with clean water at the end of the day, flush the injection system with a mixture of water and biodegradable cleaner such as Simple Green.

For more information or technical assistance please call Regenesis at 949-366-8000

APPENDIX C
Site-Specific Heath and Safety Plan

Site-Specific Health and Safety Plan
160 Holmes Street, Livermore, California

Date:
January 28, 2011

Prepared For:
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Introduction

The purpose of this Site-Specific Health and Safety Plan (HASP) is to ensure that all individuals engaged in site activities do so in a safe manner and in compliance with EPA, state and local regulations. The primary regulatory documents with which site personnel need to comply are OSHA 29 CFR, Part 1910, and the California Administrative Code, Title 8. In addition, all site work will comply with Allterra Environmental, Inc.'s (Allterra) Health and Safety Program and all supporting Standard Operating Procedures (SOPs). This HASP may be modified during field activities, if necessary, as more information and site-specific data are obtained.

Prior to beginning any work on-site, an approved copy of this HASP shall be provided to all employees and subcontractors by the Project Manager. Each subcontractor will be responsible for providing his own HASP. Allterra retains the right to review and approve each subcontractor's HASP prior to the beginning of field work.

Purpose and Objectives

The purpose of this HASP is to provide guidelines and procedures to ensure the health and physical safety of those persons working at the site. While it may be impossible to eliminate all risks associated with site work, the goal is to provide state-of-the-art precautionary and responsive measures for the protection of on-site personnel, the general public and the environment. The HASP objectives are as follows:

a. Ensure the safety of all site personnel;
b. Protect the public and the environment; and
c. Adhere to Allterra's health and safety policies and procedures.

Implementation

This HASP, and any additional HASP, will be reviewed by all site personnel prior to their scheduled field work. Whenever the HASP is revised or amended, personnel will be instructed of changes and new procedures.

The HASP will be implemented in the field by Allterra's Health and Safety Coordinator and/or designated Site Safety Officer (SSO).

Background and Site Description

The subject site is located on the southwest corner of Holmes Street and Second Street at 160 Holmes Street in Livermore, California. The site currently operates as a service station and convenience store.

Proposed Work

Allterra has proposed to conduct in-situ soil and groundwater remediation within the source area at the subject site. This work includes using a truck-mounted Geoprobe® rig equipped with 2-inch diameter push core drilling equipment to inject the chemical oxidant RegenOx™ and the slow release technology known as Oxygen Release Compound Advanced (ORC Advanced™) into the subsurface onsite.

Job Hazard Assessment

Chemical Health Hazards

Chemical	PEL/Ceiling/ IDLH	Known Concentrations in Soil, Water, Air, Etc.	Signs/Symptoms
Benzene	1.0 ppm	Soil = 0.47 ppm Water = 11,000 ppb	Irritation of eyes, nose, and respiratory systems. Headache, giddiness, fatigue, anorexia, staggered gait, and dermatitis
Toluene	100 ppm	Soil = 81 ppm Water = 26,000 ppb	Irritation of eyes and mucous membrane, headache, dermatitis, narcosis, and coma.
Ethylbenzene	300 ppm	Soil = 120 ppm Water = 5,500 ppb	Irritation of eyes and mucous membrane, headache, dermatitis, narcosis, and coma.
Xylenes	100 ppm	Soil = 940 ppm Water = 28,000 ppb	Irritation of eyes, nose, and throat, excitement, drowsiness, headache, dizziness, nausea ,vomiting, anorexia, staggered gait, and dermatitis.
Gasoline	300 ppm	Soil = 6,500 ppm Water = 210,000 ppb	Skin irritant, disturbance of eyes. Deep burning in the throat and respiratory track and bronchopneumonia. Repeated chronic dermal contact may result in drying of skin, lesions and other dermatological conditions.
Diesel	100 mg/m^3	Soil = 1,300 ppm Water = 57,000 ppb	Irritation to skin. Prolonged breathing at high vapor concentrations can cause central nervous system effects
Methyl Tertiary Butyl Ether	50 ppm	Soil = 140 ppm Water = 1,500,000 ppb	Minor skin and eye irritant, Inhalation of vapor can irritate respiratory tract. Central nervous system effects may include headache, dizziness, loss of balance and coordination. May also cause nausea and vomiting if ingested.
RegenOx™ (Sodium Percarbonate)	NA	NA	Inhalation exposure causes irritation to respiratory tract, including mucus membranes, nose and throat. Ingestion is associated with nausea and diarrhea. Eye contact causes irritation, redness, and pain. May also cause slight skin irritation.
ORC Advanced™ (Calcium Hydroxide Oxide)	NA	NA	Irritating to mucous membranes and eyes. Risk of skin irritation, sore throat, and nose bleeds with extended exposure. Ingestion is associated with nausea and vomiting.

Physical Hazards

Hazard	Mitigation Measure
Drilling Equipment Hazard	Heavy equipment will be in good working order and operated in accordance with recognized industry standards. Strive to keep a safe distance from heavy machinery so that you would not be in the path of a moving part if it were to swing suddenly. Always be aware of the movement of machinery around you. Approach vehicles from the driver's side. Make sure you are seen by the vehicle operator. Make eye contact.
Trip/Fall Hazard	Good housekeeping and shoes with traction will be worn.

Fire and Explosion Hazards

List Flammable or combustible materials kept on-site. Keep ignition sources away from the following materials.

Flammable (Flash Point < 100 °F)	Combustible (Flash Point < 200 °F)
Gasoline (43 °F)	Diesel (130 °F)

Flammability will be monitored by LEL meter.

List all oxidizers kept on-site: RegenOx™ (see Chemical Health Hazards)

Type and location of Fire Extinguisher: ABC fire extinguisher will be located in the support zone in the truck or outside.

Other Hazards

X *Noise*:

Activities likely to generate noise exceeding 85 Db: drilling Use hearing protection during these activities.

X *Heat Stress*

Symptoms: Heat Cramps: Muscular pains and spasms.
Heat Exhaustion: Cool, pale, moist skin; dilated pupils, headache, sweating, nausea, dizziness, vomiting, near normal body temperature.
Heat Stroke: Hot, red skin; small pupils; high body temperature; reduced sweating

Mitigation: Cool place for breaks (in the shade or in trucks)
Whenever ambient temperatures exceed 80 °F, or whenever semi-permeable or impermeable protective clothing is worn and ambient temperatures exceed 70 °F, monitoring the worker may include:

Calculate the workers heart rate at the beginning of the rest period. If the heart rate exceeds 110 beats/min shorten the next work cycle. If the heart

rate still exceeds 110 beats/min during the next rest period, shorten the work cycle by 1/2 and continue monitoring.

Take frequent breaks in shaded areas. Remove PPE during breaks and provide plenty of drinking water. Record the time and duration of all breaks. Heat stroke victims must receive emergency medical care.

_____*Hypothermia/ Frostbite*

Symptoms: Hypothermia: Shivering, apathy, loss of consciousness, decreasing pulse and breathing rate.
Frostbite: White, then greyish yellow processing to greyish blue skin. Cold numb body parts.

Mitigation: Wear multi-layer cold weather clothing. Take frequent breaks in a warm sheltered area. Provide warm drinks. For frostbite victims, warm the injured part gradually, do not rub the affected area. Warm hypothermia victims and transport to emergency medical care.

Exposure Monitoring
All samples will be recorded in the exposure log. Copies of the exposure log are filed in the job file. All sampling instruments will be calibrated per the manufacturer's instructions on a daily basis.

Monitoring Equipment	Hazard Monitored	Sample Location	Sample Frequency	Action Level	Action
PID	Volatile organic vapors	To be determined	Hourly	300 ppm	Use of a respirator while working

Personal Protective Equipment
As a minimum, modified Level D protection is required on all Allterra worksites. During site-specific drilling and injection field activities, field personnel will wear modified Level D personal protective equipment (PPE) consisting of hardhats, chemical resistant gloves, safety goggles or face shield, NIOSH-approved dust and mist respirator, long sleeve clothing or Tyvek® suit, and steel-toed boots. For each task on this project, we have identified additional protective garments required, and included the conditions (exposure levels, etc.) under which the level of PPE would be modified in the table below.

Task(s)	Condition	Garment(s)
All	At all times	Level D = steel-toe boots, safety glasses, and hard hat
Injection Activities	At all times	Level D + safety goggles or face shield, NIOSH-approved dust and mist respirator, and long sleeve clothing or Tyvek® suit
Other		

Site Control and Communication
The site will be secured as follows: Traffic safety equipment and caution tape.

Work Zones will be marked as follows: Marked with florescent or caution tape and traffic safety equipment. Exclusion Zone is within 15 feet of machinery. Only essential personnel will be allowed into an Exclusion Zone. When practical, 25 to 75 feet of space surrounding Exclusion Zones will be designated as Contamination Reduction Zones. Support Zone is all other area.

On-site communication:	Radio	
	Verbal	X
	Hand Signals	X
	Other	
Off-site communication:	Radio	
	Telephone	X
	Other	

The specific signal for an emergency is: Waving both arms overhead
The specific signal for an evacuation is: Wave personnel toward assembly point
Evacuation assembly point is: To be designated prior to work so a head count can be taken in the event of an evacuation.

Sanitation and Decontamination
As required, all equipment (trucks, field equipment, heavy machinery, etc.) shall be decontaminated prior to exiting the work zone. Personnel decontamination shall be conducted as needed in accordance with the health and safety section of this plan. All waste soils removed during drilling activities will be placed into drums and will remain on site pending disposal.

Personal decontamination procedure: *Hands and face must be clean prior to eating, drinking, or smoking*.
Location of Wash Water: *Support Zone, or to designated prior to work start*.
Location of toilet: *Support Zone, or to designated prior to work start.*
Location of drinking water: *Support Zone, or to designated prior to work start*.
Equipment Decontamination Procedures: *Steam cleaned or washed with Alconox*.
Materials to be disposed of as Hazardous Waste: *Personal Protective Equipment*.

This hazard assessment is based on available information concerning chemical hazards suspected to be present at the site. The work to be performed will be conducted in accordance with EPA and CAL-OSHA regulations and Monterey County requirements.

Emergency Services
If an emergency should occur on-site, the Emergency System (911) should be activated. Two-way communication between the site and the emergency trauma center will be maintained via a portable cellular telephone. Emergency telephone numbers shall be posted on-site and a portable telephone unit made immediately available at all times. These numbers shall include the following:

Emergency

Ambulance	911
Police	911
Poison Control	(800) 662-9886
Pleasanton Urgent Care Medical Center	(925) 462-9300

Non Emergency

Alameda County Fire Department #8	(925) 551-6868
Livermore Police Department	(925) 371-4900
National Response Center	(800) 424-8802

Emergency/Contingency Plans and Procedures
From the Site, head northeast on Holmes Street and turn right onto 1st Street. Continue on 1st Street and turn left onto P Street. Continue on P Street and turn left onto Portola Avenue. Continue on Portola Avenue and take the I-580 west on ramp towards Oakland. Continue on I-580 west for approximately 5 miles and take the Santa Rita Road/Tassajara Road Exit (Exit #47). Turn left onto Santa Rita Road and continue south for approximately 1.0 mile. Arrive at Urgent Care at 3128 Santa Rita Road in Pleasanton, California.

Key Safety Personnel and Responsibilities
Project Manager
The Allterra Project Manager is the SSO. The SSO will ensure that site personnel have proper protective equipment available, that specific site hazards are noted, and that personnel have knowledge of the nearest hospital location. The site safety officer can stop work at the site upon determination that an eminent health or safety hazard exists. If a stop-work order is issued, Allterra will take appropriate steps to remedy the situation and resume site activities. Allterra's Project Manager is responsible for directing all project operations. The Project Manager is also responsible for ensuring that the safety personnel are given free access to all relevant site information that could impact health and safety. The project manager will remain in view of all field activities, and he will inform site personnel of a change in activities.

Employees
All Allterra employees working at the site are responsible for reading and understanding the HASP. Other subcontractors at the site are responsible for providing their own HASPs, which

must incorporate, at a minimum, Allterra's HASP. As described above, Allterra's SSO has the authority to ensure that subcontractor employees are following the Allterra HASP provisions.

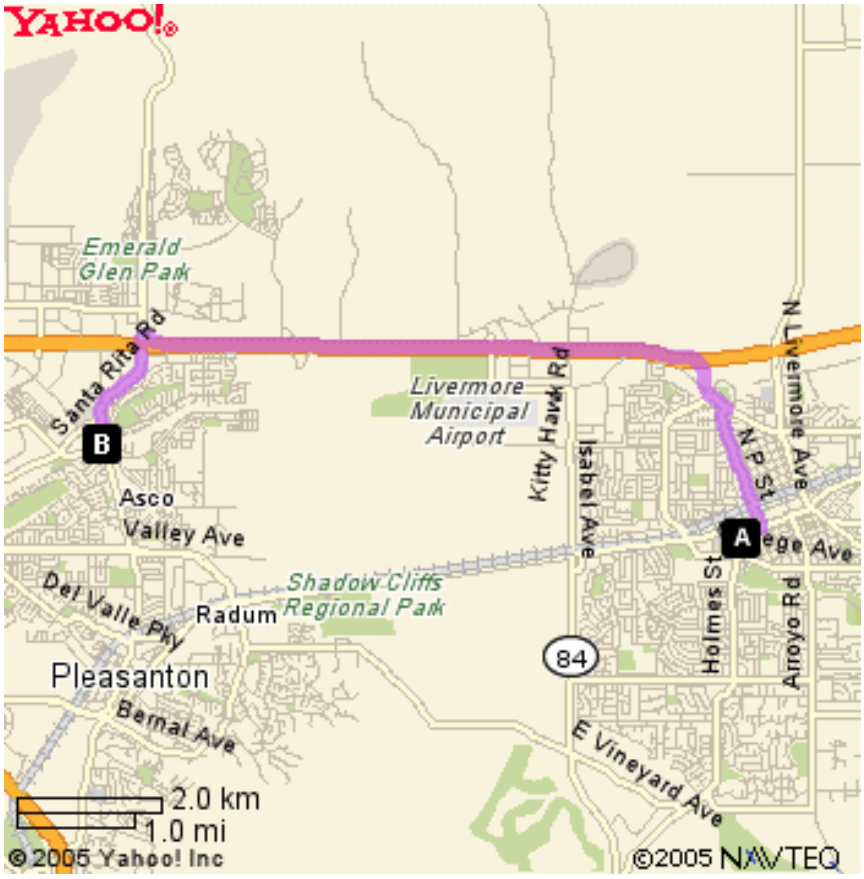
Site Safety Briefing Procedures (Tailgate Meeting):
All field personnel from Allterra and the subcontractors must attend a safety orientation meeting prior to commencing field activities. The meeting will be scheduled and conducted by the SSO and is to include an overview of the site history, the potentially hazardous compounds, their potential mode of ingress into the body, protective equipment requirements, and emergency response equipment. All individuals who do not have respirators and who may be required to wear them, will not be allowed on the site until they are provided with and fit tested for respirators by their respective employers.

A tailgate meeting will be held every morning before the start of field work and is to be attended by all personnel onsite. The purpose of the meeting is to discuss the days work, potential hazards, and specific health and safety procedures to be utilized during the day.

Sign-Off
I have read the HASP and fully understand the hazards associated with the following job:
160 Holmes Street, Livermore, California

I will comply with the minimum safety requirements set forth in the HASP. I agree to notify the responsible employee of Allterra should any unsafe acts be witnessed by me while I am on-site.

Print Name	Signature	Date



Driving Route to Hospital

Hospital Location

Hospital Location Map

160 Holmes Street, Livermore, California

Material Safety Data Sheet

GASOLINE, UNLEADED

1 . Product and company identification

Product name : GASOLINE, UNLEADED

Synonym : Regular, Unleaded Gasoline (US Grade), Mid-Grade, Plus, Super, WinterGas, SummerGas, Supreme, SuperClean WinterGas, RegularClean, PlusClean, Premium, marked or dyed gasoline, TQRUL, transitional quality regular unleaded, BOB, Blendstock for Oxygenate Blending

Code : W102E, SAP: 102 to 117

Material uses : Unleaded gasoline is used in spark ignition engines including motor vehicles, inboard and outboard boat engines, small engines such as chain saws and lawn mowers, and recreational vehicles.

Manufacturer : PETRO-CANADA
P.O. Box 2844
150 – 6th Avenue South-West
Calgary, Alberta
T2P 3E3

In case of emergency : Petro-Canada: 403-296-3000
Canutec Transportation: 613-996-6666
Poison Control Centre: Consult local telephone directory for emergency number(s).

2 . Hazards identification

Physical state : Clear liquid.

Odour : Gasoline

WHMIS (Canada) :

Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : WARNING!

FLAMMABLE LIQUID AND VAPOUR. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. CONTAINS MATERIAL WHICH CAN CAUSE HERITABLE GENETIC EFFECTS.

Flammable liquid. Irritating to eyes, respiratory system and skin. Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapour or mist. Avoid contact with eyes, skin and clothing. Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure. Contains material which can cause heritable genetic effects. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Inhalation of this product may cause respiratory tract irritation. Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death.

Ingestion : Ingestion of this product may cause gastro-intestinal irritation. Aspiration of this product may result in severe irritation or burns to the respiratory tract. Ingestion of this product may cause Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death.

2 . Hazards identification

Skin : Irritating to skin.

Eyes : Irritating to eyes.

Potential chronic health effects

Chronic effects : This product contains an ingredient or ingredients, which have been shown to cause chronic toxic effects. Repeated or prolonged exposure to the substance can produce blood disorders.

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : Contains material which can cause heritable genetic effects.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure : Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis.

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
Gasoline	86290-81-5	85-100
Ethanol	64-17-5	0.1-1
Benzene	71-43-2	0.5-1.5
Toluene	108-88-3	15-40*

**Montreal: may vary from 3-40%*
**Edmonton: may vary from 1-5%*

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First-aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Flammable liquid (NFPA) .

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Products of combustion : Carbon oxides (CO, CO2), nitrogen oxides (NOx), polynuclear aromatic hydrocarbons, phenols, aldehydes, ketones, smoke and irritating vapours as products of incomplete combustion.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Extremely flammable in presence of open flames, sparks, shocks, and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. Rapid escape of vapour may generate static charge causing ignition. May accumulate in confined spaces.

Special remarks on explosion hazards : Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Containers may explode in heat of fire. Vapours may form explosive mixtures with air.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical

7 . Handling and storage

(ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Ensure the storage containers are grounded/bonded.

8 . Exposure controls/personal protection

Ingredient	Exposure limits
Gasoline	**ACGIH TLV (United States).** TWA: 300 ppm 8 hour(s). STEL: 500 ppm 15 minute(s).
Ethanol	**ACGIH TLV (United States).** STEL: 1000 ppm 15 minute(s).
Benzene	**ACGIH TLV (United States). Absorbed through skin.** TWA: 0.5 ppm 8 hour(s). STEL: 2.5 ppm 15 minute(s).
Toluene	**ACGIH TLV (United States).** TWA: 20 ppm 8 hour(s).

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: A NIOSH-approved air-purifying respirator with an organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

8 . Exposure controls/personal protection

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Recommended: polyvinyl alcohol (PVA), Viton. Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Clear liquid.

Flash point : Closed cup: -50 to -38°C (-58 to -36.4°F) [Tagliabue.]

Auto-ignition temperature : 257°C (494.6°F) (NFPA)

Flammable limits : Lower: 1.3% (NFPA)
Upper: 7.6% (NFPA)

Colour : Clear to slightly yellow or green, undyed liquid. May be dyed red for taxation purposes.

Odour : Gasoline

Odour threshold : Not available.

pH : Not available.

Boiling/condensation point : 25 to 220°C (77 to 428°F) (ASTM D86)

Melting/freezing point : Not available.

Relative density : 0.685 to 0.8 kg/L @ 15°C (59°F)

Vapour pressure : <107 kPa (<802.5 mm Hg) @ 37.8°C (100°F)

Vapour density : 3 to 4 [Air = 1] (NFPA)

Volatility : Not available.

Evaporation rate : Not available.

Viscosity : Not available.

Pour point : Not available.

Solubility : Hydrocarbon components virtually insoluble in water. Soluble in alcohol, ether, chloroform and benzene. Dissolves fats, oils and natural resins.

10 . Stability and reactivity

Chemical stability : The product is stable.

Hazardous polymerisation : Under normal conditions of storage and use, hazardous polymerisation will not occur.

Materials to avoid : Reactive with oxidising agents, acids and interhalogens.

Hazardous decomposition products : May release COx, NOx, phenols, polycyclic aromatic hydrocarbons, aldehydes, ketones, smoke and irritating vapours when heated to decomposition.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Gasoline	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	13600 mg/kg	-
Ethanol	LD50 Dermal	Rabbit	>15800 mg/kg	-
	LD50 Oral	Mouse	3450 mg/kg	-
	LC50 Inhalation Vapour	Rat	8850 mg/m³	4 hours
Benzene	LD50 Dermal	Rabbit	>8240 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
	LC50 Inhalation Vapour	Rat	13228 ppm	4 hours
Toluene	LD50 Dermal	Rabbit	12125 mg/kg	-
	LD50 Oral	Rat	636 mg/kg	-
	LC50 Inhalation Vapour	Rat	7585 ppm	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Gasoline	A3	2B	-	-	-	-
Ethanol	A3	-	-	-	-	-
Benzene	A1	1	A	+	Proven.	+
Toluene	A4	3	D	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : There is a wealth of information about the teratogenic hazards of Toluene in the literature; however, based upon professional judgement regarding the body of evidence, WHMIS classification as a teratogen is not warranted.

Reproductive toxicity

Conclusion/Summary : Not available.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN1203	GASOLINE	3	II		-
DOT Classification	Not available.	Not available.	Not available.	-		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Flammable liquid
Irritating material
Carcinogen

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

Canada inventory : All components are listed or exempted.

United States inventory (TSCA 8b) : All components are listed or exempted.

Europe inventory : All components are listed or exempted.

16 . Other information

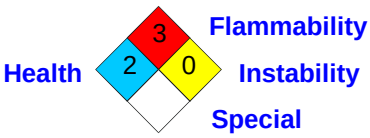
Label requirements : FLAMMABLE LIQUID AND VAPOUR. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. CONTAINS MATERIAL WHICH CAN CAUSE HERITABLE GENETIC EFFECTS.

Hazardous Material Information System (U.S.A.) :

Health	*	2
Flammability		3
Physical hazards		0
Personal protection		H

16 . Other information

National Fire Protection Association (U.S.A.) :



References : Available upon request.
™ Trademark of Suncor Energy Inc. Used under licence.

Date of printing : **4/21/2010.**

Date of issue : 9 April 2010

Date of previous issue : No previous validation.

Responsible name : **Product Safety - RS**

Indicates information that has changed from previously issued version.

For Copy of (M)SDS : Internet: www.petro-canada.ca/msds

Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228

For Product Safety Information: (905) 804-4752

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Haltermann

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name:	Methyl Tert-Butyl Ether
Product Number(s):	40900-01
Synonyms:	MTBE; tert-Butyl methyl ether; Methyl-1,1-dimethylethyl ether; Methoxy-2-methyl propane
CAS Number:	1634-04-4

Company Identification

Company Name:	Johann Haltermann, Ltd.
Company Address:	16717 Jacintoport Blvd. Houston, TX 77015 USA
Product Information:	281-452-5951 Fax: 281-457-1128
24 HR Emergency Assistance:	832-376-2026
24 HR CHEMTREC:	800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component Listing

Chemical Name	CAS #	Amount
METHYL TERT-BUTYL ETHER	1634-04-4	>99 %

(See section 8 for exposure guidelines)

(See section 15 for regulatory information)

HAZARDS DISCLOSURE:
This product contains hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

As defined under SARA 311 and 312, this product contains materials that are designated as the following hazards: Acute Chronic Fire

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Flammable liquid.
May be harmful if ingested or inhaled.
Irritating to eyes and skin.
May be harmful to aquatic organisms.

NFPA Rating:

Health:	2
Flammability:	3
Reactivity:	0

POTENTIAL HEALTH EFFECTS

EYE:

Contact with eyes may cause redness and pain.

SKIN:

Contact with this material may cause dry skin and redness.

INHALATION:

Inhalation of this material may cause dizziness, drowsiness, headache, weakness, and unconsciousness.

INGESTION:

Ingestion of this material may cause abdominal pain, nausea, vomiting, dizziness, drowsiness, headache, weakness, and unconsciousness.

SUBCHRONIC EFFECTS:

This substance is irritating to the skin.
Swallowing the liquid may cause aspiration in to the lungs with the risk of chemical pneumonitis.
Exposure far above the OEL may result in a lowering of consciousness.

CARCINOGENICITY INFORMATION:

MTBE is listed by IARC as " Not classifiable as to its carcinogenicity to humans" (Category 3).

REPRODUCTIVE EFFECTS:

No information available on reproductive effects.

TARGET ORGANS:

Target organs include: eyes, skin, respiratory system, GI tract, central nervous system.

4. FIRST AID MEASURES

EYE CONTACT FIRST AID:

After initial flushing, remove contacts if possible and continue flushing.
Get medical attention.

SKIN CONTACT FIRST AID:
Remove contaminated clothing and shoes.
Wash affected area immediately with large amounts of soap and water.
Seek medical attention if irritation develops or perisists.

INHALATION FIRST AID:
If inhaled, remove to fresh air and rest.
If not breathing, give artificial respiration or give oxygen by trained personnel.
Refer for medical attention.

INGESTION FIRST AID:
If swallowed, do NOT induce vomiting.
Rinse mouth. Give slurry of activated charcoal in water to drink.
Call a physician or poison control center immediately.

NOTES TO PHYSICIAN:

Swallowing this liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT:	-28	°C
AUTOIGNITION TEMPERATURE:	375	°C
LOWER FLAMMABLE LIMITS:	1.6	% by volume in air
UPPER FLAMMABLE LIMITS:	15.1	% by volume in air

EXTINGUISHING MEDIA:

Use water spray to cool fire exposed containers.

Use powder, AFFF, foam, or carbon dioxide when fighting fires involving this material.

FIRE FIGHTING INSTRUCTIONS:
Evacuate non-emergency personnel to a safe area.
As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

COMBUSTION PRODUCTS:
In the case of fire, oxides of carbon, hydrocarbons, fumes and smoke may be produced.

MISCELLANEOUS:
The vapor is heavier than air and may travel along the ground; distant ignition is possible.

6. ACCIDENTAL RELEASE MEASURES

SAFEGUARDS (PERSONNEL):

Eliminate all sources of ignition - heat, sparks, flame, electricity, impact and friction.
Wear appropriate personal protective equipment.
Ventilate spill area.

INITIAL CONTAINMENT:
Eliminate all sources of ignition - heat, sparks, flame, electricity, and impact.
Collect leaking and spilled material in sealable containers as far as possible.
Absorb remaining liquid with inert material and remove to safe place.

LARGE SPILLS PROCEDURE:
Stop the source of the leak or release.

Clean up spills as soon as possible, observing precautions in Exposure Controls/Personal Protection section.
Contain liquid to prevent further contamination of soil, surface water, or groundwater.

MISCELLANEOUS:
Notify local, state, and federal authorities as required by law.

7. HANDLING AND STORAGE

HANDLING (PERSONNEL):
Ground and bond containers when transferring material.
Do not inhale or ingest.
Avoid contact with eyes, skin, and clothing.
Wash thoroughly after handling.

HANDLING (PHYSICAL ASPECTS):
Avoid contact with strong oxidizing agents and strong acids.

Eliminate all sources of ignition - heat, sparks, flame, electricity, impact and friction.

To reduce explosion hazard, use closed system, ventilation, explosion-proof electrical equipment and lighting.
Do NOT use compressed air for filling, discharging, or handling.

STORAGE PRECAUTIONS:
Store in a cool, fireproof, well ventilated area separated from strong oxidants and strong acids.
Eliminate leaks which could enter the environment and lead to bioaccumulation.

MISCELLANEOUS:
Prevent build up of electrostatic charges (by grounding, etc).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
Use only with adequate ventilation.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

EYE/FACE PROTECTION REQUIREMENTS:
Chemical goggles are recommended to avoid contact with eyes.

SKIN PROTECTION REQUIREMENTS:
Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles.

RESPIRATORY PROTECTION REQUIREMENTS:

When there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

EXPOSURE GUIDELINES:

Compound Name	CAS #	Exposure Guidelines
METHYL TERT-BUTYL ETHER	1634-04-4	ACGIH TWA: 50 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid	
Color:	Colorless	
Odor:	Ethereal	
Boiling Point:	55.0	°C
Melting Point:	-109	°C
Vapor Pressure:	250	mm Hg at 25° C
Solubility in water:	4.2	g/100 mL at 20° C
Specific Gravity:	0.7	(water = 1)

10. STABILITY AND REACTIVITY

STABILITY:
This compound is stable at ambient conditions.

POLYMERIZATION:
Hazardous polymerization will not occur.

INCOMPATABILITY WITH OTHER MATERIALS:

MTBE reacts violently with strong oxidants causing a fire hazard. MTBE decomposes on contact with acids.

DECOMPOSITION:
In the case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.

CONDITIONS TO AVOID:
Keep away from all sources of ignition including static electricity.
Prevent build-up of electrostatic charge by grounding.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:

Compound Name	CAS #	TEST - SPECIES - RESULT
METHYL TERT-BUTYL ETHER	1634-04-4	Oral LD50 - Rat: 4 gm/kg

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS:

This material may be harmful to the environment. Bioaccumulation may occur.

ENVIRONMENTAL FATE:

According to the National Library of Medicine's Hazardous Substances Data Bank:

"If released to air, a vapor pressure of 250 mm Hg at 25 deg C indicates methyl t-butyl ether will exist solely as a vapor in the ambient atmosphere. Vapor-phase methyl t-butyl ether will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals and nitrate radicals; half-lives for these reactions in air are estimated to be 5.5 and 50 days, respectively. Direct photolysis is not expected to be an important removal process since aliphatic ethers do not absorb light in the environmental spectrum. If released to soil, methyl t-butyl ether is expected to have very high mobility based upon a Koc of 6 calculated from a soil/water partition coefficient of 0.0925. Volatilization from moist soil surfaces is expected to be an important fate process based upon a Henry's Law constant of 5.87X10-4 atm-cu m/mole. Methyl t-butyl ether may potentially volatilize from dry soil surfaces based upon its vapor pressure. If released into water, methyl t-butyl ether is not expected to adsorb to suspended solids and sediment in the water column based upon the Koc. Volatilization from water surfaces is expected to be an important fate process based upon this compound's Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 4.1 hours and 4.1 days, respectively. A BCF of 1.5 in Japanese carp suggests bioconcentration in aquatic organisms is low. Methyl t-butyl ether is not expected to undergo hydrolysis in the environment due to the lack of hydrolyzable functional groups. In general, most studies have indicated that methyl t-butyl ether is difficult to biodegrade."

ECOLOGICAL DATA:

Compound Name	CAS #	TEST-SPECIES-RESULTS
METHYL TERT-BUTYL ETHER	1634-04-4	N.D.

N.D. - No data available

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Recover or recycle if possible.

It is the responsibility of the waste generator to determine the physical characteristics and toxicity of the material generated in order to properly designate the waste classification and disposal methods in compliance with applicable regulations.

Treat or dispose of waste material in accordance with all local, state/provincial, and national requirements.

CONTAMINATED MATERIALS:

Treat or dispose of contaminated material in accordance with all local, state/provincial, and national requirements.

CONTAINER DISPOSAL:

Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

14. TRANSPORTATION INFORMATION

PRODUCT LABEL: Methyl Tert-Butyl Ether
D.O.T. SHIPPING NAME: Methyl Tert-Butyl Ether
UN NUMBER: UN 2398
PRODUCT RQ (LBS): 1000
D.O.T. PLACCARD: Flammable
PACKAGE CLASS: II

15. REGULATORY INFORMATION

REGULATORY DISCLOSURES:

This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA) or are exempt from reporting.

This material or all of its components are listed on the Canadian Domestic Substances List (DSL).

FEDERAL REGULATORY LISTS:

Compound Name	CAS #	SARA 313	CERCLA	RCRA	CAA
METHYL TERT-BUTYL ETHER	1634-04-4	313	1,000	N.L	N.L

N.L. - Not listed on regulatory list

CALIFORNIA REGULATIONS:

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

PENNSYLVANIA REGULATIONS:

The following product components are cited on the Pennsylvania Hazardous Substances List and/or the Pennsylvania Environmental Hazardous Substances List, and are present at levels which require reporting.

To the best of our knowledge, this product does not contain any components cited on the Pennsylvania Special Hazardous Substances List.

Compound Name	CAS #	LISTING	AMOUNT
METHYL TERT-BUTYL ETHER	1634-04-4	PA RTK	>99 %

ADDITIONAL STATE REGULATIONS:

Components of this product are found on the following state lists.

Compound Name	CAS #	STATE LISTS
METHYL TERT-BUTYL ETHER	1634-04-4	DE, MN, NJ, NY, WI

CANADIAN REGULATIONS:

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) classification for this product is:
B2 - Flammable liquid with a flash point of <37.8° C (100° F).
D2B - Eye or skin irritant.

Compound Name	CAS #	REPORTING LIMIT (%)
METHYL TERT-BUTYL ETHER	1634-04-4	N.L.

Refer elsewhere in the MSDS for specific warnings and safe handling information.
Refer to the employer's workplace education program.
CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

REASON FOR ISSUE: New MSDS
PREPARED BY: PH
APPROVED BY: JJ
TITLE: E, H & S Specialist
APPROVAL DATE: November 23, 2009
SUPERSEDES DATE: New

****

This information is furnished without warranty, expressed or implied except that it is accurate to the best knowledge of Johann Haltermann, Ltd.. The data on this sheet are related only to the specific material herein. Johann Haltermann, Ltd. assumes no responsibility for the use or reliance upon these data.

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END OF MSDS

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Regen OX – Part A (Oxidizer Complex)

Material Safety Data Sheet (MSDS)

Last Revised: October 1, 2007

Section 1 – Supplier Information and Material Identification

Supplier:

1011 Calle Sombra
San Clemente, CA 92673
Telephone: 949.366.8000
Fax: 949.366.8090
E-mail: info@regenesis.com

Chemical Description:	A mixture of sodium percarbonate [$2Na_2CO_3 \cdot 3H_2O_2$], sodium carbonate [Na_2CO_3], sodium silicate and silica gel.
Chemical Family:	Inorganic Chemicals
Trade Name:	Regen Ox – Part A (Oxidizer Complex)
Product Use:	Used to remediate contaminated soil and groundwater (environmental applications)

Section 2 – Chemical Information/Other Designations

CAS No.	Chemical	Percentage
15630-89-4	Sodium Percarbonate	60 -100 %
5968-11-6	Sodium Carbonate Monohydrate	10 – 30 %
7699-11-6	Silicic Acid	< 1 %
63231-67-4	Silica Gel	< 1 %

Section 3 – Physical Data

Form:	Powder
Color:	White
Odor:	Odorless
Melting Point:	NA
Boiling Point:	NA

Section 3 – Physical Data (cont)

Flammability/Flash Point:	NA
Vapor Pressure:	NA
Bulk Density:	0.9 – 1.2 g/cm^3
Solubility:	Min 14.5g/100g water @ 20 ºC
Viscosity:	NA
pH (3% solution):	≈ 10.5
Decomposition Temperature:	Self-accelerating decomposition with oxygen release starts at 50 ºC.

Section 4 – Reactivity Data

Stability:	Stable under normal conditions
Conditions to Avoid/Incompatibility:	Acids, bases, salts of heavy metals, reducing agents, and flammable substances
Hazardous Decomposition Products:	Oxygen. Contamination with many substances will cause decomposition. The rate of decomposition increases with increasing temperature and may be very vigorous with rapid generation of oxygen and steam.

Section 5 – Regulations

TSCA Inventory Listed:	Yes
CERCLA Hazardous Substance (40 CFR Part 302)	
Listed Substance:	*No*
Unlisted Substance:	*Yes*
SARA, Title III, Sections 313 (40 CFR Part 372) – Toxic Chemical Release Reporting: Community Right-To-Know	
Extremely Hazardous Substance:	No
WHMIS Classification:	C, D2B
Canadian Domestic Substance List:	Appears

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:

Oxidizer. Store in a cool, well ventilated area away from all sources of ignition and out of the direct sunlight. Store in a dry location away from heat and in temperatures less than 40 °C.

Keep away from incompatible materials and keep lids tightly closed. Do not store in improperly labeled containers.

Protect from moisture. Do not store near combustible materials. Keep containers well sealed.

Store separately from reducing materials. Avoid contamination which may lead to decomposition.

Handling:

Avoid contact with eyes, skin and clothing. Use with adequate ventilation.

Do not swallow. Avoid breathing vapors, mists or dust. Do not eat, drink or smoke in the work area.

Label containers and keep them tightly closed when not in use.

Wash hands thoroughly after handling.

Personal Protective Equipment (PPE)

Engineering Controls:

General room ventilation is required if used indoors. Local exhaust ventilation, process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Avoid creating dust or mists. Maintain adequate ventilation at all times. Do not use in confined areas. Keep levels below recommended exposure limits. To determine actual exposure limits, monitoring should be performed on a routine basis.

Respiratory Protection:

For many conditions, no respiratory protection is necessary; however, in dusty or unknown conditions or when exposures exceed limit values a NIOSH approved respirator should be used.

Hand Protection:

Wear chemical resistant gloves (neoprene, rubber, or PVC).

Section 6 – Protective Measures, Storage and Handling (cont)

Eye Protection:	Wear chemical safety goggles. A full face shield may be worn in lieu of safety goggles.
Skin Protection:	Try to avoid skin contact with this product. Chemical resistant gloves (neoprene, PVC or rubber) and protective clothing should be worn during use.
Other:	Eye wash station.
Protection Against Fire & Explosion:	Product is non-explosive. In case of fire, evacuate all non-essential personnel, wear protective clothing and a self-contained breathing apparatus, stay upwind of fire, and use water to spray cool fire-exposed containers.

Section 7 – Hazards Identification

Potential Health Effects

Inhalation:	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath, and irritations to mucous membranes, nose and throat.
Eye Contact:	Causes irritation, redness and pain.
Skin Contact:	Causes slight irritation.
Ingestion:	May be harmful if swallowed (vomiting and diarrhea).

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage:	Eliminate all ignition sources. Evacuate unprotected personnel and never exceed any occupational exposure limit. Shovel or sweep spilt material into plastic bags or vented containers for disposal. Do not return spilled or contaminated material to the inventory.
Extinguishing Media:	Water

First Aid

Eye Contact:	Flush eyes with running water for at least 15 minutes with eyelids held open. Seek a specialist.
Inhalation:	Remove affected person to fresh air. Seek medical attention if the effects persist.
Ingestion:	If the individual is conscious and not convulsing, give two-four cups of water to dilute the chemical and seek medical attention immediately. **Do Not** induce vomiting.

Section 8 – Measures in Case of Accidents and Fire (cont)

Skin Contact:	Wash affected areas with soap and a mild detergent and large amounts of water.

Section 9 – Accidental Release Measures

Precautions:

Cleanup Methods:	Shovel or sweep spilt material into plastic bags or vented containers for disposal. Do not return spilled or contaminated material to the inventory.

Section 10 – Information on Toxicology

Toxicity Data

LD50 Oral (rat):	2,400 mg/kg
LD50 Dermal (rabbit):	Min 2,000 mg/kg
LD50 Inhalation (rat):	Min 4,580 mg/kg

Section 11 – Information on Ecology

Ecology Data

Ecotoxicological Information:	NA

Section 12 – Disposal Considerations

Waste Disposal Method

Waste Treatment:	Dispose of in an approved waste facility operated by an authorized contactor in compliance with local regulations.
Package (Pail) Treatment:	The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

Section 13 – Shipping/Transport Information

D.O.T. Shipping Name:	Oxidizing Solid, N.O.S. [A mixture of sodium percarbonate [$2Na_2CO_3 \cdot 3H2O_2$], sodium carbonate [Na_2CO_3], sodium silicate and silica gel.]
UN Number:	1479
Hazard Class:	5.1
Labels:	5.1 (Oxidizer)
Packaging Group:	III

Section 14 – Other Information

HMIS® Rating	Health – 1 (slight)	Reactivity – 1 (slight)
	Flammability – 0 (none)	Lab PPE – goggles, gloves, and lab coat

HMIS® is a registered trademark of the National Painting and Coating Association.

Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

Regen OX – Part B (Activator Complex)

Material Safety Data Sheet (MSDS)

Last Revised: November 7, 2005

Section 1 – Supplier Information and Material Identification

Supplier:

REGENESIS
1011 Calle Sombra
San Clemente, CA 92673
Telephone: 949.366.8000
Fax: 949.366.8090
E-mail: info@regenesis.com

Chemical Description:	A mixture of sodium silicate solution, silica gel and ferrous sulfate
Chemical Family:	Inorganic Chemicals
Trade Name:	Regen Ox – Part B (Activator Complex)
Product Use:	Used for environmental remediation of contaminated soils and groundwater

Section 2 – Chemical Information/Other Designations

CAS No.	Chemical
1344-09-8	Silicic Acid, Sodium Salt, Sodium Silicate
63231-67-4	Silica Gel
7720-78-7	Ferrous Sulfate
7732-18-5	Water

Section 3 – Physical Data

Form:	Liquid
Color:	Blue/Green
Odor:	Odorless
Melting Point:	NA
Boiling Point:	NA
Flammability/Flash Point:	NA
Vapor Pressure:	NA

Section 3 – Physical Data (cont)	
Specific Gravity	1.39 g/cm^3
Solubility:	Miscible
Viscosity:	NA
pH (3% solution):	11
Hazardous Decomposition Products:	Oxides of carbon and silicon may be formed when heated to decomposition.

Section 4 – Reactivity Data	
Stability:	Stable under normal conditions.
Conditions to Avoid:	None.
Incompatibility:	Avoid hydrogen fluoride, fluorine, oxygen difluoride, chlorine trifluoride, strong acids, strong bases, oxidizers, aluminum, fiberglass, copper, brass, zinc, and galvanized containers.

Section 5 – Regulations	
TSCA Inventory Listed:	Yes
CERCLA Hazardous Substance (40 CFR Part 302)	
Listed Substance:	*No*
Unlisted Substance:	*Yes*
SARA, Title III, Sections 302/303 (40 CFR Part 355) – Emergency Planning and Notification	
Extremely Hazardous Substance:	No
SARA, Title III, Sections 311/312 (40 CFR Part 370) – Hazardous Chemical Reporting: Community Right-To-Know	
Hazard Category:	Acute
SARA, Title III, Sections 313 (40 CFR Part 372) – Toxic Chemical Release Reporting: Community Right-To-Know	
Extremely Hazardous Substance:	No

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:	Keep in a tightly closed container (steel or plastic) and store in a cool, well ventilated area away from all incompatible materials (acids, reactive metals, and ammonium salts). Store in a dry location away from heat and in temperatures less than 24 ?C. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers.
Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing spray mist. Use with adequate ventilation. Do not use product if it is brownish-yellow in color.

Personal Protective Equipment (PPE)

Engineering Controls:	General room ventilation is required if used indoors. Local exhaust ventilation, process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Safety shower and eyewash station should be within direct access.
Respiratory Protection:	Use NIOSH-approved dust and mist respirator where spray mist exists. Respirators should be used in accordance with 29 CFR 1910.134.
Hand Protection:	Wear chemical resistant gloves.
Eye Protection:	Wear chemical safety goggles. A full face shield may be worn in lieu of safety goggles.
Skin Protection:	Try to avoid skin contact with this product. Gloves and protective clothing should be worn during use.
Other:	
Protection Against Fire & Explosion:	Product is non-explosive and non-combustible.

Section 7 – Hazards Identification

Potential Health Effects	
Inhalation:	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath, and irritations to mucous membranes, nose and throat.
Eye Contact:	Causes irritation, redness and pain.
Skin Contact:	Causes irritation. Symptoms include redness, itching and pain.
Ingestion:	May cause irritation to mouth, esophagus, and stomach.

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage (small):	Mop up and neutralize liquid, then discharge to sewer in accordance with local, state and federal regulations.
After Spillage/Leakage (large):	Keep unnecessary personnel away; isolate hazard area and do not allow entrance into the affected area. Do not touch or walk through spilled material. Stop leak if possible without risking injury. Prevent runoff from entering into storm sewers and ditches that lead to natural waterways. Isolate the material if at all possible. Sand or earth may be used to contain the spill. If containment is not possible, neutralize the contaminated area and flush with large quantities of water.
Extinguishing Media:	Material is compatible with all extinguishing media.
Further Information:	
First Aid	
Eye Contact:	Flush eyes with running water for at least 15 minutes with eyelids held open. Seek a specialist.
Inhalation:	Remove affected person to fresh air. Give artificial respiration if individual is not breathing. If breathing is difficult, give oxygen. Seek medical attention if the effects persist.
Ingestion:	If the individual is conscious and not convulsing, give two-four cups of water to dilute the chemical and seek medical attention immediately. **DO NOT** induce vomiting.
Skin Contact:	Wash affected areas with soap and a mild detergent and large amounts of water. Remove contaminated clothing and shoes.

Section 9 – Accidental Release Measures

Precautions:

PPE:	Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots (see Section 6).
Environmental Hazards:	Sinks and mixes with water. High pH of this material may be harmful to aquatic life. Only water will evaporate from a spill of this material.
Cleanup Methods:	Pick-up and place in an appropriate container for reclamation or disposal. US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

Section 10 – Information on Toxicology

Toxicity Data

Sodium Silicate:	When tested for primary eye irritation potential according to OECD Guidelines, Section 405, a similar sodium silicate solution produced corneal, iridal and conjunctival irritation. Some eye irritation was still present 14 days after treatment, although the average primary irritation score has declined from 29.7 after 1 day to 4.0 after 14 days. When tested for primary skin irritation potential, a similar sodium silicate solution produced irritation with a primary irritation index of 3 to abraded skin and 0 to intact skin. Human experience confirms that irritation occurs when sodium silicates get on clothes at the collar, cuffs, or other areas where abrasion may exist. The acute oral toxicity of this product has not been tested.
Ferrous Sulfate:	LD50 Oral (rat): 319 mg/kg not a suspected carcinogen.

Section 11 – Information on Ecology

Ecology Data

Ecotoxicological Information:	Based on 100% solid sodium silicate, a 96 hour median tolerance for fish of 2,320 mg/l; a 96 hour median tolerance for water fleas of 247 mg/L; a 96 hour median tolerance for snail eggs of 632 mg/L; and a 96 hour median tolerance for Amphipoda of 160 mg/L.

Section 12 – Disposal Considerations

Waste Disposal Method

Waste Treatment:	Neutralize and landfill solids in an approved waste facility operated by an authorized contactor in compliance with local regulations.
Package (Pail) Treatment:	The empty and clean containers are to be recycled or disposed of in conformity with local regulations.

Section 13 – Shipping/Transport Information

D.O.T.	This product is not regulated as a hazardous material so there are no restrictions.

Section 14 – Other Information

HMIS® Rating	Health – 2 (moderate)	Reactivity – 0 (none)
	Flammability – 0 (none)	Lab PPE – goggles, gloves, and lab coat
	Contact – 1 (slight)	

HMIS® is a registered trademark of the National Painting and Coating Association.

Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

Oxygen Release Compound – Advanced (ORC *Advanced*™)
MATERIAL SAFETY DATA SHEET (MSDS)

Last Revised: March 13, 2007

Section 1 - Material Identification

Supplier:

REGENESIS

1011 Calle Sombra
San Clemente, CA 92673

Phone:	**949.366.8000**
Fax:	**949.366.8090**
E-mail:	**info@regenesis.com**

Chemical Description:	A mixture of Calcium OxyHydroxide [$CaO(OH)_2$] and Calcium Hydroxide [$Ca(OH)_2$].
Chemical Family:	Inorganic Chemical
Trade Name:	Advanced Formula Oxygen Release Compound (ORC *Advanced*™)
Chemical Synonyms	Calcium Hydroxide Oxide; Calcium Oxide Peroxide
Product Use:	Used to remediate contaminated soil and groundwater (environmental applications)

Section 2 – Composition

CAS No.	Chemical
682334-66-3	**Calcium Hydroxide Oxide [$CaO(OH)_2$]**
1305-62-0	**Calcium Hydroxide [$Ca(OH)_2$]**
7758-11-4	**Dipotassium Phosphate (HK_2O_4P)**
7778-77-0	**Monopotassium Phosphate (H_2KO_4P)**

Section 3 – Physical Data

Form:	Powder
Color:	White to Pale Yellow
Odor:	Odorless
Melting Point:	527 °F (275 °C) – Decomposes
Boiling Point:	Not Applicable (NA)
Flammability/Flash Point:	NA
Auto- Flammability:	NA
Vapor Pressure:	NA
Self-Ignition Temperature:	NA
Thermal Decomposition:	527 °F (275 °C) – Decomposes
Bulk Density:	0.5 – 0.65 g/ml (Loose Method)
Solubility:	1.65 g/L @ 68° F (20° C) for calcium hydroxide.
Viscosity:	NA
pH:	11-13 (saturated solution)
Explosion Limits % by Volume:	Non-explosive
Hazardous Decomposition Products:	Oxygen, Hydrogen Peroxide, Steam, and Heat
Hazardous Reactions:	None

Section 4 – Reactivity Data

Stability:	Stable under certain conditions (see below).
Conditions to Avoid:	Heat and moisture.
Incompatibility:	Acids, bases, salts of heavy metals, reducing agents, and flammable substances.
Hazardous Polymerization:	Does not occur.

Section 5 – Regulations

TSCA Inventory List:	Listed

CERCLA Hazardous Substance (40 CFR Part 302)

Listed Substance:	No
Unlisted Substance:	Yes
Reportable Quantity (RQ):	100 pounds
Characteristic(s):	Ignitibility
RCRA Waste Number:	D001

SARA, Title III, Sections 302/303 (40 CFR Part 355 – Emergency Planning and Notification)

Extremely Hazardous Substance:	No

SARA, Title III, Sections 311/312 (40 CFR Part 370 – Hazardous Chemical Reporting: Community Right-To-Know

Hazard Category:	Immediate Health Hazard Fire Hazard
Threshold Planning Quantity:	10,000 pounds

Section 5 – Regulations (cont)

SARA, Title III, Section 313 (40 CFR Part 372 – Toxic Chemical Release Reporting: Community Right-To-Know

Extremely Hazardous Substance:	No	
WHMIS Classification:	C	Oxidizing Material Poisonous and Infectious Material
	D	Material Causing Other Toxic Effects – Eye and Skin Irritant
Canadian Domestic Substance List:	Not Listed	

Section 6 – Protective Measures, Storage and Handling

Technical Protective Measures

Storage:	Keep in tightly closed container. Store in dry area, protected from heat sources and direct sunlight.
Handling:	Clean and dry processing pipes and equipment before operation. Never return unused product to the storage container. Keep away from incompatible products. Containers and equipment used to handle this product should be used exclusively for this material. Avoid contact with water or humidity.

Section 6 – Protective Measures, Storage and Handling (cont)

Personal Protective Equipment (PPE)

Engineering Controls:	Calcium Hydroxide ACGIH® TLV® (2000) 5 mg/m^3 TWA OSHA PEL Total dust–15 mg/m^3 TWA Respirable fraction– 5 mg/m^3 TWA NIOSH REL (1994) 5 mg/m^3
Respiratory Protection:	For many conditions, no respiratory protection may be needed; however, in dusty or unknown atmospheres use a NIOSH approved dust respirator.
Hand Protection:	Impervious protective gloves made of nitrile, natural rubbber or neoprene.
Eye Protection:	Use chemical safety goggles (dust proof).
Skin Protection:	For brief contact, few precautions other than clean clothing are needed. Full body clothing impervious to this material should be used during prolonged exposure.
Other:	Safety shower and eyewash stations should be present. Consultation with an industrial hygienist or safety manager for the selection of PPE suitable for working conditions is suggested.
Industrial Hygiene:	Avoid contact with skin and eyes.
Protection Against Fire & Explosion:	NA

Section 7 – Hazards Identification

Emergency Overview:	Oxidizer – Contact with combustibles may cause a fire. This material decomposes and releases oxygen in a fire. The additional oxygen may intensify the fire.
Potential Health Effects:	Irritating to the mucous membrane and eyes. If the product splashes in ones face and eyes, treat the eyes first. Do not dry soiled clothing close to an open flame or heat source. Any

	clothing that has been contaminated with this product should be submerged in water prior to drying.
Inhalation:	High concentrations may cause slight nose and throat irritation with a cough. There is risk of sore throat and nose bleeds if one is exposed to this material for an extended period of time.
Eye Contact:	Severe eye irritation with watering and redness. There is also the risk of serious and/or permanent eye lesions.
Skin Contact:	Irritation may occur if one is exposed to this material for extended periods.
Ingestion:	Irritation of the mouth and throat with nausea and vomiting.

Section 8 – Measures in Case of Accidents and Fire

After Spillage/Leakage/Gas Leakage:	Collect in suitable containers. Wash remainder with copious quantities of water.
Extinguishing Media:	See next.
Suitable:	Large quantities of water or water spray. In case of fire in close proximity, all means of extinguishing are acceptable.
Further Information:	Self contained breathing apparatus or approved gas mask should be worn due to small particle size. Use extinguishing media appropriate for surrounding fire. Apply cooling water to sides of transport or storage vessels that are exposed to flames until the fire is extinguished. Do not approach hot vessels that contain this product.
First Aid:	After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention. Consult an opthalmologist in all cases.

Section 8 – Measures in Case of Accidents and Fire

Eye Contact:	Flush eyes with running water for 15 minutes, while keeping the eyelids wide open. Consult with an ophthalmologist in all cases.
Inhalation:	Remove subject from dusty environment. Consult with a physician in case of respiratory symptoms.

Ingestion:	If the victim is conscious, rinse mouth and admnister fresh water. DO NOT induce vomiting. Consult a physician in all cases.
Skin Contact:	Wash affected skin with running water. Remove and clean clothing. Consult with a physician in case of persistent pain or redness.
Special Precautions:	Evacuate all non-essential personnel. Intervention should only be done by capable personnel that are trained and aware of the hazards associated with this product. When it is safe, unaffected product should be moved to safe area.
Specific Hazards:	Oxidizing substance. Oxygen released on exothermic decomposition may support combustion. Confined spaces and/or containers may be subject to increased pressure. If product comes into contact with flammables, fire or explosion may occur.

Section 9 – Accidental Release Measures

Precautions:	Observe the protection methods cited in Section 3. Avoid materials and products that are incompatible with product. Immediately notify the appropriate authorities in case of reportable discharge (> 100 lbs).
Cleanup Methods:	Collect the product with a suitable means of avoiding dust formation. All receiving equipment should be clean, vented, dry, labeled and made of material that this product is compatible with. Because of the contamination risk, the collected material should be kept in a safe isolated place. Use large quantities of water to clean the impacted area. See Section 12 for disposal methods.

Section 10 – Information on Toxicology

Toxicity Data

Acute Toxicity:	Oral Route, LD_{50}, rat, > 2,000 mg/kg (powder 50%) Dermal Route, LD_{50}, rat, > 2,000 mg/kg (powder 50%) Inhalation, LD_{50}, rat, > 5,000 mg/m^3 (powder 35%)
Irritation:	Rabbit (eyes), severe irritant

Sensitization:	No data
Chronic Toxicity:	In vitro, no mutagenic effect (Powder 50%)
Target Organ Effects:	Eyes and respiratory passages.

Section 11 – Information on Ecology

Ecology Data	
	10 mg $Ca(OH)_2$/L: pH = 9.0
	100 mg $Ca(OH)_2$/L: pH = 10.6
Acute Exotoxicity:	Fishes, Cyprinus carpio, LC_{50}, 48 hrs, 160 mg/L
	Crustaceans, Daphnia sp., EC_{50}, 24 hours, 25.6 mg/L
	(Powder 16%)
Mobility:	Low Solubility and Mobility
	Water – Slow Hydrolysis.
	Degradation Products: Calcium Hydroxide
Abiotic Degradation:	Water/soil – complexation/precipitation. Carbonates/sulfates present at environmental concentrations.
	Degradation products: carbonates/sulfates sparingly soluble
Biotic Degradation:	NA (inorganic compound)
Potential for Bioaccumulation:	NA (ionizable inorganic compound)

Section 11 – Information on Ecology (cont)

Comments:	Observed effects are related to alkaline properties of the product. Hazard for the environment is limited due to the product properties of: • No bioaccumulation • Weak solubility and precipatation as carbonate or sulfate in an aquatic environment. Diluted product is rapidly neutralized at environmental pH.
Further Information:	NA

Section 12 – Disposal Considerations

Waste Disposal Method:	Consult current federal, state and local regulations regarding the proper disposal of this material and its emptied containers.

Section 13 – Shipping/Transport Information

D.O.T Shipping Name:	Oxidizing Solid, N.O.S [A mixture of Calcium OxyHydroxide [$CaO(OH)_2$] and Calcium Hydroxide [$Ca(OH)_2$].
UN Number:	1479
Hazard Class:	5.1
Label(s):	5.1 (Oxidizer)
Packaging Group:	II
STCC Number:	4918717

Section 14 – Other Information

HMIS® Rating	Health – 2 Flammability – 0	Reactivity – 1 PPE - Required

HMIS® is a registered trademark of the National Painting and Coating Association.

NFPA® Rating	Health – 2 Flammability – 0	Reactivity – 1 OX

NFPA® is a registered trademark of the National Fire Protection Association.

Reason for Issue: Update toxicological and ecological data

Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available.