RECEIVED
By Alameda County Environmental Health at 2:37 pm, Mar 10, 2015

March 5, 2015

Rita and Tony Sullins
187 North L Street
Livermore, CA 94550

Re: Transmittal Letter
Site Location: Arrow Rentals
187 North L Street, Livermore, CA 94550

Dear Mr. Wickham:

On behalf of Rita and Tony Sullins, Ground Zero Analysis, Inc. (GZA) prepared the March 4, 2015 Well Installation Report that was sent to your office via electronic delivery per Alameda County's guidelines.

I declare under penalty of law that the information and/or recommendations contained in the above referenced document or report is true and correct to the best of my knowledge.

Respectfully submitted,

Rita / Tony Sullins
Property Owner
Don Sul Inc.
187 North L Street
Livermore, CA 94550

GROUND ZERO
ANALYSIS, INC.

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Well Installation Report

Arrow Rentals
187 North L Street
Livermore, California

March 4, 2015

Prepared for:

Tony and Rita Sullins
Arrow Rentals Service
187 North L Street
Livermore, CA 94550

Prepared by:

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Eric L. Price
California Professional Geologist No. 8414

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1.0 INTRODUCTION

The site is located at 187 North L Street in the central portion of the City of Livermore, California. The subject property is at an elevation of approximately 480 feet above mean sea level (msl). In 1972 and 1986, a total of five former USTs containing gasoline product were removed from the subject property. The sources of petroleum hydrocarbons were purported to be from the former USTs and associated piping as well as a 1985 incident in which a petroleum supplier pumped up to 600 gallons of gasoline into vapor monitoring well (Pitcock release).

Ground Zero Analysis, Inc. (Ground Zero) is submitting this *Well Installation Report* in response to Alameda County Environmental Health's (ACEH) *Technical Report Request* dated October 6, 2014. A vicinity map is included as Figure 1.

2.0 GEOLOGY AND HYDROGEOLOGY

The shallow sediments beneath the subject property (<100 feet below grade) are Pleistocene alluvial fan and flood plain deposits. Regionally, the surrounding area slopes to the west.

The subjective field observations of various field geologists and associated boring logs were included in Geological Technics, Inc.'s (GTI) *Site Conceptual Model* dated December 18, 2006. The subsurface lithology falls into two predominant categories – clayey/sandy gravels and clays; with minor amounts of silt and sand units. The lithology consists of primarily gravelly units from the surface to approximately 35 – 45 feet below grade surface (bgs). Below these depths are 15 to 20 feet of clayey units that seem to retard the vertical migration of contaminants. These fine grained units are underlain by more gravels and a second clay horizon at approximately 78 feet bgs. Silts and sand units are present in the soil profile but are thin (less than 5 feet thick) and less frequent than the soils noted above.

The average depth to groundwater (DTW) in September 2014 was 52 feet bgs corresponding to an average groundwater elevation of about 429 above msl. Groundwater elevation decreased an average of 15.62 feet between December 2013 and September 2014. Groundwater generally flows westerly to northwesterly with a gradient ranging between 0.01 feet per foot (ft/ft) to 0.08 ft/ft.

3.0 HISTORICAL SITE INVESTIGATIONS

Site investigation and/or UST removal activities have been conducted at the Site since 1972. Groundwater monitoring wells have been sampled since 1989. The following is a chronology of historical information and site activities:

1972 Three 1,500 gallon USTs were removed from the subject property.

1985 Approximately 600 gallons of gasoline are pumped into a vapor monitoring well by Pitcock Petroleum (Pitcock Release).

1986 A 4,000 gallon UST and a 6,000 gallon UST were removed from the subject property.

1989 Three groundwater monitoring wells were installed on-site and adjacent to the site (W-1, W-2 and W-3). Five soil borings were advanced at the subject site (B-1 through B-5).

1990 Five groundwater monitoring wells were installed on-site and off-site (W-A through W-E). Three soil borings were advanced at the subject site (B-1A, B-7 and B-8).

1991 One soil boring was advanced at the subject site (B-F).

1992 UST associated piping was removed and approximately 10 yd^3 of soil was excavated. Two soil borings were advanced at the subject site (B-G and B-H).

1994 A dual phase extraction (DPE) pilot test was performed.

1996 Four groundwater monitoring wells were installed on-site and off-site (W-1s, W-Bs, W-3s and W-Es).

1998 A soil gas survey was conducted at the subject site.

2005 A soil gas survey was conducted at the subject site.

2006 Five multi-chambered "CMT™" wells were installed on the subject property. A DPE pilot test was performed.

2011 Soil and groundwater remediation begins after the installation of a DPE system.

2012 Subsurface remediation is enhanced with the installation of an air sparging (AS) system.

2014 This report documents the installation of two downgradient groundwater monitoring wells (MW-9 and MW-10) and one vapor extraction well (EW-2) near the Pitcock Release. The extraction well was piped into the existing dual phase vapor extraction system and incorporated into the vapor removal stream.

4.0 NATURE AND EXTENT OF CONTAMINATION DATA GAP

The presence of petroleum hydrocarbon constituents in the soil and groundwater has been attributed to historical releases from auto fueling operations at the Site. Groundwater elevation has decreased significantly beneath the subject property. The average groundwater elevation decreased from the April 24, 1996 peak to the September 9, 2014 low by 30.14 feet. The result was dry monitoring wells that were previously used to delineate the downgradient plume boundaries. In addition, remediation activities were focused near EW-1 and there was no active remediation near the Pitcock Release.

5.0 SCOPE OF WORK – GROUNDWATER MONITORING WELL INSTALLATION

Between January 26, 2015 and January 27, 2015, Ground Zero personnel installed two groundwater monitoring wells (MW-9 and MW-10) and one extraction/groundwater monitoring well (EW-2) as shown on Figure 2. The scope of work included the following tasks:

- Obtained Permit and conducted pre-field work activities;
- Installed two groundwater monitoring and one vapor extraction wells;
- Analyzed soil samples;
- Developed monitoring and extraction wells;
- Connected vapor extraction well to the dual phase extraction system;
- Surveyed well-heads for location and elevation control;
- Monitored groundwater; and
- Disposed of soil and groundwater generated during investigation activities.

5.1 Pre-field Work and Permitting Activities

Prior to drilling activities, a well installation permit was obtained from Zone 7 Water Agency. A copy of the permit is included in Attachment A. Underground utilities were cleared by contacting Underground Services Alert (USA) and having underground utilities marked. The locations of the monitoring wells were be pre-cored by Cal-West using a 16-inch concrete core saw. Zone 7 Water Agency and ACEH were given notice at least three business days prior to drilling activities.

5.2 Groundwater Monitoring Well Installation

Drilling and groundwater monitoring well installation was conducted by V&W Drilling of Stockton, California (C-57 #720904) under the supervision of Andrew Dorn, an experienced Ground Zero geologist. Construction of the wells tried to take into account the great variations in groundwater elevation and anticipated future decline. If groundwater elevation increases, monitoring well W-3s will be used to monitor shallow groundwater conditions.

All reusable equipment was decontaminated between borings. Investigation derived waste (IDW) generated during the well installation activities was placed in properly labeled Department of Transportation (DOT) approved 55-gallon drums and temporarily stored on-site pending disposal. Well construction details are summarized in Table 1. Well locations are shown in Figure 2 and well construction details are shown on Figure 3 and Figure 4. Field notes are included in Attachment B and Borehole logs are included in Attachment C.

5.2.1 Construction Details – Down-Gradient Groundwater Monitoring Wells

Two borings (MW-9 and MW-10) were advanced using 8-inch hollow-stem augers to approximately 65 feet bgs. A 2-inch diameter, twenty-foot length, 0.010" slotted well screen was lowered into the augers. The top of the screen was connected to 2-inch diameter PVC blank well casing to approximately 3-inches below ground surface and a filter back consisting of #2/12 sand was added to approximately 24-inches above the well screen. Three feet of bentonite chips or

pellets was placed above the filter pack in approximately 6-inch lifts and hydrated. A Portland cement grout sanitary seal was placed above the transition seal to approximately 6-inches below ground surface. A locking well cap was installed at the top of the well casing and the monitoring wells were completed with an 8-inch traffic-rated well box installed flush with grade surface.

5.2.2 Construction Details – Pitcock Release Monitoring and Extraction Well

One boring (EW-2) was advanced using 8-inch hollow-stem augers to approximately 60 feet bgs. A 2-inch diameter, twenty-foot length, 0.010" slotted well screen was lowered into the augers. The top of the screen was connected to 2-inch diameter PVC blank well casing to approximately 3-inches below ground surface and a filter back consisting of #2/12 sand was added to approximately 24-inches above the well screen. Three feet of bentonite chips or pellets was placed above the filter pack in approximately 6-inch lifts and hydrated. A Portland cement grout sanitary seal was placed above the transition seal to approximately 6-inches below ground surface. A locking well cap was installed at the top of the well casing and the monitoring wells were completed with a 12-inch traffic-rated well box installed flush with grade surface.

A PVC "T" connection was installed on the PVC blank well casing and a locking well cap was installed at the top of the PVC "T" connection. The DPE system was connected to the PVC "T" connection below grade using PVC pipe. A trench was excavated between EW-2 and the DPE system and the PVC pipe installed connecting the well to the existing remediation manifold. The trench was covered with backfill and capped with asphalt.

5.3 Soil Sampling and Analysis

Soil samples were collected using a split spoon style core sampler lined with stainless steel sleeves for analysis of contamination and lithologic identification. Samples were classified in accordance with the Unified Soil Classification System. A photoionization detector (PID) was used to screen soil samples for evidence of hydrocarbon contamination.

Selected soil samples were immediately capped, segregated and preserved by placing in an ice chest at a temperature of less than 6°C and transported to BC Laboratories of Bakersfield, California (ELAP #1186) under chain of custody protocol. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethyl benzene, total xylenes (BTEX); and methyl *tert*-butyl ether (MTBE) using EPA Method 8260B. Analytical data are summarized in Table 2 and the Laboratory Analytical Report is included in Attachment D.

The findings are briefly discussed below:

- MW-9: Results indicate the presence of TPHg and all or some of the BTEX constituents in each of the sample intervals. MTBE was not reported above laboratory detection limits at any depth interval. The highest concentrations of TPHg (32 mg/Kg) and benzene (0.32 mg/Kg) were detected in the 40-foot bgs sample (capillary fringe). The highest concentrations of toluene (0.29 mg/Kg), ethylbenzene (0.38 mg/Kg) and total xylenes (1.3 mg/Kg) were reported in the 65-foot bgs sample (bottom of the boring).

- MW-10: Results indicate the presence of TPHg (0.71 mg/Kg), toluene (0.020 mg/Kg), ethylbenzene (0.0089 mg/Kg) and total xylenes (0.11 mg/Kg) in the 65-foot bgs (bottom of boring) sample. MTBE was not reported above laboratory detection limits at any depth interval. No analyzed constituent was reported above laboratory detection limits in the 40-foot bgs or 50-foot bgs samples.
- EW-2: Results indicate the presence of TPHg and BTEX constituents in the 35-foot bgs and 40-foot bgs sample intervals. MTBE was not reported above laboratory detection limits at any depth interval. No analyzed constituent was reported above laboratory detection limits in the 65-foot bgs sample. The highest concentrations of TPHg (1,800 mg/Kg), benzene (2.0 mg/Kg), toluene (2.9 mg/Kg), ethylbenzene (16 mg/Kg) and total xylenes (72 mg/Kg) were reported in the 40-foot bgs sample (capillary fringe).

5.4 Monitoring Well Development and Survey

The newly installed groundwater monitoring wells were developed on January 30, 2015. The monitoring wells were developed by mechanical pumping and surging methods until the turbidity of the pumped groundwater is visibly reduced. Approximately 50 to 60 gallons of water was purged from each well. Field notes are included in Attachment B.

The groundwater monitoring wells were surveyed by Epic Land Surveying, Inc (Epic) in accordance with assembly bill 2886 GeoTracker guidelines and the data was uploaded to the State GeoTracker database.

5.5 Groundwater Sampling and Analysis

The newly installed groundwater monitoring wells will be sampled quarterly for one year and semi-annually thereafter in conjunction with monitoring of other site wells. The first quarter 2015 event is scheduled for March 2015. Data from the quarterly monitoring will be discussed in the associated semi-annual groundwater monitoring report.

The groundwater monitoring well caps will be loosened to allow groundwater elevation stabilization. The total depth and depth to groundwater will be measured by an electronic sounding device and used to calculate well casing volume. Groundwater elevations will be calculated by subtracting the measured depth to groundwater in each well from the respective wellhead elevation. A Flow Cell and sensors will be used to provide a constant stream of real time accurate water quality information during the purging process. The purging process will be monitored using an electronic sounding device to ensure the pumping rate does not induce draw-down in the well. Groundwater parameters (temperature, electric conductivity, pH, and oxidation-reduction potential) will be collected and recorded during the purging process.

Once the parameters have stabilized within 10% of the previous readings, the pump rate will be adjusted to the lowest technically feasible setting prior to collecting samples. The groundwater samples will be placed into the appropriate laboratory supplied containers, checked for headspace, uniquely labeled, placed into an ice chest cooled to less than 6°C, and transported or shipped to a certified laboratory under chain of custody protocol for analysis. Groundwater samples will be analyzed for TPHg, BTEX and MTBE using EPA Method 8260B.

5.6 Waste Disposal

Investigation derived waste was placed in properly labeled DOT approved 55-gallon drums and temporarily stored on-site pending disposal. On February 18, 2015, the IDW was removed for disposal by Woodward Drilling of Rio Vista, California. Water produced during groundwater monitoring activities will be processed through the groundwater remediation system.

FIGURES

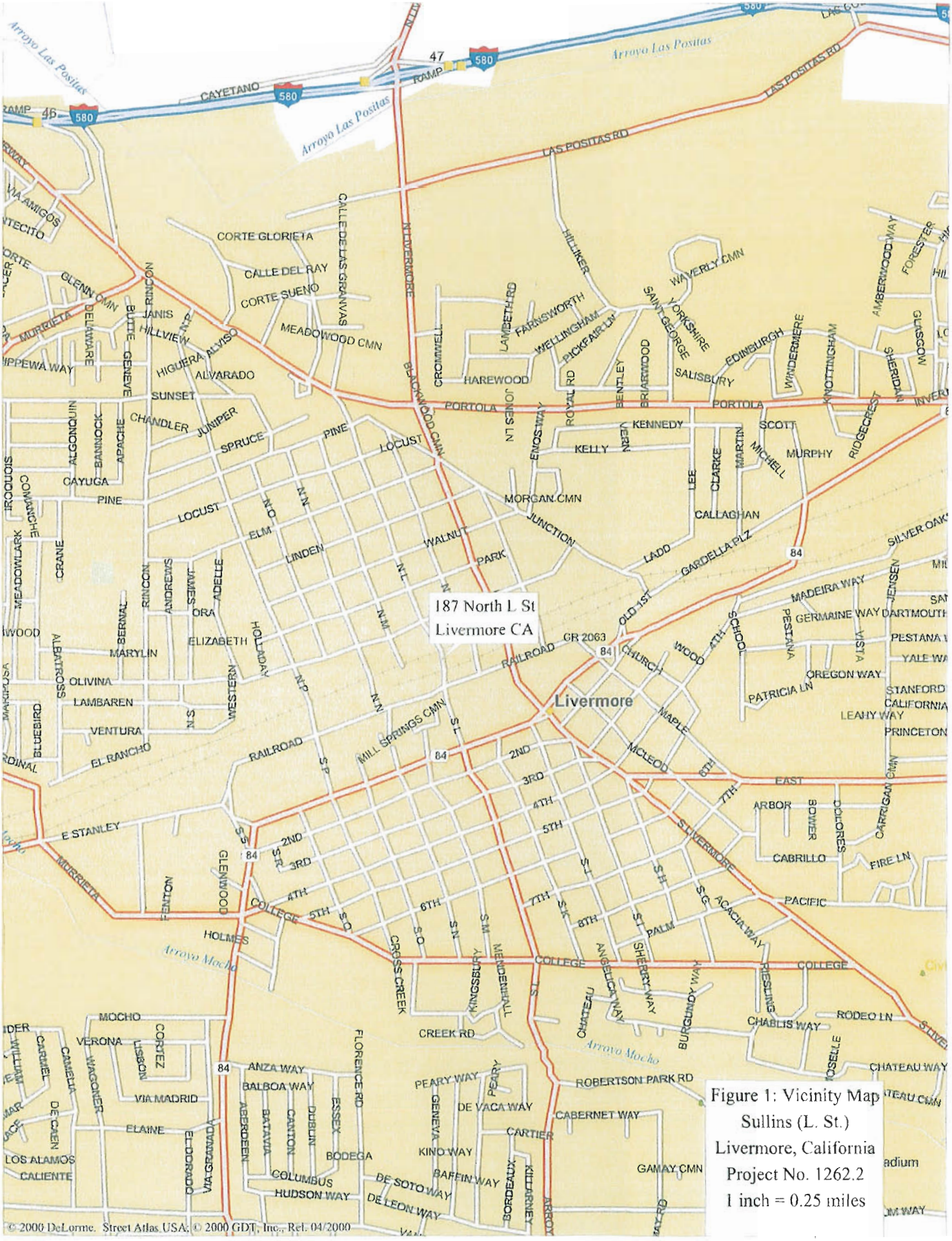


Figure 1: Vicinity Map
Sullins (L. St.)
Livermore, California
Project No. 1262.2
1 inch = 0.25 miles

N

0 20

SCALE 1"=20'

FUTURE OAK STREET

WESTERN PACIFIC R.R.

NORTH L STREET

W-B

SHEDS

W-Bs

COVERED STORAGE

SHOP/ OFFICE

FORMER DISPENSER

MW-6/106/206/306

MW-8/108/208/308

MW-9

EW-1

W-1

MW-4/104/204/304/404

W-1s

W-A

EW-2

W-3

W-3s

MW-7/107/207/307

MW-5/105/205/305

SHED

EXTENT OF REMEDIAL COMPOUND

MW-10

W-2

W-C

LEGEND

- MONITORING WELL
- EXTRACTION WELL
- MONITORING WELL (NO ACCESS)
- MONITORING WELL (DESTROYED/MISSING)
- DESTROYED MONITORING WELL
- FORMER UST
- FENCE

NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

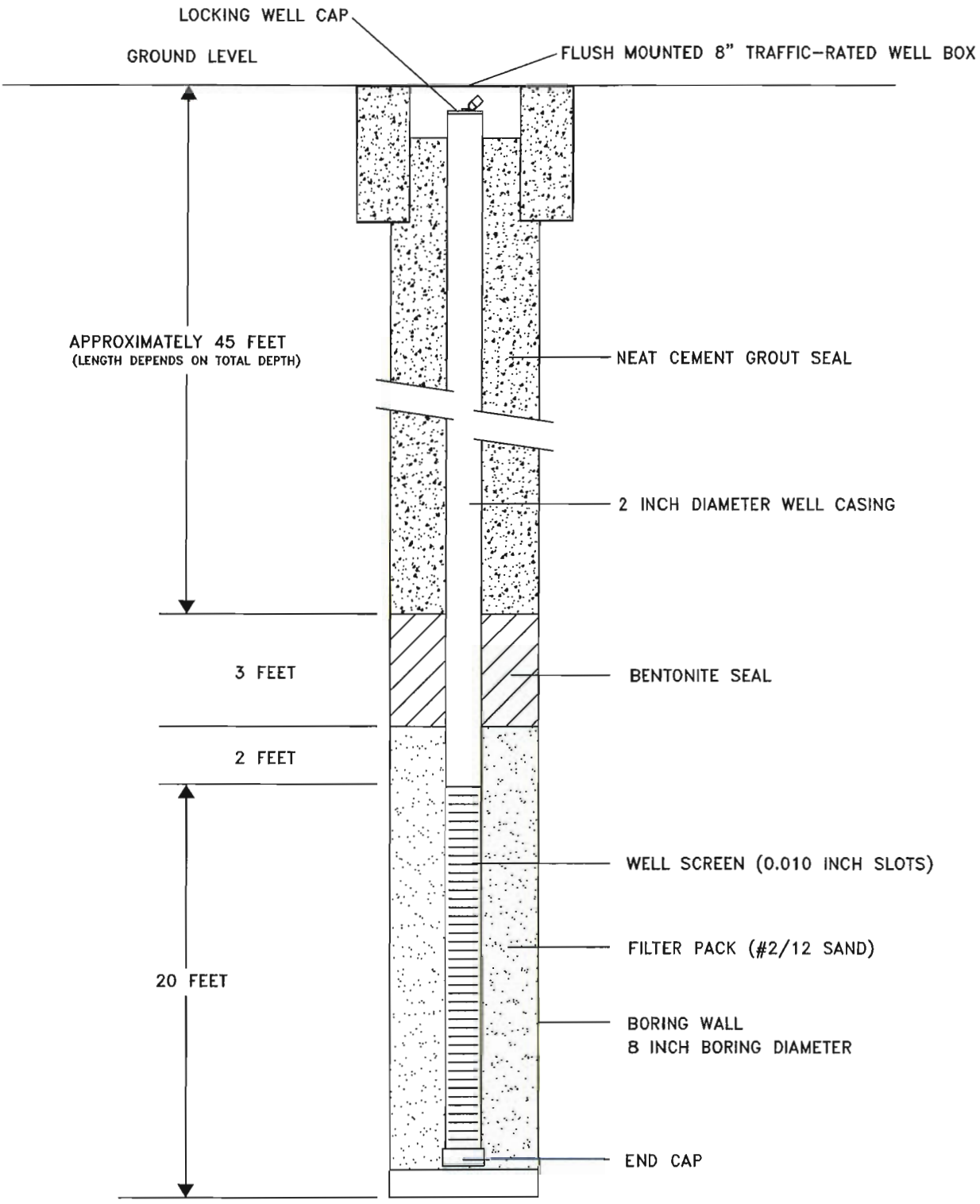
STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

FIGURE 2

GROUND ZERO ANALYSIS, INC.

SITE MAP WITH MONITORING AND EXTRACTION WELLS

SULLINS (ARROW RENTALS)
187 NORTH L STREET
LIVERMORE, CA

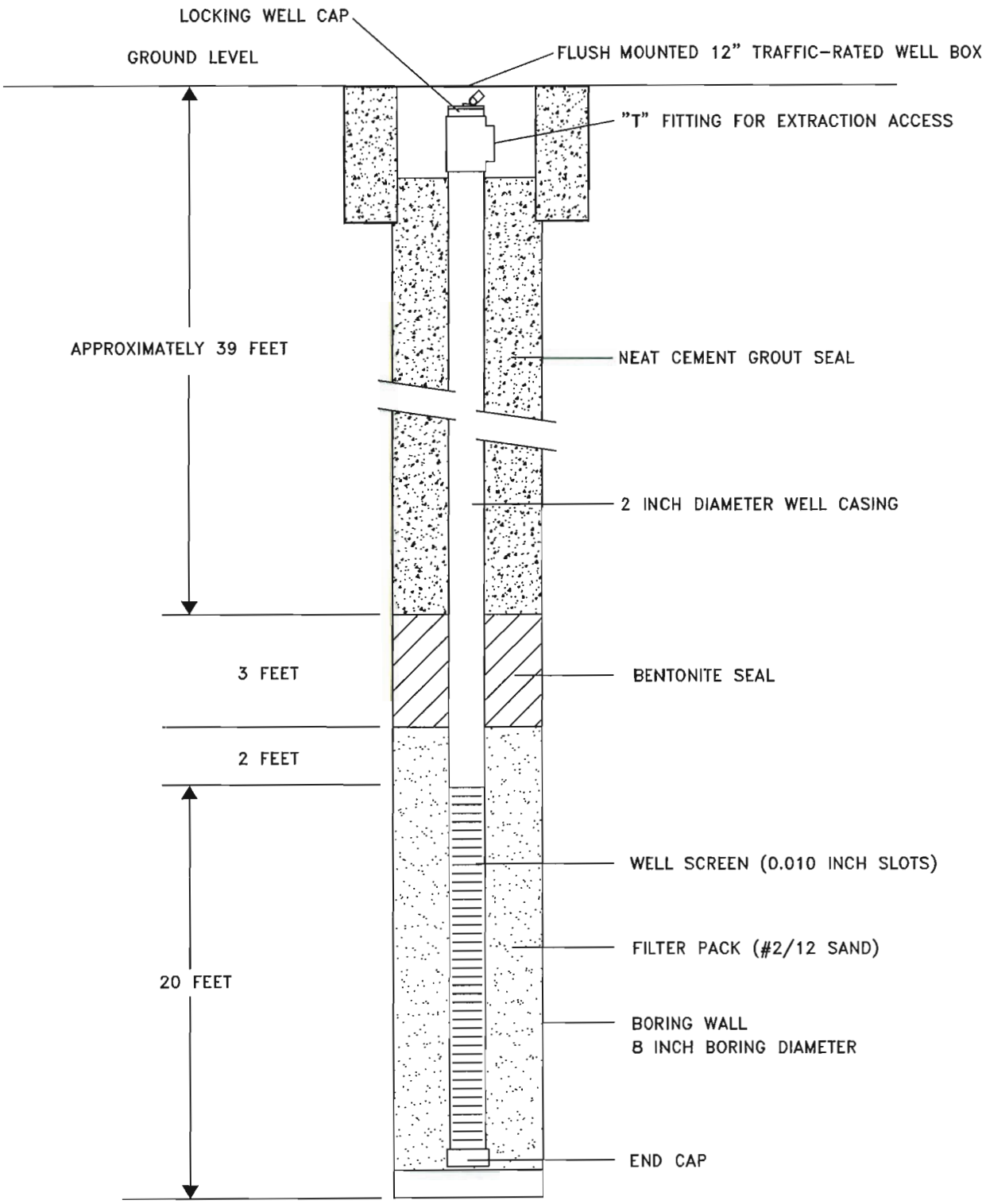


TD: APPROXIMATELY 65 FEET
NOT TO SCALE

GROUND ZERO ANALYSIS, INC.

WELL CONSTRUCTION DIAGRAM – DOWN-GRADIENT MONITORING WELL
SULLINS (ARROW RENTALS)
187 NORTH "L" STREET
LIVERMORE, CALIFORNIA

FIGURE
3



GROUND ZERO ANALYSIS, INC.

WELL CONSTRUCTION DIAGRAM
PITCOCK RELEASE MONITORING & EXTRACTION WELL
SULLINS (ARROW RENTALS)
187 NORTH "L" STREET
LIVERMORE, CALIFORNIA

FIGURE
4

TABLES

Table 1: Summary of Well Construction

Arrow Rentals
187 North L Street
Livermore, CA
Project No. 1262.2

Aquifer	Well/Boring Type	Well/Boring Number	Status	Date Drilled	Total Depth (ft)	Boring Diameter (in)	Well Casing Diameter (in)	Casing Type	Slot Size (in)	Sand Type	Well Screen		Filter Pack		Annular Seal		Grout Seal	
											From	To	From	To	From	To	From	To
Shallow	Vapor Extraction	W-1s	Active	03/11/96	45	?	6	PVC	0.010	#2/12	45	20	45	17	17	15	15	S
	Monitoring	W-Bs	Active	03/12/96	45	?	6	PVC	0.010	#2/12	45	20	45	18	18	16	16	S
	Monitoring	W-3s	Active	03/12/96	45	?	4	PVC	0.010	#2/12	45	20	45	18	18	16	16	S
	Monitoring	W-Es	Active	03/13/96	45	?	2	PVC	0.010	#2/12	45	20	45	18	18	16	16	S
	Monitoring	MW-4	Active	10/02/06	82	8	-	MCT	-	#2/12	30	29	30	20	16	14	14	S
	Monitoring	MW-5	Active	10/09/06	68	8	-	MCT	-	#2/12	27	26	29	24	24	21.5	21.5	S
	Monitoring	MW-6	Active	10/10/06	68	8	-	MCT	-	#2/12	30	29	31	27	27	24	24	S
	Monitoring	MW-7	Active	10/04/06	69.5	8	-	MCT	-	#2/12	30	29	30	20	-	-	6	S
	Monitoring	MW-8	Active	10/05/06	66.5	8	-	MCT	-	#2/12	30	29	30	30	20	18	18	S
	Monitoring	MW-9	Active	01/27/15	65	8	2	PVC	0.010	#2/12	65	45	65	43	43	40	40	S
	Monitoring	MW-10	Active	01/27/15	65	8	2	PVC	0.010	#2/12	65	45	65	43	43	40	40	S
	Vapor Extraction	EW-1	Active	10/03/06	25	10	4	PVC	0.010	#2/12	25	10	25	9.5	9.5	7.5	7.5	S
	Vapor Extraction	EW-2	Active	01/26/15	60	8	2	PVC	0.010	#2/12	60	40	60	38	38	35	35	S
Intermediate	Vapor Extraction	W-1	Active	05/25/89	56.5	8	2	PVC	0.010	#2/12	55.5	45.5	55.5	41.5	41.5	39	39	S
	Monitoring	W-2	Active	05/26/89	51.5	8	2	PVC	0.010	#2/12	49	39	49	36	36	22.5	22.5	S
	Monitoring	W-3	Active	05/26/89	51.5	8	2	PVC	0.010	#2/12	48	38	48	34.5	34.5	32.5	32.5	S
	Vapor Extraction	W-A	Active	07/12/90	63	12	4	PVC	0.010	#2/12	57.5	42	63	40	40	36.5	36.5	S
	Monitoring	W-B *	Active	07/13/90	55	12	4	PVC	0.010	#2/12	55	40	55	32	32	30	30	S
	Monitoring	W-C *	Active	07/11/90	55	8	2	PVC	0.010	#2	55	45	55	37.5	37.5	35	35	S
	Monitoring	W-D *	Active	07/12/90	57.5	8	2	PVC	0.010	#2/12	57.5	42	57.5	39.5	34	32	32	S
	Monitoring	W-E *	Active	07/10/90	61	8	2	PVC	0.010	#2/12	60.5	40.5	61	37	30	29	29	S
	Monitoring	MW-104	Active	10/02/06	51	8	-	MCT	-	#2/12	50.5	49.5	52	48	45	30	-	-
	Monitoring	MW-105	Active	10/09/06	37	8	-	MCT	-	#2/12	37	36	39	34	35	29	-	-
	Monitoring	MW-106	Active	10/10/06	37	8	-	MCT	-	#2/12	37	36	39	35	35	31	-	-
	Monitoring	MW-107	Active	10/04/06	40	8	-	MCT	-	#2/12	40	39	42	37	37	30	-	-
	Monitoring	MW-108	Active	10/05/06	40	8	-	MCT	-	#2/12	40	39	42	37	37	30	-	-
	Monitoring	MW-205	Active	10/09/06	48	8	-	MCT	-	#2/12	48	47	50	45	45	39	-	-
	Monitoring	MW-206	Active	10/10/06	50	8	-	MCT	-	#2/12	50	49	52	47	47	39	-	-
	Monitoring	MW-207	Active	10/04/06	50	8	-	MCT	-	#2/12	50	49	52	47	47	42	-	-
	Monitoring	MW-208	Active	10/05/06	52	8	-	MCT	-	#2/12	52	51	54	49	49	42	-	-
Deep	Monitoring	MW-204	Active	10/02/06	66.5	8	-	MCT	-	#2/12	66.5	65.5	68	64	64	52	-	-
	Monitoring	MW-305	Active	10/09/06	68	8	-	MCT	-	#2/12	66	65	68	63	63	50	-	-
	Monitoring	MW-306	Active	10/10/06	68	8	-	MCT	-	#2/12	66	65	68	63	63	52	-	-
	Monitoring	MW-307	Active	10/04/06	69.5	8	-	MCT	-	#2/12	66	65	68	63	63	52	-	-
	Monitoring	MW-308	Active	10/05/06	66.5	8	-	MCT	-	#2/12	66	65	66	63	63	54	-	-
Deepest	Monitoring	MW-304	Active	10/02/06	75.5	8	-	MCT	-	#2/12	75.5	74.5	76	73	73	68	-	-
	Monitoring	MW-404	Active	10/02/06	82	8	-	MCT	-	#2/12	81.5	80	81.5	79.5	80	76	-	-

* = well was destroyed in 2008

Table 2. Summary of Analytical Data - Soil Borings

Sullins
187 North L Street
Livermore, California
Project No. 1262.2

Summary of Soil Analytical Data

Date Sampled	Borehole	Sample Depth (Ft)	TPH-Gasoline	TEPH-Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	DIPE	ETBE	MTBE	TAME	TBA
			milligrams per kilogram (mg/Kg)										
03/02/89	B-1	2	ND	-	ND	ND	ND	ND	-	-	-	-	-
		5	ND	-	ND	ND	ND	ND	-	-	-	-	-
		10	ND	-	ND	ND	ND	ND	-	-	-	-	-
		15	ND	2.3	ND	ND	ND	ND	-	-	-	-	-
		20	170	-	2.1	1.4	0.22	1.5	-	-	-	-	-
		25	220	-	0.38	7.1	6.4	52	-	-	-	-	-
03/02/89	B-2	2	3.5	-	ND	ND	ND	0.1	-	-	-	-	-
		5	8.2	-	ND	ND	ND	ND	-	-	-	-	-
		10	ND	-	ND	ND	ND	ND	-	-	-	-	-
		15	ND	2.3	ND	ND	ND	ND	-	-	-	-	-
		25	1.7	-	ND	ND	ND	0.55	-	-	-	-	-
03/02/89	B-3	2	ND	-	ND	ND	ND	ND	-	-	-	-	-
		5	ND	-	ND	ND	ND	ND	-	-	-	-	-
		10	ND	-	ND	ND	ND	ND	-	-	-	-	-
		15	ND	2.6	ND	ND	ND	ND	-	-	-	-	-
		20	ND	-	ND	ND	ND	ND	-	-	-	-	-
		25	1.3	-	ND	ND	ND	ND	-	-	-	-	-
03/02/89	B-4	2	ND	-	ND	ND	ND	ND	-	-	-	-	-
		5	ND	-	ND	ND	ND	ND	-	-	-	-	-
		10	ND	-	ND	ND	ND	ND	-	-	-	-	-
		15	ND	-	ND	ND	ND	ND	-	-	-	-	-
03/03/89	B-5	2	ND	-	ND	ND	ND	ND	-	-	-	-	-
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		15	ND	-	ND	ND	ND	ND	-	-	-	-	-
		20	ND	ND	ND	ND	ND	ND	-	-	-	-	-
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05/25/89	W-1	5	ND	-	ND	ND	ND	ND	-	-	-	-	-
		10	ND	-	ND	ND	ND	ND	-	-	-	-	-
		15	1200	-	ND	21	20	130	-	-	-	-	-
		20	350	380	2.5	14	6.3	30	-	-	-	-	-
		25	490	-	3.5	24	9.4	46	-	-	-	-	-
		30	160	-	1.0	7.9	3.6	18	-	-	-	-	-
		35	370	-	2.4	20	8.2	40	-	-	-	-	-
		40	16000	1500	220	1,100	340	1,500	-	-	-	-	-
		45	1600	-	30	120	34	160	-	-	-	-	-
		50	2500	-	28	200	59	270	-	-	-	-	-
		55	120	-	3.2	10	2.7	13	-	-	-	-	-
05/26/89	W-2	5	1.2	-	ND	0.14	ND	ND	-	-	-	-	-
		10	ND	-	ND	0.1	ND	ND	-	-	-	-	-
		15	ND	-	ND	0.1	ND	ND	-	-	-	-	-
		20	ND	-	ND	ND	ND	ND	-	-	-	-	-
		25	ND	-	ND	ND	ND	ND	-	-	-	-	-
		30	ND	-	ND	ND	ND	ND	-	-	-	-	-
		35	ND	-	ND	ND	ND	ND	-	-	-	-	-
		40	ND	-	ND	ND	ND	ND	-	-	-	-	-
		45	ND	ND	ND	ND	ND	ND	-	-	-	-	-
		50	ND	-	ND	ND	ND	ND	-	-	-	-	-
05/26/89	W-3	5	ND	-	ND	ND	ND	ND	-	-	-	-	-
		10	ND	-	ND	ND	ND	ND	-	-	-	-	-
		15	ND	-	ND	ND	ND	ND	-	-	-	-	-
		20	ND	-	ND	ND	ND	ND	-	-	-	-	-
		25	ND	-	ND	ND	ND	ND	-	-	-	-	-
		30	ND	-	ND	ND	ND	ND	-	-	-	-	-
		35	ND	-	ND	ND	ND	ND	-	-	-	-	-
		40	ND	ND	ND	ND	ND	ND	-	-	-	-	-
		45	ND	-	ND	ND	ND	ND	-	-	-	-	-
		50	12	-	0.06	ND	ND	ND	-	-	-	-	-

Table 2. Summary of Analytical Data - Soil Borings

Sullins
187 North L Street
Livermore, California
Project No. 1262.2

Summary of Soil Analytical Data

Date Sampled	Borehole	Sample Depth (Ft)	TPH-Gasoline	TEPH-Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	DIPE	ETBE	MTBE	TAME	TBA
			milligrams per kilogram (mg/Kg)										
07/10/90	B-1A	10	ND<10	-	-	-	-	-	-	-	-	-	-
		15	ND<10	-	-	-	-	-	-	-	-	-	-
		20	ND<10	-	-	-	-	-	-	-	-	-	-
		30	ND<10	-	-	-	-	-	-	-	-	-	-
		35	ND<10	-	-	-	-	-	-	-	-	-	-
		40	350	-	-	-	-	-	-	-	-	-	-
		45	54	-	-	-	-	-	-	-	-	-	-
		50	ND<10	-	-	-	-	-	-	-	-	-	-
07/10/90	B-7	5	ND	ND	ND	ND	ND	ND	-	-	-	-	-
		10	ND	-	ND	ND	ND	ND	-	-	-	-	-
07/10/90	B-8	5	ND	-	ND	ND	ND	ND	-	-	-	-	-
		10	ND	ND	ND	ND	ND	ND	-	-	-	-	-
07/12/90	W-A	20	ND<1	-	0.41	0.32	0.24	0.21	-	-	-	-	-
		30	2	-	0.39	0.13	0.035	1.2	-	-	-	-	-
		35	-	-	-	-	-	-	-	-	-	-	-
		40	1,000	-	12	37	7.5	27	-	-	-	-	-
07/13/90	W-B	25	ND<1	-	-	-	-	-	-	-	-	-	-
		30	-	-	-	-	-	-	-	-	-	-	-
		35	ND<1	-	0.69	0.26	0.11	0.07	-	-	-	-	-
03/12/91	B-F	15	-	-	0.002	0.025	0.030	0.034	-	-	-	-	-
01/31/92	B-G	5.5	570	-	0.55	1.3	ND<0.25	2.8	-	-	-	-	-
		7	ND<1	-	ND<0.005	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
		8	ND<1	-	ND<0.005	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
		9.5	ND<1	-	ND<0.005	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
		11.5	490	-	ND<0.1	ND<0.1	ND<0.1	0.53	-	-	-	-	-
		13	3,100	-	ND<2	4.4	38	330	-	-	-	-	-
		14	750	-	ND<0.5	ND<0.5	3.9	38	-	-	-	-	-
		15	1,800	-	ND<0.5	16	31	220	-	-	-	-	-
		16	6,700	-	ND<20	96	120	790	-	-	-	-	-
		17.5	3,000	-	ND<1.3	2.2	19	220	-	-	-	-	-
		19	240	-	ND<0.05	0.45	1.3	5.9	-	-	-	-	-
		20.5	2,100	-	4	75	29	180	-	-	-	-	-
		26	150	-	1	3.2	0.9	5.3	-	-	-	-	-
		31.5	40	-	4	4.4	0.48	2.8	-	-	-	-	-
		36	1,900	-	1.8	63	21	120	-	-	-	-	-
		41	12,000	-	150	520	130	710					
01/31/92	B-H	4.5	ND<1	-	ND<0.005	0.016	ND<0.005	ND<0.010	-	-	-	-	-
		6	ND<1	-	ND<0.005	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
		7.5	ND<1	-	ND<0.005	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
		9.5	ND<1	-	ND<0.005	0.008	ND<0.005	ND<0.005	-	-	-	-	-
		11	ND<1	-	ND<0.005	0.009	ND<0.005	ND<0.005	-	-	-	-	-
		12.5	ND<1	-	ND<0.005	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
		14	ND<1	-	ND<0.005	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
		21	ND<1	-	ND<0.005	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
		26.5	160	-	ND<0.025	0.12	0.11	2.2	-	-	-	-	-
		31	1,900	-	0.59	1.1	1.1	3.3	-	-	-	-	-
		36	8,000	-	16	18	26	210	-	-	-	-	-
		41	ND<1	-	0.058	ND<0.005	ND<0.005	ND<0.005	-	-	-	-	-
10/02/06	MW-4	15	64**	84*	ND<0.25	ND<0.25	0.65	ND<0.5	ND<0.25	ND<0.25	ND<0.25	ND<0.25	ND<2.5
		30	18	3.2*	0.15	0.19	0.11	1.1	ND<0.02	ND<0.02	ND<0.02	ND<0.02	ND<0.2
		45	820**	360*	ND<0.25	ND<0.25	4.2	7.7	ND<0.25	ND<0.25	ND<0.25	ND<0.25	ND<2.5
		60.5	1100	680*	8.7	1.1	18	62	ND<0.25	ND<0.25	ND<0.25	ND<0.25	ND<2.5
		73	5.4	ND<1	0.027	0.065	0.043	0.19	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.1
		80	12	ND<1	0.013	0.036	0.016	0.084	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
10/09/06	MW-5	26	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		36	11**	1.1*	ND<0.005	0.021	0.031	0.035	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		40.5	110	360*	1.1	1.4	1.2	5.7	ND<0.25	ND<0.25	ND<0.25	ND<0.25	ND<2.5
		48	7.6	ND<1	0.19	0.025	0.067	0.16	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		55.5	75	ND<1	0.18	0.13	0.67	0.53	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		66.5	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05

Table 2. Summary of Analytical Data - Soil Borings

Sullins
187 North L Street
Livermore, California
Project No. 1262.2

Summary of Soil Analytical Data

Date Sampled	Borehole	Sample Depth (Ft)	TPH-Gasoline	TEPH-Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	DIPE	ETBE	MTBE	TAME	TBA
			milligrams per kilogram (mg/Kg)										
10/10/06	MW-6	16	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		26	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		40.5	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		45	7.2**	1.1*	ND<0.005	0.022	0.014	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		49.5	1.2**	ND<1	ND<0.005	0.0091	0.0052	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		67.5	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
10/04/06	MW-7	15	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		40	220	23*	3.9	19	8.8	43	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.25
		45.5	1200	66*	10	56	32	160	ND<0.25	ND<0.25	ND<0.25	ND<0.25	ND<2.5
		49	ND<1	ND<1	0.31	0.051	0.034	0.1	ND<0.01	ND<0.01	ND<0.01	ND<0.01	ND<0.1
		68	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
10/05/06	MW-8	25	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		35	2200	800*	3.8	2.2	29	130	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.25
		45	1.7	ND<1	0.058	ND<0.005	0.011	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		55	1.8	ND<1	0.022	ND<0.005	ND<0.005	ND<0.01	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05
		65	ND<1	ND<1	0.041	ND<0.02	0.03	ND<0.04	ND<0.02	ND<0.02	ND<0.02	ND<0.02	ND<0.2
01/27/15	MW-9	35	0.42	--	0.056	ND<0.005	0.026	0.043	--	--	ND<0.005	--	--
		40	32	--	0.32	0.084	0.29	1.2	--	--	ND<0.005	--	--
		65	26	--	0.17	0.29	0.38	1.3	--	--	ND<0.005	--	--
01/26/15	MW-10	40	<0.20	--	ND<0.005	ND<0.005	ND<0.005	ND<0.01	--	--	ND<0.005	--	--
		50	<0.20	--	ND<0.005	ND<0.005	ND<0.005	ND<0.01	--	--	ND<0.005	--	--
		65	0.71	--	<0.010	0.020	0.0089	0.11	--	--	ND<0.005	--	--
01/26/15	EW-2	35	2.0	--	0.005	0.0069	0.026	0.20	--	--	ND<0.005	--	--
		40	1800	--	2.0	2.9	16	72	--	--	<0.12	--	--
		60	<0.20	--	ND<0.005	ND<0.005	ND<0.005	ND<0.01	--	--	ND<0.005	--	--

*= laboratory reported as within diesel range but does not match diesel chromatogram "fingerprint"
**= laboratory reported as within gasoline range but does not match gasoline chromatogram "fingerprint"
"-" well not sampled or constituent not analyzed
pre- 2006 data adapted from *Environmental Sampling Services* Reports on file at ACEH

ATTACHMENT A

Drilling Permit

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306
E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Arrow Rentals, 187 L Street
Livermore, CA 94550

Coordinates Source _____ ft. Accuracy _____ ft.
LAT: _____ ft. LONG: _____ ft.
APN 098-0408-001-00

CLIENT
Name Rite & Tony Sullins
Address 5476 Maybeck Lane Phone 209-522-4119
City Livermore, CA Zip 94550

APPLICANT
Name Ground Zero Analysis on behalf of Tony & Rita Sullins
Email gza@groundzeroanalysis.com Fax 209-522-4227
Address 1172 Kansas Avenue Phone 209-522-4119
City Modesto Zip 95351

TYPE OF PROJECT:
Well Construction 3 Wells
Well Destruction __
Cathodic Protection __
Geotechnical Investigation __
Contamination Investigation __
Other _____ __

PROPOSED WELL USE:
Domestic __
Municipal __
Industrial __
Dewatering __
Irrigation
Remediation
Groundwater Monitoring X
Other _____

DRILLING METHOD:
Mud Rotary __ Air Rotary __ Hollow Stem Auger X
Cable Tool __ Direct Push __ Other _____ __

DRILLING COMPANY V&W Drilling

DRILLER'S LICENSE NO. C57 - 720904

WELL SPECIFICATIONS:
Drill Hole Diameter 8 in. Maximum Depth 67 ft.
Casing Diameter 2 in.
Surface Seal Depth 42 ft. Number 3

SOIL BORINGS:
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 11/3/14
ESTIMATED COMPLETION DATE 11/7/14

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE _____ Date 10/13/14

ATTACH SITE PLAN OR SKETCH

FOR OFFICE USE

PERMIT NUMBER 2014164
WELL NUMBER 3S/2E-8R49 to 8R51 (EW-2, MW-9 & MW-10)
APN 098-0408-001-00

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original **Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.**
3. Permit is void if project not begun within 90 days of approval date.
4. **Notify Zone 7 at least 24 hours before the start of work.**

B. WATER SUPPLY WELLS
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

(C.) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

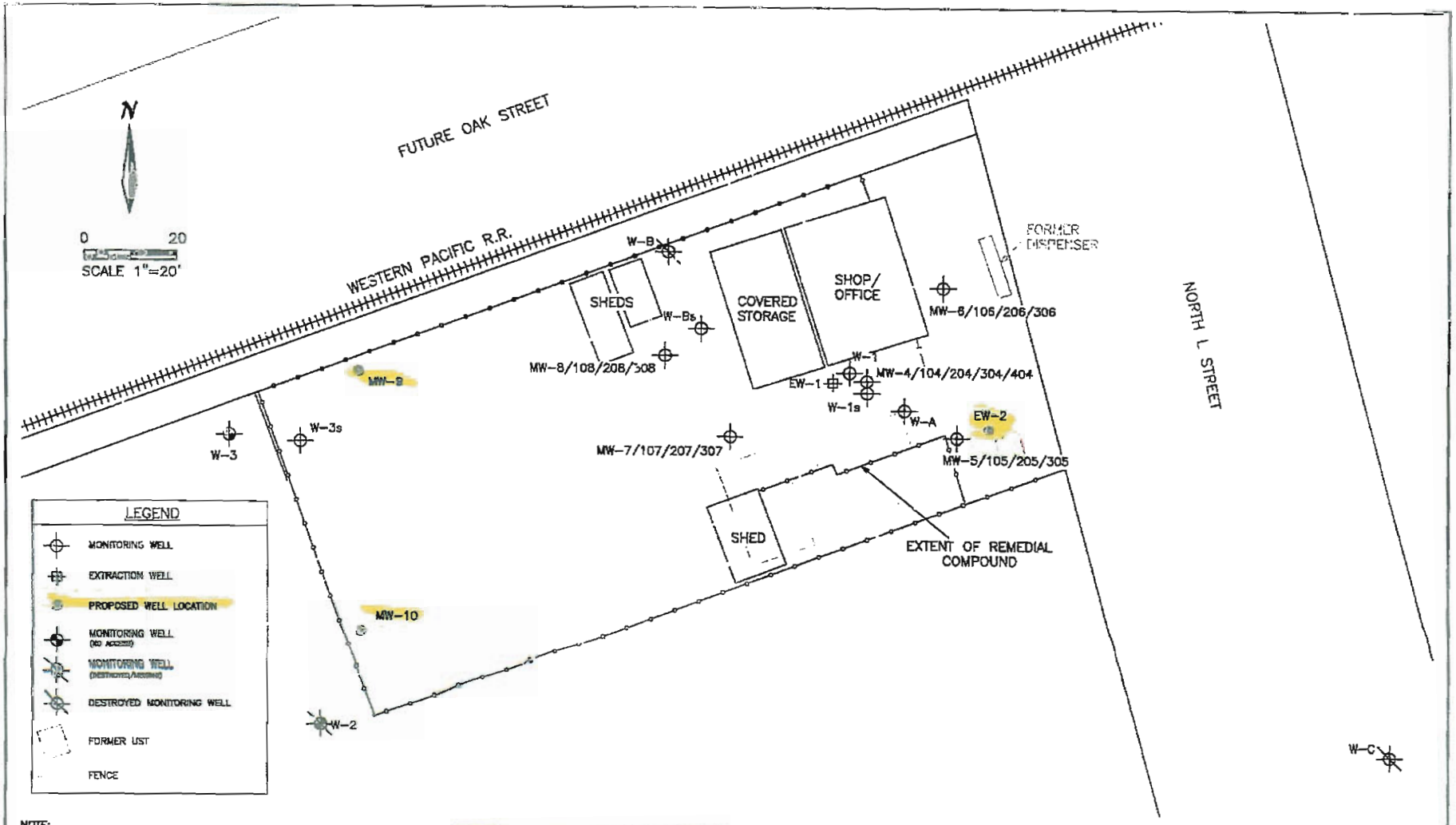
E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report **including all soil and water laboratory analysis results.**

Approved Wyman Hong Date 10/27/14
Wyman Hong

Revised: January 4, 2010



NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

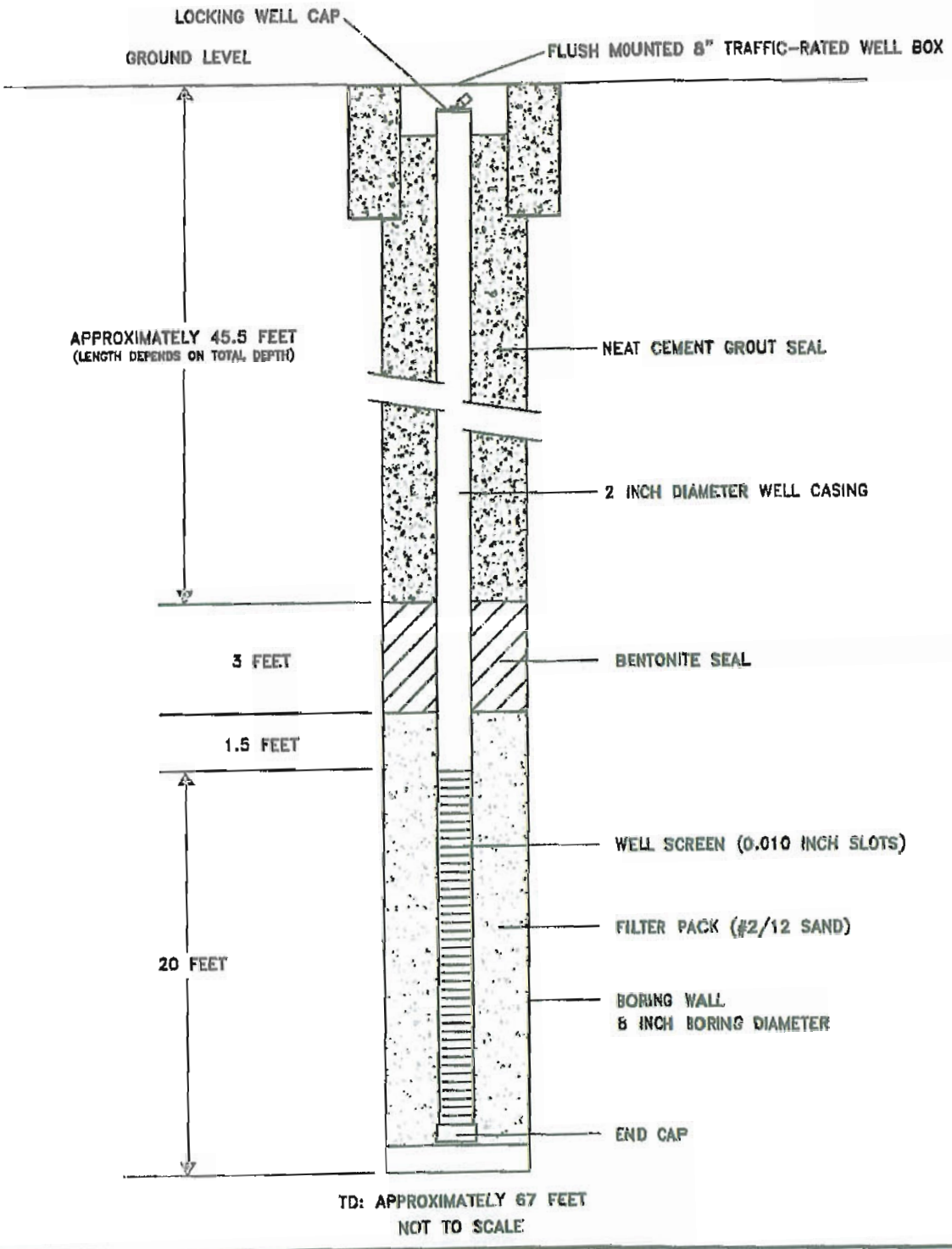
STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD–CLYDE CONSULTANTS

FIGURE 2

GROUND ZERO ANALYSIS, INC

PROPOSED GROUNDWATER MONITORING WELL LOCATIONS

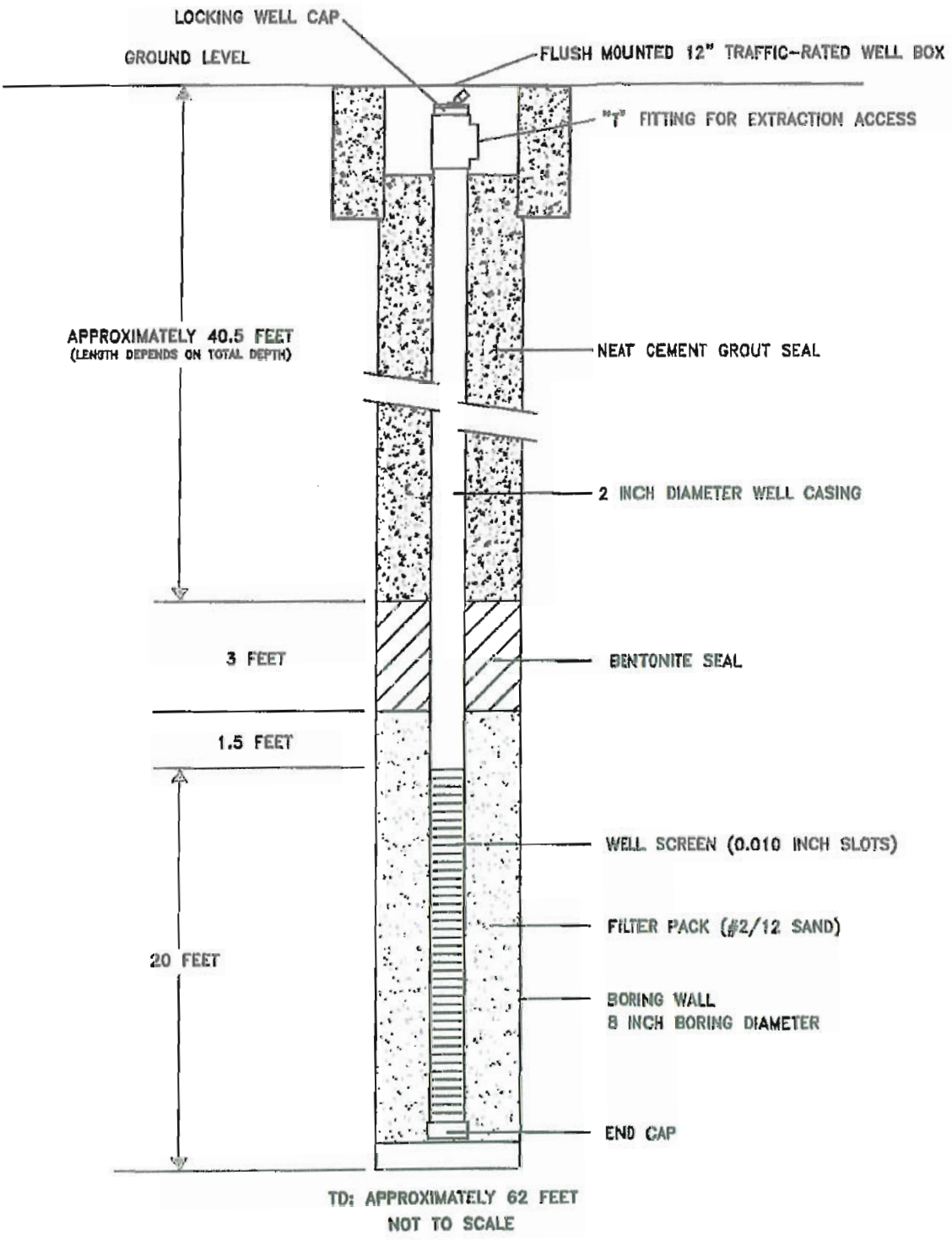
SULLINS (ARROW RENTALS)
187 NORTH L STREET
LIVERMORE, CA



GROUND ZERO ANALYSIS, INC.

WELL CONSTRUCTION DIAGRAM – DOWN-GRADIENT MONITORING WELL
SULLINS (ARROW RENTALS)
187 NORTH "L" STREET
LIVERMORE, CALIFORNIA

FIGURE 3



GROUND ZERO ANALYSIS, INC.

WELL CONSTRUCTION DIAGRAM
PITCOCK RELEASE MONITORING & EXTRACTION WELL
SULLINS (ARROW RENTALS)
187 NORTH "L" STREET
LIVERMORE, CALIFORNIA

FIGURE
4


ARROW RENTALS
187 N. L STREET
APN: 098-0406-001-00

ATTACHMENT B

Field Notes

GROUND ZERO ANALYSIS, INC.

COPY

Daily Field Record

Project SULLINS
Project # 1262.2
Location
Weather FOG / SUN

Date 1-26-2015
Time on job 0615 to 1740
Record Keeper ANDREW DORN
Wind < 5 MPH
Temp 60°

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
ANDREW DORN	GZA	0730	1620
ANTHONY	CAL WEST CONCRETE	ON-SITE	1602
FRANK	VEN DRILLING	ON-SITE	1620
ANGEL	VEN DRILLING	ON-SITE	1620
JEFF	ZONE 7	0930 / 1245	0945 / 1310
ERIC	GZA	1110	?

Time	Location of Work / Work Performed / Field Equipment Used / etc.
0730	ARRIVED ON-SITE & BEGAN CHECKING USA MARKINGS + AND CONFLICTS
	CAL-WEST SETTING UP EQUIPMENT
0750	BEGAN CUTTING CONCRETE AT EW-2 LOCATION
0855	BEGAN CUTTING CONCRETE AT MW-9 LOCATION
0905	DTW IN MW-1 = 43.3' BGS
0908	SPOKE W/ EP - [illegible]
	[illegible], SCREENED 60-40' BGS
0913	BEGAN CUTTING [illegible]
0924	BEGAN [illegible]
[illegible]	[illegible]
0950	BEGAN HAND AUGERING MW-10 LOCATION TO 5' BGS
0950	BEGAN DRILLING EW-2 LOCATION
1105	FINISHED EW-2 BORING + BEGAN CONSTRUCTING WELL
1250	BEGAN INSTALLING GROUT COLUMN TO EW-2
1400	BEGAN DRILLING MW-10 LOCATION W-3 DTW = 42.9' BGS
1525	FINISHED MW-10 BORING + BEGAN INSTALLING PIPE + SAND PACK
1620	LEFT SITE

Daily field record logs

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project SULLINS
Project # 1262.2
Location
Weather PARTLY CLOUDY

Date 1-27-2015
Time on job 0635 to
Record Keeper ANDREW DORN
Wind < 5MPH
Temp 65°

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
ANDREW DORN	GCA	0805	1345
FRANK	VIEW DRILLING	ON-SITE	1335
ANGEL	VIEW DRILLING	ON-SITE	1335
JEFF JONES	ZONE 7	0830 / 1140	0834 / 1210

Time	Location of Work / Work Performed / Field Equipment Used / etc.
0805	ARRIVED ON-SITE — VIEW WAS PREPARING AUGERS FROM WELL ABOVE - SAND PACK
	COMPLETE SAND PACK 65'- 43', BENTONITE 43'- 40'
0830	JEFF JONES STOPPED BY TO CHECK ON PROGRESS - TEMPORARY WELL CAP PROVIDED
	12 pm FOR GROUT
0840	BEGAN INSTALLING MW-9 BORING — DRILL TO 20' BGS + BEGIN SAMPLING
0950	FINISHED MW-9 BORING + BEGAN INSTALLING PIPE + FILTER PACK
MW-9 & MW-10	CONSTRUCTION
	65'-45' 0.01" SCREEN
	65'-43' #12 SAND PACK
	43'- 40' BENTONITE PELLETS
	40'- SURFACE GROUT COLUMN
1145	BEGAN INSTALLING MW-10 GROUT COLUMN
1158	BEGAN INSTALLING MW-9 GROUT COLUMN
1235	BEGAN INSTALLING WELL BOXES & CLEAN UP
1345	LEFT SITE

11 SOIL DRUMS
2 WATER DRUMS

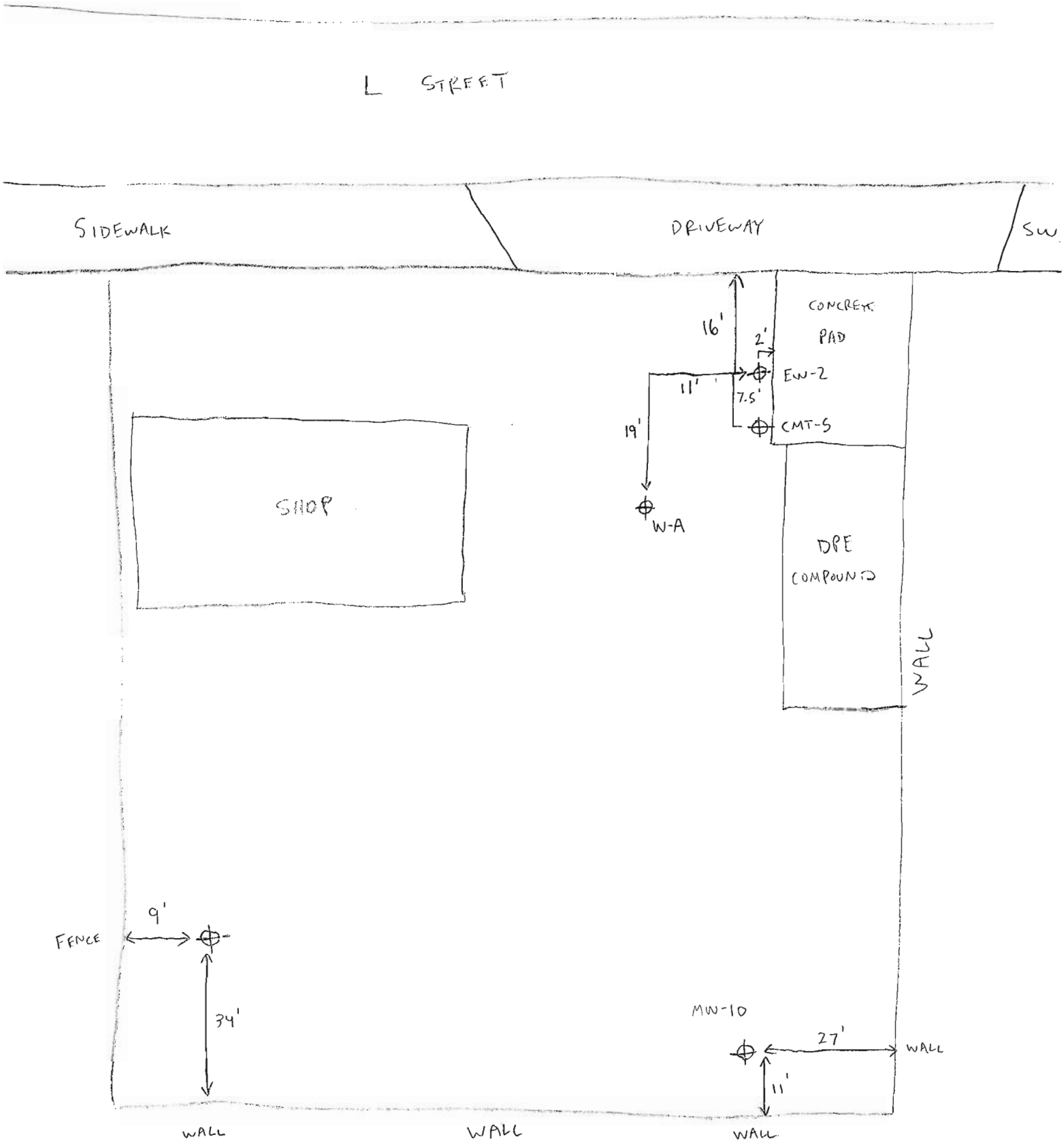
GROUND ZERO ANALYSIS, INC.

Daily Field Record Continued

Project Name SULLINS Project # 1262.2 Date 1-27-2015

Technician ANDREW DORN DPE SYSTEM MONITORING

Time	Location of Work / Work Performed / Field Equipment Used / etc.
1027	TURNED SYSTEM ON
1039	SYSTEM @ TEMP - ELIMINATED DEAD-HEAD IN W-A & W-1 - SLOWLY LOWER STINGER
	WELLS W-1s, W-1 & W-A OPEN, EW-1 CLOSED
	SYSTEM RUNNING HOT 1570 - 1660° F TEMP CONTROLLER, 1550 HIGH LIMIT
	HOURS = 23268.6
	PG&E = 97096 728843 GALLONS EXTRACTED
	FLOW = 100 CFM INF PID = 126 PPM
	VACUUM = 18" Hg EFF PID = 1.2 PPM
	PROPANE = 94 %
1250	KO DRUM FILLED & KICKED ON AIR STRIPPER


L STREET
SIDEWALK
DRIVEWAY
SW
CONCRETE PAD
16'
2'
EW-2
11'
7.5'
CMT-5
19'
W-A
SHOP
DPE COMPOUND
WALL
FENCE
9'
34'
MW-10
27'
WALL
11'
WALL
WALL
WALL

GROUND ZERO ANALYSIS

INTERVAL/SAMPLE DESCRIPTION

PROJECT SULLINS
WELL/BORING NO. MW-9
DATE/BY 1-27-2015
ANDREW DORN

LOG INTERVAL	SC 20 - 31.5'			CL 35 - 41.5' *		SC LENSE ?	
SAMPLE INTERVAL	20-21.5'	25-26.5'	30-31.5'	35-36.5'	40-41.5'	41.5 SHOE	45-46.5'
BLOWCOUNTS	50/-6" -	50/-6" -	50/-6" -	5 - 8 - 8	4 - 6 - 9	- -	- -
% SAND	50	50	50	20	30-40	50	30-40
GR SIZE/RANGE	(FN) M CRS	(FN) M (CRS)	(FN) M CRS	(VFN) M CRS	(VFN) M CRS	(FN) M CRS	(FN) (M) CRS
ANGULARITY	(A) SA SR R	(A) SA SR R	(A) SA SR R	A SA SR R	A SA SR R	A (SA) SR R	A (SA) SR R
GRADING	W (P)	W (P)	W (P)	W P	W P	W P	(W) P
% GRAVEL	20	20	20	0	0	0	∠10
GR SIZE/RANGE	FN (CRS)	FN (CRS)	FN (CRS)	FN CRS	FN CRS	FN CRS	FN CRS
ANGULARITY	(A) SA SR R	(A) SA SR R	(A) SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R
GRADING	W P	W P	W P	W P	W P	W P	W P
COBBLES	UP TO 2cM	UP TO 3cM	UP TO 2cM				
% FINES	30	30	30	80	60-70	50	50-60
DRY STRENGTH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH
DILATANCY	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R
TOUGHNESS	L M H	L M H	L M H	L M H	L M H	L M H	L M H
PLASTICITY	N L M H	N L M H	N L M H	(N) L M H	(N) L M H	(N) L M H	(N) L M H
CMPCTNSS/CNSSTNCY							
COLOR	BROWN/RED	BROWN/RED	BROWN/RED	REDISH BROWN	BROWN/GRAY	BROWN/GRAY	BROWN
ODOR	(N) SL M STRNG	(N) SL M STRNG	(N) SL M STRNG	N (SL) M STRNG	N SL (M) STRNG	N SL (M) STRNG	N (SL) M STRNG
ORGANICS	N Y	N Y	N Y	(N) Y	(N) Y	(N) Y	(N) Y
MOISTURE	(DRY) MST WET	(DRY) MST WET	(DRY) MST WET	(DRY) MST WET	DRY (MST) WET	DRY (MST) WET	DRY (MST) WET
HCL REACTION	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG
CEMENTATION	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG
~~STRUCTURE~~ TIME				0910	0915		0920
COMMENTS	INCOMPLETE RECOVERY SAND MATRIX	INCOMPLETE RECOVERY SAND MATRIX SIMILAR TO ABVE W/ ↑ GRAIN SIZE & ANGULARITY	INCOMPLETE RECOVERY SAND MATRIX	CLAY MATRIX W/ SILT & SAND FRACTURED	CAPILARY FRINGE GRAY SPOTTING ↑ SAND CONTENT & GRAIN SIZE W/ DEPTH		SIMILAR TO 40' W/ ↑ GRAIN SIZE GW IN BORING
SAMPLE ID				MW-9@35'	MW-9@40'		MW-9@45'
NAME	CLAYEY GRAVELY SAND	→	→	SANDY CLAY	SANDY CLAY	CLAYEY SAND	SANDY CLAY
SYMBOL	SC	SC	SC	CL	CL	SC	CL
PID	0	0	0	45 ppm	980 ppm		130 ppm

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GROUND ZERO ANALYSIS

PROJECT SULLINS
WELL/BORING NO. MW-10
DATE/BY 1-26-2015
ANDREW DORN

INTERVAL/SAMPLE DESCRIPTION

LOG INTERVAL	CL 20 - 31.5'			SC/SW 35 - 41'		CL 41 - 41.5'	
SAMPLE INTERVAL	20-21.5'	25-26.5'	30-31.5'	35-36.5'	40-41'	41-41.5'	45-46.5'
BLOWCOUNTS	50/-6" -	50/-6" -	50/-6" -	50/-6" -	35-50/6"-	- -	50/-6" -
% SAND	40	40	40	50	50	20	50
GR SIZE/RANGE	(FN) M CRS	(FN) M CRS	(FN) M CRS	FN M (CRS)	FN M (CRS)	(VFN) M CRS	(FN) M (CRS)
ANGULARITY	(A SA) SR R	(A SA) SR R	(A SA) SR R	(A SA) SR R	(A SA) SR R	A SA SR R	(A SA) SR R
GRADING	(W) P	(W) P	(W) P	(W) P	(W) P	W P	W (P)
% GRAVEL	10	10	10	20	20	0	20
GR SIZE/RANGE	(FN) CRS	(FN) CRS	(FN) CRS	(FN) CRS	(FN) CRS	FN CRS	(FN) CRS
ANGULARITY	(A SA) SR R	(A SA) SR R	(A SA) SR R	(A SA) SR R	(A SA) SR R	A SA SR R	(A) SA SR R
GRADING	W P	W P	W P	W P	W P	W P	W P
COBBLES	UP TO 1 CM	UP TO 1CM	UP TO 1CM	UP TO 1CM	UP TO 1CM		UP TO 2CM
% FINES	50	50	50	30	30	80	30
DRY STRENGTH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH
DILATANCY	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R
TOUGHNESS	(L) M H	(L) M H	(L) M H	L M H	L M H	L M H	L M H
PLASTICITY	(N L) M H	(N L) M H	(N L) M H	N L M H	N L M H	N (L M) H	N L M H
CMPCTNSS/CNSSTNCY							
COLOR	REDDISH BRWN	REDDISH BROWN	REDDISH BROWN	L. BROWN	L. BROWN	BROWN	L. BROWN
ODOR	(N) SL M STRNG	(N) SL M STRNG	(N) SL M STRNG	(N) SL M STRNG	N (SL) M STRNG	N (SL) M STRNG	N (SL) M STRNG
ORGANICS	N Y	N Y	N Y	N Y	N Y	N Y	N Y
MOISTURE	(DRY) MST WET	(DRY) MST WET	(DRY) MST WET	(DRY) MST WET	DRY (MST) WET	DRY (MST) WET	DRY MST (WET)
HCL REACTION	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG
CEMENTATION	(WEAK) M STRNG	(WEAK) M STRNG	(WEAK) M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG
~~STRUCTURE~~ TIME					1440		
COMMENTS	INCOMPLETE RECOVERY	INCOMPLETE RECOVERY	INCOMPLETE RECOVERY	COARSE SAND DOMINATE LENSES OF CLEAN COARSE SAND W/ F. GRAVEL	COARSE SAND DOMINATE →	CLAY MATRIX W/ SAND & SILT	COARSE SAND DOMINATE LENSES OF CLEAN COARSE SAND W/ F. GRAVEL
SAMPLE ID					MW-10@40'		
NAME	SANDY CLAY	SANDY CLAY	SANDY CLAY	GRAVELLY CLAYEY SAND	GRAVELLY CLAYEY SAND	SANDY CLAY	GRAVELLY CLAYEY SAND
SYMBOL	CL	CL	CL	SC/SW	SC/SW	CL	SC/SP
PID	0 ppm	0	0	0	0	0	54 ppm

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GROUND ZERO ANALYSIS

PROJECT SULLINS
WELL/BORING NO. MW-9
DATE/BY 1-27-2015
ANDREW DORN

INTERVAL/SAMPLE DESCRIPTION

LOG INTERVAL	SC 50-51.5	CL 55-56.5'	SC 60-66.5'*				
SAMPLE INTERVAL	50-51.5	55-56.5'	60-61.5'	65-66.5'			
BLOWCOUNTS	50/-6" -	50/-6" -	10 - 10 - 11	50/-6" -	- -	- -	- -
% SAND	50	20	60	70			
GR SIZE/RANGE	FN M CRS	VFN M CRS	FN M CRS	FN M CRS	FN M CRS	FN M CRS	FN M CRS
ANGULARITY	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R
GRADING	W P	W P	W P	W P	W P	W P	W P
% GRAVEL	30	0	<5	10			
GR SIZE/RANGE	FN CRS	FN CRS	FN CRS	FN CRS	FN CRS	FN CRS	FN CRS
ANGULARITY	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R
GRADING	W P	W P	W P	W P	W P	W P	W P
COBBLES	UP TO 2cm		UP TO 1/2cm	UP TO 4cm			
% FINES	20	80	35	20			
DRY STRENGTH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH
DILATANCY	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R
TOUGHNESS	L M H	L M H	L M H	L M H	L M H	L M H	L M H
PLASTICITY	N L M H	N L M H	N L M H	N L M H	N L M H	N L M H	N L M H
CMPCTNESS/CNSSTNCY							
COLOR	GRAY	BROWN	REDDISH BROWN	RED/BROWN			
ODOR	N SL M STRNG	N SL M STRNG	N SL M STRNG	N SL M STRNG	N SL M STRNG	N SL M STRNG	N SL M STRNG
ORGANICS	N Y	N Y	N Y	N Y	N Y	N Y	N Y
MOISTURE	DRY MST WET	DRY MST WET	DRY MST WET	DRY MST WET	DRY MST WET	DRY MST WET	DRY MST WET
HCL REACTION	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG
CEMENTATION	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG
~~STRUCTURE~~ TIME				0945			
COMMENTS	INCOMPLETE RECOVERY NO SAMPLE	CLAY MATRIX W/ SILT & SAND VERY DRY W/ WET UNIT ABOVE @ 50'	SAND MATRIX W/ CLAY MOSTLY FINE SAND W/ SOME MED & COARSE	INCOMPLETE RECOVERY			
SAMPLE ID				MW-9@65'			
NAME	CLAYEY GRAVELLY SAND	SANDY CLAY	CLAYEY SAND	CLAYEY GRAVELLY SAND			
SYMBOL	SC	CL	SC	SC			
PID	84 ppm	0 ppm	19 ppm	37 ppm			

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GROUND ZERO ANALYSIS

INTERVAL/SAMPLE DESCRIPTION

PROJECT: SULLINS
WELL/BORING NO.: MW-10
DATE/BY: 1-26-2015 ANDREW DORN

LOG INTERVAL	SC, SW/SP 45' - 56.5'			CL 60 - 66.5'			
SAMPLE INTERVAL	50-51.5'	55-56'	56-56.5'	60-61.5	65-66.5'		
BLOWCOUNTS	50/-6" -	28-50/6"-	- -	12-14-28	50/-6" -	- -	- -
% SAND	60	70	50	30-40	30-40		
GR SIZE/RANGE	VFN (M) CRS	FN M (CRS)	FN M (CRS)	FN M CRS	FN M CRS	FN M CRS	FN M CRS
ANGULARITY	A (SA) SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R
GRADING	(W) P	(W) P	W (P)	(W) P	(W) P	W P	W P
% GRAVEL	<10	20	20	30	30		
GR SIZE/RANGE	(FN) CRS	(FN) CRS	(FN CRS)	(FN CRS)	(FN CRS)	FN CRS	FN CRS
ANGULARITY	A (SA) SR R	A (SA SR) R	(A) SA SR R	(A) SA SR R	(A) SA SR R	A SA SR R	A SA SR R
GRADING	W P	(W) P	W P	W P	W P	W P	W P
COBBLES	UP TO 1cm	UP TO 1cm	UP TO 2cm	UP TO 2cm	UP TO 2cm		
% FINES	30	10	30	30-40	30-40		
DRY STRENGTH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH
DILATANCY	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R
TOUGHNESS	L M H	L M H	L M H	L M H	L M H	L M H	L M H
PLASTICITY	(N L) M H	N L M H	N L M H	N L M H	N L M H	N L M H	N L M H
CMPCTNSS/CNSSTNCY							
COLOR	BROWN	L. BROWN	L. BROWN	L. BROWN	L. BROWN		
ODOR	(N) SL M STRNG	(N) SL M STRNG	(N) SL M STRNG	(N) SL M STRNG	(N) SL M STRNG	N SL M STRNG	N SL M STRNG
ORGANICS	(N) Y	N Y	N Y	N Y	N Y	N Y	N Y
MOISTURE	DRY (MST WET)	DRY MST (WET)	DRY MST (WET)	DRY MST (WET)	DRY (MST WET)	DRY MST WET	DRY MST WET
HCL REACTION	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG
CEMENTATION	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG
~~STRUCTURE~~ TIME	1455				1520		
COMMENTS	MOSTLY VF SAND AND SILT; INCOMPLETE RECOVERY	SIMILAR TO 40-41' W/ ↓ CLAY, ↑ SILT; INCOMPLETE RECOVERY	COARSE SAND DOMINATE	CLAY MATRIX	CLAY MATRIX		
SAMPLE ID	MW-10@50'				MW-10@65'		
NAME	CLAYEY SAND	GRAVELLY SAND	GRAVELLY CLAYEY SAND	GRAVELLY CLAY	GRAVELLY CLAY		
SYMBOL	SC	SW	SC/SP	CL	CL		

PID	17 ppm	0	0	0	0	

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GROUND ZERO ANALYSIS

INTERVAL/SAMPLE DESCRIPTION

PROJECT SULLINS
WELL/BORING NO. EW-2
DATE/BY 1-26-2015
ANDREW DORN

LOG INTERVAL	PEA GRAVEL UST PIT ?	GM/GC 10 - 31.5'					*
SAMPLE INTERVAL	5-6.5'	10-11.5'	15-16.5'	20-21.5'	25-26.5'	30-31.5'	35-36.5'
BLOWCOUNTS	- -	50/-6" -	50/-6" -	50/-6" -	50/-6" -	50/-6" -	13 - 8 -9
% SAND		40	40	40	40	40	20
GR SIZE/RANGE	FN M CRS	FN M CRS	FN M CRS	FN M CRS	FN M CRS	FN M CRS	VFN M CRS
ANGULARITY	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R
GRADING	W P	W P	W P	W P	W P	W P	W P
% GRAVEL		50	40	50	30	30	0
GR SIZE/RANGE	FN CRS	FN CRS	FN CRS	FN CRS	FN CRS	FN CRS	FN CRS
ANGULARITY	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R
GRADING	W P	W P	W P	W P	W P	W P	W P
COBBLES		UP TO 3CM	UP TO 3CM	UP TO 3CM	UP TO 4CM	> 4CM	
% FINES		10	20	10	30	30	80
DRY STRENGTH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH
DILATANCY	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R
TOUGHNESS	L M H	L M H	L M H	L M H	L M H	L M H	L M H
PLASTICITY	N L M H	N L M H	N L M H	N L M H	N L M H	N L M H	N L M H
CMPCTNSS/CNSSTNCY							
COLOR		BROWN/RED	BROWN/RED	BROWN/RED	BROWN/RED	BROWN/RED	BROWN
ODOR	N SL M STRNG	N SL M STRNG	N SL M STRNG	N SL M STRNG	N SL M STRNG	N SL M STRNG	N SL M STRNG
ORGANICS	N Y	N Y	N Y	N Y	N Y	N Y	N Y
MOISTURE	DRY MST WET	DRY MST WET	DRY MST WET	DRY MST WET	DRY MST WET	DRY MST WET	DRY MST WET
HCL REACTION	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG
CEMENTATION	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG
~~STRUCTURE~~ TIME				1010	1015		1025
COMMENTS	UST BACKFILL	UST BACKFILL	INCOMPLETE RECOVERY	INCOMPLETE RECOVERY	INCREASED RECOVERY	INCOMPLETE RECOVERY	SOME ANGULAR GRAVEL - FOSS. SLUFF CLAY MATRIX W/ SAND & SILT
SAMPLE ID				EW-2@20'	EW-2@25'		EW-2@35'
NAME		SANDY GRAVEL	SANDY GRAVEL	SANDY GRAVEL	CLAYEY GRAVEL	CLAYEY GRAVEL	SANDY CLAY
SYMBOL		GM	GM	GM	GC	GC	CL

PID 0 ppm 0 0 0 0 0

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1140 ppm

GROUND ZERO ANALYSIS

INTERVAL/SAMPLE DESCRIPTION

PROJECT SULLINS
WELL/BORING NO. EW-2
DATE/BY 1-26-2015
ANDREW DORN

LOG INTERVAL	CL 35-46.5' *		SP 50-51.5'	CL 55-61.5' *			
SAMPLE INTERVAL	40-41.5'	45-46.5'	50'-51.5'	55'-56.5'	60-61.5'		
BLOWCOUNTS	10 - 10 - 12	8 - 8 - 13	23 - 50/6" -	9 - 12 - 23	10 - 12 - 13	- -	- -
% SAND	20	30	70	20	30		
GR SIZE/RANGE	(VFH) M CRS	(VFH) M CRS	FH (M) CRS	(VFH) M CRS	(VFH) M CRS	FH M CRS	FH M CRS
ANGULARITY	A SA SR R	A SA SR R	A (SA) SR R	A SA SR R	A (SA) SR R	A SA SR R	A SA SR R
GRADING	W P	W P	W (P)	W P	W P	W P	W P
% GRAVEL	0	0	30	0	0		
GR SIZE/RANGE	FH CRS	FH CRS	(FH) CRS	FH CRS	FH CRS	FH CRS	FH CRS
ANGULARITY	A SA SR R	A SA SR R	(A SA) SR R	A SA SR R	A SA SR R	A SA SR R	A SA SR R
GRADING	W P	W P	(W) P	W P	W P	W P	W P
COBBLES			UP TO 1cM				
% FINES	80	70	0	80	70		
DRY STRENGTH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH	N L M H VH
DILATANCY	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R	N SLW R
TOUGHNESS	L M H	L M H	L M H	L M (H)	L M H	L M H	L M H
PLASTICITY	N (L M) H	N (L) M H	N L M H	N (L M) H	N (L) M H	N L M H	N L M H
CMPCTNSS/CNSSTNCY							
COLOR	BROWN/GRAY	BROWN/GRAY	GRAY	GRAY	REDDISH BROWN/GRAY		
ODOR	N SL (M) STRNG	N SL (M) STRNG	N SL (M) STRNG	N SL (M) STRNG	N (SL) M STRNG	N SL M STRNG	N SL M STRNG
ORGANICS	(N) Y	(N) Y	(N) Y	(N) Y	(N) Y	N Y	N Y
MOISTURE	DRY (MST) WET	DRY (MST) WET	DRY MST (WET)	DRY MST (WET)	DRY (MST WET)	DRY MST WET	DRY MST WET
HCL REACTION	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG	N WEAK STRNG
CEMENTATION	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG	WEAK M STRNG
STRUCTURE	1040	1045	1050	1055	1100		
COMMENTS	CLAY MATRIX SILT w/SAND	FRACTURED CLAY MATRIX SILT	WATER TABLE WATER BEARING INTERBEDDED C. GRAVELLY SAND AND F. WELL GRADED SAND	CLAY MATRIX SILT w/ SAND	FRACTURED CLAY MATRIX WATER BEARING		
PID →	900 PPM	190 PPM	810 PPM	90 PPM	44 PPM		
SAMPLE ID	EW-2@40'	EW-2@45'	EW-2@50'	EW-2@55'	EW-2@60'		
NAME	SANDY CLAY	SANDY CLAY	GRAVELLY SAND	SANDY CLAY	SANDY CLAY		
SYMBOL	CL	CL	SP	CL	CL		

PIPE TD = 60' 4"
BOREHOLE TD = 60'
SCREEN 60' - 40'

SAND PACK 60' - 38'
BENTONITE 38' - 35'

SRI SUPREME #12 SAND

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GROUND ZERO ANALYSIS, INC.

Daily Field Record

Page 1 of

Project Sullins
Project # 5262 Task 6
Location Sunny
Weather Clear

Date 01/30/15
Time on job 0630 to 1600
Record Keeper A. Scoma
Wind NA
Temp 72°

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
Anthony Scoma	GZA	0748	1500

Time	Location of Work / Work Performed / Field Equipment Used / etc.
0630	Sunny Escalon
0730	Home Depot Livermore Parts Pick up
	on site 0748 Noted the System was not in operation
	Removed Lids + plugs in wells EW-2, MW-9, MW-10
	WLP used Monitor DTW DTB order MW 10, 9, EW-2
	Surge Blocked each well. Rigid after hand
	Bailed 3 to 4 gallons from each well then
	I used an eletric pump to remove all
	silt and develope each well.
	3 poly drums was used, filled with 55 gallons
	of Purge Water
	Teflon Bailer, Surge Block, eletric pump,
	210' Disposable Tubing was used, Poly drum

Continued On Next Page

Daily Field Report		
Project Name: Sullins	Field Technician: AS	Date: 01/30/15
Project Activity: O+M	Job Number: 5262 TOK	Page: of

Tim 1300 called office, explained to Andrew that the System was down when I arrived at 0748

Andrew had me shut main power down
When I switched power back on noticed that
Oxidizer High Temperature LT was on then the LT went out.

System Start up 1306

Tim 1315 Control Power, Limits operational, System at temp, Flame on Lights are on

Tim 1336 opened up dilution Valve 1/2 Turn

Tim 1344 Total Hr's 23312.1 KWH 97778

50% Propane., drop tank 2/3 full, no water in Knock-out

Slowly Pulled Hose's from W-1 & W-A to free Hoses of any head Space to allow water to flow.

Day S.D. 1500

Purge Log Form

Project Name: Sullins Project Number: 5262 Site Location: Livermore

Well No: GW-2 Date: 01/30/15 Field Tech: _____

Total Depth: 58.20 Depth to water: 42.64 Water Column Length: _____

Casing Diameter: _____ Casing Factor: _____ Volume Calculation: 3.3

Total Purge Volume: _____ Casing volumes Produced: _____ Pump Type: GS-10

PH Meter: _____ Calibrated: Y or N Cond. Meter: _____ Calibrated: Y or N

Temp Meter: _____ Turbidity Meter: _____ Calibrated: Y or N

[Casing Factor: 2"=.17 3"=.38 4"=.66 5"=1.02 6"=1.5 8"=2.6 (In Gallons per linear foot)]

Time	Prod. Rate	Gallons(total)	DTW	Ph	Ec	Temp (°C)	Turbidity	Comments
1142	1 Gpm	0	42.64					Greenish cast
1150	↓	8.0					↓	Gone clear, no sheen
1202		20.0	" ↓				Water Level Below Pump	Brownish silt Pump on Bottom
1217		35.0	↓					Clear
1231	↓	49.0	Water Level Below Pump					off
1234			48.75					

Storage or Disposal Method: _____ Total Drums Onsite: _____

Percent Recharge Prior to Sampling: _____ Sample Collection Method: _____

Sample Labeled: _____ Sample Time: _____ Laboratory: _____

Analysis: _____ No. of Containers: _____

Duplicate: _____ Trip Blank: _____ Rinsate Blank: _____

Comments: Surge Blocked. Hand Bailed 4 gallons

DTB after Development 59.80

Purge Log Form

Project Name: Sullivan Project Number: 5262 Tank 6 Site Location: Livermore

Well No: MW-9 Date: 01/30/15 Field Tech: AS

Total Depth: 69.40 Depth to water: 42.88 Water Column Length: _____

Casing Diameter: _____ Casing Factor: _____ Volume Calculation: _____

Total Purge Volume: _____ Casing volumes Produced: _____ Pump Type: Gr. Jan pump

PH Meter: _____ Calibrated: Y or N Cond. Meter: _____ Calibrated: Y or N

Temp Meter: _____ Turbidity Meter: _____ Calibrated: Y or N

[Casing Factor: 2"=.17 3"=.38 4"=.66 5"=1.02 6"=1.5 8"=2.6 (In Gallons per linear foot)]

Time	Prod. Rate	Gallons(total)	DTW	Ph	Ec	Temp (°C)	Turbidity	Comments
1036	1.9 Gpm	0	42.88					Brown's oils
								Surge through out
1044		15.2	48.89				Pump at Bottom	No odor / Clear
1050		26.6					Lifting Pump	Clearing Quickly
								Clear
1106		57.0	42.99					Off
1112			42.94					

Storage or Disposal Method: _____ Total Drums Onsite: _____

Percent Recharge Prior to Sampling: _____ Sample Collection Method: _____

Sample Labeled: _____ Sample Time: _____ Laboratory: _____

Analysis: _____ No. of Containers: _____

Duplicate: _____ Trip Blank: _____ Rinsate Blank: _____

Comments: Well Developed

Surge Blocked well, Hand Bailed 3 gal

65.0 ntu after Development

Purge Log Form

Project Name: Sullins Project Number: 5262 76 Site Location: Livermore

Well No: MW-10 Date: 1/30/15 Field Tech: AS

Total Depth: 63.00 Depth to water: 42.47 Water Column Length:

Casing Diameter: 2 Casing Factor: Volume Calculation:

Total Purge Volume: Casing volumes Produced: Pump Type: ES-100 pump

PH Meter: Calibrated: Y or N Cond. Meter: Calibrated: Y or N

Temp Meter: Turbidity Meter: Calibrated: Y or N

[Casing Factor: 2"=.17 3"=.38 4"=.66 5"=1.02 6"=1.5 8"=2.6 (In Gallons per linear foot)]

Time	Prod. Rate	Gallons(total)	DTW	Ph	Ec	Temp (°C)	Turbidity	Comments
0918	1.1 Gpm	0	42.47					Surge, Brown
0925	"	7.7						w odor
0939	"	23.1						
0950	"	35.2	Water Below Pump					Pump at Bottom
0952	"	37.4	"					clear
1008	"	55.0	"					off
1010			46.00					

Storage or Disposal Method: Total Drums Onsite:

Percent Recharge Prior to Sampling: Sample Collection Method:

Sample Labeled: Sample Time: Laboratory:

Analysis: No. of Containers:

Duplicate: Trip Blank: Rinsate Blank:

Comments: Well Developing

Surge Blockoff & Hand Bailed 4 Gallons

DTB after Developing 65.42

Ground Zero Analysis Inc.

Project Name: Sullins Date: 1/30/15

Project Number: 5262 Task 6 By: A.S

WELL ID	TIME	DTW	DTB	DTP	ELEV.	ADJ. DTW	Comments
EW-2	0839	42.64	58.20				DTB before Developing Slight Gas odor
MW-9	0833	42.88	64.40				" " " no odor
MW-10	0826	42.47	63.00				" " " no odor

ATTACHMENT C

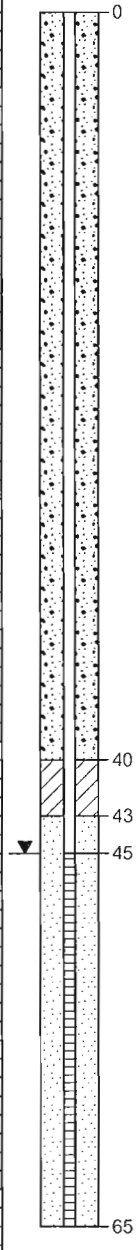
Boring Logs

GROUND ZERO ANALYSIS, INC.

Log of Boring MW-9

Sullins (Arrow Rentals)
187 N. L Street
Livermore, CA
Project No.:1262.2

Date : 01/27/15
Drilling Method : Hollow Stem Auger
Driller : V&W Drilling
Logged By : Andrew Dorn



USCS	GRAPHIC	DESCRIPTION	PID (ppm)	LAB SAMPLE	Blow Count
		Free Drill 0-20'			
SC		CLAYEY GRAVELLY SAND - Brown/red, mostly F-C sand w/ silt/clay and gravel up to 2cm, angular to sub-angular, slightly moist, no odor	0		50/6"
SC		CLAYEY GRAVELLY SAND - same as above at 20-21.5' w/ increased grain size and angularity	0		50/6"
SC		CLAYEY GRAVELLY SAND - same as above at 20-21.5' w/ increased grain size and angularity	0		50/6"
CL		SANDY CLAY - Reddish brown, mostly clay w/ VF sand, v. low plasticity, slightly moist, slight odor	45	MW-9 @ 35' TPHg 0.42 mg/kg Benzene 0.056 mg/kg	5/8/8
CL		SANDY CLAY - Brown/gray, mostly clay w/ VF sand, v. low plasticity, moist, moderate odor	980	MW-9 @ 40' TPHg 32 mg/kg Benzene 0.32 mg/kg	4/6/9
CL		SANDY CLAY - same as above at 40-41.5' w/ increased grain size	130		
SC		CLAYEY GRAVELLY SAND - Gray, F-C sand, mostly C sand, sub-angular to angular gravel up to 2cm, wet, slight odor	84		50/6"
CL		SANDY CLAY - Brown, mostly clay w/ VF sand and no gravel, moderate toughness, v. low plasticity, dry, strong cementation, slight odor	0		50/6"
SC		CLAYEY SAND - Reddish brown, sand matrix w/ clay, F-c sand, mostly F sand, well graded, some gravel to 1/2cm, slight odor, wet	19	MW-9 @ 65' TPHg 26 mg/kg Benzene 0.17 mg/kg	10/10/11
SC		CLAYEY GRAVELLY SAND - Gray, F-C sand, mostly C sand, sub-angular to angular gravel up to 4cm, wet, no odor	37		50/6"

03-04-2015 K:\Jobs\S Jobs\Sullins (L St.) 1262\12622\Graphics\borelogs\MW-9.bor

Log of Boring MW-10

GROUND ZERO ANALYSIS, INC.

Sullins (Arrow Rentals)
187 N. L Street
Livermore, CA
Project No.:1262.2

Date : 01/26/15
Drilling Method : Hollow Stem Auger
Driller : V&W Drilling
Logged By : Andrew Dorn

USCS	GRAPHIC	DESCRIPTION	PID (ppm)	LAB SAMPLE	Blow Count
		Free Drill 0-20'			
CL		SANDY CLAY - Brown/red, mostly clay w/ F-C sand and fine gravel to 1cm, angular to sub-angular, well graded, v. low plasticity, dry, no odor	0		50/6"
CL		SANDY CLAY - Brown/red, mostly clay w/ F-C sand and fine gravel to 1cm, angular to sub-angular, well graded, v. low plasticity, dry, no odor	0		50/6"
CL		SANDY CLAY - Brown/red, mostly clay w/ F-C sand and fine gravel to 1cm, angular to sub-angular, well graded, v. low plasticity, dry, no odor	0		50/6"
SC/SW		GRAVELLY CLAYEY SAND - Light brown, F-C sand and fine gravel, angular to sub-angular, well graded, slightly moist, no odor, interbedded clayey sand and well graded gravelly sand	0		50/6"
SC/SW		GRAVELLY CLAYEY SAND - same as 35-36.5' above	0	MW-10 @ 40' TPHg ND<0.2 mg/kg Benzene ND<0.005 mg/kg	35/50-6"
CL		SANDY CLAY - Brown, clay matrix w/ VF sand, low to moderate plasticity, moist, slight odor			
SC/SW		same as 35-36.5 w/ larger grain size	54		50/6"
SC		CLAYEY SAND - Brown, mostly clay w/ VF-M sand and F gravel to 1cm, slightly wet, no odor	17	MW-10 @ 50' TPHg ND<0.2 mg/kg Benzene ND<0.005 mg/kg	50/6"
SW		GRAVELLY SAND - Light brown, F-C sand, fine gravel to 1cm, sub-angular to sub-rounded, wet, no odor	0		28/50/6"
SC/SW		same as 35-36.5 w/ larger grain size			
CL		GRAVELLY CLAY - Light brown, clay matrix w/ F-C sand and gravel to 2cm, wet, no odor	0	MW-10 @ 65' TPHg 0.71 mg/kg Benzene ND<0.01 mg/kg	12/14/28
CL		GRAVELLY CLAY - Light brown, clay matrix w/ F-C sand and gravel to 2cm, wet, no odor	0		50/6"

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

0 40 43 45 65

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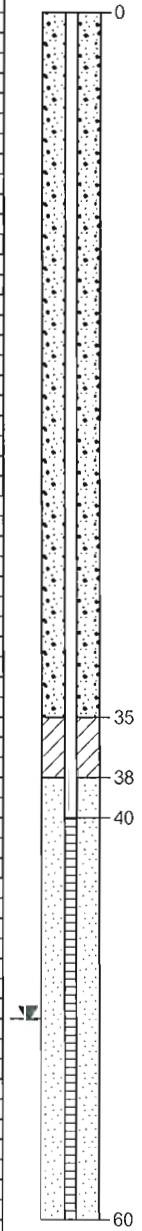
GROUND ZERO ANALYSIS, INC.

Log of Boring EW-2

Sullins (Arrow Rentals)
187 N. L Street
Livermore, CA
Project No.:1262.2

Date : 01/26/15
Drilling Method : Hollow Stem Auger
Driller : V&W Drilling
Logged By : Andrew Dorn



USCS	GRAPHIC	DESCRIPTION	PID (ppm)	LAB SAMPLE	Blow Count
GP		PEA GRAVEL - Former UST pit fill	0		
GC		SANDY GRAVEL - Brown/red, mostly angular gravel up to 3cm w/ F-C sand and clay, dry, no odor, possible mixture of UST pit fill and native material	0		50/6"
GC		SANDY GRAVEL - Brown/red, mostly angular to subangular gravel up to 3cm w/ F-C sand and clay, moist, no odor, more clay than above	0		50/6"
GC		SANDY GRAVEL - Brown/red, mostly angular gravel up to 3cm w/ F-C sand and clay, dry, no odor,	0		50/6"
GC		SANDY GRAVEL - Brown/red, mostly angular to subangular gravel up to 4cm w/ F-C sand and clay, dry, no odor, more clay than above	0		50/6"
		SANDY GRAVEL - Brown/red, mostly angular to subangular gravel w/ F-C sand and clay, dry, no odor, gravel larger than above	0		50/6"
CL		SANDY CLAY - Brown, clay matrix w/ silt and VF sand, no gravel, slightly moist, slight odor	1140	EW-2 @ 35' TPHg 2.0 mg/kg Benzene 0.0052 mg/kg	13/8/9
CL		SANDY CLAY - Brown/gray, clay matrix w/ silt and VF sand, no gravel, moist, low to moderate plasticity, mild odor	900	EW-2 @ 40' TPHg 1800 mg/kg Benzene 2.0 mg/kg	10/10/12
CL		SANDY CLAY - Brown/gray, clay matrix w/ silt and VF sand, no gravel, moist, low to moderate plasticity, mild odor	190		8/8/13
SP		GRAVELLY SAND - Gray, F-C sand mostly M, subangular to angular gravel up to 1 cm, interbedded layers of coarse gravelly sand and fine well graded sand, wet, moderate odor	810		23/50-6"
CL		SANDY CLAY - Gray, clay matrix w/ silt and VF sand, wet, modearte odor	90		9/12/23
CL		SANDY CLAY - Reddish brown/gray, clay matrix w/ silt and VF-M sand, wet, modearte odor	44	EW-2 @ 60' TPHg ND<0.2 mg/kg Benzene ND<0.005 mg/kg	10/12/13

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ATTACHMENT D

Laboratory Analytical Report

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 02/12/2015

Project Manager

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Client Project:	1262.2
BCL Project:	Soil Samples
BCL Work Order:	1502245
Invoice ID:	B195536

Enclosed are the results of analyses for samples received by the laboratory on 1/28/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

Table of Contents

Chain of Custody and Cooler Receipt Form for 1502245 Page 1 of 2

GROUND ZERO ANALYSIS, INC.
1172 Kansas Avenue
Modesto, CA
(209) 522-4119 Fax 522-4227
E-mail: gza@groundzeroanalysis.com

Chain of Custody

Page 1 of 1

15-62245

Billing To: Ground Zero Analysis, Inc.

Project #: 1262.2
Project Name: Sullins
Site Address: 187 N. L Street, Livermore, CA
Global ID No.: N/A
EDF Report: ☐ Yes ☒ No
Client: Ground Zero Analysis, Inc.
Ref Attn: Ground Zero Analysis, Inc.
Client Address: 1172 Kansas Avenue
Type of Event: GWM Sys Monitoring Drilling Other
City, State, Zip: Modesto, CA 95351
Client Email: gza@groundzeroanalysis.com
Client Phone: (209) 522-4119
Client Fax: (209) 522-4227
Sampling Info: Sampled By (initials): AD , GZA

Date	Time	EDF Field ID	Sample I.D./Description / Location	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	TPH-G, BTEX, MTBE 8260
1-26-15	1455	-1	MW-10 @ 50'	1	S	none	X
1-26-15	1440	-2	MW-10 @ 40'				
1-26-15	152	-3	MW-10 @ 65'				
1-27-15	0910	-4	MW-9 @ 35'				
1-27-15	0915	-5	MW-9 @ 40'				
1-27-15	0945	-6	MW-9 @ 65'				
1-26-15	1025	-7	EW-2 @ 35'				
1-26-15	1040	-8	EW-2 @ 40'				
1-26-15	1100	-9	EW-2 @ 60'				

Analysis Requested

Laboratory: BC LABS
Purchase Order #
Turnaround Time: (5) Standard 1 day 2 day 3 day 5 day
Email Lab Report (.pdf): ☒ Yes ☐ No
Email EDF Lab Report (.zip): ☐ Yes ☐ No
Mail Lab Report: ☐ Yes ☐ No

Special Instructions / Remarks

CHK BY
DISTRIBUTION
SUB-OUT

Relinquished / Relinquished by:	Signature	Print Name	Company	Date:	Time:
		Andrew Doan	Ground Zero	1.28.15	1222
Received / Relinquished by:		Ross Dickey	BC Labs	1.28.15	1227
Received / Relinquished by:		Ross Dickey	BC Labs	1.28.15	1610

REL (Ross) 1-28-15 Please Return cooler / Ice chest to Ground Zero Analysis, Inc.
REC Tony Bogan 1-28-15 1610
REL. Tony Bogan 1-28-15 1830 REC. (BCL)
REL (BCL) 1-28-15 2110
REC (BCL) 1-29-15 0815 2110

Rev. 3/2014

Chain of Custody and Cooler Receipt Form for 1502245 Page 2 of 2

BC LABORATORIES INC. **COOLER RECEIPT FORM** Rev. No. 18 09/04/14 Page 1 Of 1

Submission #: 15-02245

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 208 Date/Time 4/28/15 2236

Temperature: (A) 1.6 °C / (C) 1.4 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
TMART KIT										
Summa Canister										

Comments:

Sample Numbering Completed By: _____ Date/Time: 1/29/15 0950 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]

A = Actual / C = Corrected

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1502245-01	COC Number:	---	Receive Date:	01/28/2015 22:20
	Project Number:	---	Sampling Date:	01/26/2015 14:55
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	MW-10@50'	Lab Matrix:	Solids
	Sampled By:	Andrew Dorn	Sample Type:	Soil
1502245-02	COC Number:	---	Receive Date:	01/28/2015 22:20
	Project Number:	---	Sampling Date:	01/26/2015 14:40
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	MW-10@40'	Lab Matrix:	Solids
	Sampled By:	Andrew Dorn	Sample Type:	Soil
1502245-03	COC Number:	---	Receive Date:	01/28/2015 22:20
	Project Number:	---	Sampling Date:	01/26/2015 15:20
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	MW-10@65'	Lab Matrix:	Solids
	Sampled By:	Andrew Dorn	Sample Type:	Soil
1502245-04	COC Number:	---	Receive Date:	01/28/2015 22:20
	Project Number:	---	Sampling Date:	01/27/2015 09:10
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	MW-9@35'	Lab Matrix:	Solids
	Sampled By:	Andrew Dorn	Sample Type:	Soil
1502245-05	COC Number:	---	Receive Date:	01/28/2015 22:20
	Project Number:	---	Sampling Date:	01/27/2015 09:15
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	MW-9@40'	Lab Matrix:	Solids
	Sampled By:	Andrew Dorn	Sample Type:	Soil
1502245-06	COC Number:	---	Receive Date:	01/28/2015 22:20
	Project Number:	---	Sampling Date:	01/27/2015 09:45
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	MW-9@65'	Lab Matrix:	Solids
	Sampled By:	Andrew Dorn	Sample Type:	Soil
1502245-07	COC Number:	---	Receive Date:	01/28/2015 22:20
	Project Number:	---	Sampling Date:	01/26/2015 10:25
	Sampling Location:	---	Sample Depth:	---
	Sampling Point:	EW-2@35'	Lab Matrix:	Solids
	Sampled By:	Andrew Dorn	Sample Type:	Soil

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1502245-08	**COC Number:**	---	**Receive Date:**	01/28/2015 22:20
	Project Number:	---	**Sampling Date:**	01/26/2015 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EW-2@40'	**Lab Matrix:**	Solids
	Sampled By:	Andrew Dorn	**Sample Type:**	Soil
1502245-09	**COC Number:**	---	**Receive Date:**	01/28/2015 22:20
	Project Number:	---	**Sampling Date:**	01/26/2015 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EW-2@60'	**Lab Matrix:**	Solids
	Sampled By:	Andrew Dorn	**Sample Type:**	Soil

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-01 | **Client Sample Name:** MW-10@50', 1/26/2015 2:55:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	114	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	105	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/30/15	02/04/15 21:58	ADC	MS-V2	1	BYB0002

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-02 | **Client Sample Name:** MW-10@40', 1/26/2015 2:40:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	106	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/04/15	02/07/15 02:52	XDC	MS-V3	1	BYB0348

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-03 | **Client Sample Name:** MW-10@65', 1/26/2015 3:20:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.010	0.0026	EPA-8260B	ND	A01,S05	1
Ethylbenzene	**0.0089**	**mg/kg**	**0.010**	**0.0030**	**EPA-8260B**	ND	**J,A01,S05**	1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND	S08,Z1	2
Toluene	**0.020**	**mg/kg**	**0.010**	**0.0024**	**EPA-8260B**	ND	**A01,S05**	1
Total Xylenes	**0.11**	**mg/kg**	**0.020**	**0.0068**	**EPA-8260B**	ND	**A01,S05**	1
p- & m-Xylenes	**0.093**	**mg/kg**	**0.010**	**0.0044**	**EPA-8260B**	ND	**A01,S05**	1
o-Xylene	**0.014**	**mg/kg**	**0.010**	**0.0024**	**EPA-8260B**	ND	**A01,S05**	1
Total Purgeable Petroleum Hydrocarbons	**0.71**	**mg/kg**	**0.40**	**0.040**	**Luft-GC/MS**	ND	**A01,S05**	1
1,2-Dichloroethane-d4 (Surrogate)	89.1	%	70 - 121 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	100	%	70 - 121 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.3	%	81 - 117 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	106	%	74 - 121 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	112	%	74 - 121 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/04/15	02/10/15 23:38	XDC	MS-V3	2	BYB0348
2	EPA-8260B	02/04/15	02/06/15 12:40	XDC	MS-V3	1	BYB0348

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-04 | **Client Sample Name:** MW-9@35', 1/27/2015 9:10:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**0.056**	**mg/kg**	**0.0050**	**0.0013**	**EPA-8260B**	ND		1
Ethylbenzene	**0.026**	**mg/kg**	**0.0050**	**0.0015**	**EPA-8260B**	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	**0.043**	**mg/kg**	**0.010**	**0.0034**	**EPA-8260B**	ND		1
p- & m-Xylenes	**0.042**	**mg/kg**	**0.0050**	**0.0022**	**EPA-8260B**	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.42**	**mg/kg**	**0.20**	**0.020**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	111	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/04/15	02/05/15 15:32	XDC	MS-V3	1	BYB0348

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-05 | **Client Sample Name:** MW-9@40', 1/27/2015 9:15:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**0.32**	**mg/kg**	**0.12**	**0.032**	**EPA-8260B**	ND	**A01,S05**	1
Ethylbenzene	**0.29**	**mg/kg**	**0.12**	**0.038**	**EPA-8260B**	ND	**A01,S05**	1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND	S08,Z1	2
Toluene	**0.084**	**mg/kg**	**0.12**	**0.030**	**EPA-8260B**	ND	**J,A01,S05**	1
Total Xylenes	**1.2**	**mg/kg**	**0.25**	**0.085**	**EPA-8260B**	ND	**A01,S05**	1
p- & m-Xylenes	**1.1**	**mg/kg**	**0.12**	**0.055**	**EPA-8260B**	ND	**A01,S05**	1
o-Xylene	**0.11**	**mg/kg**	**0.12**	**0.030**	**EPA-8260B**	ND	**J,A01,S05**	1
Total Purgeable Petroleum Hydrocarbons	**32**	**mg/kg**	**5.0**	**0.50**	**Luft-GC/MS**	ND	**A01,S05**	1
1,2-Dichloroethane-d4 (Surrogate)	92.3	%	70 - 121 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	93.8	%	70 - 121 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	110	%	81 - 117 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	105	%	74 - 121 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	114	%	74 - 121 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/04/15	02/11/15 12:05	XDC	MS-V3	25	BYB0348
2	EPA-8260B	02/04/15	02/05/15 15:54	XDC	MS-V3	1	BYB0348

Ground Zero Analysis, Inc.
1172 Kansas Avenue
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Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-06 | **Client Sample Name:** MW-9@65', 1/27/2015 9:45:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**0.17**	**mg/kg**	**0.0050**	**0.0013**	**EPA-8260B**	ND		1
Ethylbenzene	**0.38**	**mg/kg**	**0.0050**	**0.0015**	**EPA-8260B**	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Toluene	**0.29**	**mg/kg**	**0.0050**	**0.0012**	**EPA-8260B**	ND		1
Total Xylenes	**1.3**	**mg/kg**	**0.010**	**0.0034**	**EPA-8260B**	ND		1
p- & m-Xylenes	**0.93**	**mg/kg**	**0.0050**	**0.0022**	**EPA-8260B**	ND		1
o-Xylene	**0.40**	**mg/kg**	**0.0050**	**0.0012**	**EPA-8260B**	ND		1
Total Purgeable Petroleum Hydrocarbons	**26**	**mg/kg**	**5.0**	**0.50**	**Luft-GC/MS**	ND	**A01,S05**	2
1,2-Dichloroethane-d4 (Surrogate)	115	%	70 - 121 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	91.9	%	70 - 121 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	118	%	81 - 117 (LCL - UCL)		EPA-8260B		A19,S09	1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	129	%	74 - 121 (LCL - UCL)		EPA-8260B		A19,S09	1
4-Bromofluorobenzene (Surrogate)	106	%	74 - 121 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/30/15	02/04/15 23:49	ADC	MS-V2	1	BYB0002
2	EPA-8260B	01/30/15	02/11/15 13:34	XDC	MS-V3	25	BYB0568

Ground Zero Analysis, Inc.
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Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-07 | **Client Sample Name:** EW-2@35', 1/26/2015 10:25:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**0.0052**	**mg/kg**	**0.0050**	**0.0013**	**EPA-8260B**	ND		1
Ethylbenzene	**0.026**	**mg/kg**	**0.0050**	**0.0015**	**EPA-8260B**	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Toluene	**0.0069**	**mg/kg**	**0.0050**	**0.0012**	**EPA-8260B**	ND		1
Total Xylenes	**0.20**	**mg/kg**	**0.010**	**0.0034**	**EPA-8260B**	ND		1
p- & m-Xylenes	**0.15**	**mg/kg**	**0.0050**	**0.0022**	**EPA-8260B**	ND		1
o-Xylene	**0.043**	**mg/kg**	**0.0050**	**0.0012**	**EPA-8260B**	ND		1
Total Purgeable Petroleum Hydrocarbons	**2.0**	**mg/kg**	**0.20**	**0.020**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	112	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/30/15	02/05/15 00:11	ADC	MS-V2	1	BYB0002

Ground Zero Analysis, Inc.
1172 Kansas Avenue
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Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-08 | **Client Sample Name:** EW-2@40', 1/26/2015 10:40:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**2.0**	**mg/kg**	**0.12**	**0.032**	**EPA-8260B**	ND	**A01,S05**	1
Ethylbenzene	**16**	**mg/kg**	**1.0**	**0.30**	**EPA-8260B**	ND	**A01,S05**	2
Methyl t-butyl ether	ND	mg/kg	0.12	0.012	EPA-8260B	ND	A01,S05	1
Toluene	**2.9**	**mg/kg**	**0.12**	**0.030**	**EPA-8260B**	ND	**A01,S05**	1
Total Xylenes	**72**	**mg/kg**	**2.0**	**0.68**	**EPA-8260B**	ND	**A01,S05**	2
p- & m-Xylenes	**56**	**mg/kg**	**1.0**	**0.44**	**EPA-8260B**	ND	**A01,S05**	2
o-Xylene	**15**	**mg/kg**	**1.0**	**0.24**	**EPA-8260B**	ND	**A01,S05**	2
Total Purgeable Petroleum Hydrocarbons	**1800**	**mg/kg**	**500**	**50**	**Luft-GC/MS**	ND	**A01,S05**	3
1,2-Dichloroethane-d4 (Surrogate)	72.8	%	70 - 121 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	84.7	%	70 - 121 (LCL - UCL)		EPA-8260B			2
1,2-Dichloroethane-d4 (Surrogate)	92.5	%	70 - 121 (LCL - UCL)		EPA-8260B			3
Toluene-d8 (Surrogate)	120	%	81 - 117 (LCL - UCL)		EPA-8260B		A19,S09	1
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	97.7	%	81 - 117 (LCL - UCL)		EPA-8260B			3
4-Bromofluorobenzene (Surrogate)	114	%	74 - 121 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	109	%	74 - 121 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	106	%	74 - 121 (LCL - UCL)		EPA-8260B			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	02/04/15	02/10/15 16:22	XDC	MS-V3	25	BYB0348
2	EPA-8260B	02/04/15	02/10/15 16:57	XDC	MS-V3	200	BYB0348
3	EPA-8260B	02/04/15	02/10/15 17:20	XDC	MS-V3	2500	BYB0348

Ground Zero Analysis, Inc.
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Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1502245-09 | **Client Sample Name:** EW-2@60', 1/26/2015 11:00:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	01/30/15	02/05/15 00:33	ADC	MS-V2	1	BYB0002

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYB0002						
Benzene	BYB0002-BLK1	ND	mg/kg	0.0050	0.0013	
Ethylbenzene	BYB0002-BLK1	ND	mg/kg	0.0050	0.0015	
Methyl t-butyl ether	BYB0002-BLK1	ND	mg/kg	0.0050	0.00050	
Toluene	BYB0002-BLK1	ND	mg/kg	0.0050	0.0012	
Total Xylenes	BYB0002-BLK1	ND	mg/kg	0.010	0.0034	
p- & m-Xylenes	BYB0002-BLK1	ND	mg/kg	0.0050	0.0022	
o-Xylene	BYB0002-BLK1	ND	mg/kg	0.0050	0.0012	
Total Purgeable Petroleum Hydrocarbons	BYB0002-BLK1	ND	mg/kg	0.20	0.020	
1,2-Dichloroethane-d4 (Surrogate)	**BYB0002-BLK1**	**110**	%	**70 - 121 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYB0002-BLK1**	**99.0**	%	**81 - 117 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYB0002-BLK1**	**103**	%	**74 - 121 (LCL - UCL)**		
QC Batch ID: BYB0348						
Benzene	BYB0348-BLK1	ND	mg/kg	0.0050	0.0013	
Ethylbenzene	BYB0348-BLK1	ND	mg/kg	0.0050	0.0015	
Methyl t-butyl ether	BYB0348-BLK1	ND	mg/kg	0.0050	0.00050	
Toluene	BYB0348-BLK1	ND	mg/kg	0.0050	0.0012	
Total Xylenes	BYB0348-BLK1	ND	mg/kg	0.010	0.0034	
p- & m-Xylenes	BYB0348-BLK1	ND	mg/kg	0.0050	0.0022	
o-Xylene	BYB0348-BLK1	ND	mg/kg	0.0050	0.0012	
Total Purgeable Petroleum Hydrocarbons	BYB0348-BLK1	ND	mg/kg	0.20	0.020	
1,2-Dichloroethane-d4 (Surrogate)	**BYB0348-BLK1**	**113**	%	**70 - 121 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYB0348-BLK1**	**101**	%	**81 - 117 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYB0348-BLK1**	**110**	%	**74 - 121 (LCL - UCL)**		
QC Batch ID: BYB0568						
Total Purgeable Petroleum Hydrocarbons	BYB0568-BLK1	ND	mg/kg	0.20	0.020	
1,2-Dichloroethane-d4 (Surrogate)	**BYB0568-BLK1**	**86.6**	%	**70 - 121 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYB0568-BLK1**	**98.8**	%	**81 - 117 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYB0568-BLK1**	**101**	%	**74 - 121 (LCL - UCL)**		

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Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYB0002										
Benzene	BYB0002-BS1	LCS	0.13507	0.12500	mg/kg	108		70 - 130		
Toluene	BYB0002-BS1	LCS	0.13047	0.12500	mg/kg	104		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYB0002-BS1	LCS	0.054220	0.050000	mg/kg	108		70 - 121		
Toluene-d8 (Surrogate)	BYB0002-BS1	LCS	0.050710	0.050000	mg/kg	101		81 - 117		
4-Bromofluorobenzene (Surrogate)	BYB0002-BS1	LCS	0.053800	0.050000	mg/kg	108		74 - 121		
QC Batch ID: BYB0348										
Benzene	BYB0348-BS1	LCS	0.11261	0.12500	mg/kg	90.1		70 - 130		
Toluene	BYB0348-BS1	LCS	0.11117	0.12500	mg/kg	88.9		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYB0348-BS1	LCS	0.050740	0.050000	mg/kg	101		70 - 121		
Toluene-d8 (Surrogate)	BYB0348-BS1	LCS	0.049570	0.050000	mg/kg	99.1		81 - 117		
4-Bromofluorobenzene (Surrogate)	BYB0348-BS1	LCS	0.052020	0.050000	mg/kg	104		74 - 121		
QC Batch ID: BYB0568										
1,2-Dichloroethane-d4 (Surrogate)	BYB0568-BS1	LCS	0.047410	0.050000	mg/kg	94.8		70 - 121		
Toluene-d8 (Surrogate)	BYB0568-BS1	LCS	0.050360	0.050000	mg/kg	101		81 - 117		
4-Bromofluorobenzene (Surrogate)	BYB0568-BS1	LCS	0.051070	0.050000	mg/kg	102		74 - 121		

Ground Zero Analysis, Inc.
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Reported: 02/12/2015 9:42
Project: Soil Samples
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYB0002	Used client sample: N										
Benzene	MS	1502150-03	ND	0.13504	0.12500	mg/kg		108		70 - 130	
	MSD	1502150-03	ND	0.13691	0.12500	mg/kg	1.4	110	20	70 - 130	
Toluene	MS	1502150-03	ND	0.12895	0.12500	mg/kg		103		70 - 130	
	MSD	1502150-03	ND	0.13140	0.12500	mg/kg	1.9	105	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1502150-03	ND	0.053640	0.050000	mg/kg		107		70 - 121	
	MSD	1502150-03	ND	0.054960	0.050000	mg/kg	2.4	110		70 - 121	
Toluene-d8 (Surrogate)	MS	1502150-03	ND	0.049650	0.050000	mg/kg		99.3		81 - 117	
	MSD	1502150-03	ND	0.050030	0.050000	mg/kg	0.8	100		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1502150-03	ND	0.053610	0.050000	mg/kg		107		74 - 121	
	MSD	1502150-03	ND	0.051890	0.050000	mg/kg	3.3	104		74 - 121	
QC Batch ID: BYB0348	Used client sample: N										
Benzene	MS	1502150-05	ND	0.11111	0.12500	mg/kg		88.9		70 - 130	
	MSD	1502150-05	ND	0.11716	0.12500	mg/kg	5.3	93.7	20	70 - 130	
Toluene	MS	1502150-05	ND	0.11026	0.12500	mg/kg		88.2		70 - 130	
	MSD	1502150-05	ND	0.11305	0.12500	mg/kg	2.5	90.4	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1502150-05	ND	0.051830	0.050000	mg/kg		104		70 - 121	
	MSD	1502150-05	ND	0.053360	0.050000	mg/kg	2.9	107		70 - 121	
Toluene-d8 (Surrogate)	MS	1502150-05	ND	0.049340	0.050000	mg/kg		98.7		81 - 117	
	MSD	1502150-05	ND	0.050120	0.050000	mg/kg	1.6	100		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1502150-05	ND	0.052230	0.050000	mg/kg		104		74 - 121	
	MSD	1502150-05	ND	0.051340	0.050000	mg/kg	1.7	103		74 - 121	
QC Batch ID: BYB0568	Used client sample: N										
1,2-Dichloroethane-d4 (Surrogate)	MS	1502150-08	ND	0.049040	0.050000	mg/kg		98.1		70 - 121	
	MSD	1502150-08	ND	0.047550	0.050000	mg/kg	3.1	95.1		70 - 121	
Toluene-d8 (Surrogate)	MS	1502150-08	ND	0.049950	0.050000	mg/kg		99.9		81 - 117	
	MSD	1502150-08	ND	0.050450	0.050000	mg/kg	1.0	101		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1502150-08	ND	0.051280	0.050000	mg/kg		103		74 - 121	
	MSD	1502150-08	ND	0.052130	0.050000	mg/kg	1.6	104		74 - 121	

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported:	02/12/2015 9:42
Project:	Soil Samples
Project Number:	1262.2
Project Manager:	Project Manager

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A19	Surrogate is high due to matrix interference. Interferences verified through second extraction/analysis.
S05	The sample holding time was exceeded.
S08	The internal standard on the sample was not within the control limits.
S09	The surrogate recovery on the sample for this compound was not within the control limits.
Z1	Sample was analysed twice at 5.0G and both times it had low internal standards .