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San Jose, CA 95138
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July 13, 2009

RECEIVED

1:44 pm, Jul 16, 2009

Alameda County
Environmental Health

Steven Plunkett
Alameda County Health Care Services ("County")
1131 Harbor Bay Parkway, Suite 250
Alameda County, CA 94502-6577

LUFT Site: 900 Central Ave, Alameda (Site)
Re: Report Submittal – *Second Quarter 2009 Groundwater-Monitoring Results*, June 30, 2009. Request for approval to suspend further quarterly groundwater monitoring until recently proposed corrective actions are implemented

Dear Mr. Plunkett:

On behalf of the parties contributing to the 900 Central Avenue Corrective Action Account, please find enclosed herewith a copy of the above-reference technical report prepared by RRM, Inc., Santa Cruz, CA (RRM).

On behalf of the parties participating in site-remediation efforts, I declare under penalty of perjury that the information contained in the enclosed document is true and correct to the best of my knowledge.

The report covers the groundwater-monitoring event RRM conducted on June 9, 2009 during which they sounded, purged and sampled six monitoring wells and one recovery well. The groundwater-monitoring work was conducted pursuant to the directives set forth in County correspondence dated July 12, 2006 and January 9, 2007.

We have just recently submitted RRM's Corrective Action Plan for the site which calls for conducting remedial excavation work in the late third quarter or early fourth quarter 2009. In view of this proposed work and recent SWRCB resolution 2009-0042, RRM is recommending suspending routine quarterly monitoring until the remedial excavation work is completed. RRM is proposing to initiate follow-up groundwater monitoring in the aftermath of the remedial excavation work.

We are in the process of making all the associated Geotracker and FTP uploads that are due in connection with this report.

Thank you for your ongoing courtesy and cooperation.

Sincerely:

Brian T. Kelleher

Court consultant/project coordinator

Cc with enclosure: Kim Dincel, Esq., Hines, Smith et al, counsel for Pearce Parties; Gail Ward, Senior Claims Specialist, Safeco, for Thompson Parties; Joe Ryan, Esq., Ryan & Lifter, counsel for Thompson Parties; Laurie Sherwood, Esq., Walsworth & Franklin et al counsel for Peterson Parties; Edward Martins, Esq., counsel for Ann Marie Holland and Estate of John Holland Sr.; Hal Reiland, counsel for Barbara Holland; Jack Holland Jr., c/o Mulholland Bros; cc cover letter only, Matt Kaempf, RRM



June 30, 2009
RRM Project # KCE514

900 Central Avenue Corrective Action Account
c/o Mr. Brian Kelleher
Kelleher & Associates
5655 Silver Creek Valley Road PMB 281
San Jose, CA 95138

Re: **Second Quarter 2009 Groundwater Monitoring Results**
900 Central Avenue
Alameda, CA

Dear Mr. Kelleher:

This report, prepared by RRM, Inc. (RRM), presents the results of the second quarter 2009 groundwater monitoring event conducted on June 9, 2009, at the referenced site (Figure 1). Well specifications are summarized in Table 1 and groundwater elevation and analytical data are summarized in Table 2. An extended site plan with utility locations is shown on Figure 2, a groundwater elevation contour map is shown on Figure 3, a gasoline range total petroleum hydrocarbon (TPHg) isoconcentration map is shown on Figure 4, and a benzene isoconcentration map is shown on Figure 5. Previous remedial investigation work is summarized in Attachment A; field and analytical procedures are presented in Attachment B; and certified analytical reports, chain-of-custody, and field data sheets are presented in Attachment C.

SITE BACKGROUND

Site Description and History – The site is located on the southeast corner of Central Avenue and Ninth Street in Alameda, CA. In September 1975, the site operated as a Holland Oil Company retail gasoline station that consisted of a garage at the southwest corner, a pump island canopy in the northeast quadrant, three 550-gallon underground storage tanks (USTs) located beneath the sidewalk on Ninth Street, and a reported waste oil tank. According to Alameda Fire Department records, the original permit for the tanks was issued in 1931 to Mohawk Oil Company. A 1973 business directory lists the operator as EZ Pickings Gas and a 1975 directory as Holland Service Station No. 1. The tanks were removed by Holland Oil Company Inc., in September 1975.

In 1976 the property was sold to the Peterson family. In 1978, the Petersons sold the property to Gary Thompson dba Oak Construction. In October 1978 Oak Construction razed the gas station structures and constructed a residential duplex. The current owners, Karen and Gary Pearce, purchased the property in May 1985. The identification of subsurface contamination in 1994 instigated a lawsuit between the past and present owners. Due to the complexity of the lawsuit, William Nagle was appointed as Special Master in 1996 to help resolve the case. In 2003, Brian Kelleher of Kelleher &

Associates in San Jose, CA was appointed on behalf of the litigating parties to coordinate remedial response actions and associated cost recovery work.

The site is located three blocks east of downtown Alameda and approximately 3,000 feet northeast of Robert Crown Memorial State Beach and San Francisco Bay. The site is on gently sloping terrain approximately 25 feet above mean sea level. There is a man-made lagoon system approximately 1,000 feet south of the site.

The property is located in a mixed residential/commercial area. At the southwest corner of Central Avenue and Ninth Street, was a former church that has since been converted to a movie theater. The property to the northwest (841 Central Avenue) is reportedly the location of a former gas station that operated from approximately 1947 to 1969. Both former gas station properties and the remainder of the surrounding properties are currently residential.

Site Geology and Hydrogeology - Based on interpretation of historical boring logs, the site is underlain by sandy fill to a depth of approximately 3.5 feet. Fine sandy silt and poorly graded sand was encountered beneath the fill to approximately 26 feet below ground surface (bgs), the maximum depth explored. Groundwater was encountered in the borings between 12 and 13 feet bgs. From the initial two years of quarterly groundwater monitoring, depth to water seasonally ranged from 6 to 13 feet bgs and flow was toward the southwest (*Lowney, "Soil and Groundwater Quality Reconnaissance" July 20, 1994; and Allwest, "Subsurface Investigation Report," August 5, 1997, and quarterly monitoring reports for 1999 and 2002*).

CURRENT GROUNDWATER MONITORING RESULTS

Groundwater Elevation, Flow Direction and Gradient

Groundwater elevations at monitoring wells MW-1 through MW-6 and RW-1 were calculated from depth to water data (Table 2). Groundwater elevations ranged from 17.33 feet above mean sea level (MSL) at well MW-4 to 18.23 feet above MSL at well MW-2. The groundwater flow direction is toward the west at a gradient of approximately of 0.01 foot/foot. Seasonal fluctuations in the shallow water table are typical at the site, and the groundwater elevation has decreased over three feet since the first quarter 2009 monitoring event. A groundwater elevation contour for the June 9, 2009 event is shown on Figure 3.

Groundwater Analytical Data

Analytical data for groundwater samples collected from monitoring wells MW-1 through MW-6, and RW-1 are summarized in Table 2; isoconcentration maps for TPHg and benzene are shown on Figures 4 and 5, respectively. TPHg was detected in wells MW-1 and RW-1 at concentrations of 62,000 parts per billion (ppb) and 43,000 ppb, respectively. Benzene was only detected in Well MW-1 at a concentration of 2,900 ppb. Analysis for MtBE and other fuel oxygenates has been discontinued, as these compounds have not been detected in groundwater at the site. Certified analytical reports and chain-of-custody documentation are presented in Attachment C.

CONCLUSIONS

- Groundwater sample analytical data show that dissolved petroleum hydrocarbons extend from the former UST area to the southwest beneath Ninth Street. Dissolved petroleum hydrocarbons have been defined to low and/or non-detect levels by well MW-2 to the east (upgradient), by well MW-3 to the south (cross-gradient), and by wells MW-4 through 6 to the southwest (downgradient).
- Due to the heavy traffic along Central Avenue, it is considered impractical to install a monitoring well in the roadway to define dissolved petroleum hydrocarbons to the north (cross-gradient).
- As fuel oxygenates have not been detected in soil or groundwater at the site, the subsurface release likely occurred prior to the 1980s.
- The current and historic shallow groundwater flow direction is west to southwest when using the most recent well elevation survey data in conjunction with historic groundwater depth readings.
- Petroleum hydrocarbons in soil and groundwater have been adequately defined and characterized.
- Dissolved TPHg concentrations in wells RW-1 and MW-1 indicate the presence of residual contamination in the vicinity of the former USTs; these concentrations will likely continue to affect groundwater quality. In addition, the TPHg and/or benzene concentrations at these wells exceed current San Francisco Bay Region RWQCBs Environmental Screening Levels for the vapor intrusion/indoor air pathway for residential land use.

RECOMMENDATIONS

RRM provided recommendations for remedial action feasibility testing at the site in the *Response to Technical Comments* letter dated January 21, 2009. However, based on additional review of site conditions and discussions with site stakeholders, RRM has prepared a Corrective Action Plan (CAP) for the site dated June 30, 2009 that fully responds to concerns the County raised in its January 21, 2009 correspondence.

In the CAP, the recommended corrective action alternative is remedial excavation. Pending County approval of the CAP, RRM anticipates conducting the proposed remedial excavation work in the late third quarter or early fourth quarter 2009 during dry weather and low water table conditions.

As a cost-saving measure that is consistent with recently issued State Water Resources Control Board Resolution No. 2009-0042 # 3, RRM recommends suspension of the quarterly groundwater monitoring program pending completion of the proposed remedial excavation work. Follow-up quarterly groundwater monitoring will resume once the work is completed, presumably during the fourth quarter..

Should you have any questions regarding the contents of this report, please call RRM at (831) 475-8141.

Sincerely,

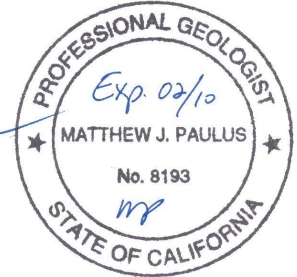
RRM, Inc.

Handwritten signature of Matt Kaempf in blue ink, followed by the word "for:".

Matt Kaempf
Project Manager

Handwritten signature of Matthew J. Paulus in blue ink.

Matthew J. Paulus
Senior Geologist
PG 8193



Attachments: Table 1 – Well Specifications
Table 2 – Groundwater Elevation and Analytical Data

Figure 1 – Site Location Map
Figure 2 – Extended Site Map
Figure 3 – Groundwater Elevation Contour Map, June 9, 2009
Figure 4 – TPHg Isoconcentration Map, June 9, 2009
Figure 5 – Benzene Isoconcentration Map, June 9, 2009

Attachment A – Summary of Prior Investigation Work
Attachment B – Field and Analytical Procedures
Attachment C – Certified Analytical Reports, Chain-of-Custody Documentation, and
Field Data Sheets

Table 1
Well Specifications

900 Central Avenue
Alameda, California

Well	Total Depth (feet, bgs)	Casing Diameter (inch)	Screened Interval (feet, bgs)	Screen Length (feet)
MW-1	18	2	6 - 18	12
MW-2	19.5	2	6 - 19.5	13.5
MW-3	18	2	6 - 18	12
MW-4	18	2	6 - 18	12
MW-5	18	2	6 - 18	12
MW-6	18	2	6 - 18	12
RW-1	20	4	5 - 20	15

Notes:

bgs = below ground surface

Table 2
Groundwater Elevation and Analytical Data

900 Central Avenue
Alameda, California

Sample ID	Date Gauged & Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Total Xylenes (ppb)	MtBE (ppb)	TPHd (ppb)	TPHmo (ppb)	Notes
Monitoring Wells													
MW-1	11/27/98	25.17	11.77	13.40	360	5.8	5.5	9.2	40	<5.0	<50	<500	
	03/12/99		6.59	18.58	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	06/01/99		8.71	16.46	930	<0.50	19	52	230	<5.0	540	<500	
	09/03/99		11.79	13.38	14,000	300	1,900	890	5,600	<5.0	2,100	<500	
	03/29/02		8.32	16.85	<50	<0.50	<0.50	<0.50	<0.50	<0.50	61	<610	
	07/15/02		11.39	13.78	39,000	1,700	2,900	1,800	7,800	<10	4,200	<5000	
	10/03/02		12.88	12.29	42,000	2,600	3,300	1,800	10,000	<500	8,400	<2500	
	02/05/07		10.40	14.77	26,000	2,550	2,010	1,140	4,870	<0.5	NA	NA	1
	05/04/07		9.77	15.40	28,000	2,080	1,820	739	5,500	NA	NA	NA	1
	08/23/07	28.27	12.23	16.04	56,700	2,570	2,370	1,120	9,560	<11	NA	NA	1,3
	11/28/07		12.94	15.33	51,700	3,160	3,270	1,050	9,250	<11.0	NA	NA	1,3
	02/28/08		8.10	20.17	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	4
	06/03/08		11.40	16.87	11,000	1,060	2,080	784	4,370	NA	NA	NA	1,5
	09/04/08		13.23	15.04	66,000	4,000	5,410	62.0	11,700	NA	NA	NA	1
	11/06/08		13.76	14.51	100,000	2,870	5,160	1,720	13,800	NA	NA	NA	
	02/09/09		13.76	14.51	73,000	3,190	4,250	2,410	16,800	NA	NA	NA	7
	05/07/09		10.40	17.87	62,000	2,900	6,300	2,700	16,000	NA	NA	NA	
MW-2	11/27/98	25.12	11.76	13.41	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	03/12/99		6.53	18.64	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	06/01/99		8.56	16.61	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	09/03/99		11.60	13.57	<50	<0.50	<0.50	<0.50	1.8	<5.0	<50	<500	
	03/29/02		8.10	17.07	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	07/15/02		10.92	14.25	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	10/03/02		DRY	--	NS	NS	NS	NS	NS	NS	NS	NS	
	02/05/07		10.15	15.02	89	<0.5	<0.5	<0.5	<1.50	<0.5	NA	NA	1,2
	05/04/07		9.43	15.74	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	08/23/07	28.31	11.94	16.37	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	11/28/07		12.67	15.64	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	02/28/08		7.89	20.42	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	4
	06/03/08		11.07	17.24	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1

Table 2
Groundwater Elevation and Analytical Data

900 Central Avenue
Alameda, California

Sample ID	Date Gauged & Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Total Xylenes (ppb)	MtBE (ppb)	TPHd (ppb)	TPHmo (ppb)	Notes
MW-2	09/04/08		12.95	15.36	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
(cont.)	11/06/08		13.52	14.79	52	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	3
	02/09/09		13.50	14.81	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	7
	05/09/09		10.08	18.23	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	
MW-3	11/27/98	24.58	11.41	13.76	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	03/12/99		6.01	19.16	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	06/01/99		8.16	17.01	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	09/03/99		11.27	13.90	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	03/29/02		7.78	17.39	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<50	<500	
	07/15/02		10.82	14.35	<50	<0.50	<0.50	<0.50	<0.50	<0.50	110	<500	
	10/03/02		12.28	12.89	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<50	<500	
	02/05/07		9.85	15.32	<50	<0.5	<0.5	<0.5	<1.50	<0.5	NA	NA	1
	05/04/07		9.19	15.98	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	08/23/07	27.69	11.63	16.06	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	11/28/07		12.31	15.38	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	02/28/08		7.46	20.23	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	4
	06/03/08		10.82	16.87	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	09/04/08		12.62	15.07	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	11/06/08		13.20	14.49	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	
	02/09/09		13.21	14.48	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	7
	05/09/09		9.83	17.86	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	
MW-4	08/23/07	27.37	11.73	15.64	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	11/28/07		12.43	14.94	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	02/28/08		7.81	19.56	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	4
	06/03/08		10.99	16.38	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	09/04/08		12.68	14.69	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	11/06/08		13.25	14.12	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	
	02/09/09		13.30	14.07	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	7
	05/09/09		10.04	17.33	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	

Table 2
Groundwater Elevation and Analytical Data

900 Central Avenue
Alameda, California

Sample ID	Date Gauged & Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Total Xylenes (ppb)	MtBE (ppb)	TPHd (ppb)	TPHmo (ppb)	Notes
MW-5	08/23/07	27.25	11.56	15.69	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	11/28/07		12.29	14.96	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	02/28/08		7.55	19.70	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	4
	06/03/08		10.84	16.41	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	09/04/08		12.53	14.72	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	11/06/08		13.12	14.13	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	
	02/09/09		13.16	14.09	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	7
	05/09/09		9.89	17.36	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	
MW-6	08/23/07	27.24	11.52	15.72	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	11/28/07		12.24	15.00	<50	<0.500	<0.500	<0.500	<1.50	<0.500	NA	NA	1
	02/28/08		7.43	19.81	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	4
	06/03/08		10.81	16.43	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	09/04/08		12.51	14.73	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	11/06/08		13.10	14.14	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	
	02/09/09		13.14	14.10	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	7
	05/09/09		9.84	17.40	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	
RW-1	08/23/07	27.43	11.23	16.20	16,000	<4.40	38.9	571	2,660	<4.40	NA	NA	1,3
	11/28/07		11.97	15.46	24,400	4.75	110	915	3,980	<4.40	NA	NA	1,3
	02/28/08		7.22	20.21	10,100	<4.40	40.3	256	1,430	NA	NA	NA	1,3
	06/03/08		10.41	17.02	40,000	<4.40	120	1,100	8,810	NA	NA	NA	1, 5
	09/04/08		12.25	15.18	17,000	<4.40	41.1	640	3,290	NA	NA	NA	1, 5
	11/06/08		12.75	14.68	19,000	<4.40	28.1	369	2,340	NA	NA	NA	6
	02/09/09		12.77	14.66	20,000	<4.40	51.9	738	4,410	NA	NA	NA	7
	05/09/09		9.34	18.09	43,000	<11	200	2,100	10,000	NA	NA	NA	6
Grab Groundwater Samples													
EB-1	04/20/94	NA	NA	NA	76,000	2,200	8,800	2,500	1,600	NA	16,000*	<1,000	
EB-2	04/20/94	NA	NA	NA	<50	<0.5	<0.5	<0.5	<0.5	NA	<50	720	
EB-3	04/20/94	NA	NA	NA	<50	<0.5	<0.5	<0.5	<0.5	NA	<50	820	

Table 2
Groundwater Elevation and Analytical Data

900 Central Avenue
Alameda, California

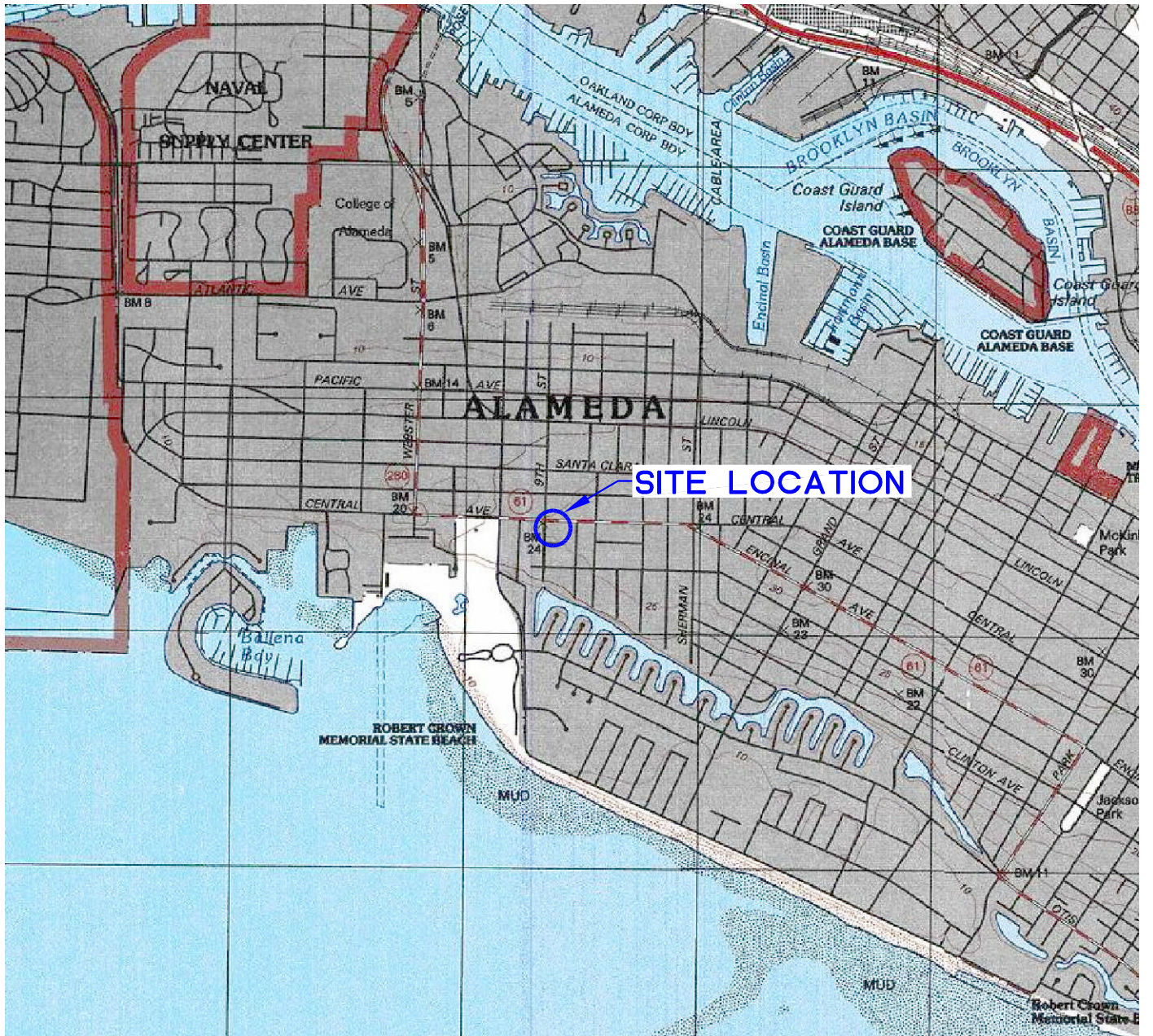
Sample ID	Date Gauged & Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Total Xylenes (ppb)	MtBE (ppb)	TPHd (ppb)	TPHmo (ppb)	Notes
P-1-W	06/30/97	NA	NA	NA	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
P-2-W	06/30/97	NA	NA	NA	290	2.4	2.1	1.4	3.1	NA	<100	<1,000	
P-3-W	06/30/97	NA	NA	NA	92,000	190	5,000	4,600	24,000	NA	<100	<1,000	
P-4-W	06/30/97	NA	NA	NA	17,000	610	720	940	3,800	NA	<100	<1,000	
P-5-W	06/30/97	NA	NA	NA	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
P-6-W	06/30/97	NA	NA	NA	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
P-7-W	06/30/97	NA	NA	NA	66	2.3	6.5	0.8	4.7	NA	NA	NA	
P-8-W	06/30/97	NA	NA	NA	51	1.7	5.1	0.55	2.4	NA	NA	NA	

Notes:

MSL = relative to mean sea level
 TOC = top of casing
 TPHg = gasoline range total petroleum hydrocarbons
 TPHd = diesel range total petroleum hydrocarbons
 TPHmo = motor oil range total petroleum hydrocarbons
 TBA = tert-Butanol

MtBE = Methyl tert-Butyl Ether
 ppb = parts per billion (micrograms per liter)
 < = none detected at or above reported detection limit
 NS = not sampled
 NA = not analyzed

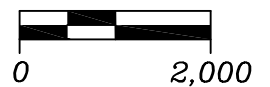
1 = also sampled for the fuel oxygenates ethyl tert-butyl ether (ETBE), isopropyl ether (DIPE), t-butyl alcohol (t-butanol) (TBA), and tert-amyl methyl ether (TAME); none of these compounds detected above the laboratory limit.
 2 = the laboratory reported value due to discrete peaks present within the TPH as gasoline quantitation range (heavy end); not typical gasoline.
 3 = the laboratory reported results are elevated due to non-target compounds within the gasoline range
 4 = also sampled for the fuel oxygenates ethyl tert-butyl ether (ETBE), t-butyl alcohol (t-butanol) (TBA), and tert-amyl methyl ether (TAME); none of these compounds detected above the laboratory limit.
 5 = laboratory noted that although TPH as gasoline constituents are present, TPH value includes a significant portion of non-target hydrocarbons present within gasoline range.
 6 = Although TPH as Gasoline compounds are present, result includes heavy end hydrocarbons within the C5 - C12 quantitation range (possibly aged gasoline).
 7 = Sample also analyzed for 1,2-dibromoethane and 1,2-dichloroethane; neither was detected.



QUADRANGLE LOCATION



SCALE IN FEET



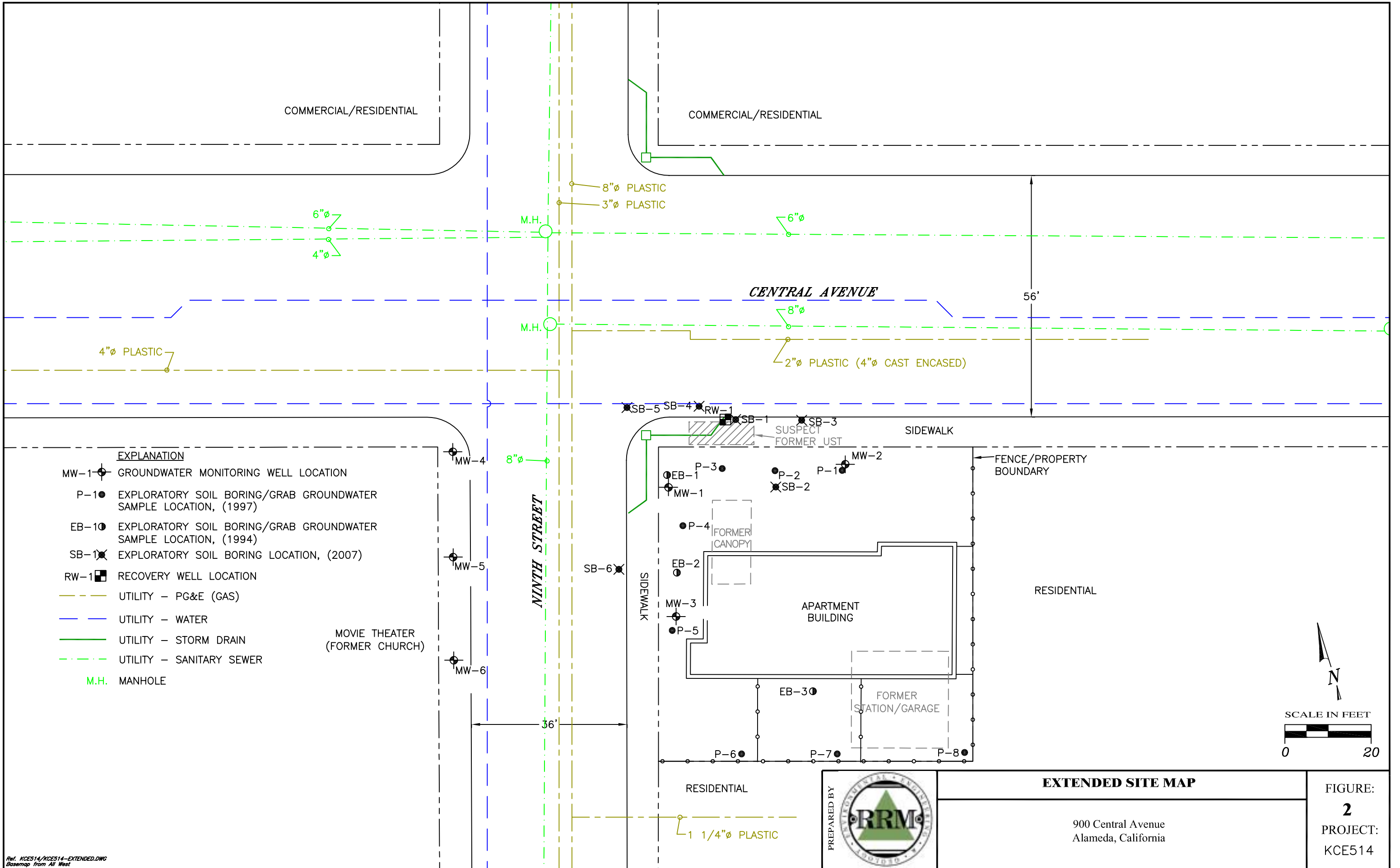
Ref. KCE514/KCE514-SLM.DWG
Base Map from TOPOI.NGH

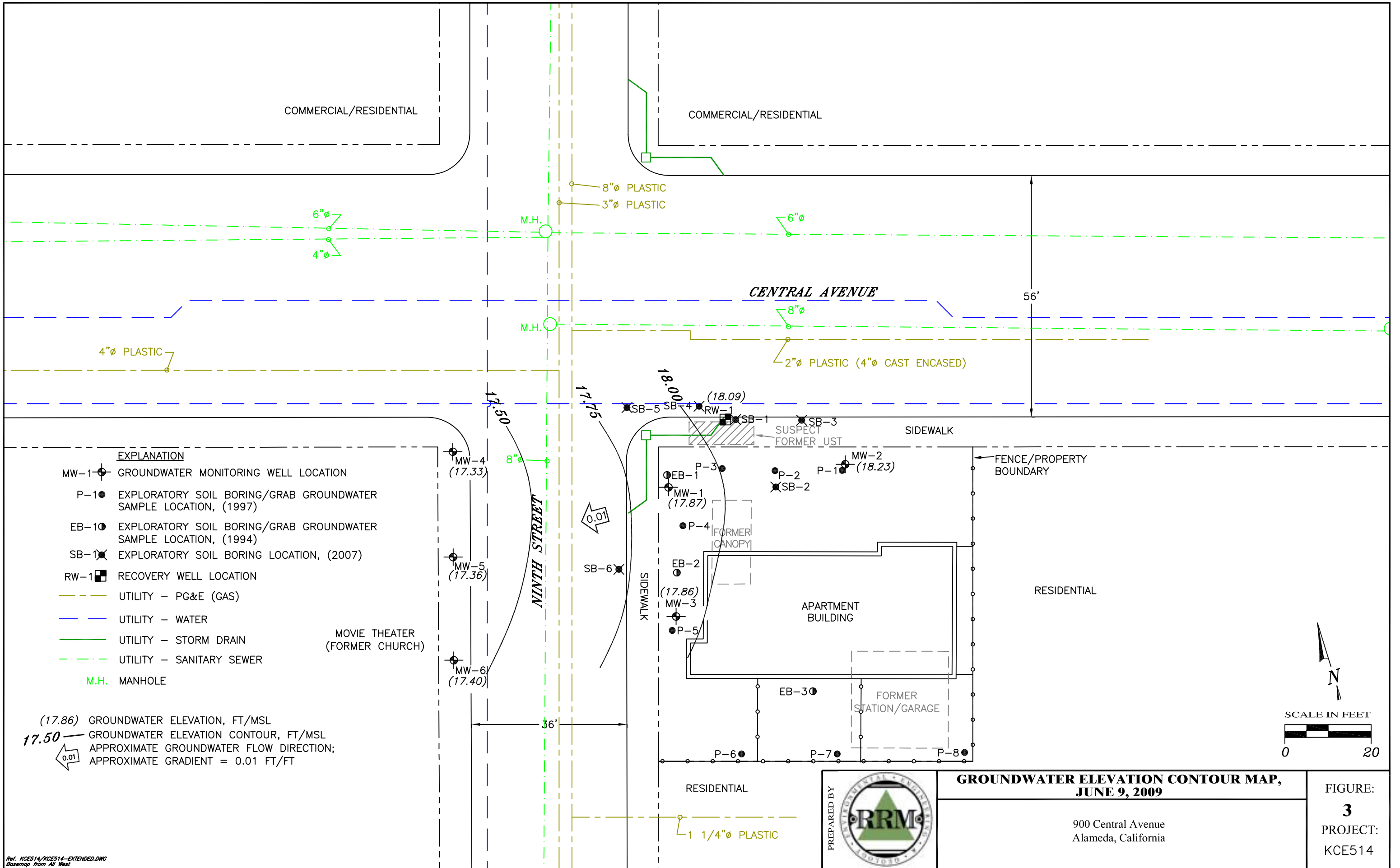
SITE LOCATION MAP

900 Central Avenue
Alameda, California

FIGURE:
1
PROJECT:
KCE514







- EXPLANATION**
- MW-1 GROUNDWATER MONITORING WELL LOCATION
 - P-1 EXPLORATORY SOIL BORING/GRAB GROUNDWATER SAMPLE LOCATION, (1997)
 - EB-1 EXPLORATORY SOIL BORING/GRAB GROUNDWATER SAMPLE LOCATION, (1994)
 - SB-1 EXPLORATORY SOIL BORING LOCATION, (2007)
 - RW-1 RECOVERY WELL LOCATION
 - UTILITY - PG&E (GAS)
 - UTILITY - WATER
 - UTILITY - STORM DRAIN
 - UTILITY - SANITARY SEWER
 - M.H. MANHOLE

(17.86) GROUNDWATER ELEVATION, FT/MSL
 17.50 — GROUNDWATER ELEVATION CONTOUR, FT/MSL
 APPROXIMATE GROUNDWATER FLOW DIRECTION;
 APPROXIMATE GRADIENT = 0.01 FT/FT

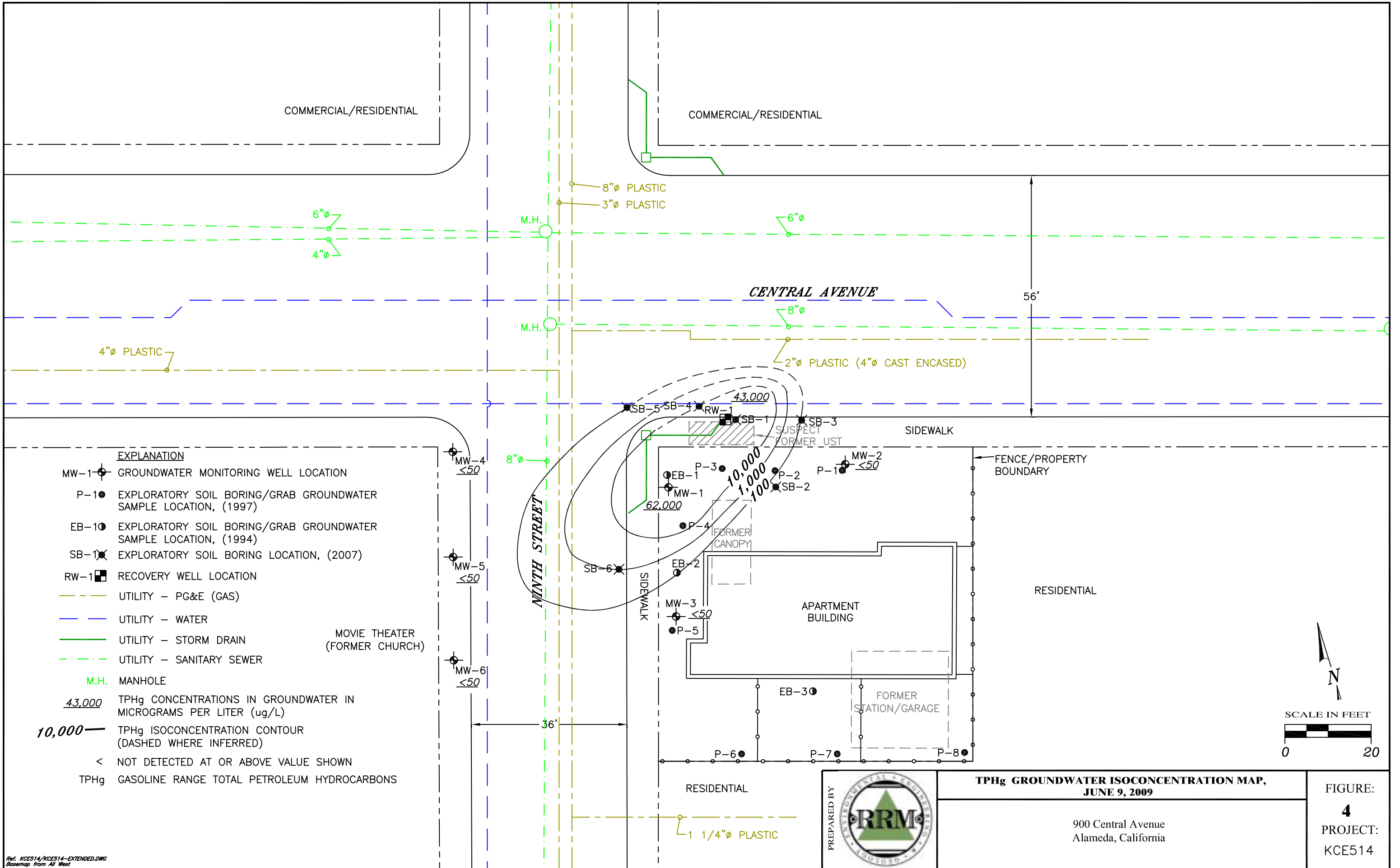
**GROUNDWATER ELEVATION CONTOUR MAP,
 JUNE 9, 2009**



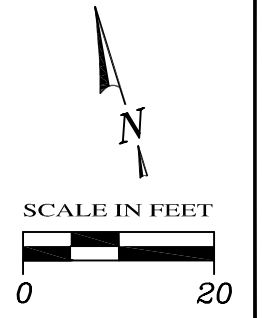
900 Central Avenue
 Alameda, California

FIGURE:
3
 PROJECT:
 KCE514

Ref: KCE514/KCE514-EXTENDED.DWG
 Basemap from All West

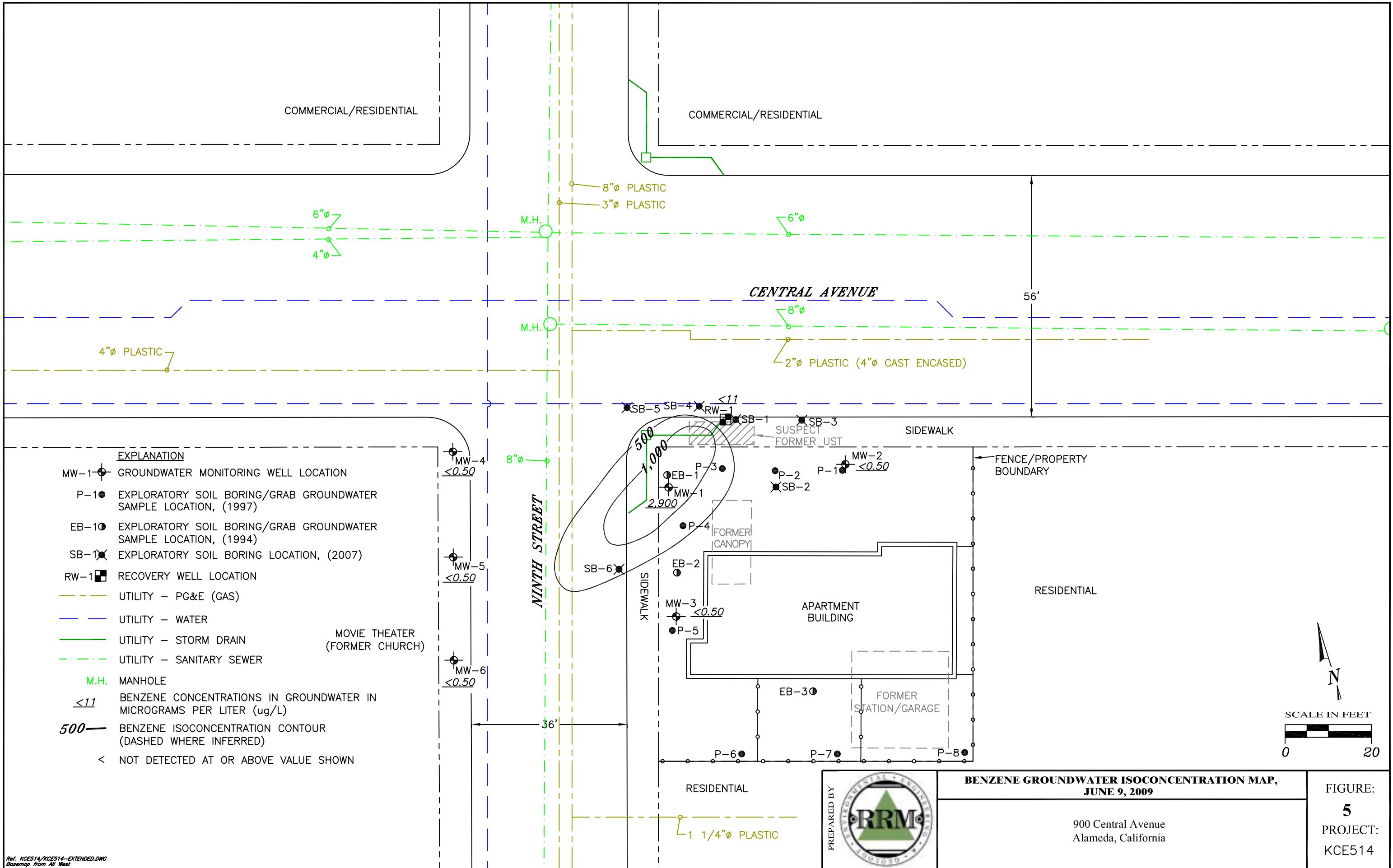


- EXPLANATION**
- MW-1 GROUNDWATER MONITORING WELL LOCATION
 - P-1 EXPLORATORY SOIL BORING/GRAB GROUNDWATER SAMPLE LOCATION, (1997)
 - EB-1 EXPLORATORY SOIL BORING/GRAB GROUNDWATER SAMPLE LOCATION, (1994)
 - SB-1 EXPLORATORY SOIL BORING LOCATION, (2007)
 - RW-1 RECOVERY WELL LOCATION
 - UTILITY - PG&E (GAS)
 - UTILITY - WATER
 - UTILITY - STORM DRAIN
 - UTILITY - SANITARY SEWER
 - M.H. MANHOLE
 - 43,000 TPHg CONCENTRATIONS IN GROUNDWATER IN MICROGRAMS PER LITER ($\mu\text{g/L}$)
 - 10,000 TPHg ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)
 - < NOT DETECTED AT OR ABOVE VALUE SHOWN
 - TPHg GASOLINE RANGE TOTAL PETROLEUM HYDROCARBONS

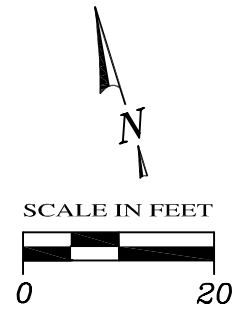


Ref. KCE514/KCE514-EXTENDED.DWG
Basemap from All West

PREPARED BY RRM	TPHg GROUNDWATER ISOCONCENTRATION MAP, JUNE 9, 2009	FIGURE: 4 PROJECT: KCE514
	900 Central Avenue Alameda, California	



- EXPLANATION**
- MW-1 GROUNDWATER MONITORING WELL LOCATION
 - P-1 EXPLORATORY SOIL BORING/GRAB GROUNDWATER SAMPLE LOCATION, (1997)
 - EB-1 EXPLORATORY SOIL BORING/GRAB GROUNDWATER SAMPLE LOCATION, (1994)
 - SB-1 EXPLORATORY SOIL BORING LOCATION, (2007)
 - RW-1 RECOVERY WELL LOCATION
 - UTILITY - PG&E (GAS)
 - UTILITY - WATER
 - UTILITY - STORM DRAIN
 - UTILITY - SANITARY SEWER
 - M.H. MANHOLE
 - <11 BENZENE CONCENTRATIONS IN GROUNDWATER IN MICROGRAMS PER LITER (ug/L)
 - 500 BENZENE ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)
 - < NOT DETECTED AT OR ABOVE VALUE SHOWN



PREPARED BY RRM	BENZENE GROUNDWATER ISOCONCENTRATION MAP, JUNE 9, 2009	FIGURE: 5 PROJECT: KCE514
	900 Central Avenue Alameda, California	

Ref. KCE514/KCE514-EXTENDED.DWG
 Base map from All West

A

SUMMARY OF PRIOR INVESTIGATION WORK

ATTACHMENT A

SUMMARY OF PRIOR INVESTIGATION WORK

Historic Remedial Investigations and Groundwater Monitoring

April 1994 Subsurface Investigations - Lowney Associates (Lowney) of Mountain View, CA conducted a site history review that included historic Sanborn maps and aerial photos and completed a subsurface investigation. During the investigation, three bore holes (EB-1 through EB-3) were completed to 20 feet bgs in and around the incorrectly presumed location of the former USTs and pump island; soil samples were collected at 5-foot intervals, geologic logs were prepared; grab groundwater samples were collected from each boring; all groundwater and select soil samples (15 to 16-foot interval) were analyzed for motor oil range total petroleum hydrocarbons (TPH_{mo}), diesel range TPH (TPH_d), gasoline range TPH (TPH_g), benzene, toluene, ethyl benzene, and xylenes (collectively BTEX); and a leachability test was conducted on the soil sample collected from Boring EB-1. TPH_g and benzene were detected in the soil sample collected from EB-1 at 95 parts per million (ppm) and 400 parts per billion (ppb) respectively. In the grab groundwater sample from EB-1, TPH_g and benzene were detected at 76,000 ppb and 2,200 ppb respectively (*Lowney Associates, "Soil and Groundwater Quality Reconnaissance" July 20, 1994*).

June 1997 Subsurface Investigations and RBCA Analyses - Allwest Environmental Inc. (Allwest) of San Francisco, CA conducted a file review to assess potential on-site and off-site sources of subsurface contamination. They also advanced eight geoprobe-type soil borings (P-1 through P-8) to 16 feet bgs in and around the presumed location of the former USTs and pump island; collected soil samples at 5-foot intervals and field-tested the samples for total volatile hydrocarbons with an organic vapor analyzer (OVA); prepared geologic logs; collected grab groundwater samples from each boring; and analyzed 31 soil samples and eight groundwater samples for TPH_g and BTEX. They reported discolored/odorous soils at 10 to 12 feet bgs in borings P-2 through P-4. TPH_g was detected at 4,600 ppm in the soil sample collected at 14.5 feet bgs from Boring P-3. TPH_g was detected in five of the eight grab groundwater samples with the highest concentration of 92,000 ppb at Boring P-3. Tier 1 and Tier 2 risk-based corrective-action evaluations were conducted using ASTM methodology. On the basis of the results Allwest concluded that there were no significant human health risks and no need for active remediation (*Allwest, "Subsurface Investigation Report," August 5, 1997*).

November 1998 Well Installations and Sampling – Allwest advanced three bore holes to 18 feet bgs at the northeast quadrant of the site; collected soil samples at 5-foot intervals and field tested the samples for TVH using a field OVA; prepared geologic logs; converted the borings to 2-inch diameter monitoring wells (MW-1 through MW-3) and developed, surveyed, sounded, purged and sampled the wells; and analyzed three groundwater samples for TPH_g and BTEX. The depth to groundwater was approximately

12 feet bgs. TPHg and benzene was detected only in the sample from MW-1 at 360 ppb and 5.8 ppb respectively. The well installation report included a recommendation to monitor the wells quarterly for one year. This recommendation was approved by the County (*Allwest "Groundwater Monitoring Well Installation and Sampling" February 2, 1999*).

1999-Quarterly Groundwater Monitoring – From March through September 1999, Allwest conducted three quarterly groundwater monitoring events during which they sounded, purged, and sampled the three wells. The samples were analyzed for TPHmo, TPHd, and TPHg, and BTEX. Depth to groundwater ranged seasonally from approximately 6 to 12 feet bgs. TPHg was only detected in MW-1 at concentrations ranging from less than 50 ppb to 14,000 ppb. Based on the results, Allwest recommended conducting a risk assessment (*Allwest "Quarterly Groundwater Monitoring Reports" with the following dates: March 3, 1999; July 2, 1999; and October 14, 1999*).

2002-Quarterly Groundwater Monitoring– From March through December 2002, Allwest conducted four quarterly groundwater monitoring events during which they sounded, purged, and sampled the three wells. The samples were analyzed for TPHmo, TPHd, TPHg, and BTEX. Depth to groundwater ranged from approximately 8 to 13 feet bgs. TPHg was only detected in MW-1 at concentrations ranging from less than 50 ppb to 42,000 ppb; Methyl tert-Butyl Ether (MtBE) was not detected (*Allwest "Quarterly Groundwater Monitoring Reports" with the following dates: June 26, 2002; August 8, 2002; October 25, 2002; and "2002 Annual Groundwater Monitoring & Risk Assessment Report," January 31, 2003*).

2003-Production Well Survey, Conceptual Model and Risk Assessment – In December 2002, Allwest reviewed agency files to locate nearby water production wells and identified four irrigation wells and one monitoring well within approximately 500 feet of the site. They prepared a site conceptual model consisting of a 3-dimensional drawing showing known areas of subsurface contamination and potential sensitive receptors. They performed a cursory risk assessment using risk-based screening levels (RBSLs) set forth in published Regional Water Quality Control Board (RWQCB) lookup tables. Based on the risk assessment, Allwest concluded that the levels of TPHg and benzene in groundwater at MW-1 posed a possible risk to nearby residences via the vapor intrusion pathway. (*Allwest: "2002 Annual Groundwater Monitoring & Risk Assessment Report," January 31, 2003*).

B

FIELD AND ANALYTICAL PROCEDURES

ATTACHMENT B

FIELD AND ANALYTICAL PROCEDURES

Groundwater Sampling

Groundwater sampling procedures consisted of initially measuring and documenting the water level in the well and checking the well for the presence of separate-phase hydrocarbon (SPH) using an oil/water interface probe or a clear Teflon bailer. If the well did not contain SPH, it was purged a minimum of three casing volumes or until dry. During purging, well stabilization parameters (temperature, pH, and electrical conductivity) were monitored. After 80% recovery of the water levels, a groundwater sample was collected with a clean Teflon bailer and placed into the appropriate EPA-approved containers. Sampling equipment was cleaned with tri-sodium phosphate between uses. The samples were labeled and transported under iced storage to the laboratory using appropriate chain-of-custody documentation.

Laboratory Analytical Procedures

Select soil and all groundwater samples collected from new and existing wells were analyzed in the laboratory for the presence of gasoline range total petroleum hydrocarbons; benzene, toluene, ethylbenzene, and total xylenes using GC/MS and EPA Methods 8260B, 8015B, and 8021B. Select groundwater samples were analyzed for other oxygenates including: ethyl tertiary butyl ether, tertiary butanol, diisopropyl ether, and tertiary amyl methyl ether using EPA Method 8260B.

C

**CERTIFIED ANALYTICAL REPORTS,
CHAIN-OF-CUSTODY DOCUMENTATION, AND
FIELD DATA SHEETS**



May 14, 2009

Matt Kaempf
Remediation Risk Management, Inc.
2560 Soquel Ave, Suite 202
Santa Cruz, CA 95062

TEL: (831) 475-8141
FAX (831)475-8249

RE: KCE 514/900 Central Ave, Alameda

Order No.: 0905053

Dear Matt Kaempf:

Torrent Laboratory, Inc. received 7 samples on 5/7/2009 for the analyses presented in the following report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Reported data is applicable for only the samples received as part of the order number referenced above.

Torrent Laboratory, Inc, is certified by the State of California, ELAP #1991. If you have any questions regarding these tests results, please feel free to contact the Project Management Team at (408)263-5258;ext: 204.

Sincerely,


Laboratory Director

5/14/09
Date

Patti Sandrock
QA Officer 



TORRENT LABORATORY, INC.

483 Sinclair Frontage Road • Milpitas, CA • Phone: (408) 263-5258 • Fax: (408) 263-8293

Visit us at www.torrentlab.com email: analysis@torrentlab.com

Report prepared for: Matt Kaempf
Remediation Risk Management, Inc.

Date Received: 5/7/2009
Date Reported: 5/14/2009

Client Sample ID: MW-1
Sample Location: 900 Central Ave, Alameda
Sample Matrix: GROUNDWATER
Date/Time Sampled 5/7/2009 12:40:00 PM

Lab Sample ID: 0905053-001
Date Prepared: 5/13/2009

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Benzene	SW8260B	5/13/2009	0.5	88	44	2900	µg/L	R19528
Toluene	SW8260B	5/13/2009	0.5	88	44	6300	µg/L	R19528
Ethylbenzene	SW8260B	5/13/2009	0.5	88	44	2700	µg/L	R19528
Xylenes, Total	SW8260B	5/13/2009	1.5	88	130	16000	µg/L	R19528
Surr: Dibromofluoromethane	SW8260B	5/13/2009	0	88	61.2-131	103	%REC	R19528
Surr: 4-Bromofluorobenzene	SW8260B	5/13/2009	0	88	64.1-120	99.3	%REC	R19528
Surr: Toluene-d8	SW8260B	5/13/2009	0	88	75.1-127	115	%REC	R19528
TPH (Gasoline)	SW8260B(TPH)	5/13/2009	50	88	4400	62000	µg/L	G19528
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	5/13/2009	0	88	58.4-133	77.6	%REC	G19528

Client Sample ID: MW-2
Sample Location: 900 Central Ave, Alameda
Sample Matrix: GROUNDWATER
Date/Time Sampled 5/7/2009 10:10:00 AM

Lab Sample ID: 0905053-002
Date Prepared: 5/13/2009

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Benzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Toluene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Ethylbenzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Xylenes, Total	SW8260B	5/13/2009	1.5	1	1.5	ND	µg/L	R19528
Surr: Dibromofluoromethane	SW8260B	5/13/2009	0	1	61.2-131	102	%REC	R19528
Surr: 4-Bromofluorobenzene	SW8260B	5/13/2009	0	1	64.1-120	98.9	%REC	R19528
Surr: Toluene-d8	SW8260B	5/13/2009	0	1	75.1-127	112	%REC	R19528
TPH (Gasoline)	SW8260B(TPH)	5/13/2009	50	1	50	ND	µg/L	G19528
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	5/13/2009	0	1	58.4-133	86.2	%REC	G19528

These analyses were performed according to State of California Environmental Laboratory Accreditation program, Certificate # 1991

Client Sample ID: MW-3
Sample Location: 900 Central Ave, Alameda
Sample Matrix: GROUNDWATER
Date/Time Sampled: 5/7/2009 10:40:00 AM

Lab Sample ID: 0905053-003
Date Prepared: 5/13/2009

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Benzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Toluene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Ethylbenzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Xylenes, Total	SW8260B	5/13/2009	1.5	1	1.5	ND	µg/L	R19528
Surr: Dibromofluoromethane	SW8260B	5/13/2009	0	1	61.2-131	109	%REC	R19528
Surr: 4-Bromofluorobenzene	SW8260B	5/13/2009	0	1	64.1-120	102	%REC	R19528
Surr: Toluene-d8	SW8260B	5/13/2009	0	1	75.1-127	107	%REC	R19528
TPH (Gasoline)	SW8260B(TPH)	5/13/2009	50	1	50	ND	µg/L	G19528
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	5/13/2009	0	1	58.4-133	81.0	%REC	G19528

Client Sample ID: MW-4
Sample Location: 900 Central Ave, Alameda
Sample Matrix: GROUNDWATER
Date/Time Sampled: 5/7/2009 12:10:00 PM

Lab Sample ID: 0905053-004
Date Prepared: 5/13/2009

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Benzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Toluene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Ethylbenzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Xylenes, Total	SW8260B	5/13/2009	1.5	1	1.5	ND	µg/L	R19528
Surr: Dibromofluoromethane	SW8260B	5/13/2009	0	1	61.2-131	108	%REC	R19528
Surr: 4-Bromofluorobenzene	SW8260B	5/13/2009	0	1	64.1-120	104	%REC	R19528
Surr: Toluene-d8	SW8260B	5/13/2009	0	1	75.1-127	112	%REC	R19528
TPH (Gasoline)	SW8260B(TPH)	5/13/2009	50	1	50	ND	µg/L	G19528
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	5/13/2009	0	1	58.4-133	80.2	%REC	G19528

Client Sample ID: MW-5
Sample Location: 900 Central Ave, Alameda
Sample Matrix: GROUNDWATER
Date/Time Sampled: 5/7/2009 11:30:00 AM

Lab Sample ID: 0905053-005
Date Prepared: 5/13/2009

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Benzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Toluene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Ethylbenzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Xylenes, Total	SW8260B	5/13/2009	1.5	1	1.5	ND	µg/L	R19528
Surr: Dibromofluoromethane	SW8260B	5/13/2009	0	1	61.2-131	108	%REC	R19528
Surr: 4-Bromofluorobenzene	SW8260B	5/13/2009	0	1	64.1-120	105	%REC	R19528
Surr: Toluene-d8	SW8260B	5/13/2009	0	1	75.1-127	114	%REC	R19528
TPH (Gasoline)	SW8260B(TPH)	5/13/2009	50	1	50	ND	µg/L	G19528
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	5/13/2009	0	1	58.4-133	85.3	%REC	G19528

Client Sample ID: MW-6
Sample Location: 900 Central Ave, Alameda
Sample Matrix: GROUNDWATER
Date/Time Sampled: 5/7/2009 11:05:00 AM

Lab Sample ID: 0905053-006
Date Prepared: 5/13/2009

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Benzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Toluene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Ethylbenzene	SW8260B	5/13/2009	0.5	1	0.50	ND	µg/L	R19528
Xylenes, Total	SW8260B	5/13/2009	1.5	1	1.5	ND	µg/L	R19528
Surr: Dibromofluoromethane	SW8260B	5/13/2009	0	1	61.2-131	112	%REC	R19528
Surr: 4-Bromofluorobenzene	SW8260B	5/13/2009	0	1	64.1-120	98.9	%REC	R19528
Surr: Toluene-d8	SW8260B	5/13/2009	0	1	75.1-127	107	%REC	R19528
TPH (Gasoline)	SW8260B(TPH)	5/13/2009	50	1	50	ND	µg/L	G19528
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	5/13/2009	0	1	58.4-133	80.2	%REC	G19528

Client Sample ID: RW-1
Sample Location: 900 Central Ave, Alameda
Sample Matrix: GROUNDWATER
Date/Time Sampled 5/7/2009 1:25:00 PM

Lab Sample ID: 0905053-007
Date Prepared: 5/13/2009-5/14/2009

Parameters	Analysis Method	Date Analyzed	RL	Dilution Factor	MRL	Result	Units	Analytical Batch
Benzene	SW8260B	5/13/2009	0.5	22	11	ND	µg/L	R19528
Toluene	SW8260B	5/13/2009	0.5	22	11	200	µg/L	R19528
Ethylbenzene	SW8260B	5/13/2009	0.5	22	11	2100	µg/L	R19528
Xylenes, Total	SW8260B	5/14/2009	1.5	44	66	10000	µg/L	R19535
Surr: Dibromofluoromethane	SW8260B	5/14/2009	0	44	61.2-131	103	%REC	R19535
Surr: Dibromofluoromethane	SW8260B	5/13/2009	0	22	61.2-131	104	%REC	R19528
Surr: 4-Bromofluorobenzene	SW8260B	5/14/2009	0	44	64.1-120	108	%REC	R19535
Surr: 4-Bromofluorobenzene	SW8260B	5/13/2009	0	22	64.1-120	110	%REC	R19528
Surr: Toluene-d8	SW8260B	5/14/2009	0	44	75.1-127	105	%REC	R19535
Surr: Toluene-d8	SW8260B	5/13/2009	0	22	75.1-127	112	%REC	R19528
TPH (Gasoline)	SW8260B(TPH)	5/14/2009	50	44	2200	43000	µg/L	G19535
Surr: 4-Bromofluorobenzene	SW8260B(TPH)	5/14/2009	0	44	58.4-133	97.4	%REC	G19535

Note: Although TPH as Gasoline constituents are present, TPH value includes a significant portion of unidentified heavy end hydrocarbons within range of C5-C12 quantified as Gasoline that biases the quantitation (possibly aged gasoline).

Definitions, legends and Notes

Note	Description
ug/kg	Microgram per kilogram (ppb, part per billion).
ug/L	Microgram per liter (ppb, part per billion).
mg/kg	Milligram per kilogram (ppm, part per million).
mg/L	Milligram per liter (ppm, part per million).
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate.
MDL	Method detection limit.
MRL	Modified reporting limit. When sample is subject to dilution, reporting limit times dilution factor yields MRL.
MS/MSD	Matrix spike/matrix spike duplicate.
N/A	Not applicable.
ND	Not detected at or above detection limit.
NR	Not reported.
QC	Quality Control.
RL	Reporting limit.
% RPD	Percent relative difference.
a	pH was measured immediately upon the receipt of the sample, but it was still done outside the holding time.
sub	Analyzed by subcontracting laboratory, Lab Certificate #

CLIENT: Remediation Risk Management, Inc.
Work Order: 0905053
Project: KCE 514/900 Central Ave, Alameda

ANALYTICAL QC SUMMARY REPORT

BatchID: G19528

Sample ID MB_G19528	SampType: MBLK	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 5/12/2009	RunNo: 19528						
Client ID: ZZZZZ	Batch ID: G19528	TestNo: SW8260B(TP)	Analysis Date: 5/12/2009	SeqNo: 282416							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	ND	50									
Surr: 4-Bromofllurobenzene	10.64	0	11.36	0	93.7	58.4	133				

Sample ID LCS_G19528	SampType: LCS	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 5/12/2009	RunNo: 19528						
Client ID: ZZZZZ	Batch ID: G19528	TestNo: SW8260B(TP)	Analysis Date: 5/12/2009	SeqNo: 282417							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	249.0	50	227	0	110	52.4	127				
Surr: 4-Bromofllurobenzene	11.62	0	11.36	0	102	58.4	133				

Sample ID LCSD_G19528	SampType: LCSD	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 5/13/2009	RunNo: 19528						
Client ID: ZZZZZ	Batch ID: G19528	TestNo: SW8260B(TP)	Analysis Date: 5/13/2009	SeqNo: 282422							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline)	254.0	50	227	0	112	52.4	127	249	1.99	20	
Surr: 4-Bromofllurobenzene	11.11	0	11.36	0	97.8	58.4	133	0	0	0	

Qualifiers:	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits

CLIENT: Remediation Risk Management, Inc.
Work Order: 0905053
Project: KCE 514/900 Central Ave, Alameda

ANALYTICAL QC SUMMARY REPORT

BatchID: G19535

Sample ID MBG-G19535	SampType: MBLK	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 5/13/2009	RunNo: 19535						
Client ID: ZZZZZ	Batch ID: G19535	TestNo: SW8260B(TP)		Analysis Date: 5/13/2009	SeqNo: 282559						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	ND	50									
Surr: 4-Bromoflurobenzene	10.20	0	11.36	0	89.8	58.4	133				

Sample ID LCSG-G19535	SampType: LCS	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 5/13/2009	RunNo: 19535						
Client ID: ZZZZZ	Batch ID: G19535	TestNo: SW8260B(TP)		Analysis Date: 5/13/2009	SeqNo: 282560						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	248.2	50	227	0	109	52.4	127				
Surr: 4-Bromoflurobenzene	11.80	0	11.36	0	104	58.4	133				

Sample ID LCSDG-G19535	SampType: LCSD	TestCode: TPH_GAS_W	Units: µg/L	Prep Date: 5/13/2009	RunNo: 19535						
Client ID: ZZZZZ	Batch ID: G19535	TestNo: SW8260B(TP)		Analysis Date: 5/13/2009	SeqNo: 282561						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline)	211.0	50	227	0	93.0	52.4	127	248.2	16.2	20	
Surr: 4-Bromoflurobenzene	10.70	0	11.36	0	94.2	58.4	133	0	0	0	

Qualifiers:	E Value above quantitation range	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike Recovery outside accepted recovery limits

CLIENT: Remediation Risk Management, Inc.
Work Order: 0905053
Project: KCE 514/900 Central Ave, Alameda

ANALYTICAL QC SUMMARY REPORT

BatchID: R19528

Sample ID MB_R19528	SampType: MBLK	TestCode: 8260B_W-Pet	Units: µg/L	Prep Date: 5/12/2009	RunNo: 19528						
Client ID: ZZZZZ	Batch ID: R19528	TestNo: SW8260B	Analysis Date: 5/12/2009	SeqNo: 282412							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.50									
Ethylbenzene	ND	0.50									
Toluene	ND	0.50									
Xylenes, Total	ND	1.5									
Surr: Dibromofluoromethane	12.34	0	11.36	0	109	61.2	131				
Surr: 4-Bromofluorobenzene	11.18	0	11.36	0	98.4	64.1	120				
Surr: Toluene-d8	11.46	0	11.36	0	101	75.1	127				

Sample ID LCS_R19528	SampType: LCS	TestCode: 8260B_W-Pet	Units: µg/L	Prep Date: 5/12/2009	RunNo: 19528						
Client ID: ZZZZZ	Batch ID: R19528	TestNo: SW8260B	Analysis Date: 5/12/2009	SeqNo: 282413							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	15.46	0.50	17.04	0	90.7	66.9	140				
Toluene	15.42	0.50	17.04	0	90.5	76.6	123				
Surr: Dibromofluoromethane	10.61	0	11.36	0	93.4	61.2	131				
Surr: 4-Bromofluorobenzene	11.90	0	11.36	0	105	64.1	120				
Surr: Toluene-d8	12.43	0	11.36	0	109	75.1	127				

Sample ID LCSD_R19528	SampType: LCSD	TestCode: 8260B_W-Pet	Units: µg/L	Prep Date: 5/13/2009	RunNo: 19528						
Client ID: ZZZZZ	Batch ID: R19528	TestNo: SW8260B	Analysis Date: 5/13/2009	SeqNo: 282414							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	15.87	0.50	17.04	0	93.1	66.9	140	15.46	2.62	20	
Toluene	17.23	0.50	17.04	0	101	76.6	123	15.42	11.1	20	
Surr: Dibromofluoromethane	11.17	0	11.36	0	98.3	61.2	131	0	0	0	
Surr: 4-Bromofluorobenzene	11.87	0	11.36	0	104	64.1	120	0	0	0	
Surr: Toluene-d8	12.31	0	11.36	0	108	75.1	127	0	0	0	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

CLIENT: Remediation Risk Management, Inc.
Work Order: 0905053
Project: KCE 514/900 Central Ave, Alameda

ANALYTICAL QC SUMMARY REPORT

BatchID: R19535

Sample ID MB-R19535	SampType: MBLK	TestCode: 8260B_W_PE	Units: µg/L	Prep Date: 5/13/2009	RunNo: 19535						
Client ID: ZZZZZ	Batch ID: R19535	TestNo: SW8260B	Analysis Date: 5/13/2009	SeqNo: 282555							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	1.5									
Surr: Dibromofluoromethane	12.38	0	11.36	0	109	61.2	131				
Surr: 4-Bromofluorobenzene	12.15	0	11.36	0	107	64.1	120				
Surr: Toluene-d8	12.74	0	11.36	0	112	75.1	127				

Sample ID LCS-R19535	SampType: LCS	TestCode: 8260B_W_PE	Units: µg/L	Prep Date: 5/13/2009	RunNo: 19535						
Client ID: ZZZZZ	Batch ID: R19535	TestNo: SW8260B	Analysis Date: 5/13/2009	SeqNo: 282556							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	15.93	0.50	17.04	0	93.5	66.9	140				
Toluene	17.61	0.50	17.04	0	103	76.6	123				
Surr: Dibromofluoromethane	11.06	0	11.36	0	97.4	61.2	131				
Surr: 4-Bromofluorobenzene	11.98	0	11.36	0	105	64.1	120				
Surr: Toluene-d8	13.12	0	11.36	0	115	75.1	127				

Sample ID LCSD-R19535	SampType: LCSD	TestCode: 8260B_W_PE	Units: µg/L	Prep Date: 5/13/2009	RunNo: 19535						
Client ID: ZZZZZ	Batch ID: R19535	TestNo: SW8260B	Analysis Date: 5/13/2009	SeqNo: 282557							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	16.31	0.50	17.04	0	95.7	66.9	140	15.93	2.36	20	
Toluene	15.95	0.50	17.04	0	93.6	76.6	123	17.61	9.89	20	
Surr: Dibromofluoromethane	11.39	0	11.36	0	100	61.2	131	0	0	0	
Surr: 4-Bromofluorobenzene	11.32	0	11.36	0	99.6	64.1	120	0	0	0	
Surr: Toluene-d8	11.91	0	11.36	0	105	75.1	127	0	0	0	

Qualifiers: E Value above quantitation range H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits



483 Sinclair Frontage Road
 Milpitas, CA 95035
 Phone: 408.263.5258
 FAX: 408.263.8293
 www.torrentlab.com

CHAIN OF CUSTODY

LAB WORK ORDER NO

0905053

NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY.

Company Name: RRM Inc. Location of Sampling: 900 Central Ave, Alameda
 Address: 2560 Soquel Ave #202 Purpose: 2nd Qtr. GUM
 City: Santa Cruz State: ca Zip Code: 95062 Special Instructions / Comments:
 Telephone: 831-475-8141 FAX: 831-475-8249 matterrmc.com
 REPORT TO: _____ SAMPLER: _____ P.O. #: KCE 514 EMAIL: labdata@errmc.com

TURNAROUND TIME:

- 10 Work Days 3 Work Days Noon - Nxt Day
 7 Work Days 2 Work Days 2-8 Hours
 5 Work Days 1 Work Day Other

SAMPLE TYPE:

- Storm Water Air
 Waste Water Other
 Ground Water
 Soil

REPORT FORMAT:

- QC Level IV
 EDF
 Excel / EDD

- EPA 8260B - Full List
 EPA 8260B - 8010 List
 THP gas BTEX
 Oxygenates MTBE
 THP Diesel Si-Gel
 Motor Oil
 Pesticide - 8081
 PCB - 8082
 Metals CAM - 17
 LUFT 5 7 Metals
 8270 Full List
 PAHs Only

ANALYSIS REQUESTED

LAB ID	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	EPA 8260B - Full List	EPA 8260B - 8010 List	THP gas	BTEX	Oxygenates	MTBE	THP Diesel	Si-Gel	Motor Oil	Pesticide - 8081	PCB - 8082	Metals	CAM - 17	LUFT 5	7 Metals	8270 Full List	PAHs Only	REMARKS
001A	MW-1	050709/1240	GW	3	ALL VOLS			X															
002A	MW-2	1010																					
003A	MW-3	1040																					
004A	MW-4	1210																					
005A	MW-5	1130																					
006A	MW-6	1105																					
007A	REW-1	1325																					
																							Temp 5°C 5-7-09

1 Relinquished By: Will Bachor RRM Print: Will Bachor RRM Date: 050709 Time: 14:22 pm Received By: N.S. Kader Print: _____ Date: 5/7/09 Time: 14:22 pm
 2 Relinquished By: _____ Print: _____ Date: _____ Time: _____ Received By: _____ Print: _____ Date: _____ Time: _____

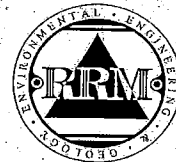
Were Samples Received in Good Condition? Yes NO Samples on Ice? Yes NO Method of Shipment 2 / off. Sample seals intact? Yes NO N/A

NOTE: Samples () are discarded by the laboratory 30 days from date of receipt unless other arrangements are made. Page 1 of 1

Log In By: _____ Date: _____ Log In Reviewed By: _____ Date: _____

TORRENT LAB

Field Data Sheet
Depth to Water Data Form



2560 Soquel Ave. #202
Santa Cruz, CA 95062
(831) 475-8141

Site Information

900 Central Ave. 050709 KCE514
Project Address Date Project Number

Alameda Alameda California
City County State

Water Level Equipment

Electronic Indicator

Oil Water Interface Probe

Other (specify)

Measured By: WR
name

Notes:

DTW Order	Well ID	Time (24:00)	Total Depth	First DTW (toc or tob)	Total Depth (toc or tob)	Depth to SPH (toc or tob)	SPH Thickness (toc or tob)	Notes (describe SPH):
6	MW-1	0917	18.73'	10.40				
1	MW-2	0852	18.40'	10.08				
2	MW-3	0858	18.70'	9.83				
5	MW-4	0912	17.95'	10.04				
4	MW-5	0907	17.95'	9.89				
3	MW-6	0903	17.10'	9.84				
7	RW-1	0922	19.05'	9.34				4" Well

Signature: [Handwritten Signature]

Field Data Sheet

Groundwater Sampling Form



2560 Soquel Ave. #202
Santa Cruz, CA 95062
(831) 475-8141

Site Information

900 Central Ave. MW-1 KCE514
Project Address Well/Sample Point ID Project Number

Alameda Alameda California
City County State

Purge Information

Water Level Equipment

Electronic Indicator
 Oil Water Interface Probe
 Other (specify) _____

Purge Equipment

Bailer Disposable Teflon #: _____
 Submersible Pump; type: _____
 Other (specify) _____

Purge Calculation

total depth = 18.73
 depth to water = 10.40
 linear feet of water = 8.33
 gallons per linear foot X .17
 gallons per casing = 1.42
 number of casings X 3
 calculated purge = 4.25

casing diameter		gallons per linear foot
0.75 in.	<input type="checkbox"/>	0.023
1 in.	<input type="checkbox"/>	0.04
2 in.	<input checked="" type="checkbox"/>	0.17
4 in.	<input type="checkbox"/>	0.67
6 in.	<input type="checkbox"/>	1.5
other	<input type="checkbox"/>	calculate
1 cubic foot = 7.48 gallons		

Purged By: 6
name _____

Purge Notes: _____

Purged Dry?: N circle Y Sampling Delay?: N circle Y

	time (24:00)	gallons (purged)	pH (units)	EC (us @ 25° C)	temp (°F circle °C)	color (see below)	turbidity (NTU or see below)	odor (see below)
start	<u>1215</u>	0						
volume 1	<u>1219</u>	<u>1.50</u>	<u>6.89</u>	<u>339</u>	<u>18.2</u>	<u>gray</u>	<u>hvy</u>	<u>strong</u>
volume 2	<u>1223</u>	<u>3.00</u>	<u>6.77</u>	<u>366</u>	<u>17.4</u>	<u>"</u>	<u>"</u>	<u>"</u>
volume 3	<u>1227</u>	<u>4.25</u>	<u>6.73</u>	<u>326</u>	<u>17.2</u>	<u>brown</u>	<u>mod</u>	<u>"</u>
volume 4								
complete								

brown, yellow cloudy, clear heavy, moderate light, trace strong, moderate slight, none

Groundwater Sampling Information

Sample Type

Monitoring Well
 Extraction Well
 Domestic Well
 Other (specify) _____

Sampling Equipment

Bailer Disposable Teflon #: _____
 Submersible Pump; type: _____
 Sampling Port
 Other (specify) _____

Sample ID	Date	Time (24:00)
<u>MW-1</u>	<u>050709</u>	<u>1240</u>
Dupe # _____		12:00

Sampled By: 6
name _____

# of Cont.	Analyses (check and circle)	Container/Size	Preservative
3	<input checked="" type="checkbox"/> TPH gas (8260B)	40 ml	HCl
	<input checked="" type="checkbox"/> BTEX (8260B)		
	<input type="checkbox"/> Fuel Oxys, no MtBE (8270)		
	<input type="checkbox"/> MtBE (8270)		
	<input type="checkbox"/> Other (specify) _____		
	<input type="checkbox"/> VOCs (8010 or 8240 or 8260B)	40 ml VOA	HCl
	<input type="checkbox"/> TPH diesel (8015M)	1 liter amber	none
	<input type="checkbox"/> Metals (8010)	500 ml plastic	HNO ₃
	<input type="checkbox"/> Other (specify) _____		

Sampling Notes: _____

Signature: W. H. ...

Field Data Sheet
Groundwater Sampling Form



2560 Soquel Ave. #202
 Santa Cruz, CA 95062
 (831) 475-8141

Site Information

900 Central Ave. MW-2 KCE514
 Project Address Well/Sample Point ID Project Number

Alameda Alameda California
 City County State

Purge Information

Water Level Equipment

Electronic Indicator
 Oil Water Interface Probe
 Other (specify) _____

Purge Equipment

Bailor Disposable Teflon #: _____
 Submersible Pump; type: _____
 Other (specify) _____

Purge Calculation

total depth = 15.40
 depth to water = 10.08
 linear feet of water = 8.32
 gallons per linear foot X .17
 gallons per casing = 1.41
 number of casings X 3
 calculated purge = 4.24

casing diameter		gallons per linear foot
0.75 in.	<input type="checkbox"/>	0.023
1 in.	<input type="checkbox"/>	0.04
2 in.	<input checked="" type="checkbox"/>	0.17
4 in.	<input type="checkbox"/>	0.67
6 in.	<input type="checkbox"/>	1.5
other	<input type="checkbox"/>	calculate

1 cubic foot = 7.48 gallons

Purged By: (signature)
 name

Purge Notes:

Purged Dry?: N circle Y Sampling Delay?: N circle Y

	time (24:00)	gallons (purged)	pH (units)	EC (uS @ 25° C)	temp (°F circle °C)	color (see below)	turbidity (NTU or see below)	odor (see below)
start	0942	0						
volume 1	0950	1.25	7.78	172	18.2	brown	mod.	none
volume 2	0954	2.75	7.21	159	16.8	"	heavy	"
volume 3	0958	4.25	7.04	156	16.4	"	"	"
volume 4								
complete								

brown, yellow cloudy, clear heavy, moderate light, trace strong, moderate slight, none

Groundwater Sampling Information

Sample Type

Monitoring Well
 Extraction Well
 Domestic Well
 Other (specify) _____

Sampling Equipment

Bailor Disposable Teflon #: _____
 Submersible Pump; type: _____
 Sampling Port
 Other (specify) _____

Sample ID MW-2 Date 050709 Time (24:00) 1010

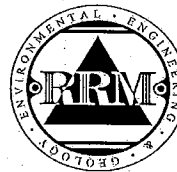
Dupe # _____ 12:00

Sampled By: (signature)
 name

# of Cont.	Analyses (check and circle)	Container/Size	Preservative	Sampling Notes:
3	<input checked="" type="checkbox"/> TPH gas (8260B) <input checked="" type="checkbox"/> BTEX (8260B) <input type="checkbox"/> Fuel Olys, no MtBE (8270) <input type="checkbox"/> MtBE (8270) <input type="checkbox"/> Other (specify) _____	40 ml VOA	HCl	
	<input type="checkbox"/> VOCs (8010 or 8240 or 8260B) <input type="checkbox"/> TPH diesel (8015M) <input type="checkbox"/> Metals (8010) <input type="checkbox"/> Other (specify) _____	40 ml VOA 1 liter amber 500 ml plastic	HCl none HNO ₃	

Signature: (signature)

Field Data Sheet
Groundwater Sampling Form



2560 Soquel Ave. #202
 Santa Cruz, CA 95062
 (831) 475-8141

Site Information

900 Central Ave. _____
 Project Address

Alameda _____ Alameda _____
 City County

MW-3 _____ KCE514 _____
 Well/Sample Point ID Project Number

California _____
 State

Purge Information

Water Level Equipment

Electronic Indicator

Oil Water Interface Probe

Other (specify) _____

Purge Equipment

Bailor Disposable Teflon #: _____

Submersible Pump; type: _____

Other (specify) _____

Purge Calculation

total depth = 18.70

depth to water = 9.83

linear feet of water = 8.87

gallons per linear foot X .17

gallons per casing = 1.51

number of casings X 3

calculated purge = 4.52

casing diameter		gallons per linear foot
0.75 in.	<input type="checkbox"/>	0.023
1 in.	<input type="checkbox"/>	0.04
2 in.	<input checked="" type="checkbox"/>	0.17
4 in.	<input type="checkbox"/>	0.67
6 in.	<input type="checkbox"/>	1.5
other	<input type="checkbox"/>	calculate
1 cubic foot = 7.48 gallons		

Purged By: WJ
 name

Purge Notes:

Purged Dry?: N circle Y

Sampling Delay?: N circle Y

	time (24:00)	gallons (purged)	pH (units)	EC (us @ 25° C)	temp (°F circle C)	color (see below)	turbidity (NTU or see below)	odor (see below)
start	1016	0						
volume 1	1021	1.50	6.76	193	16.7	brown	mod.	none
volume 2	1025	3.00	6.77	211	17.1	"	heavy	"
volume 3	1029	4.50	6.78	214	17.2	"	"	"
volume 4								
complete								

brown, yellow cloudy, clear heavy, moderate light, trace strong, moderate slight, none

Groundwater Sampling Information

Sample Type

Monitoring Well

Extraction Well

Domestic Well

Other (specify) _____

Sampling Equipment

Bailor Disposable Teflon #: _____

Submersible Pump; type: _____

Sampling Port

Other (specify) _____

Sample ID MW-3 Date 050709 Time (24:00) 1040

Dupe # _____ 12:00

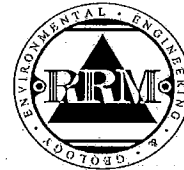
Sampled By: WJ
 name

# of Cont.	Analyses: (check and circle)	Container/Size	Preservative
3	<input checked="" type="checkbox"/> TPH gas (8260B) <input checked="" type="checkbox"/> BTEX (8260B) <input type="checkbox"/> Fuel Oxys, no MIBE (8270) <input type="checkbox"/> MIBE (8270) <input type="checkbox"/> Other (specify) _____	40 ml VOA	HCl
	<input type="checkbox"/> VOCs (8010 or 8240 or 8260B) <input type="checkbox"/> TPH diesel (8015M) <input type="checkbox"/> Metals (8010) <input type="checkbox"/> Other (specify) _____	40 ml VOA 1 liter amber 500 ml plastic	HCl none HNO ₃

Sampling Notes:

Signature: Walter

Field Data Sheet
Groundwater Sampling Form



2560 Soquel Ave. #202
 Santa Cruz, CA 95062
 (831) 475-8141

Site Information

900 Central Ave. MW-4 KCE514
 Project Address Well/Sample Point ID Project Number

Alameda Alameda California
 City County State

Purge Information

Water Level Equipment
 Electronic Indicator
 Oil Water Interface Probe
 Other (specify) _____

Purge Equipment
 Bailer Disposable Teflon #: _____
 Submersible Pump; type: _____
 Other (specify) _____

Purge Calculation

total depth = 17.95
 depth to water = 10.04
 linear feet of water = 7.91
 gallons per linear foot X .17
 gallons per casing = 1.34
 number of casings X 3
 calculated purge = 4.03

casing diameter		gallons per linear foot
0.75 in.	<input type="checkbox"/>	0.023
1 in.	<input type="checkbox"/>	0.04
2 in.	<input checked="" type="checkbox"/>	0.17
4 in.	<input type="checkbox"/>	0.67
6 in.	<input type="checkbox"/>	1.5
other	<input type="checkbox"/>	calculate

1 cubic foot = 7.48 gallons

Purged By: [Signature]
 name

Purge Notes:

Purged Dry?: N circle Y Sampling Delay?: N circle Y

	time (24:00)	gallons (purged)	pH (units)	EC (us @ 25° C)	temp (°F circle)	color (see below)	turbidity (NTU or see below)	odor (see below)
start	<u>1134</u>	<u>0</u>						
volume 1	<u>1140</u>	<u>1.25</u>	<u>6.68</u>	<u>386</u>	<u>18.5</u>	<u>brown</u>	<u>hvy</u>	<u>none</u>
volume 2	<u>1144</u>	<u>2.50</u>	<u>6.69</u>	<u>382</u>	<u>18.1</u>	<u>u</u>	<u>u</u>	<u>u</u>
volume 3	<u>1148</u>	<u>4.00</u>	<u>6.70</u>	<u>392</u>	<u>18.6</u>	<u>u</u>	<u>u</u>	<u>u</u>
volume 4								
complete								

brown, yellow cloudy, clear heavy, moderate light, trace strong, moderate slight, none

Groundwater Sampling Information

Sample Type
 Monitoring Well
 Extraction Well
 Domestic Well
 Other (specify) _____

Sampling Equipment
 Bailer Disposable Teflon #: _____
 Submersible Pump; type: _____
 Sampling Port
 Other (specify) _____

Sample ID MW-4 Date 050709 Time (24:00) 1210
 Dupe # _____ 12:00

Sampled By: [Signature]
 name

# of Cont.	Analyses (check and circle)	Container/Size	Preservative
<u>3</u>	<input checked="" type="checkbox"/> TPH gas (8260B) <input checked="" type="checkbox"/> BTEX (8260B) <input type="checkbox"/> Fuel Olys, no MtBE (8270) <input type="checkbox"/> MtBE (8270) <input type="checkbox"/> Other (specify) _____	40 ml VOA	HCl
	<input type="checkbox"/> VOCs (8010 or 8240 or 8260B) <input type="checkbox"/> TPH diesel (8015M) <input type="checkbox"/> Metals (8010) <input type="checkbox"/> Other (specify) _____	40 ml VOA 1 liter amber 500 ml plastic	HCl none HNO ₃

Sampling Notes:

Signature: [Signature]

Field Data Sheet
Groundwater Sampling Form



2560 Soquel Ave. #202
 Santa Cruz, CA 95062
 (831) 475-8141

Site Information

900 Central Ave. MW-5 KCE514
 Project Address Well/Sample Point ID Project Number

Alameda Alameda California
 City County State

Purge Information

Water Level Equipment
 Electronic Indicator
 Oil Water Interface Probe
 Other (specify) _____

Purge Equipment
 Bailor Disposable Teflon #: _____
 Submersible Pump; type: _____
 Other (specify) _____

Purge Calculation		casing diameter		gallons per linear foot
total depth =	<u>17.95</u>	0.75 in.	<input type="checkbox"/>	0.023
depth to water =	<u>9.89</u>	1 in.	<input type="checkbox"/>	0.04
linear feet of water =	<u>8.06</u>	2 in.	<input checked="" type="checkbox"/>	0.17
gallons per linear foot X	<u>.17</u>	4 in.	<input type="checkbox"/>	0.67
gallons per casing =	<u>1.37</u>	6 in.	<input type="checkbox"/>	1.5
number of casings X	<u>3</u>	other	<input type="checkbox"/>	calculate
calculated purge =	<u>4.11</u>	1 cubic foot = 7.48 gallons		

Purged By: WJ
 name

Purge Notes: _____

Purged Dry?: N circle Y Sampling Delay?: N circle Y

	time (24:00)	gallons (purged)	pH (units)	EC (us @ 25° C)	temp (°F circle °C)	color (see below)	turbidity (NTU or see below)	odor (see below)
start	<u>1108</u>	<u>0</u>						
volume 1	<u>1112</u>	<u>1.25</u>	<u>6.93</u>	<u>227</u>	<u>20.2</u>	<u>brown</u>	<u>WJ</u>	<u>WJ</u>
volume 2	<u>1116</u>	<u>2.50</u>	<u>6.79</u>	<u>223</u>	<u>19.0</u>	<u> </u>	<u>u</u>	<u>u</u>
volume 3	<u>1120</u>	<u>4.25</u>	<u>6.69</u>	<u>226</u>	<u>18.5</u>	<u> </u>	<u>u</u>	<u>u</u>
volume 4								
complete								

brown, yellow cloudy, clear heavy, moderate light, trace strong, moderate sight, none

Groundwater Sampling Information

Sample Type
 Monitoring Well
 Extraction Well
 Domestic Well
 Other (specify) _____

Sampling Equipment
 Bailor Disposable Teflon #: _____
 Submersible Pump; type: _____
 Sampling Port
 Other (specify) _____

Sample ID <u>MW-5</u>	Date <u>050709</u>	Time (24:00) <u>1130</u>
Dupe # _____		12:00

Sampled By: WJ
 name

Sampling Notes: _____

# of Cont.	Analyses (check and circle)	Container/Size	Preservative
<u>3</u>	<input checked="" type="checkbox"/> TPH gas (8260B) <input checked="" type="checkbox"/> BTEX (8260B) <input type="checkbox"/> Fuel Oxy's, no MtBE (8270) <input type="checkbox"/> MtBE (8270) <input type="checkbox"/> Other (specify) _____	40 ml VOA	HCl
	<input type="checkbox"/> VOCs (8010 or 8240 or 8260B) <input type="checkbox"/> TPH diesel (8015M) <input type="checkbox"/> Metals (8010) <input type="checkbox"/> Other (specify) _____	40 ml VOA 1 liter amber 500 ml plastic	HCl none HNO ₃

Signature: WJ

Field Data Sheet
Groundwater Sampling Form



2560 Soquel Ave. #202
 Santa Cruz, CA 95062
 (831) 475-8141

Site Information

900 Central Ave. MW-6 KCE514
 Project Address Well/Sample Point ID Project Number

Alameda Alameda California
 City County State

Purge Information

Water Level Equipment
 Electronic Indicator
 Oil Water Interface Probe
 Other (specify) _____

Purge Equipment
 Bailer Disposable Teflon #: _____
 Submersible Pump; type: _____
 Other (specify) _____

Purge Calculation

total depth = 17.10
 depth to water = 9.84
 linear feet of water = 7.26
 gallons per linear foot X .17
 gallons per casing = 1.23
 number of casings X 3
 calculated purge = 3.70

casing diameter		gallons per linear foot
0.75 in.	<input type="checkbox"/>	0.023
1 in.	<input type="checkbox"/>	0.04
2 in.	<input checked="" type="checkbox"/>	0.17
4 in.	<input type="checkbox"/>	0.67
6 in.	<input type="checkbox"/>	1.5
other	<input type="checkbox"/>	calculate

1 cubic foot = 7.48 gallons

Purged By: [Signature]
 name

Purge Notes:

Purged Dry?: N circle Y Sampling Delay?: N circle Y

	time (24:00)	gallons (purged)	pH (units)	EC (us @ 25° C)	temp (°F circle °C)	color (see below)	turbidity (NTU or see below)	odor (see below)
start	1046	0						
volume 1	1051	1.25	6.52	323	18.7	brown	hazy	none
volume 2	1055	2.50	6.59	294	18.2	"	"	"
volume 3	1054	3.75	6.71	284	18.3	"	"	"
volume 4								
complete								

brown, yellow cloudy, clear neavy, moderate light, trace strong, moderate slight, none

Groundwater Sampling Information

Sample Type
 Monitoring Well
 Extraction Well
 Domestic Well
 Other (specify) _____

Sampling Equipment
 Bailer Disposable Teflon #: _____
 Submersible Pump; type: _____
 Sampling Port
 Other (specify) _____

Sample ID: MW-6 Date: 050709 Time (24:00): 1105
 Dupe #: _____ 12:00

Sampled By: [Signature]
 name

# of Cont.	Analyses (check and circle)	Container/Size	Preservative
3	<input checked="" type="checkbox"/> TPH gas (8260B) <input checked="" type="checkbox"/> BTEX (8260B) <input type="checkbox"/> Fuel Oxy, no MtBE (8270) <input type="checkbox"/> MtBE (8270) <input type="checkbox"/> Other (specify) _____	40 ml VOA	HCl
	<input type="checkbox"/> VOCs (8010 or 8240 or 8260B) <input type="checkbox"/> TPH diesel (8015M) <input type="checkbox"/> Metals (8010) <input type="checkbox"/> Other (specify) _____	40 ml VOA 1 liter amber 500 ml plastic	HCl none HNO ₃

Sampling Notes:

Signature: [Signature]

Field Data Sheet
Groundwater Sampling Form



2560 Soquel Ave. #202
Santa Cruz, CA 95062
(831) 475-8141

Site Information

900 Central Ave. RW-1 KCE514
Project Address Well/Sample Point ID Project Number

Alameda Alameda California
City County State

Purge Information

Water Level Equipment
 Electronic Indicator
 Oil Water Interface Probe
 Other (specify) _____

Purge Equipment
 Bailor Disposable Teflon #: _____
 Submersible Pump; type: _____
 Other (specify) _____

Purge Calculation		casing diameter		gallons per linear foot	
total depth =	19.05	0.75 in.	<input type="checkbox"/>	0.023	
depth to water =	9.34	1 in.	<input type="checkbox"/>	0.04	
linear feet of water =	9.71	2 in.	<input type="checkbox"/>	0.17	
gallons per linear foot X	0.67	4 in.	<input checked="" type="checkbox"/>	0.67	
gallons per casing =	6.50	6 in.	<input type="checkbox"/>	1.5	
number of casings X	3	other	<input type="checkbox"/>	calculate	
calculated purge =	19.52	1 cubic foot = 7.48 gallons			

Purged By: LD
name

Purge Notes: _____

Purged Dry?: N circle Y Sampling Delay?: N circle Y

	time (24:00)	gallons (purged)	pH (units)	EC (us @ 25° C)	temp (°F circle °C)	color (see below)	turbidity (NTU or see below)	odor (see below)
start	1247	0			67			
volume 1	1257	6.50	6.21	295	19.5	brown	high	strong
volume 2	1306	13.00	6.42	299	17.4	"	"	"
volume 3	1314	19.50	6.53	316	17.0	gray	"	"
volume 4								
complete								

brown, yellow cloudy, clear heavy, moderate light, trace strong, moderate slight, none

Groundwater Sampling Information

Sample Type
 Monitoring Well
 Extraction Well
 Domestic Well
 Other (specify) _____

Sampling Equipment
 Bailor Disposable Teflon #: _____
 Submersible Pump; type: _____
 Sampling Port
 Other (specify) _____

Sample ID	Date	Time (24:00)
RW-1	050709	1325
Dupe #		12:00

Sampled By: LD
name

# of Cont.	Analyses (check and circle)	Container/Size	Preservative
3	<input checked="" type="checkbox"/> TPH gas (8260B)	40 ml	HCl
	<input checked="" type="checkbox"/> BTEX (8260B)		
	<input type="checkbox"/> Fuel Oxy's, no MtBE (8270)		
	<input type="checkbox"/> MtBE (8270)		
	<input type="checkbox"/> Other (specify) _____	VOA	
	<input type="checkbox"/> VOCs (8010 or 8240 or 8260B)	40 ml VOA	HCl
	<input type="checkbox"/> TPH diesel (8015M)	1 liter amber	none
	<input type="checkbox"/> Metals (8010)	500 ml plastic	HNO ₃
	<input type="checkbox"/> Other (specify) _____		

Sampling Notes: _____

Signature: [Signature]