

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director



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

June 30, 2014

Mr. Gary and Ms. Karen Pearce (Via e-mail at rogers@dincellaw.com)
c/o of Kim O' Dincel and Julie Rogers
Silicon Valley Law Group
25 Metro Drive
San Jose, CA 945110

Ms. Gloria and Mr. Robert Peterson
c/o Lauri Sherwood, Esq.
Walsworth, Franklin, Beavins & McCall
601 Montgomery Street 9th Floor
San Francisco, CA 94111

Mr. David Thompson
c/o Joseph Ryan, Esq. Ryan & Lifter LLP
2010 Crow Canyon Place, Suite 330
San Ramon, CA 94583

Mr. Jack Holland Jr.
c/o Mulholland Bros.
190 Napoleon Street
San Francisco, CA 94124

Ms. Ann Marie Holland and the Estate of John Holland, Sr.
c/o Edward Martins, Esq.
1164 A Street
Hayward, CA 94541

Ms. Barbara Holland
Hal Reiland, Esq.
P.O. Box 5490
Pleasanton, CA 94566

Subject: Case Closure for Fuel Leak Case No. Fuel Leak Case RO0000084 and
GeoTracker Global ID T0600102089, Holland Oil/Pearce Property, 900 Central Avenue,
Alameda, CA 94501

Dear Ladies and Gentlemen:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25296.10[g]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (<http://geotracker.waterboards.ca.gov>) and the Alameda County Environmental Health website (<http://www.acgov.org/aceh/index.htm>).

If you have any questions, please call Karel Detterman at (510) 567-6708. Thank you.

Sincerely,

Dilan Roe, P.E.
LOP and SCP Program Manager

Enclosures: 1. Remedial Action Completion Certification
2. Case Closure Summary

Responsible Parties
RO0000084
June 30, 2014, Page 2

cc with enclosures:

Julie Avanto, RRM, Inc., 2560 Soquel Avenue, Suite 202, Santa Cruz, CA 95062
(sent via e-mail to: julie@rrmsc.com)

Andrew Thomas, City of Alameda, Planning and Building Department, 2263 Santa Clara Avenue, Room
190, Alameda, CA 94501-4477, (sent via e-mail to: athomas@ci.alameda.ca.us)

Dilan Roe, ACEH, (sent via e-mail to: dilan.roe@acgov.org)

Karel Detterman (sent via electronic mail to: karel.detterman@acgov.org)
eFile, GeoTracker



REMEDIAL ACTION COMPLETION CERTIFICATION

June 30, 2014

Mr. Gary and Ms. Karen Pearce (Via e-mail at jrogers@dincellaw.com)
c/o of Kim O' Dincel and Julie Rogers
Silicon Valley Law Group
25 Metro Drive
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190 Napoleon Street
San Francisco, CA 94124

Ms. Barbara Holland
Hal Reiland, Esq.
P.O. Box 5490
Pleasanton, CA 94566

Subject: Technical Report Request for Fuel Leak Case No. Fuel Leak Case RO0000084 and GeoTracker Global ID T0600102089, Holland Oil/Pearce Property, 900 Central Avenue, Alameda, CA 94501

Dear Ladies and Gentlemen:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

Please be aware that claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,


Ariu Levi
Director

CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM

I. AGENCY INFORMATION

Date: June 30, 2014

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6708
Responsible Staff Person: Karel Detterman	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Holland Oil/Pearce Property		
Site Facility Address: 900 Central Avenue, Alameda, CA 94501		
RB Case No.: 01-2273	Previous Case STiD No.: 6897	LOP Case No.: RO0000084
GeoTracker ID: T0600102089		APN: 073-0398-051-00
Current Land Use: Active Fueling Station, Commercial, Residential		

Responsible Parties	Addresses	Phone Numbers
Mr. Gary and Ms. Karen Pearce c/o of Kim O' Dincel and Julie Rogers	Silicon Valley Law Group 25 Metro Drive, San Jose, CA 945110	None given
Ms. Gloria and Mr. Robert Peterson c/o Lauri Sherwood, Esq.	Walsworth, Franklin, Beavins & McCall 601 Montgomery Street 9th Floor, San Francisco, CA 94111	None given
Mr. David Thompson c/o Joseph Ryan, Esq.,	Ryan & Lifter LLP 2010 Crow Canyon Place, Suite 330 San Ramon, CA 94583	None given
Mr. Jack Holland Jr. c/o Mulholland Bros.	190 Napoleon Street San Francisco, CA 94124	None given
Ms. Barbara Holland c/o Hal Reiland, Esq.	P.O. Box 5490 Pleasanton, CA 94566	None given
Ms. Ann Marie Holland and the Estate of John Holland, Sr. c/o Edward Martins, Esq.	1164 A Street Hayward, CA 94541	None given

This Case Closure Summary along with the Case Closure Transmittal letter and the Remedial Action Completion Certification provides documentation of the case closure. This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions. Additional information on the case can be viewed in the online case file. The entire case file can be viewed over the Internet on the Alameda County Environmental Health (ACEH) website (<http://www.acgov.org/aceh/lop/ust.htm>) or the State of California Water Resources Control Board GeoTracker website (<http://geotracker.waterboards.ca.gov>). Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the ACEH website.

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Release from underground storage tank (UST) system.		
Number of monitoring wells installed: Six	Number of monitoring wells destroyed: Six	Number of monitoring wells remaining: no wells
Highest Groundwater Depth Below Ground Surface: 6.01 feet bgs	Lowest Depth: 13.76 feet bgs	Flow Direction: West.
Most Sensitive Current Groundwater Use: Potential drinking water source		

<p>Summary of Production Wells in Vicinity: The groundwater gradient direction appears to be to the west; there were no water supply wells found to be located within a radius of 2,000 feet downgradient of the site. There are a number of irrigation wells located cross and downgradient of the site and the closest irrigation well appears to be located at 920 Centennial Avenue, Alameda, a distance of approximately 264 feet west-southwest of the site. Based on the location of the well with respect to the site, the well is not expected to be a receptor for the site.</p>	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain (or other aquifer)
Is surface water affected? No	Nearest Surface Water Name: The San Francisco Bay is approximately 1,000 feet south of the site.

LTCP GROUNDWATER SPECIFIC CRITERIA

LTCP Groundwater Specific Scenario under which case was closed: Scenario 1

Site Data		LTCP Scenario 1 Criteria (ppb)	LTCP Scenario 2 Criteria (ppb)	LTCP Scenario 3 Criteria (ppb)	LTCP Scenario 4 Criteria (ppb)
Plume Length	<36 feet	<100 feet	<250 feet	<250 feet	<1,000 feet
Free Product	No free product	No free product	No free product	Removed to maximum extent practicable	No free product
Plume Stable or Decreasing	Stable	Stable or decreasing	Stable or decreasing	Stable or decreasing for minimum of 5 Years	Stable or decreasing
Distance to Nearest Water Supply Well	No water supply wells found to be located within a radius of 2,000 feet downgradient of the site	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	1000 feet cross gradient	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Property Owner Willing to Accept a Land Use Restriction?	Not applicable	Not applicable	Not applicable	Yes	Not applicable

GROUNDWATER CONCENTRATIONS

Constituent	Historic Site Maximum (ppb)	Current Site Maximum (ppb)	LTCP Scenario 1 Criteria (ppb)	LTCP Scenario 2 Criteria (ppb)	LTCP Scenario 3 Criteria (ppb)	LTCP Scenario 4 Criteria (ppb)
Benzene	4,000	<0.2	No criteria	<3,000	No criteria	<1,000
MTBE	<500	<0.2	No criteria	<1,000	No criteria	<1,000
List other chemicals of specific concern	---	---				

Scenario 5: If the site does not meet scenarios 1 through 4, has a determination been made that under current and reasonably expected future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame?

LTCP VAPOR SPECIFIC CRITERIA

LTCP Vapor Specific Scenario under which case was closed: Scenario 4

Active Fueling Station Not an active fueling station

Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3A Criteria	LTCP Scenario 3B Criteria	LTCP Scenario 3C Criteria	LTCP Scenario 4 Criteria
Unweathered Non-Aqueous Phase Liquid NAPL	---	LNAPL in groundwater	LNAPL in soil	No NAPL	No NAPL	No NAPL	No criteria
Thickness of Bioattenuation Zone Beneath Foundation	<5 feet	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥5 feet	≥5 feet
Total TPH in Bioattenuation Zone	No data	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm
Maximum Current Benzene Concentration in Groundwater	<0.2 ppb	No criteria	No criteria	<100 ppb	≥100 and <1,000 ppb	<1,000 ppb	No criteria
Oxygen Data within Bioattenuation Zone	≥4% at lower end of zone	No criteria	No criteria	No oxygen data or <4%	No oxygen data or <4%	≥4% at lower end of zone	≥4% at lower end of zone
Depth of soil vapor measurement beneath foundation	5 feet bgs	No criteria	No criteria	No criteria	No criteria	No criteria	≥5 feet

SCENARIO 4 DIRECT MEASUREMENT OF SOIL VAPOR CONCENTRATIONS

Site Soil Vapor Data			No Bioattenuation Zone		Bioattenuation Zone	
Constituent	Historic Maximum (µg/m ³)	Current Maximum (µg/m ³)	Residential	Commercial	Residential	Commercial
Benzene	8.8	8.8	<85	<280	<85,000	<280,000
Ethylbenzene	460	460	<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene	<38	<38	<93	<310	<93,000	<310,000

If the site does not meet scenarios 1 through 4, does a site-specific risk assessment for the vapor intrusion pathway demonstrate that human health is protected?

If the site does not meet scenarios 1 through 4, has a determination been made that petroleum vapors from soil or groundwater will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?

LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA

LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed: A determination been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health.

Are maximum concentrations less than those in Table 1 below?

Yes, for 5-10 feet bgs only

Constituent		Residential		Commercial/Industrial		Utility Worker
		0 to 5 feet bgs (ppm)	Volatilization to outdoor air (5 to 10 feet bgs) ppm	0 to 5 feet bgs (ppm)	Volatilization to outdoor air (5 to 10 feet bgs) ppm	0 to 10 feet bgs (ppm)
Site Maximum	Benzene	---	<0.01	---	<0.01	<0.01
LTCP Criteria	Benzene	≤1.9	≤2.8	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	---	<0.01	---	<0.01	<0.01
LTCP Criteria	Ethylbenzene	≤21	≤32	≤89	≤134	≤314
Site Maximum	Naphthalene	---	---	---	---	---
LTCP Criteria	Naphthalene	≤9.7	≤9.7	≤45	≤45	≤219
Site Maximum	PAHs	---	---	---	---	---
LTCP Criteria	PAHs	≤0.063	NA	≤0.68	NA	≤4.5

If maximum concentrations are greater than those in Table 1, are they less than levels from a site-specific risk assessment?

If maximum concentrations are greater than those in Table 1, has a determination been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?

IV. CLOSURE

Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, closure of this site appears to be consistent with the policies established by the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy which became effective on August 17, 2012.

Site Management Requirements:

This fuel leak case has been evaluated for closure consistent with the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP). Based on this evaluation, no site management requirements appear to be necessary. However, excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

Should corrective action be reviewed if land use changes? Yes

Was a deed restriction or deed notification filed? No

Date Recorded: ---

V. ADDITIONAL COMMENTS AND CONCLUSION

Additional Comments:

This fuel leak case has been evaluated for closure consistent with the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP). Soil vapor samples were collected at a depth of 5 feet bgs; however because the depth of the current building foundation is unknown, soil vapor samples may not have been taken at a depth of 5 feet below the foundation as required by the LTCP. However, oxygen data collected in all the soil vapor probes was greater than 11%. Additionally, because the subsurface is predominantly sand, ACEH considers these results to be representative of a depth of 5 feet below the foundation's bottom.

Soil samples in shallow soil 0 – 5 feet bgs have not been collected; consequently benzene, ethylbenzene, naphthalene, and PAH concentrations are unknown in shallow soil across the site. However, shallow soil in the northwest corner of the site, where the highest soil contaminant concentrations were found, was excavated. Additionally, contaminant concentrations have not been detected in groundwater and it is considered unlikely that concentrations listed in the LTCP's Table 1 of the Direct Contact and Outdoor Air Exposure Media Specific Scenario would be exceeded.

Conclusion:

Alameda County Environmental Health staff believe that the site meets the conditions for case closure under the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy. Based upon the information available in our files to date, no further investigation or cleanup for the fuel leak case is necessary at this time.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Karel Detterman, PG	Title: Hazardous Materials Specialist
Signature: <i>Karel Detter</i>	Date: <i>6/30/2014</i>
Approved by: Dilan Roe, PE	Title: LOP and SCP Program Manager
Signature: <i>Dilan Roe</i>	Date: <i>6/30/2014</i>

VII. REGIONAL BOARD AND PUBLIC NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Regional Board Notification Date: 11/15/2013	
Public Notification Date: 1/13/2014	

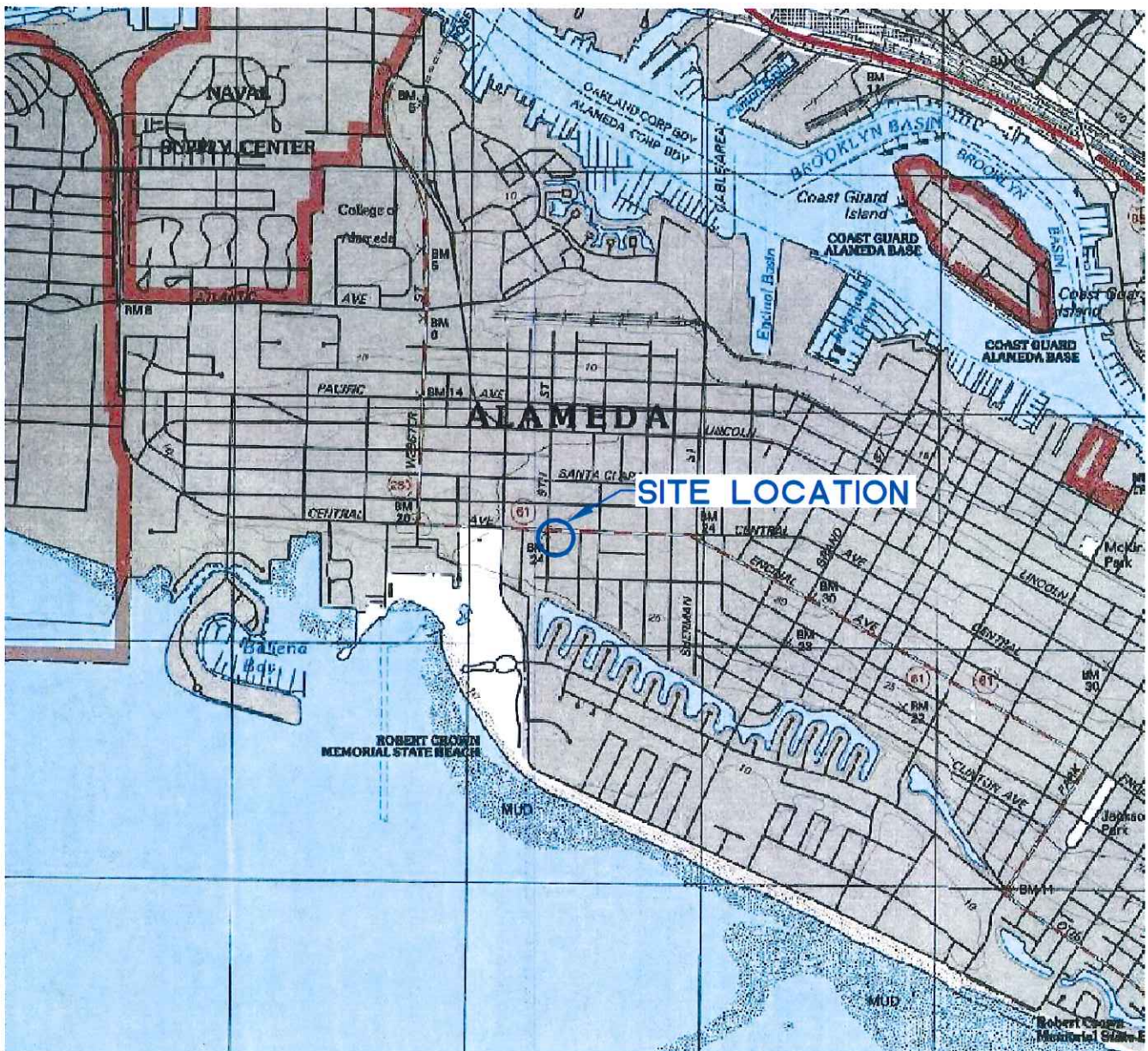
VIII. MONITORING WELL DESTRUCTION

Date Requested by ACEH: 1/30/2014	Date of Well Destruction Report: 6/30/2014	
All Monitoring Wells Destroyed: Yes	Number Destroyed: 6	Number Retained: 0
Reason Wells Retained: ----		
Additional requirements for submittal of groundwater data from retained wells: ----		
ACEH Concurrence - Signature: <i>Karel Detter</i>	Date: <i>6/30/2014</i>	

Attachments:

1. Site Vicinity Map and Aerial Photo (2 pp)
2. Site Plan (1 p)
3. Groundwater Contour and Chemical Concentration Maps (4 pp)
4. Soil and Soil Vapor Analytical Data (5 pp)
5. Groundwater Analytical Data (4 pp)
6. Cross Sections (2 pp)

ATTACHMENT 1



QUADRANGLE LOCATION



SCALE IN FEET



Ref. KCE514/KCE514-SUM.DWG
Base Map from TOP011 NGH

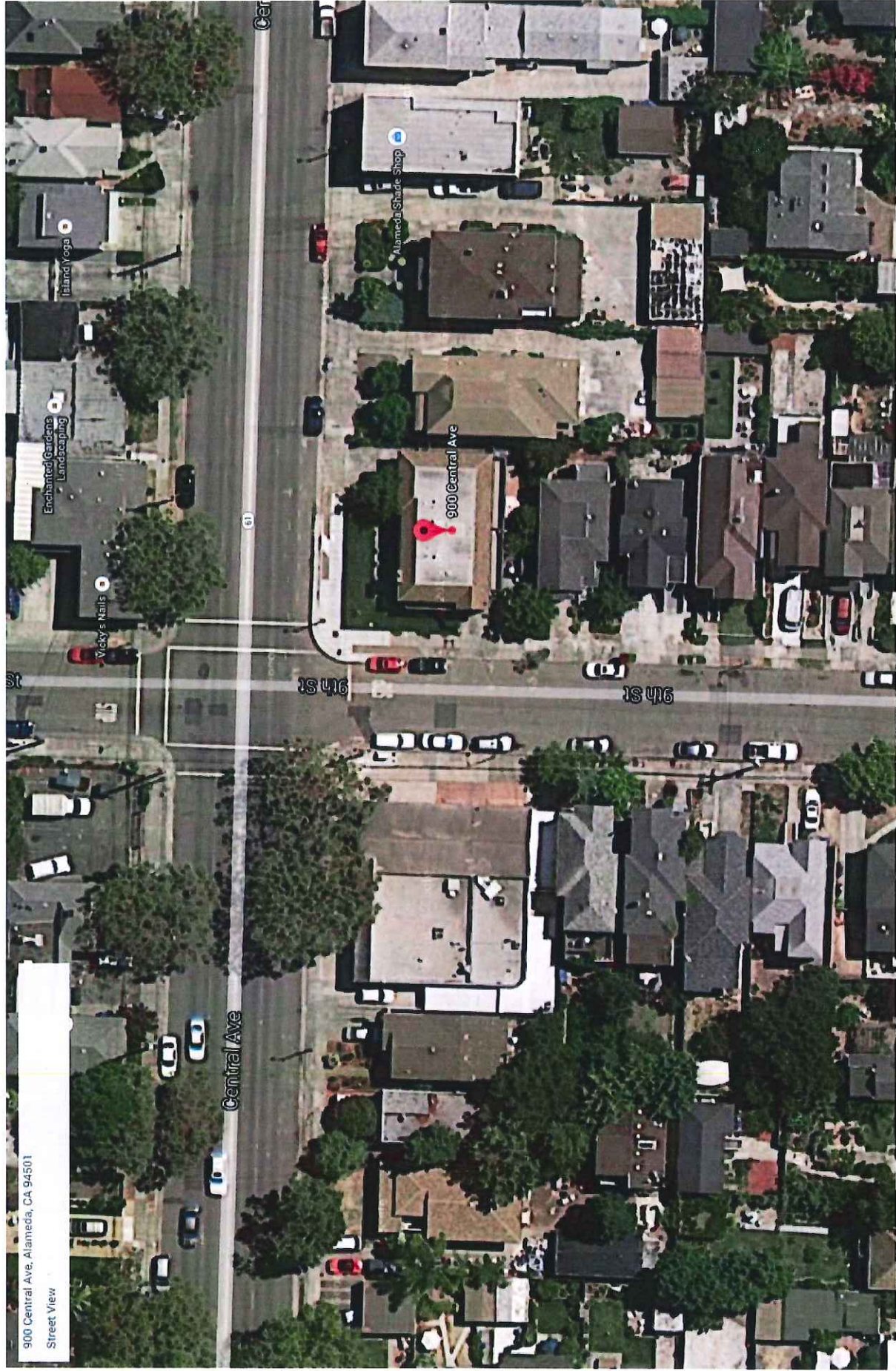
SITE LOCATION MAP

900 Central Avenue
Alameda, California

FIGURE:
1
PROJECT:
KCE514



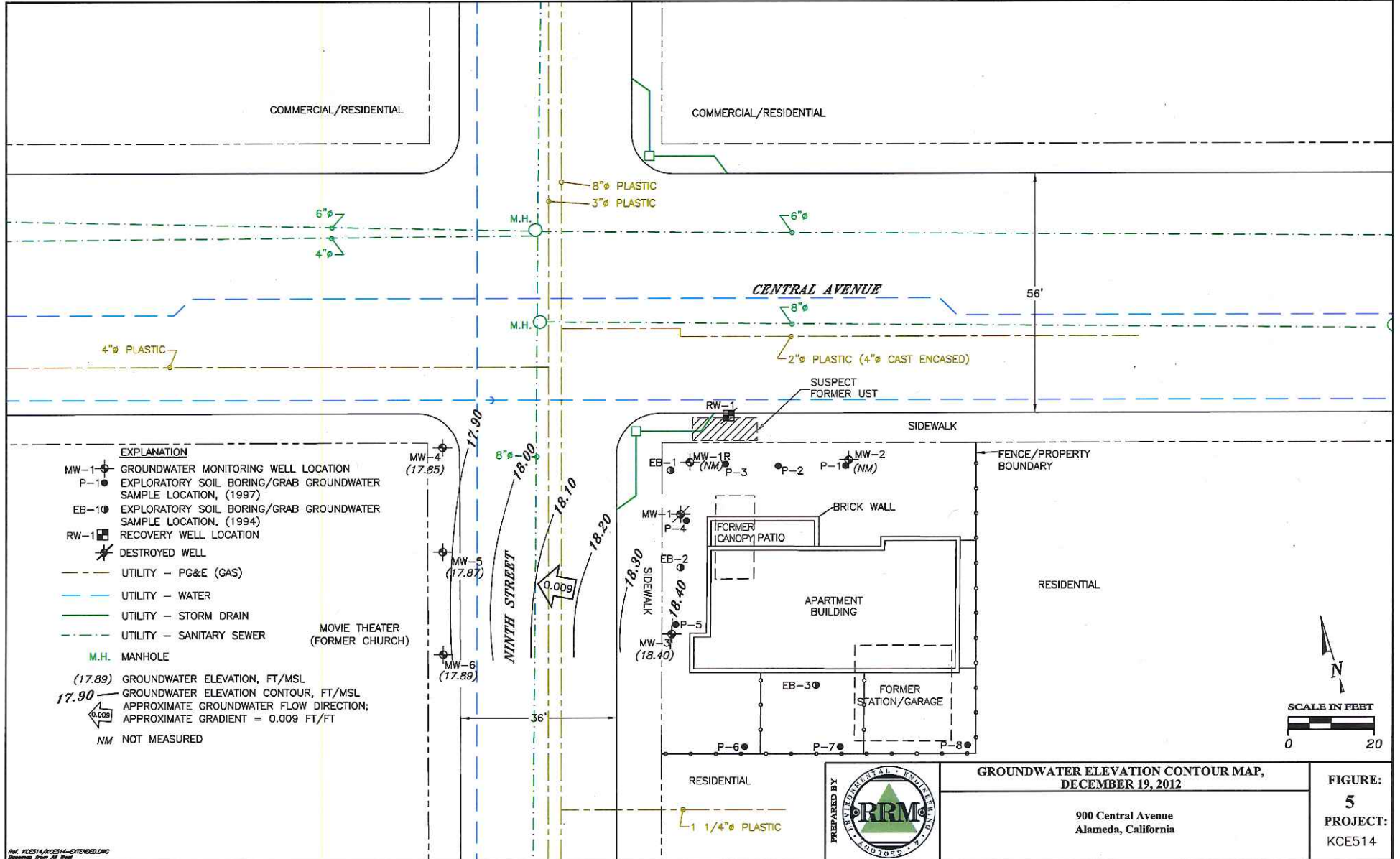
900 Central Ave - Google Maps



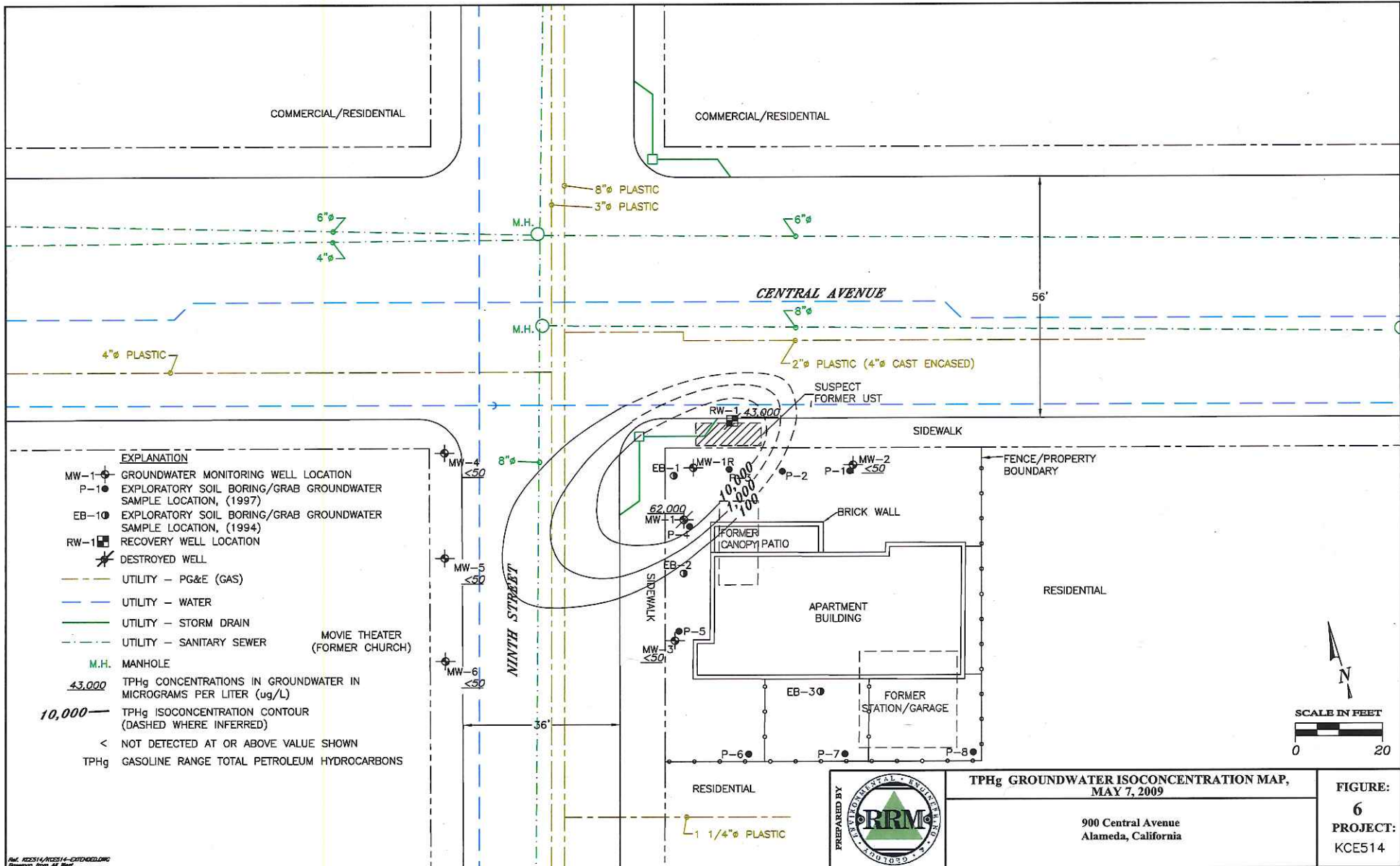
Map data ©2014 Google 20 ft

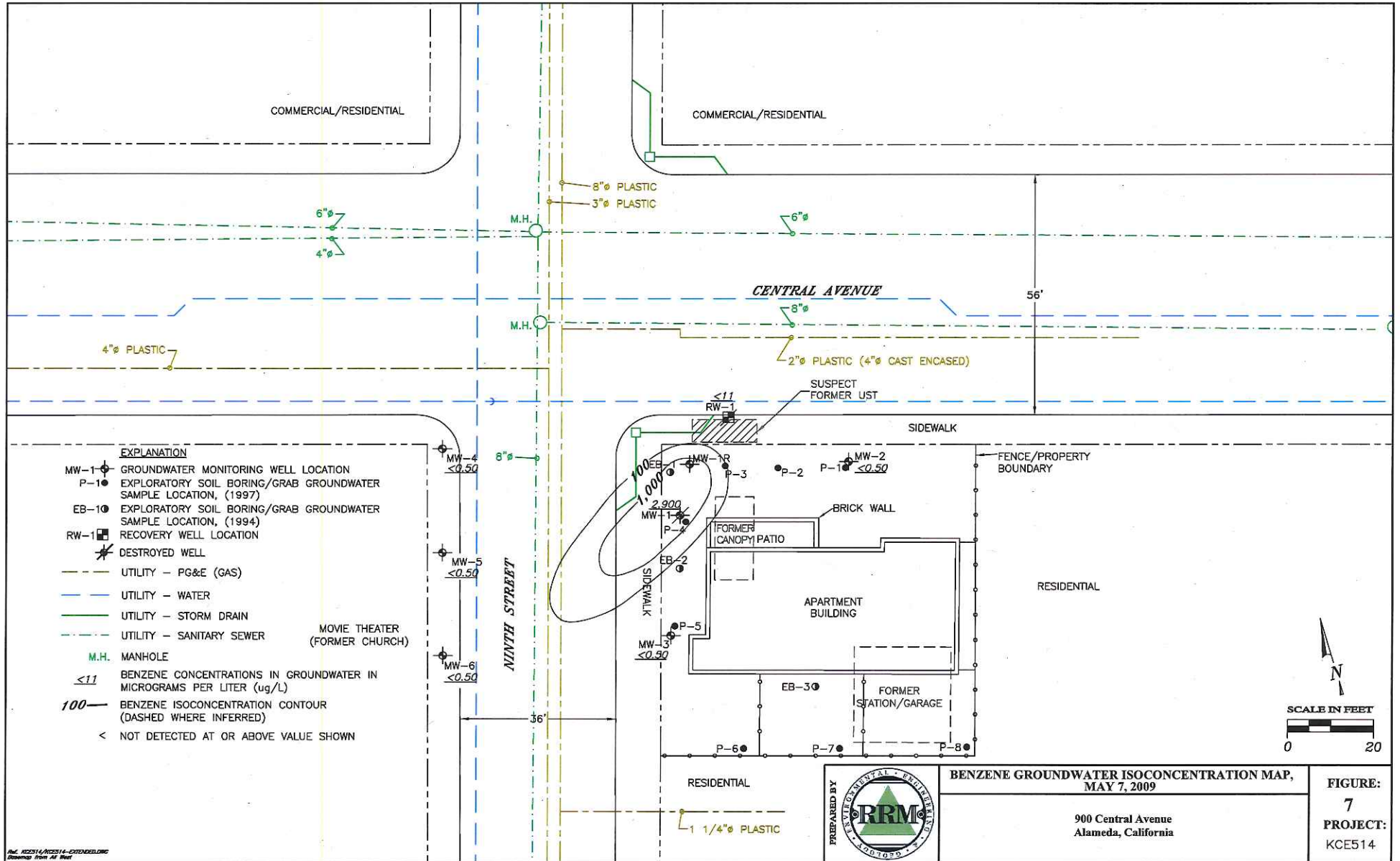
ATTACHMENT 2

ATTACHMENT 3

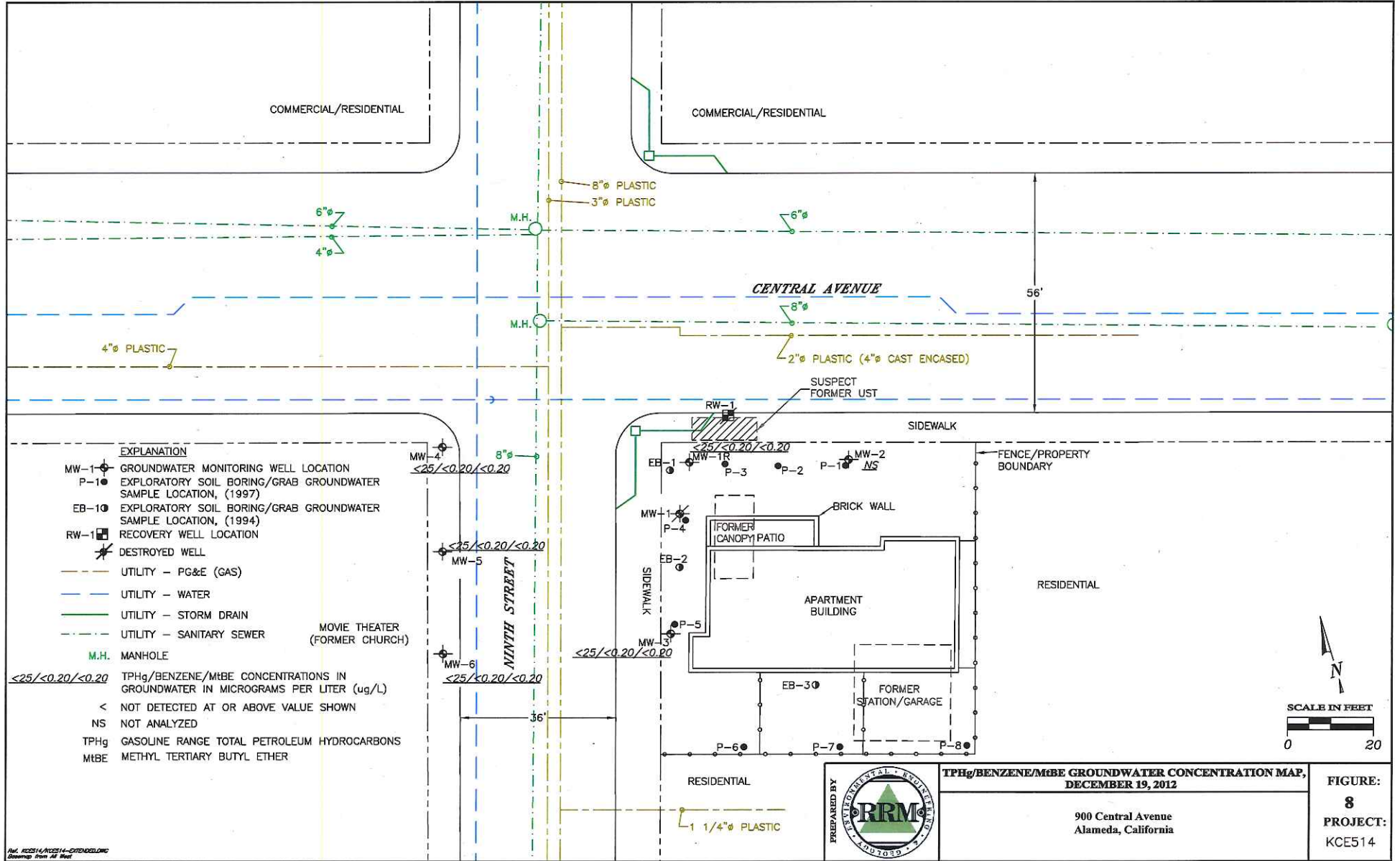


Rev. KCE514/KCE514-CYTOXOZOLONE
Sewermap from All West





Ref. KCE514/AR2514-EXTENDED.DWG
 Reshape from AF Plot



Rev. 10/25/14 KCE514 - CDTINGOLD.DWG
Screenmap from A8 West

ATTACHMENT 4

Table 3
Soil Analytical Data
 900 Central Avenue
 Alameda, California

Sample ID	Date	Depth (feet, bgs)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	TPHss (mg/kg)	TPHk (mg/kg)	VOCs (mg/kg)	Notes:
Excavation Sidewall Confirmation Borings														
CB-1-12'	03/01/12	12	16.6	<0.017	<0.017	0.0754J	0.244J	NA	NA	NA	NA	NA	NA	
CB-2-12'	03/01/12	12	<0.050	<0.00050	<0.00050	<0.00050	<0.0010	NA	NA	NA	NA	NA	NA	
CB-3-13'	03/01/12	13	<0.049	<0.00049	<0.00049	<0.00049	<0.00097	NA	NA	NA	NA	NA	NA	
CB-4-12'	03/01/12	12	986	<0.67	5.77	17	114	NA	NA	NA	NA	NA	NA	
Excavation Confirmation Samples														
NW-12'	08/16/11	12	619	<1.40	<1.40	4.33J	4.34J	NA	NA	NA	NA	NA	NA	
N-12'	08/16/11	12	1,550	<3.60	<3.60	9.59J	19.2J	NA	NA	NA	NA	NA	NA	
W-Bottom 18'	08/17/11	18	0.657	0.0015J	0.0041J	0.0133	0.0923	NA	NA	NA	NA	NA	NA	
N-16'	08/17/11	16	193	<0.370	<0.370	2.52	13.9	NA	NA	NA	NA	NA	NA	
E-Bottom 18'	08/17/11	18	<0.049	<0.0015	<0.0015	<0.0015	0.0066J	NA	NA	NA	NA	NA	NA	
Soil Disposal Profile and Vertical Delineation Borings														
PB-1-20	09/08/10	20	0.145	<0.0015	<0.0015	<0.0015	<0.0040	<0.00099	NA	NA	NA	NA	NA	
PB-1-25	09/08/10	25	<0.049	<0.0015	<0.0015	<0.0015	<0.0039	<0.00098	NA	NA	NA	NA	NA	
PB-2-20	09/08/10	20	0.304	<0.0015	<0.0015	0.0015J	0.0058J	<0.00099	NA	NA	NA	NA	NA	
PB-2-25	09/08/10	25	<0.050	<0.0015	<0.0015	0.0017J	0.0060J	<0.0010	NA	NA	NA	NA	NA	
PB-Comp-1	09/08/10	NA	36.9	<0.094	<0.094	0.427	3.36	<0.063	NA	NA	NA	NA	NA	c,d
PB-Comp-2	09/08/10	NA	<2.5	<0.075	<0.075	<0.075	<0.20	<0.050	NA	NA	NA	NA	NA	e,f
Soil Borings- RRM														
SB-1-7.5	08/09/07	7.5	0.79	<0.010	<0.010	<0.010	0.034	NA	NA	NA	NA	NA	NA	
SB-1-12	08/09/07	12	2,600	<3.3	<3.3	31	200	NA	NA	NA	NA	NA	NA	
SB-1-16	08/09/07	16	11	<0.010	<0.010	0.31	1.7	NA	NA	NA	NA	NA	NA	
SB-1-20	08/09/07	20	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-1-24	08/09/07	24	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-2-8	08/09/07	8	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-2-11.5	08/09/07	11.5	<0.50	<0.010	<0.010	<0.010	<0.010	NA	<5.0	<10	<5.0	<5.0	NA	
SB-2-16	08/09/07	16	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-2-20	08/09/07	20	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-2-24	08/09/07	24	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
Soil Cleanup Goals (mg/kg)^g			180	2	9.3	4.7	11	NA	NA	NA	NA	NA	NA	

Table 3
Soil Analytical Data
900 Central Avenue
Alameda, California

Sample ID	Date	Depth (feet, bgs)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	TPHss (mg/kg)	TPHk (mg/kg)	VOCs (mg/kg)	Notes:
Soil Borings- RRM (cont.)														
SB-3-8	08/09/07	8	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-3-12	08/09/07	12	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-3-16	08/09/07	16	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-4-8	08/09/07	8	5.1	<0.050	<0.050	<0.050	<0.100	<0.050	<5.0	<10	<5.0	<5.0	ND	
SB-5-8	08/09/07	8	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA				
SB-5-10.5	08/09/07	10.5	<0.10	<0.005	<0.005	<0.005	<0.010	<0.0050	<5.0	<10	<5.0	<5.0	ND	
SB-6-8	08/09/07	8	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-6-12	08/09/07	12	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
SB-6-16	08/09/07	16	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
Monitoring Wells - RRM														
MW-4-6	06/22/07	6	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
MW-4-10.5	06/22/07	10.5	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
MW-4-16.5	06/22/07	16.5	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
MW-5-7.5	06/22/07	8	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
MW-5-10.5	06/22/07	10.5	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
MW-5-15	06/22/07	15.0	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
MW-6-5	06/22/07	5	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
MW-6-10.5	06/22/07	10.5	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
MW-6-17	06/22/07	17	<0.50	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA	
Soil Borings - Allwest														
P-1-11 ^b	06/97	11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
P-2-10.5 ^b	06/97	10.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
P-2-12.5 ^b	06/97	12.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
P-3-11 ^b	06/97	11	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
P-3-14.5 ^b	06/97	14.5	4,600	ND	15	110	590	NA	NA	NA	NA	NA	NA	
P-4-13 ^b	06/97	13	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
P-4-15.5 ^b	06/97	15.5	1.1	0.011	0.0092	0.03	0.066	NA	NA	NA	NA	NA	NA	
P-5-11.5 ^b	06/97	11.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
P-6-10.5 ^p	06/97	10.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
Soil Cleanup Goals (mg/kg)^g			180	2	9.3	4.7	11	NA	NA	NA	NA	NA	NA	

Table 3
Soil Analytical Data
900 Central Avenue
Alameda, California

Sample ID	Date	Depth (feet, bgs)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	TPHss (mg/kg)	TPHk (mg/kg)	VOCs (mg/kg)	Notes:
Soil Borings - Allwest (cont.)														
P-7-9.5 ^b	06/97	9.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
P-8-9.5 ^b	06/97	9.5	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	
Soil Borings - Lowney														
EB-1 ^a	04/20/94	14.5	95	0.4	0.5	0.9	5.2	NA	39	<10	NA	NA	NA	
EB-2 ^a	04/20/94	16.5	<1.0	<0.005	<0.005	<0.005	<0.005	NA	<5	<10	NA	NA	NA	
EB-3 ^a	04/20/94	14.5	<1.0	<0.005	<0.005	<0.005	<0.005	NA	<5	<10	NA	NA	ND	
Soil Cleanup Goals (mg/kg)^g			180	2	9.3	4.7	11	NA	NA	NA	NA	NA	NA	

Notes:

TPHg = gasoline range total petroleum hydrocarbons

TPHd = diesel range total petroleum hydrocarbons

TPHmo = motor oil range total petroleum hydrocarbons

TPHss = Stoddard range total petroleum hydrocarbons

TPHk = kerosene total petroleum hydrocarbons

MtBE = Methyl tert-Butyl Ether

mg/kg = milligrams per kilogram

bgs = below ground surface

< = none detected at or above reported detection limit

ND = not detected

NA = not analyzed or not applicable

J = Estimated concentration; compound detected below lab reporting limit but above method detection limit

 = soil in area of sample removed during remedial excavation in August 2011

BOLD = concentrations in **BOLD** indicate value exceeds proposed cleanup goal

a = Work performed by Lowney Associates on April 4, 1994.

b = Work performed by Allwest in 1997.

c = Lead reported at 10.1 mg/kg

d = 4 part composite of samples from PB-1 & PB-2 at 5- and 10-foot depths

e = Lead reported at 3.3 mg/kg

f = 4 part composite of samples from PB-1 & PB-2 at 15- and 20-foot depths

g = soil cleanup goals proposed in RRM's August 27, 2010 *Corrective Action Plan (FINAL)*

Table 4
Soil Vapor Analytical Data
 900 Central Avenue
 Alameda, California

Sample ID	Date	Depth (feet, bgs)	TPHg (µg/m ³)	Benzene (µg/m ³)	Toluene (µg/m ³)	Ethyl-benzene (µg/m ³)	Xylenes (µg/m ³)	Naphthalene (µg/m ³)	Oxygen (%)	Nitrogen (%)	Carbon Dioxide (%)	Methane (%)	Helium (%)
SG-1	04/03/12	5	2,200	<2.4	120	51	316	<16	20	79	1.0	<0.00025	<0.12
SG-2	04/03/12	5	14,000	8.8	1,700	380	2,410	<31	19	80	1.4	<0.00020	<0.098
SG-3	04/03/12	5	3,300	4.9	230	74	570	<16	11	84	5.4	<0.00021	<0.10
SG-4	04/03/12	5	7,400	4.0	950	220	1,590	<17	13	82	4.9	<0.00022	<0.11
SG-5	04/03/12	5	15,000	<5.8	1,000	460	3,600	<38	17	80	2.8	<0.00019	<0.096
RWQCB ESLs (Residential)			150,000	42	160,000	490	52,000	36	NA	NA	NA	NA	NA

Notes:

TPHg = gasoline range total petroleum hydrocarbons

µg/m³ = micrograms per cubic meter

bgs = below ground surface

< = none detected at or above reported detection limit

NA = not analyzed

RWQCB ESLs = Table E-1 of RWQCB document *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final - May 2013*

ATTACHMENT 5

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	
Well Destroyed 7/13/11													
MW-1R	06/27/12	NM	9.85	NM	331	24.1	1.1	31.4	3.7	<0.20	NA	NA	
	12/19/12	NM	9.32	NM	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA	8
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 (cont.)	09/04/08		12.95	15.36	<50	<0.500	<0.500	<0.500	<1.50	NA	NA	NA	1
	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
	05/07/09		10.08	18.23	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	
	06/27/12		NM	NM									
	12/19/12		NM	NM									
Unable to Locate Well Well Uncovered/Blocked													
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
	05/07/09		9.83	17.86	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	
06/27/12		9.90	17.79	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA		
12/19/12		9.29	18.40	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA	8	
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
	05/07/09		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-4	06/27/12		10.05	17.32	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA	
(cont.)	12/19/12		9.52	17.85	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA	8
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
	05/07/09		9.89	17.36	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	
	06/27/12		9.92	17.33	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA	
	12/19/12		9.38	17.87	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA	8
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
	05/07/09		9.84	17.40	<50	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	
	06/27/12		9.92	17.32	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA	
	12/19/12		9.35	17.89	<25	<0.20	<0.20	<0.20	<0.46	<0.20	NA	NA	8
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
	05/07/09		9.34	18.09	43,000	<11	200	2,100	10,000	NA	NA	NA	6

Well Destroyed 7/13/11

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
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	
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	MtBE = Methyl tert-Butyl Ether
TOC = top of casing	ppb = parts per billion (micrograms per liter)
TPHg = gasoline range total petroleum hydrocarbons	< = none detected at or above reported detection limit
TPHd = diesel range total petroleum hydrocarbons	NS = not sampled
TPHmo = motor oil range total petroleum hydrocarbons	NA = not analyzed
TBA = tert-Butanol	
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.	
8 = Sample also analyzed for naphthalene; compound was not detected unless noted.	

ATTACHMENT 6

