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

November 6, 2015

Mr. Jesse Barajas (Sent via e-mail to: <u>JBarajas@alamedaca.gov</u>) City of Alameda Public Works Department 950 W Mall Square #110 Alameda, CA 94501

Subject:

Case Closure for Fuel Leak Case No. RO0003011 and GeoTracker Global ID T10000001614,

City of Alameda Maintenance Services, 1616 Fortmann Way, Alameda, CA 94501

Dear Mr. Barajas:

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) County Environmental Health website and the Alameda (http://www.acgov.org/aceh/index.htm).

Due to residual contamination, the site was closed with Site Management Requirements that limit future land use to the current commercial land use as a City of Alameda Maintenance Service center. Site Management Requirements are further described in Additional Comments of the attached Case Closure Summary.

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

cc with enclosure:

Susan Hugo, Alameda County Environmental Health, (Send via e-mail to: <a href="mailto:susan.hugo@acgov.org">susan.hugo@acgov.org</a>)
Gary Lieberman, AMEC (Sent via e-mail to: <a href="mailto:gary.lieberman@amec.com">gary.lieberman@amec.com</a>)
Karel Detterman, ACEH, (sent via electronic mail to <a href="mailto:karel.detterman@acgov.org">karel.detterman@acgov.org</a>)
Dilan Roe, ACEH, (sent via e-mail to: <a href="mailto:dilan.roe@acgov.org">dilan.roe@acgov.org</a>)
Electronic File, GeoTracker

### ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY

AGENCY
ALEX BRISCOE, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH OFFICE OF THE DIRECTOR 1131 HARBOR BAY PARKWAY ALAMEDA, CA 94502 (510) 567-6777 FAX (510) 337-9135

### REMEDIAL ACTION COMPLETION CERTIFICATION

November 6, 2015

Mr. Jesse Barajas
City of Alameda Public Works Department
950 W Mall Square #110
Alameda, CA 94501
(Sent via e-mail to: JBarajas@alamedaca.gov)

Subject:

Case Closure for Fuel Leak Case No. RO0003011 and GeoTracker Global ID T10000001614,

City of Alameda Maintenance Services, 1616 Fortmann Way, Alameda, CA 94501

Dear Mr. Barajas:

This letter confirms the completion of a site investigation and remedial action for the fuel spill 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,

Ronald Browder Acting Director

### **UST Case Closure Summary Form**

### **Agency Information**

Date: November 6, 2015

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

### **Case Information**

Facility Name: City of Alameda Maintenance Services									
Facility Address: 1616 Fortmann V	Vay, Alameda, CA 94501								
RB LUSTIS Case No:	Local Case No.:	LOP Case No.: RO0003011							
URF Filing Date: March 10, 2009	GeoTracker Global ID: T10000001	1614							
APN: 72-381-18	Current Land Use: Municipal Main	tenance and Fueling Facility							
Responsible Party(s):	Address:	Phone:							
City of Alameda Public Works Department c/o: Jesse Barajas (sent via e-mail to: jbarajas@alamedaca.gov)	950 W Mall Square #110 Alameda, CA 94501	<sup>98</sup>							

### Tank Information (Delete table if Tank info becomes a tab in GeoTracker and included in CSM Report)

Tank No.	Size (gal)	Contents	Closed in-Place/ Removed/Active	Date
1	6,000	Gasoline	Active	November 6, 2015
2	1,000	Gasoline	Active	November 6, 2015
3	1,000	Red Dye Diesel	Active	November 6, 2015

Conceptual Site Model (Attachment 1, 1 page)

Low Threat Closure Policy (LTCP) Checklist (Attachment 2, 1 page)

LTCP Groundwater Specific Criteria (Attachment 3, 1 page)

LTCP Vapor Specific Criteria (Attachment 4, 1 page)

LTCP Direct Contact and Outdoor Air Exposure Criteria (Attachment 5, 1 page)

Site Maps (Attachment 6, 4 pages)

Analytical Data (Attachment 7, 4 pages)

### **UST Case Closure Summary Form**

Site Management Requirements: This fuel leak case has been evaluated for closure consistent with the State Water Resource Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP). Residual concentrations of polyaromatic hydrocarbons (PAHs) were detected in site soil between depths of 0 to 5 feet, two PAH concentrations exceeding the LTCP's Commercial/Industrial and Utility Worker benzo(a)pyrene toxicity equivalent. Under the current land use as City of Alameda Maintenance Service center including an active municipal fueling station, the site is entirely paved and exposure to site soils is negligible, except in controlled conditions under the current commercial land use resulting in a low potential for direct contact exposure under the current land use. Therefore, case closure is granted for the current commercial land use as City of Alameda Maintenance Service center including an active fueling station.

If there is a change in land use to any residential, or conservative land use, or if any redevelopment occurs, Alameda County Environmental health (ACEH) must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans.

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.

Notification Date: April 13, 2015

RWQCB Staff Name: Cherie McCaulou	Title: Engineering Geologist
Local Agency Representative	
Prepared by: Karel Detterman, PG	Title: Hazardous Materials Specialist
Signature: Karel Dette	Date: 11/19/2015
Approved by: Dilan Roe, PE	Title: LOP and SCP Program Manager
Signature:	Date: 11 19 2015

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. The Conceptual Site Model may not contain all available data. 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) Control Board GeoTracker the State of California Water Resources (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.

**RWQCB** Notification

CSM Report

**V** G₀

GEOTRACKER HOME | MANAGE PROJECTS | REPORTS | SEARCH | LOGOUT

### 000001614) - MAP THIS SITE COMPLETED - CASE CLOSED

1616 FORTMANN WAY ALAMEDA , CA 94501

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ALAMEDA COUNTY

CITY OF ALAMEDA MAINTENANCE SERVICES CENTER (T10000001614) - MAP THIS SITE

ACTIVITIES REPORT CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP (LEAD) - CASE #: R00003011

PUBLIC WEBPAGE

CASEWORKER: KAREL DETTERMAN - SUPERVISOR: DILAN ROE
SAN FRANCISCO BAY RWQCB (REGION 2)

CASEWORKER: Cherie McCaulou - SUPERVISOR: Cheryl L. Prowell

CR Site ID #: NOT SPECIFIED

	Ţ	HIS PROJECT WA	S LAST MODIFIED	D BY <u>KAREL DE</u>	TTERMAN ON	11/20/2015 10:32	:43 AM - <u>HISTC</u>	<u>RY</u>		
	THIS SITE H	AS SUBMITTALS. (	LICK HERE TO OF	PEN A NEW WIND	OOW WITH THE	SUBMITTAL APP	ROVAL PAGE F	OR THIS SITE.		
CSM REPORT - VIEW PI	JBLIC NOTICING VE	RSION OF THIS RI	PORT							
UST CLEANUP FUND C	LAIM INFORMA	TION (DATA PL	JLLED FROM	SCUFIIS)						
CLAIM PRIORITY CLAIR	MANT SITE ADDRESS	AMT REIMB TO DATE	AGE OF	IMPACTED WELLS?	REVIEW	REVIEWER	FIVE YEAR RI			CLAIMANT DATE
PROJECT INFORMATION										
	DN (DATA FOLLE	DI KON OLO		STA		EASE REPORT	AGE OF CL	EANUP OVERSIG	HT ACENCIES	
SITE NAME / ADDRESS	INTENANCE OF	3,4050	STATUS		ITE O	DATE	CASE		LOP (LEAD) - CASE	<u> </u>
CITY OF ALAMEDA MA CENTER (Global ID: T1 1616 FORTMANN WAY ALAMEDA, CA 94501	0000001614)	(VICES	Completed - ( Closed	Jase 11/19	/2015 3	/10/2009	DE SA	00003011 CASEWORKER TTERMAN - SU IN FRANCISCO B CASEWORKER	R: <u>KAREL</u> I <b>PERVISOR</b> : DILAN I BAY RWQCB (REGIO	ROE N 2)
STAFF NOTES (INTERNAL) <no ente<="" notes="" staff="" td=""><td>RED&gt;</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></no>	RED>									
SITE HISTORY  Not all historic documents f  http://www.acgov.org/aceh/		e may be available	e on Geotracker.	A complete ca	se file for this	site is located o	n the Alameda	County Environ	nmental Health web	osite at:
The site is currently in use the diesel UST was overfille (URF), but no soil or ground	ed, diesel fuel enter dwater samples wer	ed the fuel vent lir e collected to det	ne, and was release ermine the exten	ased onto the si it of the release	urface. On Ma	arch 10, 2009 the	e City of Alam	eda completed a	n Unauthorized Re	elease Form
Two investigations were co indicated that there are resi groundwater sample detect City of Alameda Maintenan case has been closed unde	idual concentrations ed methyl tert butyl ce Services facility i	of Total Petroleu ether (MTBE) at	m Hydrocarbons a concentration o	as diesel (TPH of 12 microgram	ld) and polyar is per liter but	omatic hydrocar no TPHd, benze	rbons (PAHs) i ene, toluene, e	n site soil betwe thylbenzene, or	en depths of 0 to 5 xylenes (BTEX) or	feet. A grab PAHs. As a
RESPONSIBLE PARTIES				YO'RA TOYARK MODERATE AT						
NAME JESSE BARAJAS	ORGANIZATION City of Alameda P	ublic Works		<u>DDRESS</u> 50 W. MALL SQU	JARE #110		<u>CITY</u> ALAMEDA	EMAIL ibaraias@	alamedaca.gov	
CLEANUP ACTION INFO				MODEL STREET,						
NO CLEANUP ACTIONS I	HAVE BEEN REPO	RTED								
RISK INFORMATION		VIEW LTCP CH	HECKLIŞT		VIEW PAT	H TO CLOSURE	PLAN		VIEW C	ASE REVIEWS
CONTAMINANTS OF CONCER Diesel	RN CURRENT LAN		IAL USE Inicipal and Dom	nestic Supply	DISCHARGE Delivery Pro		E REPORTED 3/10/2009	STOP METHOD Other Means	NEARBY / IMPACTO	TED WELLS
FREE OTI		DF WATER	LAST REGULA ACTIVIT 4/13/201	ATORY Y	<u>LAST ESI</u> <u>UPLOAD</u> 4/4/2014	LAST EDF UPLOAD 11/5/2013	EXPECTE	ED CLOSURE DATE	MOST RECENT C REQUES	LOSURE [
CDPH WELLS WITHIN 1500 NONE	FEET OF THIS SITE									
CALCULATED FIELDS (BAS	ED ON LATITUDE / L	ONGITUDE)								
APN 072 038100800	GW BASIN NAME Santa Clara V	alley - East Bay	Plain (2-9.04)			<u>watershe</u> South Bay		Cities (204.20)		GL-co-
COUNTY Alameda	• EAST BAY	TER SYSTEM(S) / MUD - 375 ELE	oor be a se concern concern a concern		A 94607					
MOST RECENT CONCENTR		MARKAGA MARKATTI TATA TATA MARKATTA TATA TATA MARKATTA TATA TATA MARKATTA MARKATTA TATA MARKATTA TATA MARKATTA TATA MARKATTA MA	THE RESIDENCE OF THE PROPERTY OF THE PARTY O	AND DESCRIPTION OF THE PERSON	VE	ETUVI DENI	ZEME	VVI ENER		SUBMITTALS
SB-3	9/4/2013	ТРИд	<u>BENZENE</u> <u>ND</u>	TOLUEI ND	NE	ETHYL-BENZ ND	.C.YE	XYLENES ND	<u>MTBE</u> 12 UG/L	TBA
MOST RECENT CONCENTR	ATIONS OF PETROL	EUM CONSTITUEN	ITS IN SOIL - HIDI	<u> </u>					VIEW ESI	SUBMITTALS
FIELD PT NAME SB-1	DATE	TPHg	BENZENE	TOLUENE		ETHYL-BENZEN	(E	XYLENES ND	MTBE ND	TBA
SB-1   SB-10   SB-11	9/4/2013 9/4/2013 9/4/2013		ND ND ND	<u>ND</u> ND ND		<u>ND</u> <u>ND</u> <u>ND</u>		<u>ND</u> ND ND	ND ND	
SB-11 SB-12 SB-2	9/4/2013 9/4/2013 9/4/2013		ND ND	ND ND		ND ND		ND ND	<u>ND</u> 4.3 UG/KG	
SB-3 SB-4	9/4/2013 9/4/2013 9/4/2013		ND ND	ND ND		ND ND		ND ND	ND 9.7 UG/KG	
SB-5 SB-6	9/4/2013 9/4/2013 9/4/2013		ND ND	ND ND		ND		ND ND	ND ND	A Dispersion
SB-7 SB-8 SB-9	9/4/2013 9/4/2013 9/4/2013		ND ND ND	ND ND ND		ND ND ND ND		ND ND ND	ND 8.7 UG/KG ND	
MOST RECENT GEO_WELL										SUBMITTALS
NO GEO_WELL DATA HAS E	NAME OF TAXABLE PARTY AND ADDRESS OF TAXABLE PARTY.	GEOTRACKER E	SI FOR THIS SITE							

LOGGED IN AS KDETTERMAN

LTCP Checklist	Go	GEOTRACKER HOME   MANAGE PROJECTS   REPORTS   SEARCH   LOGOU
CITY OF ALAMEDA MAINTENANCE	SERVICES CENTER (T10000001614) - MAP TH	IIS SITE OPEN - ELIGIBLE FOR CLOSURE
1616 FORTMANN WAY ALAMEDA, CA 94501 ALAMEDA COUNTY VIEW PRINTABLE CASE SUMMARY FOR THIS SITE	ACTIVITIES REPORT PUBLIC WEBPAGE	CLEANUP OVERSIGHT AGENCIES  ALAMEDA COUNTY LOP (LEAD) - CASE #: RO0003011  CASEWORKER: KAREL DETTERMAN - SUPERVISOR: DILAN ROE  SAN FRANCISCO BAY RWQCB (REGION 2)  CASEWORKER: Chene McCaulou - SUPERVISOR: Cheryl L. Prowell  CR Site ID #: NOT SPECIFIED
TU	IC DDO JECT WAS LAST MODISIED BY VARSI DETTERMAN	
	IS PROJECT WAS LAST MODIFIED BY <u>KAREL DETTERMAN</u> SUBMITTALS. CLICK <u>HERE</u> TO OPEN A NEW WINDOW WITH T	
CLOSURE POLICY THIS	VERSION IS FINAL AS OF 11/5/2015	CHECKLIST INITIATED ON 7/26/2013 CLOSURE POLICY HISTORY
General Criteria - The site satisfies the p	olicy general criteria - CLEAR SECTION ANSWERS	YES
a. Is the unauthorized release located within the	he service area of a public water system?	
Name of Water System :		● YES ○ NO
	at a large of the	
b. The unauthorized release consists only of p		<ul><li>♥ YES ○ NO</li><li>● YES ○ NO</li></ul>
d. Free product has been removed to the max		● FP Not Encountered ○ YES ○ NO
	nature, extent, and mobility of the release has been deve	
f. Secondary source has been removed to the	<u> </u>	● YES ○ NO
g. Soil or groundwater has been tested for MT 25296.15.	BE and results reported in accordance with Health and S	Safety Code Section O Not Required YES O NO
h. Does a nuisance exist, as defined by Water	Code section 13050	O YES ® NO
	r - The contaminant plume that exceeds water qual of one of the five classes of sites listed below CLE	ality objectives is stable or decreasing in areal extent, and  YES  YES
EXEMPTION - Soil Only Case (Release has	not Affected Groundwater - Info)	O YES ® NO
Does the site meet any of the Groundwater	specific criteria scenarios?	● YES ○ NO
1.1 - The contaminant plume that exceeds wa surface water body is >250 feet from the defin	ter quality objectives is <100 feet in length. There is no fr ed plume boundary.	ree product. The nearest existing water supply well or    YES O NO
2. Media Specific Criteria: Petroleum V specific conditions satisfy items 2a, 2b, or		red low-threat for the vapor-intrusion-to-air pathway if site-
EXEMPTION - Active Commercial Petroleur	n Fueling Facility	● YES ○ NO
3. Media Specific Criteria: Direct Conta if it meets 1, 2, or 3 below CLEAR SECTION	ct and Outdoor Air Exposure - The site is conside	dered low-threat for direct contact and outdoor air exposure
EXEMPTION - The upper 10 feet of soil is fr	ee of petroleum contamination	O YES ● NO
Does the site meet any of the Direct Contac	ct and Outdoor Air Exposure criteria scenarios?	● YES ○ NO
3,3 - The regulatory agency has determined the	ne concentration of petroleum constituents in soil will have	ve no significant risk or adversely affect human health.
Additional Information		
This case should be kept OPEN in spite of me	eting policy criteria.	O YES   NO
Has this LTCP Checklist been updated for FY	15/16?	● YES ○ NO
	SPELL CHECK	
	Save Form as Partially Completed Sav	ve Form as Complete
LOGGED IN AS KDETTERMAN		CONTACT GEOTRACKER HELF

### ATTACHMENT 3 LTCP GROUNDWATER SPECIFIC CRITERIA

### LTCP Groundwater Specific Scenario under which case was closed: Scenario 5

		LTCP	LTCP	LTCP	LTCP
Site I	Data	Scenario 1	Scenario 2	Scenario 3	Scenario 4
		Criteria	Criteria	Criteria	Criteria
Plume Length	<100 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	1,430 feet	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	260 feet	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Property Owner Willing to Accept a Land Use Restriction?	Not applicable for groundwater specific criteria; however, see Site Management Requirements in Additional Information.	Not applicable	Not applicable	Yes	Not applicable

### **GROUNDWATER CONCENTRATIONS**

	Historic Site	Current Site	LTCP	LTCP	LTCP	LTCP
Constituent	Maximum	Maximum	Scenario 1	Scenario 2	Scenario 3	Scenario 4
	(µg/L)	(µg/L)	Criteria (µg/L)	Criteria (µg/L)	Criteria (µg/L)	Criteria (µg/L)
Benzene	<0.5	<0.5	No criteria	<3,000	No criteria	<1,000
MTBE	12	12	No criteria	<1,000	No criteria	<1,000

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?

Yes

Attachment 3 Comments: The site is located approximately 260 feet southeast of the Fortmann Basin, an estuary of the San Francisco Bay. A grab groundwater sample detected methyl tert butyl ether (MTBE) at a concentration of 12 micrograms per liter but no TPHd, benzene, toluene, ethylbenzene, xylenes (BTEX), or PAHs. Groundwater concentrations at the site are less than the San Francisco Bay Estuary Environmental Screening Levels (ESLs) goals.

Based on a water well survey conducted for Pennzoil case, there were no water supply wells found to be located within a radius of 2,000 feet downgradient of the site in Alameda. The closest upgradient well appears to be an industrial well located at a closed Fuel Leak case RO0000618, Encinal Terminals, 1521 Buena Vista Avenue, Alameda, a distance of approximately 1,426 feet northwest 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.

### ATTACHMENT 4 LTCP VAPOR SPECIFIC CRITERIA

LTCP Vapor Specific Scenario under which case was closed: Active municipal fueling station exempt from vapor specific criteria

Active Fueling Station	Active as of 8	/6/2015					
		LTCP	LTCP	LTCP	LTCP	LTCP	LTCP
Site Data		Scenario 1	Scenario 2	Scenario 3A	Scenario 3B	Scenario 3C	Scenario 4
		Criteria	Criteria	Criteria	Criteria	Criteria	Criteria
Unweathered LNAPL	No LNAPL	LNAPL in groundwater	LNAPL in soil	No LNAPL	No LNAPL	No LNAPL	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 Soil in Bioattenuation Zone	1,100 mg/kg*	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	No criteria
Maximum Current Benzene Concentration in Groundwater	< 0.5 µg/L	No criteria	No criteria	<100 µg/L	≥100 and <1,000 µg/L	<1,000 μg/L	No criteria
Oxygen Data within Bioattenuation Zone	No oxygen data	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		No criteria	No criteria	No criteria	No criteria	No criteria	≥5 feet

### SCENARIO 4 DIRECT MEASUREMENT OF SOIL VAPOR CONCENTRATIONS

Site So	No Bioatter	nuation Zone	Bioatten	uation Zone		
Constituent	Historic Maximum (µg/m³)	Current Maximum (µg/m³)	Residential	Commercial	Residential	Commercial
Benzene			<85	<280	<85,000	<280,000
Ethylbenzene			<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene			<93	<310	<93,000	<310,000
If the site does not meet s assessment for the vapor health is protected?						
If the site does not meet s made that petroleum vapo significant risk of adverse	ors from soil or gro	undwater will h				

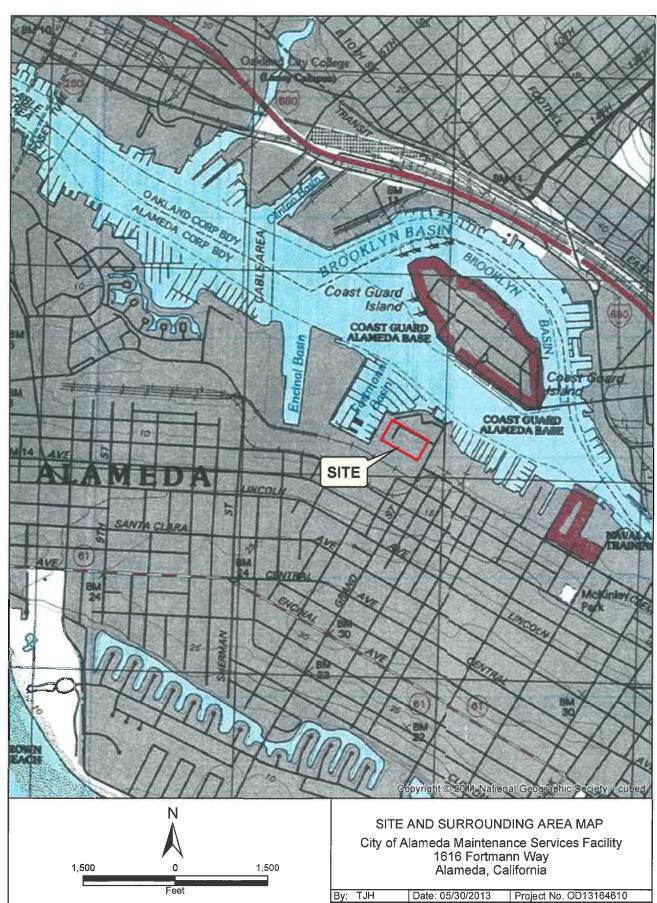
<sup>\*</sup> TPHd concentration in SB-7 at depth of 3.5 feet below ground surface (bgs)

### ATTACHMENT 5 LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA

LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed: This case should be closed in spite of not meeting the vapor specific media criteria.

Are maximum o	oncentrations les	s than those in	Table 1 below?		No	
		Resi	Commerci	ial/Industrial	Utility Worker	
Constituent		0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 10 feet bgs (mg/kg)
Site Maximum	Benzene	0.0039	0.0036	0.0039	0.0036	0.0039
LTCP Criteria	Benzene	≤1.9	≤2.8	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	0.0039	0.0036	0.0039	0.0036	0.0039
LTCP Criteria	Ethylbenzene	≤21	≤32	≤89	≤134	≤314
Site Maximum	Naphthalene	1.9	0.0072	1.9 0.0072		1.9
TCP Criteria	Naphthalene	≤9.7	≤9.7	≤45	≤45	≤219
Site Maximum	PAHs	9.2		9.2		9.2
LTCP Criteria	PAHs	≤0.063	NA	≤0.68	NA	≤4.5
	ncentrations are g an levels from a s					
has a determina petroleum in so affecting humar	ncentrations are g ation been made t il will have no sign n health as a resu	hat the concent nificant risk of ac It of controlling e		Yes		
inrougn the use institutional con	of mitigation meatrols?	isures or unroug	n me use oi			

Attachment 5 Comments: Residual concentrations of polyaromatic hydrocarbons (PAHs) exceeding PAH LTCP goals for Commercial/Industrial and Utility Worker benzo(a) pyrene toxicity equivalent were detected between depths of 0 to 5 feet at two locations under the paved parking lot, however, ACEH has determined the PAH risk is low due to the location of the PAHs. Due to Site Management Requirements, 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 future excavation and construction activities.



Source: Oakland West and Oakland East Quadrangles

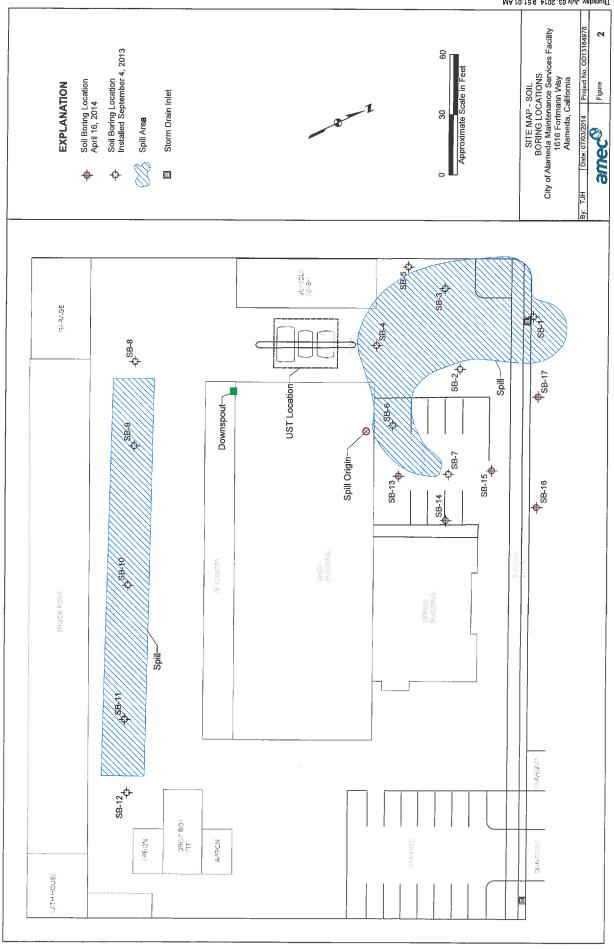
(USGS 1:24,000 Sheets)

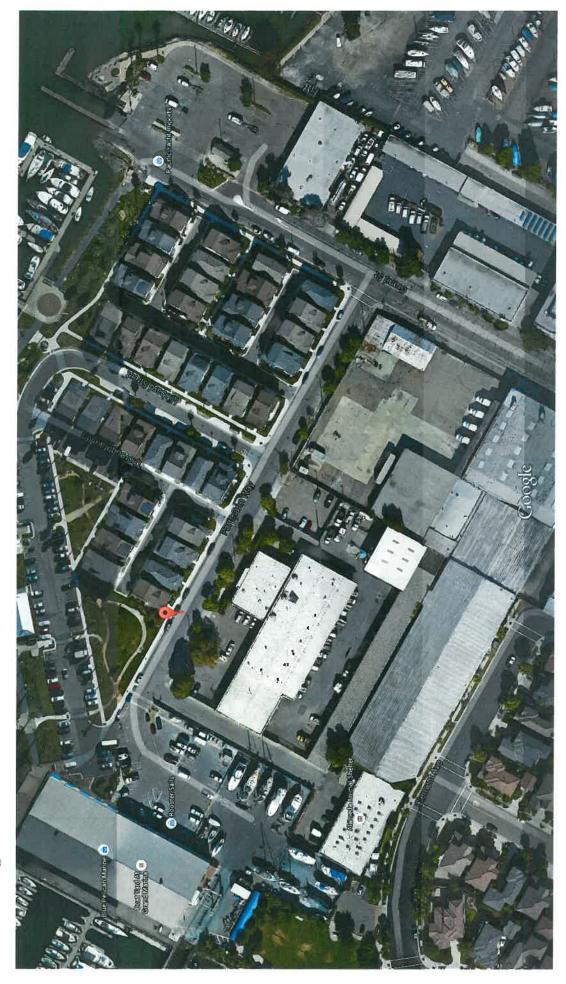
<u>amec<sup>®</sup></u>

Figure

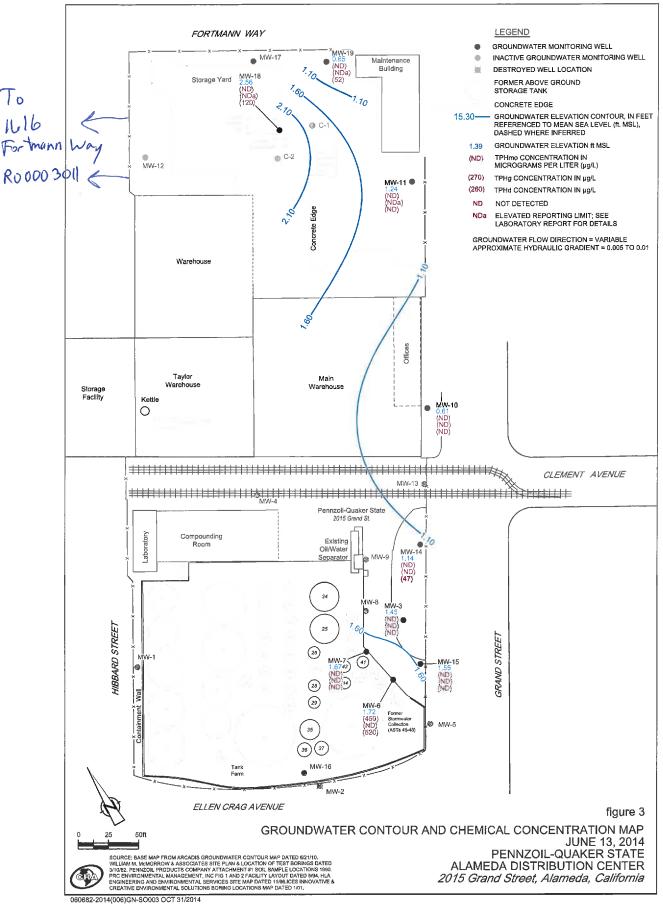
Thursday, May 30, 2013 3:56:56 PM P:\OD13164610-City of Alameda\GIS\Figure1-AreaMap.mxd

1





Imagery ©2015 Google, Map data ©2015 Google 50 ft





### TABLE 1

### SOIL SAMPLE ANALYTICAL RESULTS

City of Alameda Maintenance Facility
Alameda, California

		Commis				Reporte	ed Concen	trations		<del></del>
Sample	Sample ID	Sample Depth	Date	TPHd	Benzene	Toluene	Ethyl-	Total	MTBE	Napthalene
Location	Sample 1D	Debui	Collected	IFIIU	Delizelle	Toluelle	benzene	Xylenes	IVITOL	Ivapilialelle
		(feet bgs)		(mg/kg)			µg/	kg		
SB-1	S-SB1-2	1.5-2	9/4/2013	13	ND(4.5)	ND(4.5)	ND(4.5)	ND(8.9)	ND(4.5)	ND(8.9)
SB-1	S-SB1-5	4.5-5	9/4/2013	51	ND(4.2)	ND(4.2)	ND(4.2)	ND(8.5)	ND(4.2)	ND(8.5)
SB-2	S-SB2-3.5	3-3.5	9/4/2013	6.2	ND(3.8)	ND(3.8)	ND(3.8)	ND(7.6)	4.3	ND(7.6)
SB-2	S-SB2-5	4.5-5	9/4/2013	4.0	ND(3.9)	ND(3.9)	ND(3.9)	ND(7.6)	ND(3.9)	ND(7.6)
SB-3	S-SB3-3	2.5-3	9/4/2013	150	ND(4.3)	ND(4.3)	ND(4.3)	ND(8.5)	ND(4.3)	ND(8.5)
SB-3	S-SB3-5.5	5-5.5	9/4/2013	2.3	ND(3.9)	ND(3.9)	ND(3.9)	ND(7.7)	ND(3.9)	ND(7.7)
SB-4	S-SB4-3	2.5-3	9/4/2013	180	ND(4.2)	ND(4.2)	ND(4.2)	ND(8.4)	ND(4.2)	ND(4.2)
SB-4	S-SB4-5	4.5-5	9/4/2013	ND(0.99)	ND(3.8)	ND(3.8)	ND(3.8)	ND(7.6)	9.7	ND(7.6)
SB-5	S-SB5-2	1.5-2	9/4/2013	110	ND(3.5)	ND(3.5)	ND(3.5)	ND(7.0)	ND(3.5)	ND(7.0)
SB-5	S-SB5-5	4.5-5	9/4/2013	ND(0.99)	ND(3.4)	ND(3.4)	ND(3.4)	ND(6.7)	ND(3.4)	ND(6.7)
SB-6	S-SB6-3	2.5-3	9/4/2013	ND(1.0)	ND(3.4)	ND(3.4)	ND(3.4)	ND(6.8)	ND(3.4)	ND(6.8)
SB-6	S-SB6-5.5	5-5.5	9/4/2013	2.1	ND(4.3)	ND(4.3)	ND(4.3)	ND(8.6)	ND(4.3)	ND(8.6)
SB-7	S-SB7-3.5	3-3.5	9/4/2013	1,100	ND(3.9)	ND(3.9)	ND(3.9)	ND(7.8)	ND(3.9)	180
SB-7	S-SB7-5	4.5-5	9/4/2013	ND(0.99)	ND(3.6)	ND(3.6)	ND(3.6)	ND(7.2)	ND(3.6)	ND(7.2)
SB-8	S-SB8-3	2.5-3	9/4/2013	5.0	ND(4.0)	ND(4.0)	ND(4.0)	ND(7.9)	ND(4.0)	ND(7.9)
SB-8	S-SB8-5	4.5-5	9/4/2013	ND(0.99)	ND(4.5)	ND(4.5)	ND(4.5)	ND(8.9)	8.7	ND(8.9)
SB-9	S-SB9-2	1.5-2	9/4/2013	1.1	ND(3.8)	ND(3.8)	ND(3.8)	ND(7.7)	ND(3.8)	ND(7.7)
SB-9	S-SB9-5	4.5-5	9/4/2013	1.7	ND(5.1)	ND(5.1)	ND(5.1)	ND(10)	ND(5.1)	ND(10)
SB-10	S-SB10-2.5	2-2.5	9/4/2013	28	ND(3.6)	ND(3.6)	ND(3.6)	ND(7.2)	ND(3.6)	ND(7.2)
SB-10	S-SB10-5	4.5-5	9/4/2013	1.1	ND(4.2)	ND(4.2)	ND(4.2)	ND(8.5)	ND(4.2)	ND(8.5)
SB-11	S-SB11-2	1.5-2	9/4/2013	450	ND(3.7)	ND(3.7)	ND(3.7)	ND(7.4)	ND(3.7)	ND(7.4)
SB-11	S-SB11-5	4.5-5	9/4/2013	ND(0.99)	ND(4.5)	ND(4.5)	ND(4.5)	ND(9.1)	ND(4.5)	ND(9.1)
SB-12	S-SB12-2	1.5-2	9/4/2013	4.2	ND(3.6)	ND(3.6)	ND(3.6)	ND(7.1)	ND(3.6)	ND(7.1)
SB-12	S-SB12-5	4.5-5	9/4/2013	ND(0.99)	ND(4.8)	ND(4.8)	ND(4.8)	ND(9.6)	ND(4.8)	ND(9.6)
ESI Posic	lential / Drin	king Water	-	100	44	40,000	3,300	2,300	23	1,200

ESL Residential / Drinking Water	100	44	40,000	3,300	2,300	23	1,200
Commercial / Non Drinking Water <sup>1</sup>	500	1,200	2,900	4,700	11,000	1,800	4,800

### Notes:

1

= San Francisco Bay Regional Water Quality Control Board 2013 Tier 1 2013 Non-drinking Water

Source, Commercial Land Use Environmental Screening Levels

Napthalene analyzed using EPA method 8260B.

Benzene, toluene, ethylbenzene, and total xylenes (BTEX) analyzed using EPA method 8260B.

bgs =

= below ground surface

ESL

= San Francisco Bay Regional Water Quality Control Board 2013 Tier 1 Environmental Screening Levels

mg/kg = milligrams per kilogram

MTBE

= methyl tertiary-butyl ether analyzed using EPA method 8260B.

µg/kg

= micrograms per kilogram

ND()

= Not detected above the laboratory reporting limits (reporting limit in paranthesis).

PAHs

= Polynuclear aromatic hydrocarbons analyzed using EPA method 8270-SIM.

TPHd

= Total Petroleum Hydrocarbons, diesel range (C10-C28), analyzed using EPA method 8015M, with silica gel strip (EPA method 3630C).

= micrograms per kilogram = nicrograms = Not detected above the laboratory reporting limit in paranthesis). = Polynuclear aromatic hydrocarbons analyzed using EPA method 8270-SIM.

µg/kg ND() PAHs

### amec®

## SOIL SAMPLE ANALYTICAL RESULTS - POLYNUCLEAR AROMATIC COMPOUNDS City of Alameda Maintenance Facility Alameda, California

H								, W	Reported Concentrations - PAHs	intrations - PA	'Hs						
Date Acenaph- Acenaph-	cenaph- Acen thene thyle	Acen	aph-	Anthra- cene	Benzo[a]- lanthracene	Benzo[a]- pyrene f	Benzo[b]- fluoranthene	Benzo[g,h,i]- perylene	Benzo[k]- fluoranthene	Chrysene	Dibenz(a,h)- anthracene	Fluor- anthene	Fluorene	Indeno- [1,2,3-cd]- ovrene	Napthalene	Phenan- threne	Pyrene
									pg/kg.								
		l															ľ
9/4/2013 ND(5.0)	ND(5.0)		13	10	39	52	98	32	27	52	7.1	11	ND(5.0)	28	ND(5.0)	26	82
9/4/2013 ND(10)	ND(10)		12	35	54	45	70	17	25	89	ND(10)	110	ND(10)	16	45	130	97
ND(4.9)	Н		ND(4.9)	ND(4.9)	8.5	7.8	21	7.1	ND(4.9)	21	ND(4.9)	5.9	ND(4.9)	5.5	8.8	20	5.8
ND(4.9)	Н		ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	5.6	ND(4.9)
$\dashv$	ND(10)		ND(10)	ND(10)	24	41	09	18	17	43	ND(10)	33	ND(10)	18	ND(10)	16	47
ND(5.0)	-		ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	(0.3)QN	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	5,5	ND(5.0)	6.7
ND(25)	7		110	160	340	360	540	340	130	510	120	670	57	290	380	006	069
ND(5.0)			ND(5.0)	ND(5.0)	5.5	8.5	9.4	10	ND(5.0)	7.0	ND(5.0)	10	ND(5.0)	6.7	ND(5.0)	ND(5.0)	=
(6.9)QN	-		10	(6.6)QN	35	51	73	58	23	45	12	2	(6.9)QN	38	(6.9)QN	31	2
ND(5.0)	┥	-1	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	(0.5)QN	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5,0)
ND(5.0)	_	-1	ND(5.0)	8.3	23	24	22	23	19	53	6.2	22	ND(5.0)	18	8.7	43	93
ND(5.0)	_	~1	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	5.5	ND(5.0)	8.1	ND(5.0)	ND(5.0)	7.2	7.9	=
910		~	ND(250)	1,400	5,300	4,900	8,200	2,900	2,100	5,500	1,000	15,000	970	2,900	1.100	9.400	12.000
5.6	Н	-	ND(5.0)	11	44	47	52	37	16	20	6.5	100	5.8	27	8.4	70	100
ND(5.0)	-	-1	ND(5.0)	9.9	13	17	24	21	7.8	18	ND(5.0)	52	ND(5.0)	14	14	26	20
ND(5.0)	-+	2	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
ND(5.0)	+	-,	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
ND(4.9)	$\dashv$	- 1	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	11	ND(4.9)	(6'4')	ND(4.9)	9.4	6.7
ND(4.9)	+		ND(4.9)	ND(4.9)	8.2	1	18	15	5.8	12	ND(4.9)	21	ND(4.9)	10	9.9	10	18
ND(5.0)	-		ND(5.0)	ND(5.0)	5.0	6.3	8.1	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	8.1	ND(5.0)	ND(5.0)	(0.5)QN	ND(5.0)	6.4
+	(D)(2:0)		5.6	ND(5.0)	8.5	4	21	18	ND(5.0)	22	ND(5.0)	23	ND(5.0)	12	15	21	26
+	ND(4.9)		ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)
+	(0.5)UN		(0.5)UN	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
9/4/2013 ND(5.0)	ND(5.0)	-	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	6.1	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	6.8	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	5.2
4/10/2014 20	07	-	10 10	2007	300	340	430	220	200	380	72	610	31	190	77	380	900
+	1 600		ND/49)	3 200	400	2 8 800	67	/	4.6	<u> </u>	ND(4.9)	3	ND(4.9)	13	5.2	15	56
L	23	-	ND(5.0)	45	110	110	140	500,4	2,000	1	17	10,000	00/1	2,800	006,1	15,000	15,000
L	94	-	49	130	200	009	800	250	320	610	78	1 000	130	240	140	200	1 100
4/16/2014 8.1	8.1	-	9	20	62	72	120	35	37	82	=	120	=	32	2 00	282	130
4/16/2014 ND(50)	ND(50)	$\vdash$	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND/SU	ND(50)	ND/50
4/16/2014 ND(9.9)	(6.9)dN	$\vdash$	ND(9.9)	ND(9.9)	ND(9.9)	10	17	(6:6)QN	(6.6)QN	13	(6.9) ND(9.9)	20	(6.6)QN	(6:6)QN	(6:6)QN	ND(5.0)	ND(5.0)
_	ND(49)	$\dashv$	ND(49)	ND(49)	90	78	110	72	ND(49)	81	ND(49)	84	ND(49)	20	ND(49)	12	22
4/16/2014   ND(9.9)	(6:6)QN	$\dashv$	ND(9.9)	ND(9.9)	19	23	39	11	13	59	(6.9)QN	39	(6.6)QN	(6:6)QN	(6:6)QN	25	46
		ŀ															
16,000	16,000	+	13,000	2,800	380	38	380	27,000	380	3,800	110	40,000	8,900	380	1,200	11,000	85,000
19,000	19,000	- 1	13,000	2,800	450	45	450	27,000	450	4,500	130	40,000	8,900	450	4,800	11,000	85,000

Notes:

San Francisco Bay Regional Water Quality Control Board 2013 Tier 1 2013 Non-drinking Water Source,
 Commercial Land Use Environmental Screening Levels
 below ground surface
 San Francisco Bay Regional Water Quality Control Board 2013 Tier 1 Environmental Screening Levels

bgs ESL

WPET-FS1\projects\Secretaria\Bay Area - Pet CA\AC Alameda County\Additional Invest. Rpt\AC64859\_Tables

### TABLE 3

### **GROUNDWATER SAMPLE ANALYTICAL RESULTS**

City of Alameda Maintenance Facility Alameda, California

				Re	Reported Concentrations	centrations	· ·		
Sample Location	Date Collected	рНАТ	Benzene Toluene	Toluene	Ethyl- Total benzene Xylenes	Total Xylenes	MTBE	Napthalene	TDS
					hg/l			hg/l	mg/l
SB-3	9/4/2013	ND(51)	ND(51)   ND(0.50)   ND(0.50)   ND(0.50)   ND(1.0)	ND(0.50)	ND(0.50)	ND(1.0)	12	ND(1.0)	1,700

ESL	100	1.0	40	30	20	2.0	6.2	-
Basin Plan	-		-	opens.	-	-	1	200
Commercial / Non Drinking Water	640	27	130	43	100	1.800	24	1

### Notes:

= San Francisco Bay Regional Water Quality Control Board 2013 Tier 1 2013 Non-drinking Water Source,

Commercial Land Use Environmental Screening Levels

Benzene, toluene, ethylbenzene, and total xylenes (BTEX) analyzed using EPA method 8260B.

Napthalene analyzed using EPA method 8260B.

= Not Established

Basin Plan = Water Quality Control Plan for the San Francisco Bay Basin

= below ground surface

= San Francisco Bay Regional Water Quality Control Board 2013 Tier 1 Environmental Screening Levels bgs ESL

= micrograms per liter l/grl

milligrams per liter

= methyl tertiary-butyl ether analyzed using EPA method 8260B.

= Not detected above the laboratory reporting limits (reporting limit in paranthesis).

= Polynuclear aromatic hydrocarbons analyzed using EPA method 8270-SIM. mg/l MTBE ND() PAHs

= total dissolved solids analyzed using EPA method TDS TPHd

= Total Petroleum Hydrocarbons, diesel range (C10-C28), analyzed using EPA method 8015M, with silica gel

strip (EPA method 3630C).

= Total Petroleum Hydrocarbons, diesel range (C10-C28), analyzed using EPA method 8015M, with silica gel strip (EPA method 3630C) **TPHd** 

**TABLE 4** 

# GROUNDWATER SAMPLE ANALYTICAL RESULTS - POLYNUCLEAR AROMATIC COMPOUNDS City of Alameda Maintenance Facility Alameda, California

										Repo	Reported Concentrations - PAHs	ntrations -	PAHs						
Sample Location	Sample Sample Location ID	Sample Depth	Date Collected	Acenaph- thene	Date Acenaph-Acenaph- Anthra- Collected thene thylene cene	Anthra- cene	Benzo[a]- anthracen e	Benzo[a]- pyrene	Benzo[b]- fluoranthe ne	Benzo[a]- Benzo[a]- fluoranthe perylene e propier anthracen benzo[a]- fluoranth chrysene e private anthracen benzo[a]- fluoranthe perylene e private fluoranthe fluoranthe perylene fluoranthe perylene e private fluoranthe fluoranthe fluoranthe fluoranthe private fluoranthe fl	Benzo[k]- fluoranth ( ene	Chrysene	Dibenz(a,h)- anthracene	Fluor- anthene	Fluorene [	Indeno- 1,2,3-cd]- pyrene	Napthalene	Phenan- threne	Pyrene
		(feet bgs)								l/gu	l/grl								
SB-3	W-SB3-8	8-10	9/4/2013	ND(0.10)	V-SB3-8 8-10 9/4/2013 ND(0.10) ND(0.10) ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	(0.10)   ND(0.10)   ND	ND(0.10)	VD(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	VD(0.10)
ESI.				20	30	0.73	0.027	0.014	0.056	0,10	0.056	0.35	0.016	8.0	3.9	0.056	6.2	4.6	2.0
Commerc	commercial / Non Drinking Water	rinking Wa	ter	23	30	0.73	0.027	0.014	0,056	0.10	0.40	0.35	0.25	8.0	3.9	0.056	24	4.6	2.0

### Notes:

■ San Francisco Bay Regional Water Quality Control Board 2013 Tier 1 2013 Non-drinking Water Source, Commercial Land Use Environmental Screening Levels

 below ground surface
 San Francisco Bay Regional Water Quality Control Board 2013 Tier 1 Environmental Screening Levels
 micrograms per liter
 Not detected above the laboratory reporting limits (reporting limit in paranthesis).
 Polynuclear aromatic hydrocarbons analyzed using EPA method 8270-SIM. bgs ESL µg/l ND() PAHs