

Technology, Engineering & Construction, Inc.

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September 18, 2003

Mr. Amir Gholami, REHS Hazardous Materials Specialist Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Alameda County

Single 2 2003

Environmental Recth

SUBJECT:

Case Closure Summary

SITE:

Former Olympian Station 1435 Webster Street Alameda, California.

Dear Mr. Gholami:

As you requested in your email dated July 17, 2003, TEC Accutite is pleased to submit the completed closure summary forms for the site located at 1435 Webster Street, Alameda, California. Should you need to include any changes to the closure summary, an electronic version of the summary will be submitted by an email. Please let us know when we can proceed with the destruction of the six monitoring wells at this site.

Thank you for your cooperation and assistance on this project. If you have any questions, please call the undersigned at (650) 952-5551, Ext. 209.

Sincerely,

CC:

TEC Accutite

Sami Malaeb, FE, REA

Environmental Director

Mr. Dan Koch, 260 Michelle Court, South San Francisco, CA 94080.

No. 60888

Mr. Fred Bertetta, 254 Michelle Court, South San Francisco, CA 94080

Mr. Jeff Farrar, P.O. Box 1701, Chico, CA 95927

Mr. Thomas Ballard, GHH Engineering, Inc., 11960 Heritage Oak Place, Suite 2B,

Auburn, CA 95603

CASE CLOSURE SUMMARY UNDERGROUND FUEL STORAGE TANK LOCAL OVERSIGHT PROGRAM

I. AGENCY INFORMATION

Date:09/16/2003

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway, Suite 250
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6876
Responsible Staff Person: Amir K. Gholami, REHS	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Alameda Count

Site Facility Name: Former Olyn		8523	County 2003	
Site Facility Address: 1435 Webs	ter Street, Alameda, CA 94501-3342	Vironinaniai		
RB LUSTIS Case No.: N/A	Local Case No.:	LOP	Case No.:	
URF Filing Date: N/A	SWEEPS No.:	APN:	N: 074 - 0427 - 005 - 01	
Responsible Parties	Addresses		Phone Number	
Olympian – Fred Bertetta Jr.	254 Michelle Court, South San Francisco, CA, 94080		(650) 616- 3456	

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
_1	10,000	Gasoline	Removed	1989
2	10,000	Gasoline	Removed	1989
3	7,500	Diesel	Removed	1989
4	500	Waste oil	Removed	1989
	Piping		Removed	1989

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Holes found in tank	<u></u>			
Site characterization complete? Yes	Date Approved By Oversight Agency: July 1, 2003			
Monitoring wells installed? Yes	Number: 6	Proper screened interval? Yes		
Highest GW Depth Below Ground Surface: 12.19 ft	Lowest Depth: 6.28ft	Flow Direction: S to SE		

Are drinking water wells affected? No	Aquifer Name: East Bay Plain
	Nearest SW Name: San Francisco Bay is located approximately 1500 feet South of the site (See the attached
Is surface water affected? No	Figure 1)

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date	
Steel Single-Walled Underground Storage Tank (UST)	Gasoline 10,000- gallon UST	Disposed of at Erickson, Richmond, CA	September 1989	
Steel Single-Walled UST	Gasoline 10,000- gallon UST	Disposed of at Erickson, Richmond, CA	September 1989	
Steel Single-Walled UST	Diesel 7,500-gallon UST	Disposed of at Erickson, Richmond, CA	September 1989	
Steel Single-Walled UST	Waste Oil 500-gallon UST	Disposed of at Erickson, Richmond, CA	September 1989	
Piping	Not reported	Disposed of along with tanks	September 1989	
Free Product	None			
Soil	1,000 cubic yards	Excavated and biologically treated onsite. Soil was used for backfill after being sampled and shown to have non-detect or non-hazardous concentrations of TPH-G, BTEX, and TPH-D.	January- September 1991	
Groundwater	None reported	***************************************		

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP (Please see Attachment for additional information on contaminant locations and concentrations)

	Soil ()	opm)	Wate	er (ppb)		Soil	(ppm)	Water	(ppb)
Contaminant	1 Before	2 After	3 Before	4 After	Contaminant	1 Before	2 After	3 Before	4 After
TPH (Gas)	220	<10	48,000**	3,240**	Benzene	<0.005	<0.005	18,000**	216**
TPH (Diesel)	430	<10	2,800**	380.00**	Toluene	<0.005	<0.005	6,100**	262**
Oil & Grease	650	<50	<500	<500	Ethyl Benzene	<0.005	<0.005	<500	<500
Heavy Metals	Lead (pb) 2 ppm	Lead (pb) 2 ppm	NA	NA	Xylenes	<0.010	<0.01	8,100**	626
					MTBE (if not analyzed, explain below)	<0.005	<0.005	4,000**	530**

- * Does not match diesel chromatogram pattern
- ** These analytical results are detected in two monitoring wells onsite (MW-1 and MW-5). Dissolved phase concentrations of TPH-G, benzene, and MTBE in surrounding monitoring wells were either non-detect or just above laboratory reporting limits.

Site History and Description of Corrective Actions:

October 1988, Soil Gas Sampling: CHIPS Environmental Consultants, Inc. performed soil gas analysis at the subject site. High soil gas readings were found on the eastern side of one of the pump islands, between the pump islands, and from backfill between the gasoline storage tanks.

September 1989, UST Removal: TEC Accutite removed the following USTs (Figure 2):

- Two 10,000-gallon gasoline USTs
- One 7,500-gallon diesel UST
- One 500-gallon waste oil UST

Analysis of soil samples collected during removal of the USTs detected hydrocarbons at a maximum concentration of 220 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg), 430 ppm Total Petroleum Hydrocarbons as diesel (TPHd), and 650 ppm Total Recoverable Petroleum Hydrocarbons as Oil and Grease (TRPH).

January 1991, Soil Excavation: Excavation of the hydrocarbon impacted soil was conducted by AAA Tank Removal / Forcade Excavations Services. Approximately 950 cubic yards of soil were removed from the former location of the USTs. This soil was bioremediated onsite and returned to the former excavation.

January 1993, Well Installation: Uriah Environmental Services, Inc. installed three groundwater monitoring wells onsite (MW-1 through MW-3). Soil samples collected during the well installation did not detect petroleum hydrocarbons at concentrations above laboratory reporting limits. Semi-annual groundwater monitoring was initiated. Dissolved phase hydrocarbons were detected in all wells at varying concentrations.

February 1999, Soil Borings: TEC Accutite advanced four borings on and offsite (B1 through B4) to determine the extent of hydrocarbon impact to soil and groundwater. Petroleum hydrocarbons were detected in soil at concentrations just above laboratory reporting limits. Petroleum hydrocarbons were detected in groundwater at concentrations up to 6,000 parts per billion (ppb) MTBE and 38,000 ppb benzene.

December 1999, Well Installation: TEC Accutite installed three additional wells MW-4 through MW-6. Analysis of soil samples detected petroleum hydrocarbons at maximum concentrations of 1,100 ppm TPHg, 200 ppm TPHd and 3.4 ppm benzene in soil 9.5 feet below grade (fbg) from well MW-5. No hydrocarbons were detected in soil samples collected during the installation of wells MW-4 and MW-6. Groundwater sampling from wells MW-6 and MW-3 defined the dissolved phase hydrocarbon plume upgradient of the former dispenser islands and cross-gradient of the former USTs.

November 2000, Site Conceptual Model: TEC Accutite completed a site conceptual model (SCM). Based on historical quarterly monitoring data, it was determined that the contaminant plume was not defined downgradient. An assessment of hydrogeological conditions, proximity to sensitive receptors and current groundwater usage, suggest that MTBE in groundwater is not the primary chemical of concern. Given the shallow groundwater elevation (9 fbg), estimated high permeability of soils beneath the site, the potential for benzene vapor phase migration from hydrocarbon impacted groundwater to indoor and ambient air was

identified as an exposure pathway requiring further evaluation.

June 2001, Soil Borings: TEC Accutite drilled four soil borings to assess the extent of the dissolved phase hydrocarbons downgradient of the site. Soil samples were collected approximately 9 fbg within the capillary fringe from soil borings B1 through B4. Petroleum hydrocarbons were not detected in soil at concentrations above laboratory reporting limits. The greatest concentrations of dissolved phase petroleum hydrocarbons were detected in monitoring well MW-1 (18,000 ppb TPHg, 1,200 ppb benzene, and 1,500 ppb MTBE). Dissolved phase concentrations of TPHg, benzene, and MTBE in surrounding monitoring wells were either non-detect or just above laboratory reporting limits.

February 2002, Risk Assessment: To address the potential exposure pathway identified in the SCM, TEC Accutite performed a site-specific risk assessment. The risk assessment addressed the potential inhalation risk posed by hydrocarbon impacted groundwater beneath the site assuming both residential and commercial land use scenarios. The compounds of concern were identified as TPHg and benzene. TPHg was assessed using the TPH fractional methodology developed by TPH Criteria Working Group. The calculated annual regional mean concentrations for benzene and TPHg were 2,988 ppb and 23,137 ppb, respectively. The results of the risk assessment found that concentrations of TPHg in groundwater beneath the site were below the calculated site specific target level concentrations (SSTL's) for residential and commercial scenarios. Therefore, TPHg remaining in groundwater beneath the site does not present an inhalation risk. Benzene concentrations in groundwater exceed the SSTL for a residential scenario (110 ppb) but are less than the SSTL for a commercial scenario (6400 ppb).

The results of the risk assessment suggest that benzene in groundwater beneath the site may present an inhalation risk, assuming residential land use. The risk assessment was based on the Johnson & Ettinger Vapor Fate and Transport Model, which often overestimates actual vapor concentrations at the point of exposure by factors of 10 to 100. Rather than proceed with site closure under restricted commercial land use, a soil vapor survey was recommended to validate the exposure pathway.

May 2003, Soil Vapor Survey and Additional Risk Assessment: Rather than proceed with a deed restriction, a soil vapor survey was conducted to determine whether the vapor exposure pathway was valid.

Petroleum hydrocarbons TPH and Toluene were detected at concentrations of 5.4 ppmV and 1.9 mg/m³, and, 5.8 ppmV and 3.7 mg/m³ in soil vapor from sample locations SV-1 and SV-3, respectively. No other petroleum hydrocarbon compounds were detected in soil vapor at concentrations above laboratory reporting limits.

Chlorofluorocarbons (CFCs), Trichlorofluoromethane and Dichlorodifluoromethane, also known as Freon 11 and Freon 12 were detected in soil vapor collected from sample locations SV1, SV2, SV5 and SV6. Freon 11 and Freon 12 were detected at maximum concentrations of 8.7 mg/m³ and 7.9 mg/m³ in soil vapor collected from sample location SV-5.

CONCLUSIONS & RECOMMENDATIONS

- ◆ The origin of CFCs in soil gas is unknown. Trichlorofluoromethane and dichlorofluoromethane do not present a health risk as they were detected at concentrations significantly below the OSHA permissible exposure limit (PEL) of 5,600 mg/m³ and 4,950 mg/m³ as an 8-hour time-weighted average concentration.
- Inhalation risk associated with exposure to benzene vapors emanating off impacted groundwater beneath the site has been evaluated and determined to be an invalid exposure pathway.
- Toluene was detected in soil gas at concentrations significantly below the Regional Water Quality Control Board (San Francisco Bay Region) Soil Gas Risk Based Screening Level of 1,200 mg/m³, therefore presents no inhalation risk.
- TPH was detected in soil gas at concentrations just above laboratory detection limits.

The absence of "indicator compounds" used to evaluate risk associated with TPH is sufficient to conclude TPH presents no inhalation risk.

In summary, all exposure pathways relevant to petroleum hydrocarbons which remain in groundwater beneath the site have been evaluated. Petroleum hydrocarbons in groundwater present no risk to public health and the environment. The dissolved phase plume has been determined to be stable and should be left up to the processes of natural attenuation to restore groundwater quality. TEC Accutite requests to proceed with case closure for unrestricted land-use.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes

Does corrective action protect public health for current land use? It does not appear that the release would present a risk to human health.

Site Management Requirements: Should soil excavation or groundwater purging be needed in a future construction activity, a soil/groundwater management program should be in place. Proper soil and groundwater profiling should be conducted by sampling and analysis prior to any disposal.

Should corrective action be reviewed if land use changes? No

Monitoring Wells Decommissioned: No Number Decommissioned: None Number Retained: 6

List Enforcement Actions Taken: none

List Enforcement Actions Rescinded: none

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

• Limited area of hydrocarbon impacted groundwater near the former dispensers and USTs still exist onsite.

Conclusion:

TEC Accutite does not believe that the levels of residual contamination pose a significant threat to water resources, public health and safety, and the environment under the current or futurel land uses based upon the information available in our files to date. TEC Accutite requests to proceed with case closure for unrestricted land-use.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Amir K. Gholami	Title: Hazardous Materials Specialist
Signature:	Date:
Reviewed by:	Title:
Signature:	Date:
Approved by: .	Title:
Signature:	Date:

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.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name:	Title:
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature:	Date:

Attachments:

FIGURES:

- 1. Site Vicinity Map
- 2. Locations of the former USTs, dispenser islands and existing monitoring wells
- 3. Depiction of the groundwater flow direction
- 4. Benzene in Groundwater
- 5. MTBE in groundwater
- 6. TPH-G in groundwater

TABLES:

- 1. Soil analytical results from borings drilled in 1999
- 2. Soil analytical results from borings drilled in 2001
- 3. Summary of the groundwater analytical results

TABLE 1: Soil Analytical Results from the Borings drilled in 1999 (onsite and near the site borings)

Birthan Mark to the continues of the	Sampling	TPH-D	TPH-G ³	Benzene	Toluene	Carrier Control of the Control of th		MTBE"	Total
ID	Date		1801			Benzene			Lead (Pb)
		ppm ²	ppm	ppm	ppm	ppm	ppm	ppm	ppm
B1-7.5'	02/11/99	<1.0	0.65	<0.005	<0.005	<0.005	<0.01	<0.005	<1.0
B2-7.5'	02/11/99	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	2.0
B3-6.0'	02/11/99	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	1.2
B4-7.5'	02/11/99	<0.5	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005	1.2

TABLE 2: Soil Analytical Results from the Borings drilled in June 2001 (offsite borings)

Sample ID	Sampling Date	TPH-G ³	Benzene ppm	Toluene pom	Ethyl- Benzena ppm	Xylenes ppm	MTBE ⁴
B1-9	06/27/01	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005
B2-9	06/27/01	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005
B3-9	06/27/01	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005
B4-9	06/27/01	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005

TPH-D
Total Petroleum Hydrocarbons as Diesel

ppm part per million or mg/kg

TPH-G
Total Petroleum Hydrocarbons as Gasoline

MTBE
Methyl Tertiary Butyl Ether

Well ID	Sample	Depth to	TPHd	TPHg	В	T	E	×	MTBE	TRPH
	Date	Water (ft)			Concentratio	ns in parts per	billion (ppb)	٠.,		
MW-1	6/3/93	NA(1)	NA	NA	NA	NA	NA	NA	NA	NA
	9/14/94	11.46	<50	14,000	44	28	25	50	NA	800
	12/30/94	9.22	<50	4,000	12	3	6.8	30	NA	<500
	3/26/95	6.76	<50	1,000	21	10	7.1	25	NA	2,10
	7/9/95	8.92	<50	16,000	57	28	25	53	NA	NA
	7/31/98	8.3	1,700	4,700	1,300	48	140	150	6,600	<500
	2/11/99	7.91	2000	25,000	18,000	1,600	1,400	500	28,000	NA
	6/23/99	9.03	4,900	42,000	11,000	1,100	1,500	2,300	15,000	NA
	12/6/99	10.86	4,000	44,000	8,900	3,400	1,900	5,100	11,000	NA
	3/16/00	6.93	700	5,100	2,400	100	280	460	2,700(2)	NA
	6/13/00	8.73	2,800	17,000	5,300	260	720	790	7,000(2)	NA
	9/29/00	10.18	5,200*	50,000	11,000	2,900	1,900	4,600	7,200(2)	NA
	3/22/01	8.24	1,500*	8,600	2,600	750	250	950	3,200(2)	NA
	6/25/01	9.73	NA	18,000	1,200	1,800	970	3,200	1500(2)	NA
	9/28/01	11.06	NA	48,000	5,200	6100	2200	8100	4000	NA
	12/26/01	8.11	NA 	524	216	1.2	8.6	7.4	530(2)	NA
MW-2	6/3/93	9.54	<50	<50	5.8	<0.5	<0.5	<0.5	NA	<500
	9/14/94	11.82	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<500
	12/30/94	9.46	<50	160	1.4	1.4	8.0	5	NA	<50
	3/26/95	6.82	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
	7/9/95	9.22	NA	NA	NA	NA	NA	NA	NA	NA
	7/31/98	8.56	220	<50	<0.5	<0.5	<0.5	<0.5	73	<50
	2/11/99	8.12	<50	<50	<0.5	<0.5	<0.5	<0.5	75	NA
	6/23/99	9.33	420	<50	<0.5	<0.5	<0.5	<0.5	96	NA
	12/6/99	11.2	<110	300	28	45	6	37	210	NA
	3/16/00	6.88	<50	<50	1	<0.5	0.5	1	3	NA
	6/13/00	8.99	<50	68	8.0	<0.5	<0.5	<0.5	38	NA
	9/29/00	10.4	<50	67	8.0	0.5	<0.5	1	86(2)	NA
	3/22/01	8.46	<50	<50	1	0.5	<0.5	1	14	NA
	6/25/01	10.11	NA	<50	<0.5	<0.5	<0.5	<1.0	13	NA
	9/28/01	11.4	NA	300	4	6	3	10	130	NA
	12/26/01	8.28	NA	<50	<0.5	<0.5	<0.5	<1.0	<0.5	ND
MW-3	6/3/93	9.8	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<500
	9/14/94	12.19	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
	12/30/94	9.72	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
	3/26/95	6.88	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<50
	7/9/95	9.52	NA	NA	NA	NA	NA	NA	NA	NA
	7/31/98	8.4	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<500
	2/11/99	7.77	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA
	6/23/99	9.21	<50	<50	<0.5	<0.5	<0.5	<0.5	3	NA
	12/6/99	11.12	<110	<50	3	1	<0.5	1	0.6	NA
	3/16/00	6.48	<50	<50	<0.5	<0.5	<0.5	<1.0	1	NA
	6/13/00	8.76	<50	490	8.0	<0.5	<0.5	9	2	NA
	9/29/00	10.2	<50	57	<0.5	<0.5	<0.5	<1.0	<1.0(2)	NΑ
	3/22/01	8.24	<50	<50	<0.5	<0.5	<0.5	<1.0	2	NA
	6/25/01	10.04	NA	<50	<0.5	<0.5	<0.5	<1.0	0.8	NA
	9/28/01	11.34	NA	91	<0.5	<0.5	<0.5	2	2	NA
	12/26/01	8.01	NA	<50	<0.5	<0.5	<0.5	≺1.0	<0.5	ŊĄ
MW-4	12/6/99	10.79	160	<50	3	2	0.6	4	140	NA
	3/16/00	6.86	90	<50	0.5	0.5	<0.5	2	34	NA
	6/13/00	8.18	<50	56	<0.5	<0.5	<0.5	<1.0	1	NA
	9/29/00	10.11	<50	92	0.7	<0.5	<0.5	3	<1.0(2)	NA
	4/5/01	8.26	<50	51	<0.5	0.5	<0.5	1	6.0(2)	NA
	6/25/01	9.68	NA	<50	<0.5	<0.5	<0.5	<1.0	<0.5	NA
	9/28/01	10.98	NA	<50	<0.5	<0.5	<0.5	2	2	NA
	12/26/01	8.18	NA	<50	1.6	1.7	1.6	4.4	2.7	NA

TABLE 3: Continued

Well ID	Sample	Depth to	TPHd	TPHg	В	T	E	х	MTBE	TRPH
·	Date	Water (ft)	Concentrations in parts per billion (ppb)							
MW-5	12/6/99	10.17	2,800	30,000	2,200	3,300	910	7000	670	NA
	3/16/00	6.28	1,100	3,500	1,100	260	210	6300	260	NA
	6/13/00	7.95	1,100	6,500	2200	360	360	730	480	NA
	9/29/00	9.54	700*	3,900	990	120	300	340	390(2)	NA
	3/22/01	7.48	380*	4,300	780	240	250	530	190	NA
	6/25/01	9.05	NA	3,100	1000	110	200	320	140	NA
	9/28/01	10.39	NA	3,000	1200	77	120	170	770	NA
	12/26/01	7.28	NA.	3,240	738	262	218	626	66.4	NA
MW-6	12/6/99	11.46	110	<50	2	2	0.8	8	1	NA.
	3/16/00	8.32	<50	<50	8	8	5	18	<0.5	NA
	6/13/00	9.14	<50	75	0.7	1	0.9	2	0.6	NA
	9/29/00	10.81	<50	<50	<0.5	< 0.5	< 0.5	<1.0	<0.5	NA
	3/22/01	8.64	<50	66	0.5	<0.5	< 0.5	<1.0	3	NA
	6/25/01	10.39	NA	<50	<0.5	<0.5	<0.5	<1.0	4	NA
	9/28/01	11.7	NA	63	2	ND	ND	1	3	NA
	12/26/01	8.4	NA	<50	<0.5	<0.5	<0.5	1.4	<0.5	NA

Abbreviations / Notes

TPHd = Total Petroleum Hydrocarbons as Diesel (EPA Method 8015)

TPHg = Total Petroleum Hydrocarbons as Gasoline (EPA Method 8015)

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes (EPA Method 8020)

MTBE = Methyl tert-butyl Ether (EPA Method 8020)

TRPH = Total Recoverable Petroleum Hydrocarbons

<X = Concentration less than laboratory reporting limit

(1) Well not accessible because of a car obstruction

NA = not analyzed

* Does not match diesel chromatogram pattern
(2) Confirmed by EPA Method 8260











