#4868

ADDITIONAL SITE CHARACTERIZATION REPORT
1200 20th AVENUE, OAKLAND

Introduction: The site is located at the east corner of the intersection of 20th Avenue and Solano Way in Oakland, California (Figure 1). This report discusses the additional site characterization, which included advancing 2 hydropunch borings and collecting soil and groundwater samples at the site. The additional site characterization was conducted to determine the extent of petroleum contamination at the site.

Site History: Two underground storage tanks (USTs) were previously located at the site. The two 600-gallon tanks, which reportedly contained gasoline, were removed in January 1994. The physical size of both of the tanks (estimated during the removal activities) was 8 feet long by 3.5 feet in diameter. During the removal of the USTs, it was noted that the single-walled steel tanks had rusted through and had leaked. The approximate surface area of the removal excavation was about 20 feet by 10 feet. Approximately 80 cubic yards of soil was over-excavated and transported off site for disposal. The bottom of the excavation was approximately 15 feet below the ground surface (bgs). The exact depth to the bottom of the USTs was not recorded during the removal activities; the estimated depth to the bottom of the former USTs is 6 to 8 feet bgs.

Six soil samples were collected from the sidewalls and the bottom of the removal excavation. The soil samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH) as gasoline (TPH-g), TPH as diesel (TPH-d), and total lead. The highest concentrations of BTEX and TPH-g were detected along 20th Avenue at the western end of the removal excavation. Groundwater was not encountered during removal of USTs. As part of the UST removal action activities, three groundwater monitoring wells were installed at the site. The wells were sampled one to three times a year from 1995 to 1998.

Monitoring Well Groundwater Sampling: As part of the additional site characterization, the three monitoring wells at the site were sampled on April 1, 1999. Each well was purged with a dedicated disposable teflon-bailer. The well volume was calculated and a minimum of 3 well volumes was removed from each well prior to sampling. During removal of 3 well volumes from each well, the pH, temperature, electrical conductivity, dissolved oxygen, and turbidity of the groundwater being removed were monitored to determine when the physical parameters of the groundwater entering the well casing had stabilized. After the physical parameters of the groundwater had stabilized and a minimum of 3 well volumes had been removed from each well, groundwater samples were collected from each well. The groundwater samples were sent to an analytical laboratory to be analyzed for BTEX, methyl tertiary-butyl ether (MTBE), and TPH-g.

Hydropunch Sampling: As part of the additional site characterization, two hydropunch borings, shown on Figure 2 as SB-1 and SB-2, were advanced at the site. SB-1 is located on Solano Way, south of the location of the former USTs as proposed in the Work Plan. However, SB-2 was moved to a different location than that proposed in the Work Plan (approximately 60 feet southwest of the location of the former USTs). The boring (SB-2) was relocated and completed at the location shown on Figure 2, approximately 25 feet southwest of the location of the former USTs. Because soil from

SB-1 was observed to be clean, SB-2 was relocated closer to the location of the former USTs to better delineate the extent of contamination southwest of the former USTs. The Work Plan called for a soil sample to be collected from each soil boring at the groundwater vadose zone. Because the groundwater vadose zone was not discernible in SB-1, a ~~soil~~ water sample was not collected from this boring. Although the groundwater vadose zone was also not discernible in SB-2, two soil samples were collected from SB-2 at depths of 8.5-9.0 feet bgs and 26.5-27.0 feet bgs.

A macro-core soil sampler, a 2-inch outside-diameter by 48-inch-long continuous sampling tool, was used to collect soil from the borings for lithologic logging and analytical sampling purposes. Soil samples were collected in 1.5-inch-diameter clear acetate sleeves. The soil samples were sent to an analytical laboratory and analyzed for BTEX, MTBE, and TPH-g.

The Work Plan called for 2 grab groundwater samples to be collected; one from each of the hydropunch borings. The grab groundwater samples were to be analyzed for BTEX, MTBE, and TPH-g. However, because groundwater was not encountered in sufficient volume in either of the soil borings, grab groundwater samples were not collected. Boring SB-1 was advanced to 36 feet bgs and left open to allow groundwater time to seep into the boring. Groundwater was not detected in the boring after 24 hours. After one week, only 6 inches of water was measured in the bottom of the boring. It was not possible to collect a complete groundwater sample from this amount of water. After 2 weeks, the boring had closed in at 34.5 feet bgs and groundwater was not detected at this depth. Boring SB-2 was advanced until equipment refusal at 37.7 feet bgs. Groundwater was not encountered in SB-2.

Site Lithology: Boring logs for the additional site characterization hydropunch borings show that the soil underlying the site consists primarily of low and high plasticity clay. Hydrocarbon-stained soil was not encountered during advancement of the soil borings. The boring logs are located in Appendix A.

Groundwater Flow Direction and Gradient: Groundwater elevations were measured in the groundwater monitoring wells during the additional site characterization sampling activities. The depth to groundwater from the top of casing at each well, the top of casing elevations for each well, and the groundwater elevations measured at the site are shown in Table 1. The groundwater flow direction and gradient were calculated using these data. The groundwater flow direction is north 24 degrees east (N24E), as shown on Figure 3; this flow direction is nearly opposite to the direction of the ground surface slope at the site. MW-2 is downgradient from the location of the former USTs. The groundwater gradient was calculated to be 0.06 feet/foot (ft/ft). The direction of groundwater flow and the groundwater gradient are consistent with those calculated using previous water-level measurements from the three wells.

Laboratory Analytical Program: For the additional site characterization, the soil and groundwater samples were sent to Curtis & Tompkins Analytical Laboratories (C&T), in Berkeley, California for analysis. C&T is a California state-certified laboratory. Analyses for BTEX and MTBE were conducted using U.S. Environmental Protection Agency (US EPA) Method 8021B. Analyses for TPH-g were conducted using US EPA Method 8015M.

Groundwater Sample Analytical Results: BTEX, MTBE, and TPH-g were not detected in the groundwater samples collected from MW-2 and MW-3 during the additional site characterization. These compounds were detected in the groundwater sample collected from MW-1. For quality control purposes, a blind duplicate groundwater sample was collected from MW-1 and also analyzed for BTEX , MTBE, and TPH-g. The detected concentrations of BTEX, MTBE, and TPH-g were comparable in the groundwater and the duplicate groundwater sample collected from MW-1. The detected concentrations of the compounds in the groundwater sample and duplicate groundwater sample collected from MW-1 are presented on Table 2, which also presents the analytical results for the groundwater samples collected from MW-2 and MW-3. For the MW-1 groundwater sample and duplicate groundwater sample, the average detected benzene, toluene, ethylbenzene, and zylene concentrations were 2,500 micrograms per liter (ug/L), 325, 540, and 1,600 ug/L, respectively. The average detected concentration of MTBE in these samples was 110 ug/L, and the average detected TPH-g concentration was 13,500 ug/L. Tables 3, 4, and 5 provide the analytical groundwater sample results for BTEX and TPH-g for monitoring wells MW-1, MW-2, and MW-3, respectively, since February 1995. The complete laboratory analytical package is provided in Appendix B.

Soil Sample Analytical Results: BTEX, MTBE, and TPH-g were not detected in the two soil samples collected during the additional site characterization. Figure 4 shows TPH-g concentrations in all soil samples from the site and the depths of the soil samples. The soil samples shown on Figure 4 include those collected during the UST removal activities, during the monitoring well installation associated with the UST removal activities, and during the additional site characterization. The complete laboratory analytical package is provided in Appendix B.

Conclusions and Recommendations: The analytical results of all samples collected from the site, including previous and current samples, show that contamination related to the former USTs is present in a relatively localized area. Detected soil and groundwater contamination is generally localized in the area including the northwest sidewall of the removal excavation and MW-1. Although one soil sample collected at 9 feet bgs from the southeast sidewall of the removal excavation during removal of the USTs contained TPH-g at 8.5 mg/kg, TPH-g was not detected in any of the remaining soil samples collected from the site. Free product was not discovered in (1) the UST excavation, (2) the soil borings, or (3) groundwater during investigation of the site.

To assess the potential impact to human health for workers, it is recommended that an additional soil boring be completed inside the building at 1200 20th Avenue, southeast of the removal excavation. The boring should be located within the building as close as possible to the location of the former USTs. A soil sample should be collected at 7 feet bgs, which is equivalent to the estimated approximate depth of the bottom of the former USTs (because the floor of the building is at a lower elevation than the ground surface outside of the building). Additionally, soil samples should be collected from any zone within the soil boring where contamination is encountered. A groundwater sample should also be collected from the soil boring, if possible. Analyze for TPHg, BTEX & MTBE

Concur with this recommendation

The analytical results of soil and groundwater samples from an excavation within the building will more fully delineate the extent of contamination related to the USTs at the site. If contamination is not present in this soil boring, site closure should be attainable by comparing the site against the City of Oakland risk-based corrective action guidelines.

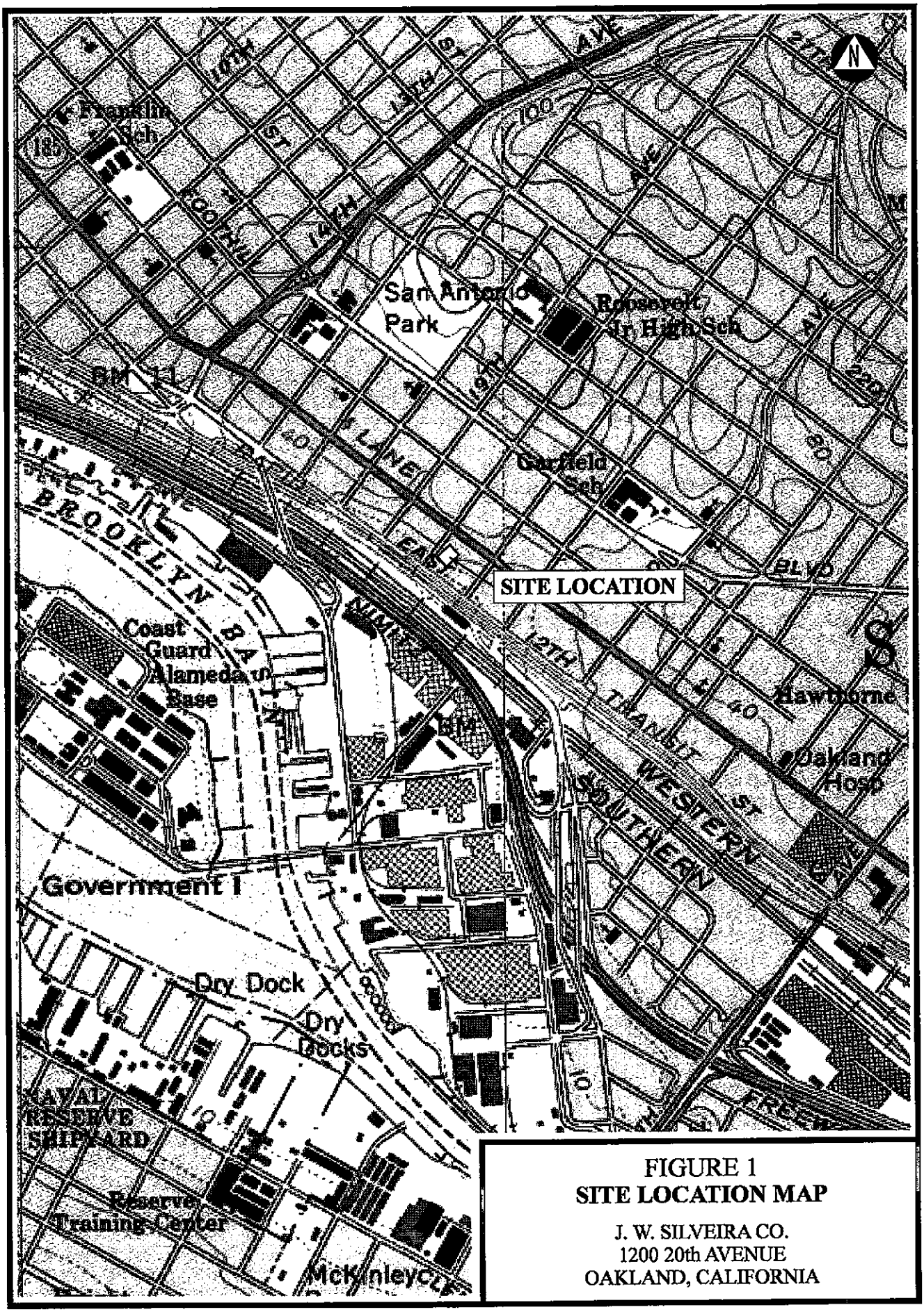
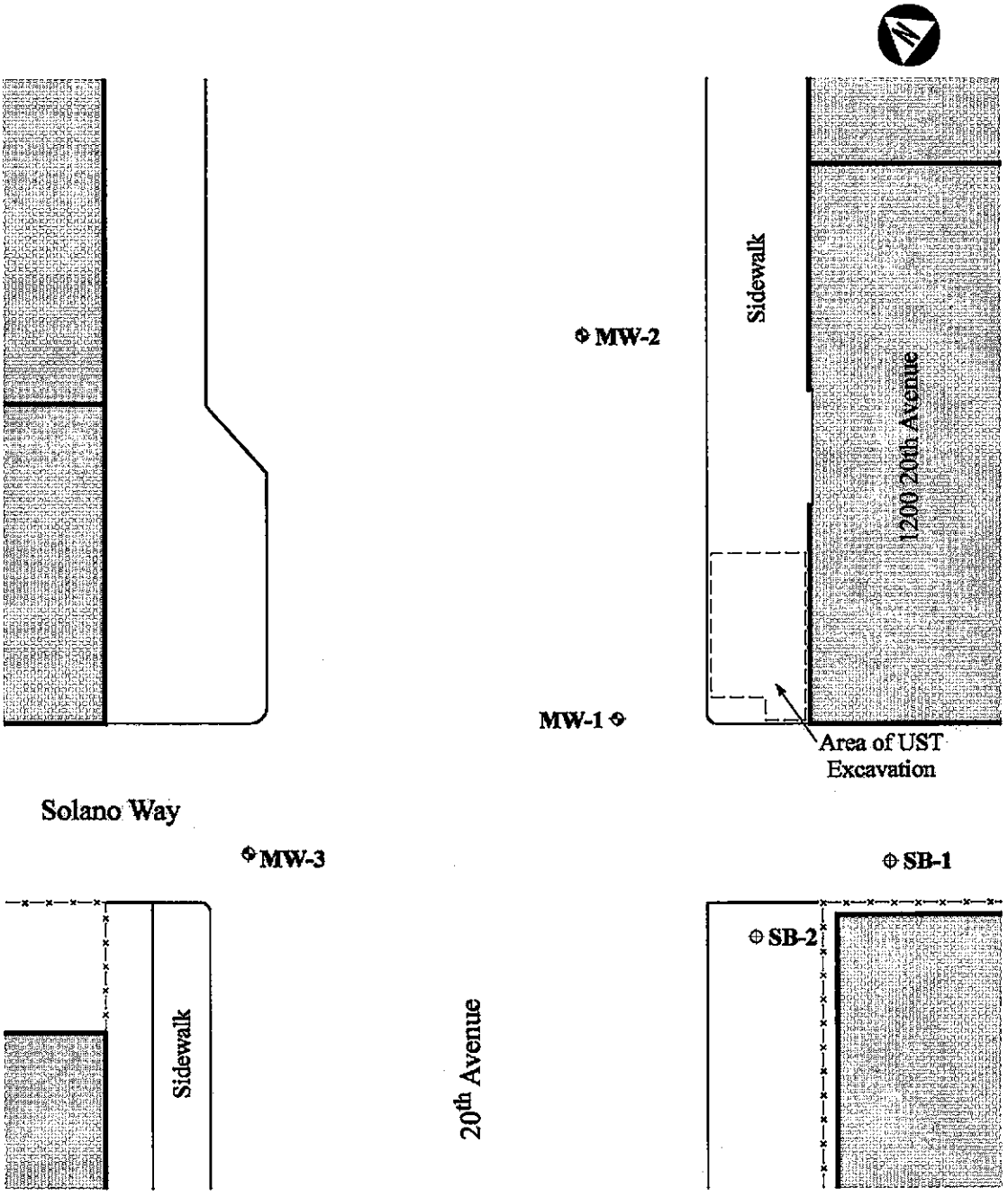


FIGURE 1
SITE LOCATION MAP

J. W. SILVEIRA CO.
1200 20th AVENUE
OAKLAND, CALIFORNIA



Notes:

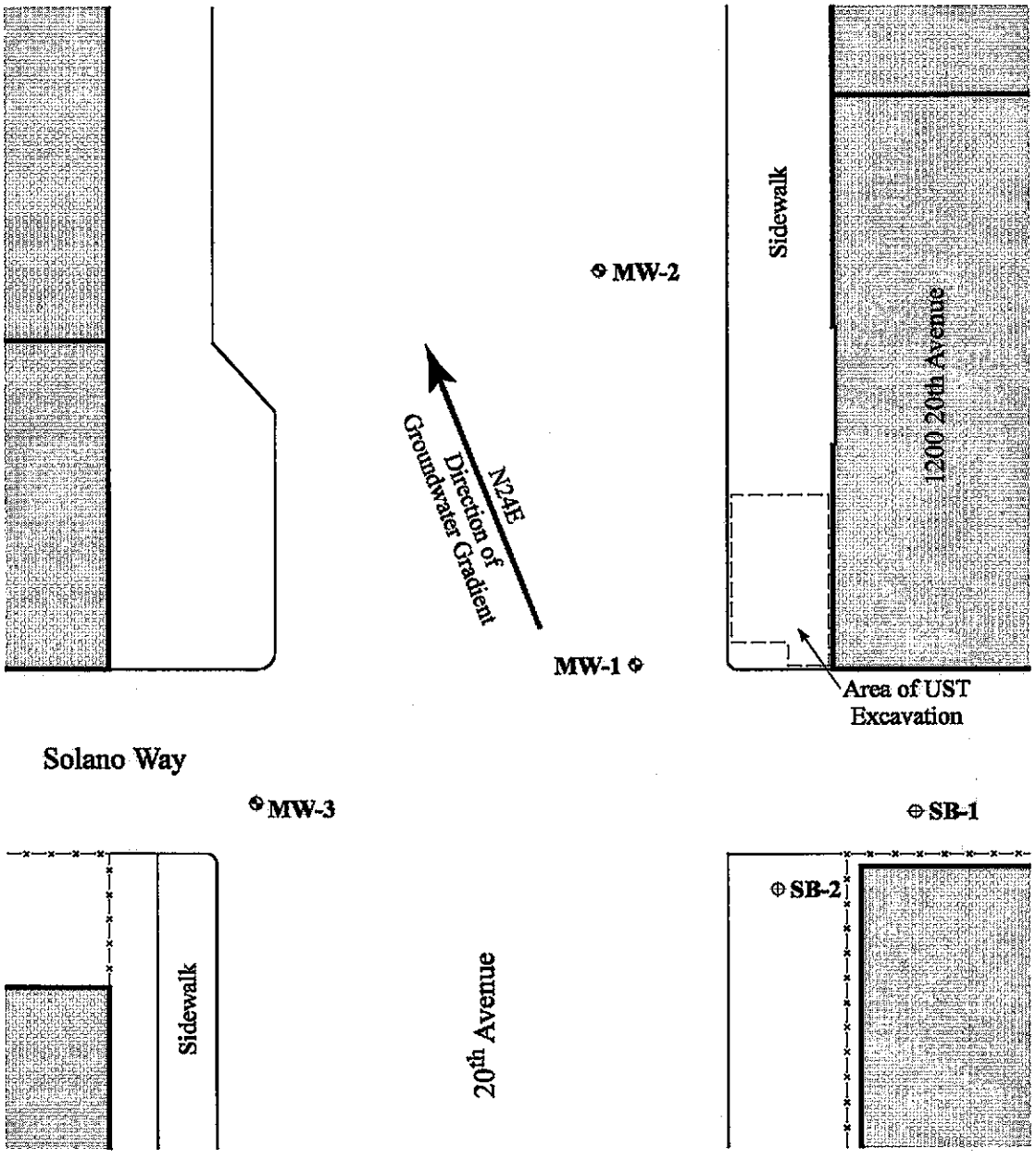
- Monitoring Well (MW)
- Soil Boring (SB)

Scale: 1 inch = 20 feet

0 10 20 30 40

FIGURE 2
MONITORING WELL AND SOIL BORING LOCATIONS

J. W. SILVEIRA CO.
1200 20th AVENUE
OAKLAND, CALIFORNIA



Notes:

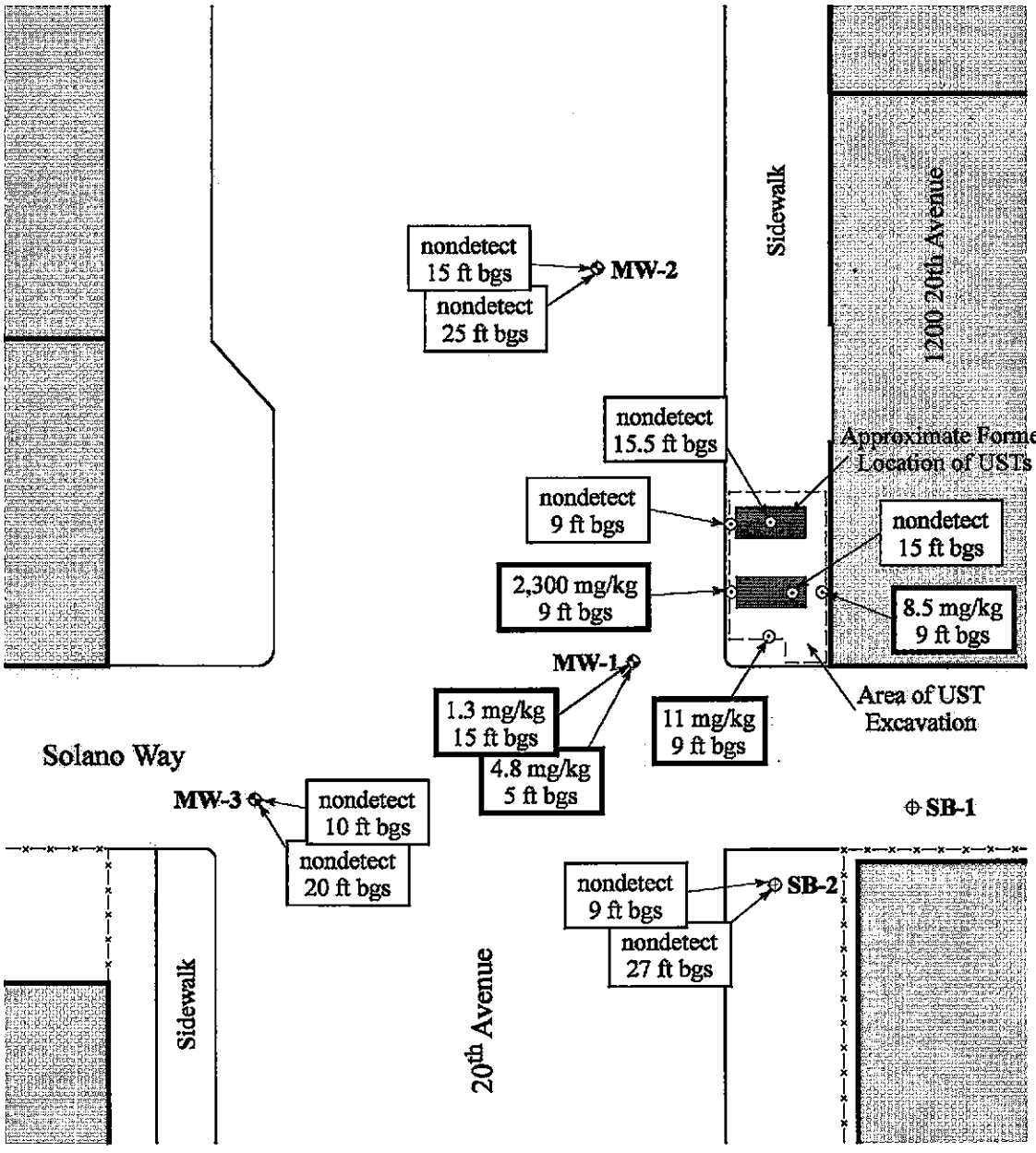
- ⊕ Monitoring Well (MW)
- ⊕ Soil Boring (SB)

Scale: 1 inch = 20 feet

0 10 20 30 40

FIGURE 3
GROUNDWATER GRADIENT

J. W. SILVEIRA CO.
1200 20th AVENUE
OAKLAND, CALIFORNIA



Notes:

- Monitoring Well (MW)
- Soil Boring (SB)
- Soil Sample from excavation

mg/kg milligrams per kilogram

Scale: 1 inch = 20 feet

0 10 20 30 40

FIGURE 4
TPH-GASOLINE IN SOIL

J. W. SILVEIRA CO.
1200 20th AVENUE
OAKLAND, CALIFORNIA

TABLE 1
GROUNDWATER ELEVATIONS
1200 20TH AVENUE

Date	Groundwater Elevations from TOC		
	MW-1	MW-2	MW-3
4/1/99	0.07	-2.50	-0.10

Notes:
MW-1 TOC Elevation: 17.15 ft
MW-2 TOC Elevation: 20.11 ft
MW-3 TOC Elevation: 16.06 ft
TOC top of casing

TABLE 2
DETECTED VOC AND TPH COMPOUNDS IN GROUNDWATER
FROM MONITORING WELLS, APRIL 1999
1200 20TH AVENUE

Analyte	Monitoring Well			
VOC (µg/L)	**MW-1**	**MW-1 Dup**	**MW-2**	**MW-3**
Benzene	2,400	2,600	*ND*	*ND*
Ethylbenzene	520	560	*ND*	*ND*
Toluene	310	340	*ND*	*ND*
m,p-Xylenes	1,600	1,600	*ND*	*ND*
o-Xylene	590	620	*ND*	*ND*
MTBE	100	120	*ND*	*ND*
TPH (µg/L)	**MW-1**	**MW-1 Dup**	**MW-2**	**MW-3**
Gasoline	13,000	14,000	*ND*	*ND*

Notes:

Dup	blind duplicate groundwater sample
µg/L	micrograms per Liter
ND	not detected
TPH	total petroleum hydrocarbons
VOC	volitile organic compound

TABLE 3
VOC AND TPH COMPOUNDS IN GROUNDWATER
MW-1 FROM FEBRUARY 1995 TO APRIL 1999
1200 20TH AVENUE

Date	TPH (µg/L)	VOC (µg/L)			
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
Feb-95	1,900	92	39	57	260
Jun-95	4,100	410	32	14	180
Oct-95	1,300	180	22	32	81
Feb-96	1,700	200	21	41	120
Jun-96	1,900	160	7	34	31
Sep-96	4,700	460	66	190	680
Jan-97	2,200	230	35	100	330
Jul-98	23,000	3,500	450	1,000	3,100
Apr-99	14,000	2,600	560	340	1,600

Notes:

µg/L	micrograms per Liter
- -	not analyzed
ND	not detected
TPH	total petroleum hydrocarbons
VOC	volitile organic compound

TABLE 4
VOC AND TPH COMPOUNDS IN GROUNDWATER
MW-2 FROM FEBRUARY 1995 TO APRIL 1999
1200 20TH AVENUE

Date	TPH (µg/L)	VOC (µg/L)			
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
Feb-95	*ND*	*ND*	*ND*	*ND*	*ND*
Jun-95	*ND*	1.8	*ND*	1.1	0.62
Oct-95	55	2.2	*ND*	1.5	*ND*
Feb-96	*ND*	3.3	2.7	0.99	2.4
Jun-96	*ND*	*ND*	0.6	*ND*	1.2
Sep-96	*ND*	9.3	0.57	1.3	1.9
Jan-97	*ND*	2.6	*ND*	*ND*	0.76
Jul-98	*ND*	*ND*	*ND*	*ND*	*ND*
Apr-99	*ND*	*ND*	*ND*	*ND*	*ND*

Notes:

µg/L	micrograms per Liter
- -	not analyzed
ND	not detected
TPH	total petroleum hydrocarbons
VOC	volitile organic compound

TABLE 5
VOC AND TPH COMPOUNDS IN GROUNDWATER
MW-3 FROM FEBRUARY 1995 TO APRIL 1999
1200 20TH AVENUE

Date	TPH (µg/L)	VOC (µg/L)			
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
Feb-95	*ND*	*ND*	*ND*	*ND*	*ND*
Jun-95	160	0.6	*ND*	0.6	0.72
Oct-95	130	5.8	*ND*	3.2	*ND*
Feb-96	54	5.6	2.8	2.9	8.1
Jun-96	*ND*	*ND*	*ND*	*ND*	*ND*
Sep-96	96	12	7.1	4	6.2
Jan-97	*ND*	*ND*	*ND*	*ND*	*ND*
Jul-98	*ND*	*ND*	*ND*	*ND*	*ND*
Apr-99	*ND*	*ND*	*ND*	*ND*	*ND*

Notes:

µg/L	micrograms per Liter
- -	not analyzed
ND	not detected
TPH	total petroleum hydrocarbons
VOC	volitile organic compound

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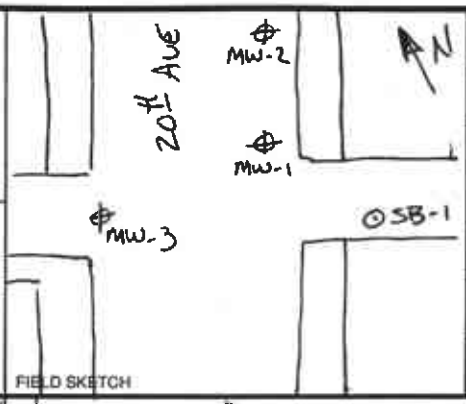
135 MAIN STREET, SUITE 1800
SAN FRANCISCO, CA 94105
415-543-4880



BORING ID: SB-1
SITE: 1200 20th Ave
PROJECT: Silveira - Oakland
PROJECT NO.: P1106
DATE: 6-7-99
LOGGED BY: Roy Glenn

SAMPLE ID	SAMPLE TIME	SAMPLE DEPTH	PID READING	DRIVE INTERVAL	INCHES RECOVERED / INCHES DRIVEN	DEPTH (ft bgs)	USCS SOIL TYPE	
					46/48	1		Asphalt 6"
								Fill, Sandy-Silt, Very Pale Brown (10 YR 7/4), Moist, Soft.
						2	CL	Silty-Clay, Light Yellowish Brown (10 YR 6/4), Low Plasticity, Dry, Stiff
						3		
						4		Clayey-Gravel, Brown (10 YR 4/3), Fine, Sub-Rounded, Medium Dense Gravel, Well Graded, Dry
					48/48	5	GC	
						6		
						7		
						8		
					44/48	9	CL	Sandy-Clay, Grayish-Brown (2.5 Y 5/2), Low Plasticity Damp, Very Stiff, w/15% Coarse Sand.
						10		
						11	SC	Clayey-Sand, Brown (10 YR 4/3), Sub-Angular, Coarse Grained Sand, Moist, Dense
						12	CH	Clay, Olive Yellow (2.5 Y 6/6), High Plasticity, Damp, Very Stiff.
					45/48	13		Gravely-Clay, Mottled Brown (7.5 YR 5/2) & Gray (5 Y 6/1) Low Plasticity, Moist, Stiff, w/20% Fine Gravel.
						14	CL	
						15		
						16		No Recovery
					0/36	17		
						18		
						19		
					35/36	20	CH	Clay, Reddish Brown (5 YR 4/4), High Plasticity, Damp, Very Stiff

SAMPLE ID	SAMPLE TIME	SAMPLE DEPTH	PID READING	DRIVE INTERVAL	INCHES RECOVERED / INCHES DRIVEN	DEPTH (ft bgs)	USCS SOIL TYPE
						22	
					22/24	23	CH
						24	
					21/24	25	
						26	
					23/24	27	
						28	
					18/18	29	
						30	
					24/24	31	
						32	
					17/18	33	
						34	
					22/24	35	
					11/12	36	
						37	
						38	
						39	
						40	
						41	
						42	
						43	
						44	

Tetra Tech EM Inc.
135 MAIN STREET, SUITE 1800
SAN FRANCISCO, CA 94105
415-543-4880

BORING ID: SB-1
SITE: 1200 20th AVENUE
PROJECT: SILVEIRA - OAKLAND

SAME AS ABOVE: CLAY, REDDISH BROWN (5YR 4/4)
HIGH PLASTICITY, DAMP, VERY STIFF.

w/1.5% VERY FINE GRAVEL 2-5mm

NO GRAVEL PRESENT

w/10% MEDIUM SAND

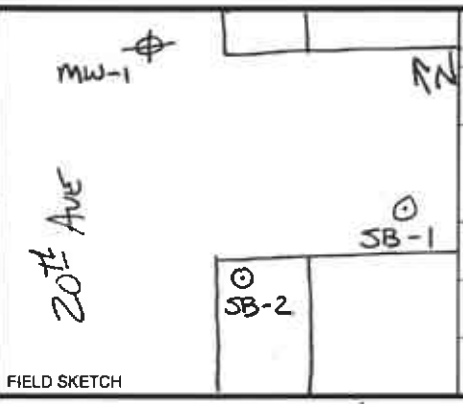
TD = 36 ft bgs. SAMPLER REFUSAL

Tetra Tech EM Inc.

135 MAIN STREET, SUITE 1800
SAN FRANCISCO, CA 94105
415-543-4880

BORING ID: SB-2
SITE: 1200 20th Ave
PROJECT: Silveira - Oakland
PROJECT NO.: P1106
DATE: 8-10-99
LOGGED BY: Roy Glenn

FIELD SKETCH



SAMPLE ID	SAMPLE TIME	SAMPLE DEPTH	PID READING	DRIVE INTERVAL	INCHES RECOVERED / INCHES DRIVEN	DEPTH (ft bgs)	USCS SOIL TYPE	
					42/46	1	CL	Silty-Clay, Light Yellowish Brown (10 YR 6/4), Low Plasticity, Dry, Stiff.
						2		
						3	GC	Clayey-Gravel, Brown (10 YR 4/3), Medium Grained, Sub-Rounded, Well Graded Gravel, Medium Dense, Dry.
						4		
					46/46	5		Damp
						6	CL	
						7		Sandy-Clay, Olive Brown (2.5 y 4/3), Low Plasticity, Damp, Very Stiff, w/20% medium sand.
JW2-05	1055					8		
					46/46	9		
						10		
						11	CL	
						12		Gravely-Clay, Mottled Brown (7.5 YR 5/2) & Gray (5Y 4/1) Low Plasticity, Moist, Stiff, w/15% Fine Gravel 5-6 mm
					45/46	13		
						14		Clay, Dark Red (2.5 YR 4/6), High Plasticity, Damp, Very Stiff
						15		
						16	CH	
					46/46	17		w/10% Very Fine Gravel 2-4 mm
						18		
						19		
						20		

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SAN FRANCISCO, CA 94105
415-543-4880

BORING ID: SB-2
SITE: 1200 20th Ave
PROJECT: SILVEIRA - OAKLAND

SAMPLE ID	SAMPLE TIME	SAMPLE DEPTH	PID READING	DRIVE INTERVAL	INCHES RECOVERED / INCHES DRIVEN	DEPTH (ft bgs)	USCS SOIL TYPE	
					34/36	22		SAME AS ABOVE: CLAY, DARK RED (2.5 YR 4/6) HIGH PLASTICITY, DAMP, VERY STIFF, w/ 10% VERY FINE GRAVEL 2-4mm
						23	CH	
					31/36	24		
						25		
						26		CLAYEY-SAND, BROWN (7.5 YR 5/2), MEDIUM GRAINED, POORLY GRADED SAND, VERY DENSE, DAMP
JW2-06	1200				36/36	27	SC	
						28		SANDY-CLAY, GRAYISH BROWN (2.5 Y 5/2), LOW PLASTICITY, DAMP, VERY STIFF, w/ 15% FINE GRAINED SAND
						29		
					21/24	30	CL	
						31		w/ 5% MEDIUM GRAVEL 8-12mm
					24/24	32		
						33		GRAVELY-CLAY, YELLOWISH BROWN (10YR 5/4), LOW PLASTICITY, DAMP, VERY STIFF, w/ 20% FINE TO MEDIUM GRAVEL 6-14mm
					16/18	34		
					17/18	35	CL	
						36		
					12/12	37		
					8/9			
						38		TD = 37.7 ft bgs. EQUIPMENT REFUSAL.
						39		DRY. NO GROUNDWATER ENCOUNTERED.
						40		
						41		
						42		
						43		
						44		

For this appendix, samples which contain "JW2" as their first three digits are associated with the site located at 1200 20th Avenue.

Samples which are numbered with the first three digits of "JW1", which are associated with the site located at 2301 East 12th Street, are also included in this appendix because the samples from the two sites were submitted to the analytical laboratory in the same cooler with the same chain-of-custody form. Thus, the analytical results presented by the laboratory include data for both sites.

The copy of the COCs delivered to the analytical laboratory does not include information about which location specific samples were collected from, nor is information provided on the laboratory copy of the COC about whether or not the sample is a quality control sample. Thus, the copy of the COCs which includes this information has also been included in this appendix.

Tetra Tech EM Inc.
San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

Page 1 of 1

PO#

Lab: C&T

Project name: JW SILVEIRA

TtEMI technical contact: JACKIE LUTA

Field samplers: HAL DAWSON, ROY GLENN

Project number: P1000004

TtEMI project manager: HAL DAWSON

Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	8oz Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	MTBE	BTEX	VOC	NITRATE	SULFATE
JW2-01	SITE 2, MW 21 MS/MSD	4/1/99	0930	WATER	21										X		X	X			
JW2-02	SITE 2, MW 14		1045		9										X		X	X			
JW2-03	SITE 2, MW 18 DUPLICATE		1050		9										X		X	X			
JW2-04	SITE 2, MW 3		1148		9										X		X	X			
JW1-04	SITE 1, MW 3		1403		9	2				1					X	X	X		X	X	X
JW1-05	SITE 1, MW 1		1440		9	2				1					X	X	X		X	X	X
JW1-06	SITE 1, MW 6		1615		9	2				1					X	X	X		X	X	X
JW1-07	SITE 1, MW 2		1645		9	2				1					X	X	X		X	X	X
JW1-08	TRIP BLANK		1700		5										X		X		X		
						1															
													48								

	Name (print)	Company Name	Date	Time
Relinquished by:	ROY GLENN	TtEMI	4-1-99	1851
Received by:	J.W. LIA	C&T	4/1/99	1851
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

WHITE–Laboratory Copy YELLOW–Project Office Copy

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San Francisco Office
135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

PO#:

Lab: C&T

Project name: JW Silveira UST

TtEMI technical contact: Jackie Luta

Field samplers: Roy Glenn

Project number: P1106.05

TtEMI project manager: Hal Dawson

Field samplers' signatures:

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Acetate	Preservative Added: HCl	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	BTEX MTBE
JW2-05	SB-2 8.5-9 ft	8-10-99	1055	Soil						1						X		X X
JW2-06	SB-2 26.5-27		1200	Soil						1						X		X X
JW1-20	SB-6 19-19.5		1400	Soil						1		X				X	X	
JW1-21	SB-6 GW		1530	WATER	6	2						X				X	X	

	Name (print)	Company Name	Date	Time
Relinquished by: Roy D. Glenn	Roy	TT EMI	8-13	0930
Received by: Steven E. Stanley	Steven E. Stanley	C&T	8-13-99	0930
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

WHITE–Laboratory Copy YELLOW–Project Office Copy

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900, Fax (510) 486-0532

RECEIVED
APR 28 1999
TETRA TECH EM INC.

Laboratory Number 138737

Tetra Tech EMI
135 Main Street
Suite 1800
San Francisco, CA 94105

Project#: P110604
Location: JW Silveira Props

Sample ID	Lab ID
JW2-01 MW2	138737-001
JW2-02 MW1	138737-002
JW2-03 MW1(D)	138737-003
JW2-04 MW3	138737-004
JW1-04	138737-005
JW1-05	138737-006
JW1-06	138737-007
JW1-07	138737-008
JW1-08	138737-009

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: _____ Date: 4.27.99
Title: Operations Manager

Signature: Carol Wortham Date: 4/27/99
Title: Project Manager

Curtis & Tompkins, Ltd.

Laboratory Number: **138737**
Client: **Tetra Tech EMI**
Location: **JW Silveira Props**
Project#: **P110604**

Receipt Date: **04/01/99**

CASE NARRATIVE

This hardcopy data package contains sample and QC results for nine water samples that were received on April 1, 1999.

Volatile Organics: The TIC compounds were not included in the electronic data deliverables. There were bubbles present in the vial analyzed for JW1-08 (CT#138737-009). No analytical problems were encountered.

TPH-Purgeables/BTXE: High surrogate recoveries were observed for samples JW1-04 (CT#138737-005) and JW1-06 (CT#138737-007) due to coelution with hydrocarbon peaks. No other analytical problems were encountered.

TPH-Extractables: No analytical problems were encountered.

Wet Chemistry: Samples were diluted due to high levels of hydrocarbons present in the sample. No analytical problems were encountered.

1209

B873J

Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record

Page 1 of 1

Project name: JW SILVEIRA	**PO#**	**Lab:** C&T
Project number: P110604	**TtEMI technical contact:** JACKIE LUTA	**Field samplers:** HAL DAWSON, ROY GLENN
	TtEMI project manager: HAL DAWSON	**Field samplers' signatures:**

Preservative Added: HCl | | HCl | HCl | HCl | | |

No./Container Types / **Analysis Required**

	Sample ID	Sample Description/Notes	Date	Time	Matrix	40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	8oz Poly	CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	MTBE	BTEX	VOC	NITRATE	SULFATE
1	JW2-01	MS/MSD	4/1/99	0930	WATER	21										X		X	X			
2	JW2-02			1045		9										X		X	X			
3	JW2-03			1050		9										X		X	X			
4	JW2-04			1148		9										X		X	X			
5	JW1-04			1403		9	2				1					X	X	X		X	X	X
6	JW1-05			1440		9	2				1					X	X	X		X	X	X
7	JW1-06			1615		9	2				1					X	X	X		X	X	X
8	JW1-07			1645		9	2				1					X	X	X		X	X	X
9	JW1-08			1700		5										X		X		X		
										Hold												
	Trip Blank																					

	Name (print)	Company Name	Date	Time
Relinquished by:	ROY GLENN	T&E EMI	4-1-99	1851
Received by:	J.W. FIA.	C&T	4/1/99	1851
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

5

WHITE–Laboratory Copy YELLOW–Project Office Copy

JW Slvcsn

COOLER RECEIPT CHECKLIST

Login#: 138737 Date Received: 4/1 Number of Coolers: 2
Client: ITENI Project: PL10604

A. Preliminary Examination Phase
Date Opened: 4/1 By (print): JWilson (sign) [signature]

1. Did cooler come with a shipping slip (airbill, etc.)? ... YES (NO)
If YES, enter carrier name and airbill number:
2. Were custody seals on outside of cooler? ... YES NO
How many and where? Seal date: Seal name:
3. Were custody seals unbroken and intact at the date and time of arrival? ... YES NO NA
4. Were custody papers dry and intact when received? ... YES NO
5. Were custody papers filled out properly (ink, signed, etc.)? ... YES NO
6. Did you sign the custody papers in the appropriate place? ... YES NO
7. Was project identifiable from custody papers? ... YES NO
If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? ... YES NO
Type of ice: Wet Temperature: 5.0°C ; 5.0°C

B. Login Phase
Date Logged In: 4/1 By (print): JWilson (sign) [signature]

1. Describe type of packing in cooler: foam
2. Did all bottles arrive unbroken? ... YES NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ... YES NO
4. Did bottle labels agree with custody papers? ... YES NO JW 4/1
5. Were appropriate containers used for the tests indicated? ... YES NO
6. Were correct preservatives added to samples? ... YES NO
7. Was sufficient amount of sample sent for tests indicated? ... YES NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ... YES NO
9. Was the client contacted concerning this sample delivery? ... YES NO
If YES, give details below.
Who was called? By whom? Date:

Additional Comments:
~~Trubble reforms~~ JW

Filename: F:\qc\forms\cooler.wpd Rev. 1 4/95

Volatile Organics by GC/MS

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props — 230 E 12th ?

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: JW1-04
Lab ID: 138737-005
Matrix: Water
Batch#: 47202
Units: ug/L
Diln Fac: 1

Sampled: 04/01/99
Received: 04/01/99
Extracted: 04/02/99
Analyzed: 04/02/99

Analyte	Result	Reporting Limit
Freon 12	ND	10
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	5.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	3.3	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	5.0
Chloroform	ND	0.5
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	73	0.5
Trichloroethene	6.7	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	7.0	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5

Volatile Organics by GC/MS

Field ID:	JW1-04	Sampled:	04/01/99
Lab ID:	138737-005	Received:	04/01/99
Matrix:	Water	Extracted:	04/02/99
Batch#:	47202	Analyzed:	04/02/99
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	29	0.5
m,p-Xylenes	6.3	0.5
o-Xylene	0.7	0.5
Styrene	ND	0.5
Bromoform	ND	0.5
Isopropylbenzene	41	5.0
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	45	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	12	5.0
para-Isopropyl Toluene	18	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	17	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	3.4 J	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	94	81-121
1,2-Dichloroethane-d4	96	76-127
Toluene-d8	103	90-109
Bromofluorobenzene	98	82-118

J: Estimated Value

Volatile Organics by GC/MS

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: JW1-05
Lab ID: 138737-006
Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 8.333

Sampled: 04/01/99
Received: 04/01/99
Extracted: 04/04/99
Analyzed: 04/04/99

Analyte	Result	Reporting Limit
Freon 12	ND	83
Chloromethane	ND	8.3
Vinyl Chloride	ND	8.3
Bromomethane	ND	8.3
Chloroethane	ND	8.3
Trichlorofluoromethane	ND	42
Acetone	ND	83
Freon 113	ND	42
1,1-Dichloroethene	ND	4.2
Methylene Chloride	ND	42
Carbon Disulfide	ND	4.2
MTBE	ND	4.2
trans-1,2-Dichloroethene	ND	4.2
Vinyl Acetate	ND	83
1,1-Dichloroethane	ND	4.2
2-Butanone	ND	83
cis-1,2-Dichloroethene	ND	4.2
2,2-Dichloropropane	ND	42
Chloroform	ND	4.2
Bromochloromethane	ND	83
1,1,1-Trichloroethane	ND	4.2
1,1-Dichloropropene	ND	42
Carbon Tetrachloride	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	1300	4.2
Trichloroethene	20	4.2
1,2-Dichloropropane	ND	4.2
Bromodichloromethane	ND	4.2
Dibromomethane	ND	42
4-Methyl-2-Pentanone	ND	83
cis-1,3-Dichloropropene	ND	4.2
Toluene	30	4.2
trans-1,3-Dichloropropene	ND	4.2
1,1,2-Trichloroethane	ND	4.2
2-Hexanone	ND	83
1,3-Dichloropropane	ND	42
Tetrachloroethene	ND	4.2
Dibromochloromethane	ND	4.2

Volatile Organics by GC/MS

Field ID:	JW1-05	Sampled:	04/01/99
Lab ID:	138737-006	Received:	04/01/99
Matrix:	Water	Extracted:	04/04/99
Batch#:	47224	Analyzed:	04/04/99
Units:	ug/L		
Diln Fac:	8.333		

Analyte	Result		Reporting Limit
1,2-Dibromoethane	ND		42
Chlorobenzene	ND		4.2
1,1,1,2-Tetrachloroethane	ND		42
Ethylbenzene	93	--	4.2
m,p-Xylenes	36		4.2
o-Xylene	ND		4.2
Styrene	ND		4.2
Bromoform	ND		4.2
Isopropylbenzene	ND		42
1,1,2,2-Tetrachloroethane	ND		4.2
1,2,3-Trichloropropane	ND		42
Propylbenzene	ND		42
Bromobenzene	ND		42
1,3,5-Trimethylbenzene	ND		42
2-Chlorotoluene	ND		42
4-Chlorotoluene	ND		42
tert-Butylbenzene	ND		42
1,2,4-Trimethylbenzene	ND		42
sec-Butylbenzene	ND		42
para-Isopropyl Toluene	ND		42
1,3-Dichlorobenzene	ND		42
1,4-Dichlorobenzene	ND		42
n-Butylbenzene	ND		42
1,2-Dichlorobenzene	ND		42
1,2-Dibromo-3-Chloropropane	ND		42
1,2,4-Trichlorobenzene	ND		42
Hexachlorobutadiene	ND		42
Naphthalene	ND		42
1,2,3-Trichlorobenzene	ND		42

Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	96	81-121
1,2-Dichloroethane-d4	102	76-127
Toluene-d8	106	90-109
Bromofluorobenzene	95	82-118

Volatile Organics by GC/MS

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: JW1-06
Lab ID: 138737-007
Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 2.5

Sampled: 04/01/99
Received: 04/01/99
Extracted: 04/05/99
Analyzed: 04/05/99

Analyte	Result	Reporting Limit
Freon 12	ND	25
Chloromethane	ND	2.5
Vinyl Chloride	ND	2.5
Bromomethane	ND	2.5
Chloroethane	ND	2.5
Trichlorofluoromethane	ND	13
Acetone	ND	25
Freon 113	ND	13
1,1-Dichloroethene	ND	1.3
Methylene Chloride	ND	13
Carbon Disulfide	ND	1.3
MTBE	ND	1.3
trans-1,2-Dichloroethene	21	1.3
Vinyl Acetate	ND	25
1,1-Dichloroethane	ND	1.3
2-Butanone	ND	25
cis-1,2-Dichloroethene	72	1.3
2,2-Dichloropropane	ND	13
Chloroform	ND	1.3
Bromochloromethane	ND	25
1,1,1-Trichloroethane	ND	1.3
1,1-Dichloropropene	ND	13
Carbon Tetrachloride	ND	1.3
1,2-Dichloroethane	ND	1.3
Benzene	280	1.3
Trichloroethene	75	1.3
1,2-Dichloropropane	ND	1.3
Bromodichloromethane	ND	1.3
Dibromomethane	ND	13
4-Methyl-2-Pentanone	ND	25
cis-1,3-Dichloropropene	ND	1.3
Toluene	4.4	1.3
trans-1,3-Dichloropropene	ND	1.3
1,1,2-Trichloroethane	ND	1.3
2-Hexanone	ND	25
1,3-Dichloropropane	ND	13
Tetrachloroethene	ND	1.3
Dibromochloromethane	ND	1.3

Volatile Organics by GC/MS

Field ID:	JW1-06	Sampled:	04/01/99
Lab ID:	138737-007	Received:	04/01/99
Matrix:	Water	Extracted:	04/05/99
Batch#:	47224	Analyzed:	04/05/99
Units:	ug/L		
Diln Fac:	2.5		

Analyte	Result		Reporting Limit
1,2-Dibromoethane	ND		13
Chlorobenzene	ND		1.3
1,1,1,2-Tetrachloroethane	ND		13
Ethylbenzene	66	--	1.3
m,p-Xylenes	6.4		1.3
o-Xylene	1.3		1.3
Styrene	ND		1.3
Bromoform	ND		1.3
Isopropylbenzene	17		13
1,1,2,2-Tetrachloroethane	ND		1.3
1,2,3-Trichloropropane	ND		13
Propylbenzene	15		13
Bromobenzene	ND		13
1,3,5-Trimethylbenzene	ND		13
2-Chlorotoluene	ND		13
4-Chlorotoluene	ND		13
tert-Butylbenzene	ND		13
1,2,4-Trimethylbenzene	ND		13
sec-Butylbenzene	ND		13
para-Isopropyl Toluene	ND		13
1,3-Dichlorobenzene	ND		13
1,4-Dichlorobenzene	ND		13
n-Butylbenzene	ND		13
1,2-Dichlorobenzene	ND		13
1,2-Dibromo-3-Chloropropane	ND		13
1,2,4-Trichlorobenzene	ND		13
Hexachlorobutadiene	ND		13
Naphthalene	ND		13
1,2,3-Trichlorobenzene	ND		13

Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	93	81-121
1,2-Dichloroethane-d4	96	76-127
Toluene-d8	104	90-109
Bromofluorobenzene	97	82-118

Volatile Organics by GC/MS

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: JW1-07
Lab ID: 138737-008
Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 8.333

Sampled: 04/01/99
Received: 04/01/99
Extracted: 04/05/99
Analyzed: 04/05/99

Analyte	Result	Reporting Limit
Freon 12	ND	83
Chloromethane	ND	8.3
Vinyl Chloride	ND	8.3
Bromomethane	ND	8.3
Chloroethane	ND	8.3
Trichlorofluoromethane	ND	42
Acetone	ND	83
Freon 113	ND	42
1,1-Dichloroethene	ND	4.2
Methylene Chloride	ND	42
Carbon Disulfide	ND	4.2
MTBE	ND	4.2
trans-1,2-Dichloroethene	ND	4.2
Vinyl Acetate	ND	83
1,1-Dichloroethane	ND	4.2
2-Butanone	ND	83
cis-1,2-Dichloroethene	ND	4.2
2,2-Dichloropropane	ND	42
Chloroform	ND	4.2
Bromochloromethane	ND	83
1,1,1-Trichloroethane	ND	4.2
1,1-Dichloropropene	ND	42
Carbon Tetrachloride	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	1100	4.2
Trichloroethene	ND	4.2
1,2-Dichloropropane	ND	4.2
Bromodichloromethane	ND	4.2
Dibromomethane	ND	42
4-Methyl-2-Pentanone	ND	83
cis-1,3-Dichloropropene	ND	4.2
Toluene	100	4.2
trans-1,3-Dichloropropene	ND	4.2
1,1,2-Trichloroethane	ND	4.2
2-Hexanone	ND	83
1,3-Dichloropropane	ND	42
Tetrachloroethene	ND	4.2
Dibromochloromethane	ND	4.2

Volatile Organics by GC/MS

Field ID:	JW1-07	Sampled:	04/01/99
Lab ID:	138737-008	Received:	04/01/99
Matrix:	Water	Extracted:	04/05/99
Batch#:	47224	Analyzed:	04/05/99
Units:	ug/L		
Diln Fac:	8.333		

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	42
Chlorobenzene	5.2	4.2
1,1,1,2-Tetrachloroethane	ND	42
Ethylbenzene	540	4.2
m,p-Xylenes	370	4.2
o-Xylene	38	4.2
Styrene	ND	4.2
Bromoform	ND	4.2
Isopropylbenzene	50	42
1,1,2,2-Tetrachloroethane	ND	4.2
1,2,3-Trichloropropane	ND	42
Propylbenzene	86	42
Bromobenzene	ND	42
1,3,5-Trimethylbenzene	120	42
2-Chlorotoluene	ND	42
4-Chlorotoluene	ND	42
tert-Butylbenzene	ND	42
1,2,4-Trimethylbenzene	200	42
sec-Butylbenzene	ND	42
para-Isopropyl Toluene	22 J	42
1,3-Dichlorobenzene	ND	42
1,4-Dichlorobenzene	ND	42
n-Butylbenzene	39 J	42
1,2-Dichlorobenzene	ND	42
1,2-Dibromo-3-Chloropropane	ND	42
1,2,4-Trichlorobenzene	ND	42
Hexachlorobutadiene	ND	42
Naphthalene	570	42
1,2,3-Trichlorobenzene	ND	42

Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	94	81-121
1,2-Dichloroethane-d4	101	76-127
Toluene-d8	106	90-109
Bromofluorobenzene	97	82-118

J: Estimated Value

Volatile Organics by GC/MS

Client:	Tetra Tech EMI	Analysis Method:	EPA 8260
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		
Field ID:	JW1-08	Sampled:	04/01/99
Lab ID:	138737-009	Received:	04/01/99
Matrix:	Water	Extracted:	04/02/99
Batch#:	47202	Analyzed:	04/02/99
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Freon 12	ND	10
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	5.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	5.0
Chloroform	ND	0.5
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5

Volatile Organics by GC/MS

Field ID:	JW1-08	Sampled:	04/01/99
Lab ID:	138737-009	Received:	04/01/99
Matrix:	Water	Extracted:	04/02/99
Batch#:	47202	Analyzed:	04/02/99
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	0.5
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	95	81-121
1,2-Dichloroethane-d4	99	76-127
Toluene-d8	106	90-109
Bromofluorobenzene	99	82-118

Curtis & Tompkins, Ltd.

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 47202
Units: ug/L
Diln Fac: 1

Prep Date: 04/02/99
Analysis Date: 04/02/99

MB Lab ID: QC94388

Analyte	Result	Reporting Limit
Freon 12	ND	10
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	5.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	5.0
Chloroform	ND	0.5
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5

Curtis & Tompkins, Ltd.

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 47202
Units: ug/L
Diln Fac: 1

Prep Date: 04/02/99
Analysis Date: 04/02/99

MB Lab ID: QC94388

Analyte	Result	-- Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	0.5
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Rec	Recovery Limits
Dibromofluoromethane	96	81-121
1,2-Dichloroethane-d4	97	76-127
Toluene-d8	104	90-109
Bromofluorobenzene	99	82-118

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 1

Prep Date: 04/04/99
Analysis Date: 04/04/99

MB Lab ID: QC94475

Analyte	Result	Reporting Limit
Freon 12	ND	10
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	5.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	5.0
Chloroform	ND	0.5
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 1

Prep Date: 04/04/99
Analysis Date: 04/04/99

MB Lab ID: QC94475

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	0.5
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Rec	Recovery Limits
Dibromofluoromethane	94	81-121
1,2-Dichloroethane-d4	99	76-127
Toluene-d8	105	90-109
Bromofluorobenzene	98	82-118

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 1

Prep Date: 04/04/99
Analysis Date: 04/04/99

MB Lab ID: QC94476

Analyte	Result	Reporting Limit
Freon 12	ND	10
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	5.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	5.0
Chloroform	ND	0.5
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 1

Prep Date: 04/04/99
Analysis Date: 04/04/99

MB Lab ID: QC94476

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	0.5
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Rec	Recovery Limits
Dibromofluoromethane	97	81-121
1,2-Dichloroethane-d4	102	76-127
Toluene-d8	104	90-109
Bromofluorobenzene	95	82-118

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 47202
Units: ug/L
Diln Fac: 1

Prep Date: 04/02/99
Analysis Date: 04/02/99

BS Lab ID: QC94386

Analyte	Spike Added	BS	%Rec #	Limits
1,1-Dichloroethene	50	53.46	107	64-139
Benzene	50	51.79	104	71-127
Trichloroethene	50	54.09	108	72-129
Toluene	50	57.3	115	73-129
Chlorobenzene	50	53.56	107	77-126

Surrogate	%Rec	Limits
Dibromofluoromethane	93	81-121
1,2-Dichloroethane-d4	97	76-127
Toluene-d8	105	90-109
Bromofluorobenzene	96	82-118

BSD Lab ID: QC94387

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	50.92	102	64-139	5	13
Benzene	50	49.38	99	71-127	5	10
Trichloroethene	50	50.75	102	72-129	6	10
Toluene	50	54.58	109	73-129	5	10
Chlorobenzene	50	51.32	103	77-126	4	10

Surrogate	%Rec	Limits
Dibromofluoromethane	95	81-121
1,2-Dichloroethane-d4	96	76-127
Toluene-d8	105	90-109
Bromofluorobenzene	96	82-118

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Lab #: 138737 BATCH QC REPORT

Curtis & Tompkins, Ltd.

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 1

Prep Date: 04/04/99
Analysis Date: 04/04/99

LCS Lab ID: QC94474

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	51.24	50	102	64-139
Benzene	49.92	50	100	71-127
Trichloroethene	51.54	50	103	72-129
Toluene	54.31	50	109	73-129
Chlorobenzene	52.35	50	105	77-126

Surrogate	%Rec	Limits
Dibromofluoromethane	94	81-121
1,2-Dichloroethane-d4	97	76-127
Toluene-d8	104	90-109
Bromofluorobenzene	95	82-118

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8260A
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 138751-001
Matrix: Water
Batch#: 47224
Units: ug/L
Diln Fac: 1

Sample Date: 04/02/99
Received Date: 04/02/99
Prep Date: 04/04/99
Analysis Date: 04/04/99

MS Lab ID: QC94477

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<0.5	50.48	101	59-144
Benzene	50	<0.5	49.98	100	67-128
Trichloroethene	50	1.513	53.09	103	61-136
Toluene	50	<0.5	54.99	110	72-126
Chlorobenzene	50	<0.5	52.77	106	78-122

Surrogate	%Rec	Limits
Dibromofluoromethane	92	81-121
1,2-Dichloroethane-d4	97	76-127
Toluene-d8	105	90-109
Bromofluorobenzene	96	82-118

MSD Lab ID: QC94478

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	50.64	101	59-144	0	13
Benzene	50	49.98	100	67-128	0	10
Trichloroethene	50	53.7	104	61-136	1	10
Toluene	50	55.21	110	72-126	0	10
Chlorobenzene	50	52.43	105	78-122	1	10

Surrogate	%Rec	Limits
Dibromofluoromethane	94	81-121
1,2-Dichloroethane-d4	100	76-127
Toluene-d8	106	90-109
Bromofluorobenzene	97	82-118

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

TVH-Total Volatile Hydrocarbons

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138737-001	JW2-01	47225	04/01/99	04/06/99	04/06/99	
138737-002	JW2-02	47248	04/01/99	04/06/99	04/06/99	
138737-003	JW2-03	47248	04/01/99	04/06/99	04/06/99	
138737-004	JW2-04	47225	04/01/99	04/06/99	04/06/99	

Matrix: Water

Analyte Diln Fac:	Units	138737-001 1	138737-002 20	138737-003 20	138737-004 1
Gasoline C7-C12	ug/L	<50	13000	14000	<50
Surrogate					
Trifluorotoluene	%REC	87	102	102	86
Bromofluorobenzene	%REC	86	114	110	85

BTXE

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8021B
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138737-001	JW2-01	47344	04/01/99	04/09/99	04/09/99	
138737-002	JW2-02	47248	04/01/99	04/06/99	04/06/99	
138737-003	JW2-03	47248	04/01/99	04/06/99	04/06/99	
138737-004	JW2-04	47344	04/01/99	04/09/99	04/09/99	

Matrix: Water

Analyte Diln Fac:	Units	138737-001 1	138737-002 20	138737-003 20	138737-004 1
MTBE	ug/L	<2	100	120	<2
Benzene	ug/L	<0.5	2400	2600	<0.5
Toluene	ug/L	<0.5	310	340	<0.5
Ethylbenzene	ug/L	<0.5	520	560	<0.5
m,p-Xylenes	ug/L	<0.5	1600	1600	<0.5
o-Xylene	ug/L	<0.5	590	620	<0.5
Surrogate					
Trifluorotoluene	%REC	106	96	95	103
Bromofluorobenzene	%REC	104	100	95	105

TVH-Total Volatile Hydrocarbons

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138737-005	JW1-04	47228	04/01/99	04/05/99	04/05/99	
138737-006	JW1-05	47344	04/01/99	04/10/99	04/10/99	
138737-007	JW1-06	47228	04/01/99	04/05/99	04/05/99	
138737-008	JW1-07	47344	04/01/99	04/10/99	04/10/99	

Matrix: Water

Analyte	Units	138737-005		138737-006	138737-007		138737-008
Diln Fac:		1		5	1		5
Gasoline C7-C12	ug/L	5600	YL	4100	4000	YL	7200
Surrogate							
Trifluorotoluene	%REC	1028	*	111	630	*	98
Bromofluorobenzene	%REC	151	*	123	158	*	109

* Values outside of QC limits
Y: Sample exhibits fuel pattern which does not resemble standard
L: Lighter hydrocarbons than indicated standard

TVH-Total Volatile Hydrocarbons

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138737-009	JW1-08	47228	04/01/99	04/05/99	04/05/99	

Matrix: Water

Analyte	Units	138737-009
Diln Fac:		1
Gasoline C7-C12	ug/L	<50
Surrogate		
Trifluorotoluene	%REC	121
Bromofluorobenzene	%REC	115

Lab #: 138737

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

METHOD BLANK

Matrix:	Water	Prep Date:	04/05/99
Batch#:	47225	Analysis Date:	04/05/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC94480

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	95	53-150
Bromofluorobenzene	95	53-149

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

METHOD BLANK

Matrix:	Water	Prep Date:	04/05/99
Batch#:	47228	Analysis Date:	04/05/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC94495

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	116	53-150
Bromofluorobenzene	108	53-149

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

METHOD BLANK

Matrix:	Water	Prep Date:	04/06/99
Batch#:	47248	Analysis Date:	04/06/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC94574

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	101	53-150
Bromofluorobenzene	97	53-149

BTXE

Client:	Tetra Tech EMI	Analysis Method:	EPA 8021B
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

METHOD BLANK

Matrix:	Water	Prep Date:	04/06/99
Batch#:	47248	Analysis Date:	04/06/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC94574

Analyte	Result
MTBE	<2.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	89	51-143
Bromofluorobenzene	90	37-146

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

METHOD BLANK

Matrix:	Water	Prep Date:	04/09/99
Batch#:	47344	Analysis Date:	04/09/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC94937

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	106	53-150
Bromofluorobenzene	92	53-149

BTXE

Client:	Tetra Tech EMI	Analysis Method:	EPA 8021B
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

METHOD BLANK

Matrix:	Water	Prep Date:	04/09/99
Batch#:	47344	Analysis Date:	04/09/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC94937

Analyte	Result
MTBE	<2.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
m,p-Xylenes	<0.5
o-Xylene	<0.5

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	108	51-143
Bromofluorobenzene	104	37-146

TVH-Total Volatile Hydrocarbons

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8015M
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 47225
Units: ug/L
Diln Fac: 1

Prep Date: 04/05/99
Analysis Date: 04/05/99

LCS Lab ID: QC94479

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	1732	2000	87	77-117

Surrogate	%Rec	Limits
Trifluorotoluene	105	53-150
Bromofluorobenzene	112	53-149

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	04/05/99
Batch#:	47228	Analysis Date:	04/05/99
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC94494

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	1939	2000	97	77-117

Surrogate	%Rec	Limits
Trifluorotoluene	142	53-150
Bromofluorobenzene	110	53-149

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 138737

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	04/06/99
Batch#:	47248	Analysis Date:	04/06/99
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC94572

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	1744	2000	87	77-117

Surrogate	%Rec	Limits
Trifluorotoluene	99	53-150
Bromofluorobenzene	105	53-149

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

BTXE

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8021B
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 47248
Units: ug/L
Diln Fac: 1

Prep Date: 04/06/99
Analysis Date: 04/06/99

LCS Lab ID: QC94573

Analyte	Result	Spike Added	%Rec #	Limits
MTBE	17.14	20	86	66-126
Benzene	20.04	20	100	65-111
Toluene	21.01	20	105	76-117
Ethylbenzene	20.93	20	105	71-121
m,p-Xylenes	42.89	40	107	80-123
o-Xylene	21.2	20	106	75-127

Surrogate	%Rec	Limits
Trifluorotoluene	93	51-143
Bromofluorobenzene	93	37-146

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 6 outside limits

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	04/09/99
Batch#:	47344	Analysis Date:	04/09/99
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC94934

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	2004	2000	100	77-117

Surrogate	%Rec	Limits
Trifluorotoluene	95	53-150
Bromofluorobenzene	108	53-149

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 138737 BATCH QC REPORT Curtis & Tompkins, Ltd. Page 1 of 1

BTXE

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8021B
Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 47344
Units: ug/L
Diln Fac: 1

Prep Date: 04/09/99
Analysis Date: 04/09/99

BS Lab ID: QC94935

Analyte	Spike Added	BS	%Rec #	Limits
MTBE	20	17.84	89	66-126
Benzene	20	18.91	95	65-111
Toluene	20	18.4	92	76-117
Ethylbenzene	20	17.79	89	71-121
m,p-Xylenes	40	37.25	93	80-123
o-Xylene	20	18.86	94	75-127

Surrogate	%Rec	Limits
Trifluorotoluene	110	51-143
Bromofluorobenzene	103	37-146

BSD Lab ID: QC94936

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
MTBE	20	16.35	82	66-126	9	12
Benzene	20	17.17	86	65-111	10	10
Toluene	20	17.75	89	76-117	4	10
Ethylbenzene	20	17.28	86	71-121	3	11
m,p-Xylenes	40	35.89	90	80-123	4	10
o-Xylene	20	18.36	92	75-127	3	11

Surrogate	%Rec	Limits
Trifluorotoluene	109	51-143
Bromofluorobenzene	102	37-146

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

TVH-Total Volatile Hydrocarbons

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8015M
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: JW2-01
Lab ID: 138737-001
Matrix: Water
Batch#: 47225
Units: ug/L
Diln Fac: 1

Sample Date: 04/01/99
Received Date: 04/01/99
Prep Date: 04/05/99
Analysis Date: 04/05/99

MS Lab ID: QC94483

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	2000	<50	1901	95	69-131

Surrogate	%Rec	Limits
Trifluorotoluene	106	53-150
Bromofluorobenzene	118	53-149

MSD Lab ID: QC94484

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	2000	1788	89	69-131	6	13

Surrogate	%Rec	Limits
Trifluorotoluene	61	53-150
Bromofluorobenzene	72	53-149

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Lab #: 138737 BATCH QC REPORT

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	ZZZZZZ	Sample Date:	03/31/99
Lab ID:	138703-021	Received Date:	03/31/99
Matrix:	Water	Prep Date:	04/05/99
Batch#:	47228	Analysis Date:	04/05/99
Units:	ug/L		
Diln Fac:	1		

MS Lab ID: QC94496

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	2000	<50	1873	94	69-131

Surrogate	%Rec	Limits
Trifluorotoluene	148	53-150
Bromofluorobenzene	117	53-149

MSD Lab ID: QC94497

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	2000	1851	93	69-131	1	13

Surrogate	%Rec	Limits
Trifluorotoluene	147	53-150
Bromofluorobenzene	115	53-149

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

BTXE

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8021B
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 138712-003
Matrix: Water
Batch#: 47248
Units: ug/L
Diln Fac: 1

Sample Date: 03/30/99
Received Date: 04/01/99
Prep Date: 04/07/99
Analysis Date: 04/07/99

MS Lab ID: QC94575

Analyte	Spike Added	Sample	MS	%Rec #	Limits
MTBE	20	<2	18.55	93	49-136
Benzene	20	<0.5	20.55	103	55-122
Toluene	20	<0.5	21.33	107	63-139
Ethylbenzene	20	<0.5	21.19	106	61-137
m,p-Xylenes	40	<0.5	42.56	106	57-148
o-Xylene	20	<0.5	21.74	109	70-141

Surrogate	%Rec	Limits
Trifluorotoluene	96	51-143
Bromofluorobenzene	99	37-146

MSD Lab ID: QC94576

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
MTBE	20	18.39	92	49-136	1	11
Benzene	20	21.16	106	55-122	3	10
Toluene	20	21.98	110	63-139	3	10
Ethylbenzene	20	21.85	109	61-137	3	10
m,p-Xylenes	40	44.06	110	57-148	3	10
o-Xylene	20	22.33	112	70-141	3	10

Surrogate	%Rec	Limits
Trifluorotoluene	97	51-143
Bromofluorobenzene	100	37-146

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P110604	Prep Method:	EPA 5030
Location:	JW Silveira Props		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	ZZZZZZ	Sample Date:	04/07/99
Lab ID:	138834-007	Received Date:	04/08/99
Matrix:	Water	Prep Date:	04/09/99
Batch#:	47344	Analysis Date:	04/09/99
Units:	ug/L		
Diln Fac:	1		

MS Lab ID: QC94938

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	2000	<50	1972	99	69-131

Surrogate	%Rec	Limits
Trifluorotoluene	97	53-150
Bromofluorobenzene	115	53-149

MSD Lab ID: QC94939

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	2000	1967	98	69-131	0	13

Surrogate	%Rec	Limits
Trifluorotoluene	96	53-150
Bromofluorobenzene	115	53-149

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8015M
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
138737-005	JW1-04	47268	04/01/99	04/06/99	04/08/99	
138737-006	JW1-05	47268	04/01/99	04/06/99	04/08/99	
138737-007	JW1-06	47268	04/01/99	04/06/99	04/08/99	
138737-008	JW1-07	47268	04/01/99	04/06/99	04/08/99	

Matrix: Water

Analyte	Units	138737-005	138737-006	138737-007	138737-008
Diln Fac:		1	1	1	1
Diesel C10-C24	ug/L	3200 YLH	4300 YLH	3400 YL	5800 YLH
Motor Oil C24-C36	ug/L	<280	850 L	<280	750 YL
Surrogate					
Hexacosane	%REC	62	76	89	66

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard
L: Lighter hydrocarbons than indicated standard

Lab #: 138737

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8015M
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 47268
Units: ug/L
Diln Fac: 1

Prep Date: 04/06/99
Analysis Date: 04/08/99

MB Lab ID: QC94630

Analyte	Result
Diesel C10-C24	<50
Motor Oil C24-C36	<300

Surrogate	%Rec	Recovery Limits
Hexacosane	80	58-128

Lab #: 138737

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P110604
Location: JW Silveira Props

Analysis Method: EPA 8015M
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 47268
Units: ug/L
Diln Fac: 1

Prep Date: 04/06/99
Analysis Date: 04/10/99

BS Lab ID: QC94631

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C10-C24	2475	1660	67	50-114

Surrogate	%Rec	Limits
Hexacosane	67	58-128

BSD Lab ID: QC94632

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C10-C24	2475	1725	70	50-114	4	25

Surrogate	%Rec	Limits
Hexacosane	66	58-128

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Curtis & Tompkins, Ltd.

Nitrogen,Nitrate

Client: Tetra Tech EMI
Project #: P110604
Location : JW Silveira Props

Analysis Method: EPA 300.0
Prep Method: EPA 300.0

Sample #	Client ID	Batch#	Sampled	Analyzed	Moisture
138737-005	JW1-04	47200	01-APR-99	02-APR-99	-
138737-006	JW1-05	47200	01-APR-99	02-APR-99	-
138737-007	JW1-06	47200	01-APR-99	02-APR-99	-
138737-008	JW1-07	47200	01-APR-99	02-APR-99	-
QC94377	Method Blank	47200	-	02-APR-99	-

Analyte: Nitrogen, Nitrate **Matrix:** Water **Units:** mg/L

Sample #	Client ID		Result	Reporting Limit	Dilution Factor
138737-005	JW1-04		ND	0.5	10
138737-006	JW1-05		0.8	0.5	10
138737-007	JW1-06		ND	0.5	10
138737-008	JW1-07		ND	0.5	10
QC94377	Method Blank	ND		0.05	1

ND = None Detected at or above Reporting Limit

Curtis & Tompkins, Ltd.

Nitrogen,Nitrate

Client: Tetra Tech EMI
Project #: P110604
Location : JW Silveira Props

Analysis Method: EPA 300.0
Prep Method: EPA 300.0

Sample #	Client ID	Batch#	Sampled	Analyzed	Moisture
QC94378	Blank Spike	47200	-	02-APR-99	-
QC94379	Blank Spike Duplicate	47200	-	02-APR-99	-

Analyte: Nitrogen, Nitrate **Matrix:** Water **Units:** mg/L

Sample #	Sample Type	Spike Amt.	Result	%Rec	Limits	%RPD	Limit
QC94378	Blank Spike	2.260	2.260	100	80-120		
QC94379	Blank Spike Duplicate	2.260	2.230	99	80-120	1	25

Curtis & Tompkins, Ltd.

Nitrogen,Nitrate

Client: Tetra Tech EMI
Project #: P110604
Location : JW Silveira Props

Analysis Method: EPA 300.0
Prep Method: EPA 300.0

Sample #	Client ID	Batch#	Sampled	Analyzed	Moisture
QC94380	MS of 138737-005	47200	01-APR-99	02-APR-99	-
QC94381	MSD of 138737-005	47200	01-APR-99	02-APR-99	-

Analyte: Nitrogen, Nitrate **Matrix:** Water **Units:** mg/L

Sample #	Client ID	Spikeamt	Result	%Rec	Limits	%RPD	Limit
QC94380	MS of 138737-005	11.30	10.27	91	75-125		
QC94381	MSD of 138737-005	11.30	10.00	88	75-125	3	35
138737-005	JW1-04		<0.5000				

Curtis & Tompkins, Ltd.

Sulfate

Client: Tetra Tech EMI
Project #: P110604
Location : JW Silveira Props

Analysis Method: EPA 300.0
Prep Method: EPA 300.0

Sample #	Client ID	Batch#	Sampled	Analyzed	Moisture
138737-005	JW1-04	47200	01-APR-99	02-APR-99	-
138737-006	JW1-05	47200	01-APR-99	02-APR-99	-
138737-007	JW1-06	47200	01-APR-99	02-APR-99	-
138737-008	JW1-07	47200	01-APR-99	02-APR-99	-
QC94377	Method Blank	47200	-	02-APR-99	-

Analyte: Sulfate **Matrix:** Water **Units:** mg/L

Sample #	Client ID	Result	Reporting Limit	Dilution Factor
138737-005	JW1-04	ND	5.0	10
138737-006	JW1-05	7.3	5.0	10
138737-007	JW1-06	10	5.0	10
138737-008	JW1-07	ND	5.0	10
QC94377	Method Blank	ND	0.50	1

ND = None Detected at or above Reporting Limit

Curtis & Tompkins, Ltd.

Sulfate

Client: Tetra Tech EMI
Project #: P110604
Location : JW Silveira Props

Analysis Method: EPA 300.0
Prep Method: EPA 300.0

Sample #	Client ID	Batch#	Sampled	Analyzed	Moisture
QC94378	Blank Spike	47200	-	02-APR-99	-
QC94379	Blank Spike Duplicate	47200	-	02-APR-99	-

Analyte: Sulfate **Matrix:** Water **Units:** mg/L

Sample #	Sample Type	Spike Amt.	Result	%Rec	Limits	%RPD	Limit
QC94378	Blank Spike	15.00	15.00	100	80-120		
QC94379	Blank Spike Duplicate	15.00	14.86	99	80-120	1	25

Lab#: 138737
Page 1 of 1

Curtis & Tompkins, Ltd.

Sulfate

Client: Tetra Tech EMI
Project #: P110604
Location : JW Silveira Props

Analysis Method: EPA 300.0
Prep Method: EPA 300.0

Sample #	Client ID	Batch#	Sampled	Analyzed	Moisture
QC94380	MS of 138737-005	47200	01-APR-99	02-APR-99	-
QC94381	MSD of 138737-005	47200	01-APR-99	02-APR-99	-

Analyte: Sulfate **Matrix:** Water **Units:** mg/L

Sample #	Client ID	Spikeamt	Result	%Rec	Limits	%RPD	Limit
QC94380	MS of 138737-005	75.00	72.68	97	75-125		
QC94381	MSD of 138737-005	75.00	71.35	95	75-125	2	35
138737-005	JW1-04		<5.000				

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900, Fax (510) 486-0532

RECEIVED
SEP 17 1999
TETRA TECH EM INC.

Laboratory Number 140946

Tetra Tech EMI
135 Main Street
Suite 1800
San Francisco, CA 94105

Project#: P1106.05
Location: JW Silveria UST,Oak.

Sample ID	Lab ID
JW2-05	140946-001
JW2-06	140946-002
JW1-20	140946-003
JW1-21	140946-004

I certify that this data package has been reviewed for technical correctness and completeness. Please see attached narrative for a discussion of any analytical problems related to this sample set. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

The case narrative is an integral and inseparable part of this report.

Signature: _____ Date: 9-14-99
Title: Operations Manager

Signature: Carol Wortham Date: 9/13/99 001
Title: Project Manager

Curtis & Tompkins, Ltd.

Laboratory Number: 140946
Client: Tetra Tech EMI
Location: JW Silveria UST
Project#: P1106.05

Receipt Date: 08/13/99

CASE NARRATIVE

This hardcopy data package contains sample and QC results for three soil samples and one water sample that were received on August 13, 1999. The soil results were reported on a dry-weight basis.

TPH-Purgeables/BTXE: No analytical problems were encountered.

TPH-Extractables: No analytical problems were encountered.

Volatiles: Due to limitations with the computer system, TIC results were not included in the electronic deliverables. High percent differences were observed for freon 12, chloroethane, n-butylbenzene, and 1,2,3-trichlorobenzene in the continuing calibration verification that was analyzed on August 16, 1999 (bhg15). These compounds met the minimum response criteria and were not detected in the associated samples or method blanks. No other analytical problems were encountered.

1206

Tetra Tech EM Inc.
San Francisco Office

14046

Chain of Custody Record

Page 1 of 1

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Project name: JW Silveira UST	**PO#**	**Lab:** C&T
Project number: P1106.05	**TtEMI technical contact:** Jackie Luta	**Field samplers:** Roy Glenn
	TtEMI project manager: Hal Dawson	**Field samplers' signatures:**

Sample ID	Sample Description/Notes	Date	Time	Matrix	No./Container Types: 40 ml VOA	1 Liter Amber	1 Liter Poly	Brass Tube	Glass Jar	Acetate	Preservative Added: HCl	Analysis Required: CLP VOA	CLP SVOA	CLP Pest/PCBs	CLP Metals	TPH Purgeables	TPH Extractables	BTEX MTBE
JW2-05		8-10-99	1055	Soil						1						X		X X
JW2-06			1200	Soil						1						X		X X
JW1-20			1400	Soil						1		X				X	X	
JW1-21			1530	Water	6	2						X				X	X	

	Name (print)	Company Name	Date	Time
Relinquished by: Roy D. Glenn	Roy	TT EMI	8-13	0930
Received by: Steven E. Stanley	Steven E. Stanley	C&T	8-13-99	0930
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:
10
3

To Silvia CST

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 160846 Date Received: 8/13 Number of Coolers: 1

Client: ITEMS Project: P1106.05

A. Preliminary Examination Phase

Date Opened: 8/13 By (print): Jwilliam (sign) [signature]

1. Did cooler come with a shipping slip (airbill, etc.)? ... YES (NO)
   If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ... YES (NO)
   How many and where? _____ Seal date: _____ Seal name: _____ NA
3. Were custody seals unbroken and intact at the date and time of arrival? ... YES NO
4. Were custody papers dry and intact when received? ... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ... (YES) NO
6. Did you sign the custody papers in the appropriate place? ... (YES) NO
7. Was project identifiable from custody papers? ... (YES) NO
   If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? ... (YES) NO
   Type of ice: Wet Blue Temperature: 5.0°C

B. Login Phase

Date Logged In: 8/13 By (print): Jwilliam (sign) [signature]

1. Describe type of packing in cooler: foam - bubble wrap
2. Did all bottles arrive unbroken? ... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ... (YES) NO
4. Did bottle labels agree with custody papers? ... (YES) NO
5. Were appropriate containers used for the tests indicated? ... (YES) NO
6. Were correct preservatives added to samples? ... (YES) NO
7. Was sufficient amount of sample sent for tests indicated? ... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ... (YES) NO
9. Was the client contacted concerning this sample delivery? ... YES NO
   If YES, give details below.
   Who was called? _____ By whom? _____ Date: _____

Additional Comments:

_____

_____

_____

_____

_____

_____

_____

Percent Moisture Summary Report

Date: 17-AUG-99
Batch: 49951
Analyst: MR

Sample	Method	Date	Tare(g)	Wet(g)	Dry(g)	Percent Solids	Percent Moisture
140927-001	CLP SOW 390	17-AUG-99	15.2168	24.7872	22.1958	91	9
140927-002	CLP SOW 390	17-AUG-99	15.6307	25.3987	22.5222	89	11
140927-003	CLP SOW 390	17-AUG-99	15.1542	23.4093	22.6205	90	10
140927-004	CLP SOW 390	17-AUG-99	15.7928	22.7369	22.004	89	11
140927-005	CLP SOW 390	17-AUG-99	14.978	22.6982	21.1103	79	21
140927-006	CLP SOW 390	17-AUG-99	15.4962	24.0242	22.927	87	13
140927-007	CLP SOW 390	17-AUG-99	15.2088	23.9428	22.0673	89	11
140927-008	CLP SOW 390	17-AUG-99	15.661	23.837	23.2404	93	7
140927-009	CLP SOW 390	17-AUG-99	15.8898	22.9358	22.1682	89	11
140927-010	CLP SOW 390	17-AUG-99	15.4917	22.9977	21.8261	84	16
140943-001	CLP SOW 390	17-AUG-99	15.8471	22.4576	19.371	53	47
140946-001	CLP SOW 390	17-AUG-99	15.9416	24.0225	23.0076	87	13
140946-002	CLP SOW 390	17-AUG-99	15.4184	22.6676	21.4602	83	17
140946-003	CLP SOW 390	17-AUG-99	15.4201	23.3183	22.1374	85	15
QC05104 of 140943-001	CLP SOW 390	17-AUG-99	15.6771	23.1163	19.5075	51	49
					RPD:	3.5%	3.8%

TVH-Total Volatile Hydrocarbons

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
140946-001	JW2-05	50066	08/11/99	08/21/99	08/21/99	13%
140946-002	JW2-06	50066	08/11/99	08/21/99	08/21/99	17%
140946-003	JW1-20	50066	08/11/99	08/21/99	08/21/99	15%

Matrix: Soil

Analyte	Units	140946-001	140946-002	140946-003
Diln Fac:		1	1	1
Gasoline C7-C12	mg/Kg	<1.1	<1.2	<1.2
Surrogate				
Trifluorotoluene	%REC	93	80	79
Bromofluorobenzene	%REC	88	113	97

TVH-Total Volatile Hydrocarbons

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8015M
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
140946-004	JW1-21	50075	08/11/99	08/22/99	08/22/99	

Matrix: Water

Analyte	Units	140946-004
Diln Fac:		1
Gasoline C7-C12	ug/L	<50
Surrogate		
Trifluorotoluene	%REC	114
Bromofluorobenzene	%REC	114

BTXE

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8021B
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
140946-001	JW2-05	50066	08/11/99	08/21/99	08/21/99	13%
140946-002	JW2-06	50066	08/11/99	08/21/99	08/21/99	17%

Matrix: Soil

Analyte	Units	140946-001	140946-002
Diln Fac:		1	1
MTBE	ug/Kg	<23	<24
Benzene	ug/Kg	<5.7	<6
Toluene	ug/Kg	<5.7	<6
Ethylbenzene	ug/Kg	<5.7	<6
m,p-Xylenes	ug/Kg	<5.7	<6
o-Xylene	ug/Kg	<5.7	<6
Surrogate			
Trifluorotoluene	%REC	110	105
Bromofluorobenzene	%REC	109	107

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P1106.05	Prep Method:	EPA 5030
Location:	JW Silveria UST,Oak.		

METHOD BLANK

Matrix:	Soil	Prep Date:	08/21/99
Batch#:	50066	Analysis Date:	08/21/99
Units:	mg/Kg		
Diln Fac:	1		

MB Lab ID: QC05515

Analyte	Result
Gasoline C7-C12	<1.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	78	62-143
Bromofluorobenzene	91	59-150

BTXE

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8021B
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 50066
Units: ug/Kg
Diln Fac: 1

Prep Date: 08/21/99
Analysis Date: 08/21/99

MB Lab ID: QC05515

Analyte	Result
MTBE	<20
Benzene	<5.0
Toluene	<5.0
Ethylbenzene	<5.0
m,p-Xylenes	<5.0
o-Xylene	<5.0

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	110	59-134
Bromofluorobenzene	110	38-150

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P1106.05	Prep Method:	EPA 5030
Location:	JW Silveria UST,Oak.		

METHOD BLANK

Matrix:	Water	Prep Date:	08/22/99
Batch#:	50075	Analysis Date:	08/22/99
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC05560

Analyte	Result
Gasoline C7-C12	<50

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	103	53-150
Bromofluorobenzene	102	53-149

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P1106.05	Prep Method:	EPA 5030
Location:	JW Silveria UST,Oak.		

LABORATORY CONTROL SAMPLE

Matrix:	Soil	Prep Date:	08/21/99
Batch#:	50066	Analysis Date:	08/21/99
Units:	mg/Kg		
Diln Fac:	1		

LCS Lab ID: QC05516

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	9.31	10	93	77-122

Surrogate	%Rec	Limits
Trifluorotoluene	80	62-143
Bromofluorobenzene	93	59-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 140946 BATCH QC REPORT Page

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P1106.05	Prep Method:	EPA 5030
Location:	JW Silveria UST,Oak.		

LABORATORY CONTROL SAMPLE

Matrix:	Water	Prep Date:	08/22/99
Batch#:	50075	Analysis Date:	08/22/99
Units:	ug/L		
Diln Fac:	1		

LCS Lab ID: QC05558

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	1782	2000	89	77-117

Surrogate	%Rec	Limits
Trifluorotoluene	109	53-150
Bromofluorobenzene	119	53-149

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

BTXE

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8021B
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 50066
Units: ug/Kg
Diln Fac: 1

Prep Date: 08/21/99
Analysis Date: 08/21/99

LCS Lab ID: QC05517

Analyte	Result	Spike Added	%Rec #	Limits
MTBE	100.3	100	100	59-135
Benzene	102	100	102	67-116
Toluene	103.1	100	103	77-122
Ethylbenzene	96.58	100	97	70-124
m,p-Xylenes	208.9	200	104	75-125
o-Xylene	103.3	100	103	75-126

Surrogate	%Rec	Limits
Trifluorotoluene	110	59-134
Bromofluorobenzene	105	38-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 6 outside limits

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P1106.05	Prep Method:	EPA 5030
Location:	JW Silveria UST,Oak.		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	JW2-06	Sample Date:	08/11/99
Lab ID:	140946-002	Received Date:	08/13/99
Matrix:	Soil	Prep Date:	08/21/99
Batch#:	50066	Analysis Date:	08/21/99
Units:	mg/Kg dry weight	Moisture:	17%
Diln Fac:	1		

MS Lab ID: QC05518

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	12.05	<1.205	11.23	93	55-134

Surrogate	%Rec	Limits
Trifluorotoluene	79	62-143
Bromofluorobenzene	94	59-150

MSD Lab ID: QC05519

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	12.05	11.71	97	55-134	4	30

Surrogate	%Rec	Limits
Trifluorotoluene	80	62-143
Bromofluorobenzene	90	59-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TVH-Total Volatile Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P1106.05	Prep Method:	EPA 5030
Location:	JW Silveria UST,Oak.		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	JW1-21	Sample Date:	08/11/99
Lab ID:	140946-004	Received Date:	08/13/99
Matrix:	Water	Prep Date:	08/22/99
Batch#:	50075	Analysis Date:	08/22/99
Units:	ug/L		
Diln Fac:	1		

MS Lab ID: QC05561

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	2000	<50	1704	85	69-131
Surrogate	**%Rec**	**Limits**			
Trifluorotoluene	114	53-150			
Bromofluorobenzene	126	53-149			

MSD Lab ID: QC05562

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	2000	1915	96	69-131	12	13
Surrogate	**%Rec**	**Limits**				
Trifluorotoluene	116	53-150				
Bromofluorobenzene	129	53-149				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8015M
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
140946-003	JW1-20	50031	08/11/99	08/19/99	08/21/99	15%

Matrix: Soil

Analyte	Units	140946-003
Diln Fac:		1
Diesel C10-C24	mg/Kg	<1.2
Surrogate		
Hexacosane	%REC	96

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8015M
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
140946-004	JW1-21	50020	08/11/99	08/18/99	08/21/99	

Matrix: Water

Analyte	Units	140946-004
Diln Fac:		1
Diesel C10-C24	ug/L	<47
Surrogate		
Hexacosane	%REC	70

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P1106.05	Prep Method:	CA LUFT
Location:	JW Silveria UST,Oak.		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	JW1-20	Sample Date:	08/11/99
Lab ID:	140946-003	Received Date:	08/13/99
Matrix:	Soil	Prep Date:	08/19/99
Batch#:	50031	Analysis Date:	08/21/99
Units:	mg/Kg dry weight	Moisture:	15%
Diln Fac:	1		

MS Lab ID: QC05382

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Diesel C10-C24	58.24	<1.176	46.4	79	41-135

Surrogate	%Rec	Limits
Hexacosane	87	52-137

MSD Lab ID: QC05383

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Diesel C10-C24	58.24	49.61	85	41-135	7	37

Surrogate	%Rec	Limits
Hexacosane	92	52-137

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

069

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client:	Tetra Tech EMI	Analysis Method:	EPA 8015M
Project#:	P1106.05	Prep Method:	EPA 3520
Location:	JW Silveria UST,Oak.		

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID:	ZZZZZZ	Sample Date:	08/11/99
Lab ID:	140915-005	Received Date:	08/12/99
Matrix:	Water	Prep Date:	08/18/99
Batch#:	50020	Analysis Date:	08/25/99
Units:	ug/L		
Diln Fac:	1		

MS Lab ID: QC05356

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Diesel C10-C24	2605	718.7	2475	67	51-104
Surrogate	**%Rec**	**Limits**			
Hexacosane	69	58-128			

MSD Lab ID: QC05357

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Diesel C10-C24	2605	3019	88	51-104	20	33
Surrogate	**%Rec**	**Limits**				
Hexacosane	73	58-128				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8015M
Prep Method: CA LUFT

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 50031
Units: mg/Kg
Diln Fac: 1

Prep Date: 08/19/99
Analysis Date: 08/21/99

LCS Lab ID: QC05381

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Analyte	Result	Spike Added	%Rec #	Limits
Diesel C10-C24	43.84	49.5	89	52-117
Surrogate	**%Rec**	**Limits**		
Hexacosane	92	52-137		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8015M
Prep Method: EPA 3520

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 50020
Units: ug/L
Diln Fac: 1

Prep Date: 08/18/99
Analysis Date: 08/25/99

LCS Lab ID: QC05355

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C10-C24	1688	2475	68	50-114

Surrogate	%Rec	Limits
Hexacosane	63	58-128

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8015M
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 50020
Units: ug/L
Diln Fac: 1

Prep Date: 08/18/99
Analysis Date: 08/21/99

MB Lab ID: QC05354

Analyte	Result	
Diesel C10-C24	<50	
Surrogate	**%Rec**	**Recovery Limits**
Hexacosane	68	58-128

Lab #: 140946

BATCH QC REPORT

Curtis & Tompkins, Ltd.

TEH-Tot Ext Hydrocarbons

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8015M
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 50031
Units: mg/Kg
Diln Fac: 1

Prep Date: 08/19/99
Analysis Date: 08/21/99

MB Lab ID: QC05380

Analyte	Result	
Diesel C10-C24	<1.0	
Surrogate	**%Rec**	**Recovery Limits**
Hexacosane	87	52-137

Volatile Organics by GC/MS

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: JW1-20
Lab ID: 140946-003
Matrix: Soil
Batch#: 49932
Units: ug/Kg dry weight
Diln Fac: 0.9804

1200 E12th St
SB-1 @20'

Sampled: 08/11/99
Received: 08/13/99
Extracted: 08/16/99
Analyzed: 08/16/99
Moisture: 15%

Analyte	Result	Reporting Limit
Freon 12	ND	12
Chloromethane	ND	12
Vinyl Chloride	ND	12
Bromomethane	ND	12
Chloroethane	ND	12
Trichlorofluoromethane	ND	5.8
Acetone	ND	23
Freon 113	ND	5.8
1,1-Dichloroethene	ND	5.8
Methylene Chloride	ND	23
Carbon Disulfide	ND	5.8
MTBE	ND	5.8
trans-1,2-Dichloroethene	ND	5.8
Vinyl Acetate	ND	58
1,1-Dichloroethane	ND	5.8
2-Butanone	ND	12
cis-1,2-Dichloroethene	ND	5.8
2,2-Dichloropropane	ND	5.8
Chloroform	ND	5.8
Bromochloromethane	ND	5.8
1,1,1-Trichloroethane	ND	5.8
1,1-Dichloropropene	ND	5.8
Carbon Tetrachloride	ND	5.8
1,2-Dichloroethane	ND	5.8
Benzene	ND	5.8
Trichloroethene	ND	5.8
1,2-Dichloropropane	ND	5.8
Bromodichloromethane	ND	5.8
Dibromomethane	ND	5.8
4-Methyl-2-Pentanone	ND	12
cis-1,3-Dichloropropene	ND	5.8
Toluene	ND	5.8
trans-1,3-Dichloropropene	ND	5.8
1,1,2-Trichloroethane	ND	5.8
2-Hexanone	ND	12
1,3-Dichloropropane	ND	5.8
Tetrachloroethene	ND	5.8
Dibromochloromethane	ND	5.8

Volatile Organics by GC/MS

Field ID:	JW1-20	Sampled:	08/11/99
Lab ID:	140946-003	Received:	08/13/99
Matrix:	Soil	Extracted:	08/16/99
Batch#:	49932	Analyzed:	08/16/99
Units:	ug/Kg dry weight	Moisture:	15%
Diln Fac:	0.9804		

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	5.8
Chlorobenzene	ND	5.8
1,1,1,2-Tetrachloroethane	ND	5.8
Ethylbenzene	ND	5.8
m,p-Xylenes	ND	5.8
o-Xylene	ND	5.8
Styrene	ND	5.8
Bromoform	ND	5.8
Isopropylbenzene	ND	5.8
1,1,2,2-Tetrachloroethane	ND	5.8
1,2,3-Trichloropropane	ND	5.8
Propylbenzene	ND	5.8
Bromobenzene	ND	5.8
1,3,5-Trimethylbenzene	ND	5.8
2-Chlorotoluene	ND	5.8
4-Chlorotoluene	ND	5.8
tert-Butylbenzene	ND	5.8
1,2,4-Trimethylbenzene	ND	5.8
sec-Butylbenzene	ND	5.8
para-Isopropyl Toluene	ND	5.8
1,3-Dichlorobenzene	ND	5.8
1,4-Dichlorobenzene	ND	5.8
n-Butylbenzene	ND	5.8
1,2-Dichlorobenzene	ND	5.8
1,2-Dibromo-3-Chloropropane	ND	5.8
1,2,4-Trichlorobenzene	ND	5.8
Hexachlorobutadiene	ND	5.8
Naphthalene	ND	5.8
1,2,3-Trichlorobenzene	ND	5.8

Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	108	67-140
1,2-Dichloroethane-d4	108	80-129
Toluene-d8	102	88-111
Bromofluorobenzene	100	76-128

Volatile Organics by GC/MS

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: JW1-21
Lab ID: 140946-004
Matrix: Water
Batch#: 49968
Units: ug/L
Diln Fac: 1

Sampled: 08/11/99
Received: 08/13/99
Extracted: 08/18/99
Analyzed: 08/18/99

Analyte	Result		Reporting Limit
Freon 12	ND	--	10
Chloromethane	ND		10
Vinyl Chloride	ND		10
Bromomethane	ND		10
Chloroethane	ND		10
Trichlorofluoromethane	ND		5.0
Acetone	ND		20
Freon 113	ND		5.0
1,1-Dichloroethene	6.1		5.0
Methylene Chloride	ND		20
Carbon Disulfide	ND		5.0
MTBE	ND		5.0
trans-1,2-Dichloroethene	ND		5.0
Vinyl Acetate	ND		50
1,1-Dichloroethane	4.1 J		5.0
2-Butanone	ND		10
cis-1,2-Dichloroethene	ND		5.0
2,2-Dichloropropane	ND		5.0
Chloroform	ND		5.0
Bromochloromethane	ND		10
1,1,1-Trichloroethane	ND		5.0
1,1-Dichloropropene	ND		5.0
Carbon Tetrachloride	ND		5.0
1,2-Dichloroethane	ND		5.0
Benzene	ND		5.0
Trichloroethene	ND		5.0
1,2-Dichloropropane	ND		5.0
Bromodichloromethane	ND		5.0
Dibromomethane	ND		5.0
4-Methyl-2-Pentanone	ND		10
cis-1,3-Dichloropropene	ND		5.0
Toluene	ND		5.0
trans-1,3-Dichloropropene	ND		5.0
1,1,2-Trichloroethane	ND		5.0
2-Hexanone	ND		10
1,3-Dichloropropane	ND		5.0
Tetrachloroethene	ND		5.0
Dibromochloromethane	ND		5.0

Volatile Organics by GC/MS

Field ID:	JW1-21	Sampled:	08/11/99
Lab ID:	140946-004	Received:	08/13/99
Matrix:	Water	Extracted:	08/18/99
Batch#:	49968	Analyzed:	08/18/99
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	104	81-121
1,2-Dichloroethane-d4	101	76-127
Toluene-d8	104	90-109
Bromofluorobenzene	97	82-118

J: Estimated Value

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 49932
Units: ug/Kg
Diln Fac: 1

Prep Date: 08/16/99
Analysis Date: 08/16/99

MB Lab ID: QC05021

Analyte	Result	-- Reporting Limit
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 49932
Units: ug/Kg
Diln Fac: 1

Prep Date: 08/16/99
Analysis Date: 08/16/99

MB Lab ID: QC05021

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Rec	Recovery Limits
Dibromofluoromethane	102	67-140
1,2-Dichloroethane-d4	99	80-129
Toluene-d8	102	88-111
Bromofluorobenzene	94	76-128

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 49932
Units: ug/Kg
Diln Fac: 1

Prep Date: 08/16/99
Analysis Date: 08/16/99

MB Lab ID: QC05103

Analyte	Result	Reporting Limit
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 49932
Units: ug/Kg
Diln Fac: 1

Prep Date: 08/16/99
Analysis Date: 08/16/99

MB Lab ID: QC05103

Analyte	Result	Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Rec	Recovery Limits
Dibromofluoromethane	108	67-140
1,2-Dichloroethane-d4	106	80-129
Toluene-d8	103	88-111
Bromofluorobenzene	97	76-128

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 49968
Units: ug/L
Diln Fac: 1

Prep Date: 08/17/99
Analysis Date: 08/17/99

MB Lab ID: QC05162

Analyte	Result	Reporting Limit
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 49968
Units: ug/L
Diln Fac: 1

Prep Date: 08/17/99
Analysis Date: 08/17/99

MB Lab ID: QC05162

Analyte	Result	-- Reporting Limit
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%Rec	Recovery Limits
Dibromofluoromethane	109	81-121
1,2-Dichloroethane-d4	101	76-127
Toluene-d8	100	90-109
Bromofluorobenzene	98	82-118

Lab #: 140946 BATCH QC REPORT

Curtis & Tompkins, Ltd.

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 49932
Units: ug/Kg
Diln Fac: 1

Prep Date: 08/16/99
Analysis Date: 08/16/99

LCS Lab ID: QC05020

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	65.93	50	132	63-144
Benzene	50.25	50	100	74-127
Trichloroethene	51.69	50	103	70-131
Toluene	52.34	50	105	72-131
Chlorobenzene	48.5	50	97	74-126

Surrogate	%Rec	Limits
Dibromofluoromethane	102	67-140
1,2-Dichloroethane-d4	104	80-129
Toluene-d8	102	88-111
Bromofluorobenzene	96	76-128

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260
Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 49968
Units: ug/L
Diln Fac: 1

Prep Date: 08/17/99
Analysis Date: 08/17/99

BS Lab ID: QC05159

Analyte	Spike Added	BS	%Rec #	Limits
1,1-Dichloroethene	50	51.81	104	64-139
Benzene	50	45.34	91	71-127
Trichloroethene	50	45.74	91	72-129
Toluene	50	44.29	89	73-129
Chlorobenzene	50	46.63	93	77-126

Surrogate	%Rec	Limits
Dibromofluoromethane	109	81-121
1,2-Dichloroethane-d4	101	76-127
Toluene-d8	98	90-109
Bromofluorobenzene	100	82-118

BSD Lab ID: QC05160

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	52.32	105	64-139	1	13
Benzene	50	45.59	91	71-127	1	10
Trichloroethene	50	46.34	93	72-129	1	10
Toluene	50	44.91	90	73-129	1	10
Chlorobenzene	50	45.48	91	77-126	2	10

Surrogate	%Rec	Limits
Dibromofluoromethane	106	81-121
1,2-Dichloroethane-d4	99	76-127
Toluene-d8	99	90-109
Bromofluorobenzene	98	82-118

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

EPA 8260 Volatile Organics

Client: Tetra Tech EMI
Project#: P1106.05
Location: JW Silveria UST,Oak.

Analysis Method: EPA 8260A
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 140961-002
Matrix: Soil
Batch#: 49932
Units: ug/Kg
Diln Fac: 0.9434

Sample Date: 08/13/99
Received Date: 08/14/99
Prep Date: 08/16/99
Analysis Date: 08/16/99

MS Lab ID: QC05037

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	47.17	<4.717	56.99	121	51-137
Benzene	47.17	<4.717	46.76	99	53-128
Trichloroethene	47.17	<4.717	51.73	110	33-153
Toluene	47.17	<4.717	48.58	103	45-134
Chlorobenzene	47.17	<4.717	44.98	95	39-132

Surrogate	%Rec	Limits
Dibromofluoromethane	106	67-140
1,2-Dichloroethane-d4	102	80-129
Toluene-d8	103	88-111
Bromofluorobenzene	108	76-128

MSD Lab ID: QC05038

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	49.02	56.22	115	51-137	1	35
Benzene	49.02	50.6	103	53-128	8	34
Trichloroethene	49.02	55.18	113	33-153	6	44
Toluene	49.02	51.63	105	45-134	6	44
Chlorobenzene	49.02	47.08	96	39-132	5	47

Surrogate	%Rec	Limits
Dibromofluoromethane	99	67-140
1,2-Dichloroethane-d4	103	80-129
Toluene-d8	104	88-111
Bromofluorobenzene	102	76-128

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits