11/10/95

REPORT OF QUARTERLY GROUND WATER MONITORING

Windsor Square Auto Repair UST Site
1900 Lewelling Boulevard
San Leandro, California

CWEC: 20507-001-03
Alameda County Site ID 3583

Prepared for:

Mr. Johnny Lin
P.O. Box 4154
San Leandro, CA 94579

Prepared by:

Century West Engineering Corporation
7950 Dublin Blvd., Suite 203
Dublin, California 94568

November 10, 1995

centurywest
ENGINEERING CORPORATION

November 10, 1995

Alameda County Health Agency
UST Local Oversight Program
1131 E. Harbor Bay Parkway
Alameda, CA 94502-6577

Attention: Mr. Dale Klettle

Subject: Report of Quarterly Ground Water Monitoring
Windsor Square Auto Repair UST Site
1900 Lewelling Blvd.
San Leandro, California
CWEC 20507-001-03
Alameda County Site ID 3583

Ladies and Gentlemen;

This report documents the third and fourth quarterly monitoring of five ground water monitoring wells at the subject site in San Leandro, California (see Figure 1). This letter report summarizes the work performed and the results of these monitoring activities.

Description of Sampling Activities

On Wednesday March 15, 1995, and Thursday August 3, 1995 Century West Engineering Corporation purged and sampled all five ground water monitoring wells (MW-1 through MW-5) located at the subject site. Purging and sampling for both monitoring events was conducted in accordance with California LUFT Field Manual guidelines as follows:

- After unlocking all five monitoring wells, water levels were measured to the nearest 0.01 foot with an electronic probe.
- Using a disposable PVC bailer, a single bail of ground water was taken from each well to check for the presence or absence of floating free product.
- Each well was purged of approximately three well volumes. During purging, temperature, pH, conductivity, and turbidity of the well water was periodically monitored and recorded until they stabilized. All purged water was stored onsite in 55-gallon metal drums. Ground water sampling data sheets for both monitoring events are contained in Appendix A.

7950 Dublin Blvd., Suite 203 Dublin, California 94568 Phone: (510) 551-7774 FAX: (510) 551-7776

- After purging parameters had stabilized, ground water was poured directly from the bailer into four 40-ml VOA vials, and two one-liter amber bottles (MW-2). Each container was then tightly sealed with teflon lined septum, labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody.

RESULTS OF QUARTERLY MONITORING

Hydrologic Conditions and Ground Water Gradient

For the third quarterly monitoring event, wells MW-1, MW-2 and MW-3 exhibited no hydrocarbons odors or hydrocarbon sheen. In addition, purged water from monitoring well MW-4 and MW-5 exhibited slight to moderate hydrocarbon odors and no sheen. Ground water flow direction was variable to the west (see Figure 2) at an approximate gradient of 0.01 ft/ft.

For the fourth quarterly monitoring event, wells MW-1 through MW-5 exhibited no hydrocarbon odor or hydrocarbon sheen. Ground water flow direction although variable was to the southwest (see Figure 3) at an approximate gradient of 0.01 ft/ft.

Analytical Results

Ground water samples for both third and fourth quarterly monitorings were analyzed for total petroleum hydrocarbons as gasoline (TPH-G), and benzene, toluene, ethylbenzene and xylenes (BTEX). Table 1 summarizes these analytical results. Laboratory data reports for the third and fourth quarterly monitoring are contained in Appendix B and Appendix C, respectively.

Table 1
SUMMARY OF GROUND WATER ANALYTICAL RESULTS
Windsor Square Auto Repair UST Site

Sample ID	Sample Date	Ground Water Elevation[1]	Concentration (ppm) TPH-G	B	T	E	X	HVOCs[2]	SVOCs[3]
MW-1	07/05/94	7.25	ND(0.05)[4]	ND(.001)	ND(.003)	ND(.003)	ND(.003)	--[6]	--
(14.20)[5]	12/15/94	8.64	ND(0.05)	ND(.0005)	ND(.0005)	ND(.0005)	ND(.0005)	--	--
	03/15/95	10.25	ND(0.05)	ND(.0005)	ND(.0005)	ND(.0005)	ND(.0005)	--	--
	08/03/95	8.19	ND(0.05)	ND(.0005)	ND(.0005)	ND(.0005)	ND(.0005)	--	--
MW-2	07/05/94	7.26	ND(0.05)	ND(.001)	ND(.003)	ND(.003)	ND(.003)	0.600[7]	ND(.010)
(13.70)	12/15/94	9.02	ND(0.05)	ND(.0005)	ND(.0005)	ND(.0005)	ND(.0005)	0.0015[8]	ND(.010)
	03/15/95	10.60	0.055	0.0016	0.0010	0.0010	0.0037	ND(.0005)	--[9]
	08/03/95	7.98	ND(0.05)	ND(.0005)	ND(.0005)	ND(.0005)	ND(.0005)	0.0347[10]	ND(.010)
MW-3	07/05/94	7.30	5.0	0.015	0.0079	0.080	0.230	--	--
(12.41)	12/15/94	7.46	1.40	0.013	0.0070	0.0011	0.0061	--	--
	03/15/95	9.16	0.078	0.0009	0.0012	0.0009	0.0022	--	--
	08/03/95	7.98	0.160	ND(.0005)	0.0010	ND(.0005)	0.0006	--	--
MW-4	07/05/94	6.99	ND(0.05)	0.0009	ND(.0005)	ND(.0005)	ND(.0005)	--	--
(12.56)	12/15/94	7.33	ND(0.05)	ND(.0005)	ND(.0005)	ND(.0005)	ND(.0005)	--	--
	03/15/95	9.17	0.057	0.0026	0.0028	0.0025	0.0080	--	--
	08/03/95	7.56	ND(0.05)	ND(.0005)	ND(.0005)	ND(.0005)	ND(.0005)	--	--
MW-5	07/05/94	6.88	ND(0.05)	0.0011	ND(.0005)	ND(.0005)	ND(.0005)	--	--
(11.76)	12/15/94	7.52	0.061	0.001	ND(.0005)	ND(.0005)	ND(.0005)	--	--
	03/15/95	9.28	0.110	0.001	0.0008	0.0009	0.0016	--	--
	08/03/95	7.52	ND(0.05)	0.0006	ND(.0005)	ND(.0005)	ND(.0005)	--	--

1 - Ground water table elevation in feet above mean sea level.
2 - Halogenated volatile organic compounds. Includes analysis for approximately 60 individual compounds. The detection limits vary for some compounds; however, the detection limit listed below is the most prevalent for this method.
3 - Semi-volatile organic compounds. Includes analysis for approximately 70 individual compounds. The detection limits are the same for all compounds.
4 - Not detected above the value expressed in the parentheses.
5 - Surveyed top of casing elevation in feet above mean sea level.
6 - Not analyzed.
7 - 0.600 ppm as methyl-t-butylether; no other halogenated volatile organic compounds were detected in the sample.
8 - 0.0015 ppm as c-1,2-dichloroethane; no other halogenated volatile organic compounds were detected in the sample.
9 - SVOC were not reported by the analytical laboratory because an emulsion formed during laboratory sample extraction which did not allow completion of the test.
10 - 0.0097 ppm as 1,1-dichloroethane and 0.025 ppm as c-1,2-dichloroethene; no other halogenated volatile organic compounds were detected in the sample.

CONCLUSIONS

Based on one full year of quarterly ground water monitoring, Century West Engineering concludes the following:

- **Past releases from the former gasoline USTs located at the site have not significantly impacted ground water beneath the site.** Although low levels of gasoline constituents were encountered in ground water samples from MW-3, located within the former UST excavation cavity, only very low to nondetectable levels of gasoline constituents were encountered in water samples from downgradient wells MW-4 and MW-5.

- **Past releases from the former waste oil UST located at the site have not significantly impacted ground water beneath the site.** The only hydrocarbon constituents encountered in MW-2 water samples were 0.600 ppm of methyl-t-butylether during the first quarter, 0.0015 ppm of c-1,2-dichloroethene during the second quarter, and 0.025 ppm of c-1,2-dichloroethene and 0.0097 ppm of 1,1-dichloroethane during the fourth quarter. There is no listed California Maximum Contaminant Level (MCLs are primary drinking water standards) for methyl-t-butylether. The MCLs for c-1,2-dichloroethene and 1,1-dichloroethane are 0.0060 ppm and 0.0050 ppm, respectively. Thus, the levels of these constituents encountered in MW-2 water samples are only slightly above the MCLs and do not represent a significant risk to ground water.

Based on these conclusions, Century West Engineering recommends that Alameda County UST Local Oversight Program grant site closure for the Windsor Square Auto Repair UST site located at 1900 Lewelling Blvd.

We appreciate the opportunity to present this report for your review. Please contact us if you have questions or require additional information.

Very truly yours,

Robert S. Bogar
Geologist

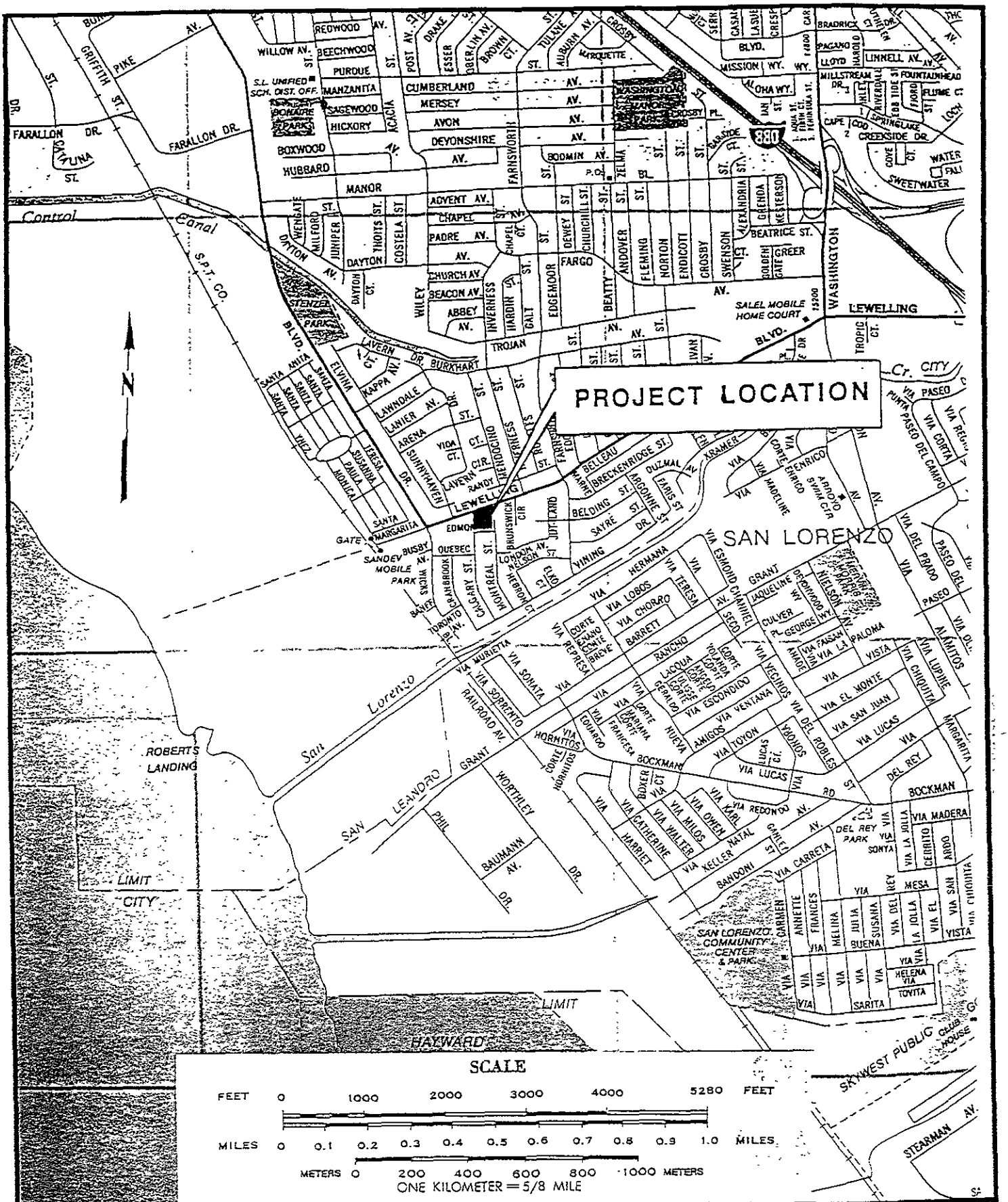
James E. Gribi
Registered Geologist
California No. 5843

REGISTERED GEOLOGIST
JAMES E. GRIBI
No. 5843
STATE OF CALIFORNIA

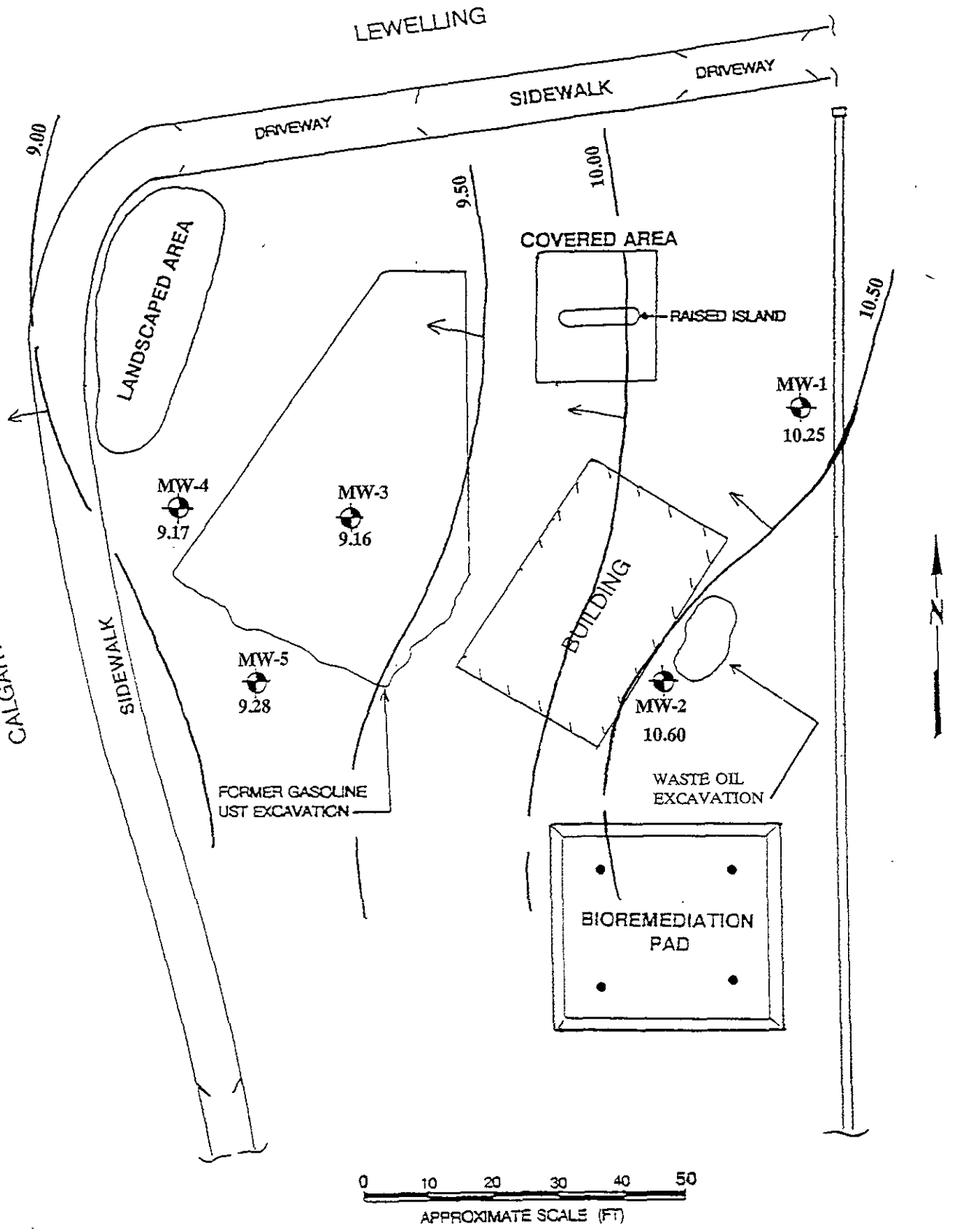
RSB/JEG:cc
Enclosures

c Johnny Lin

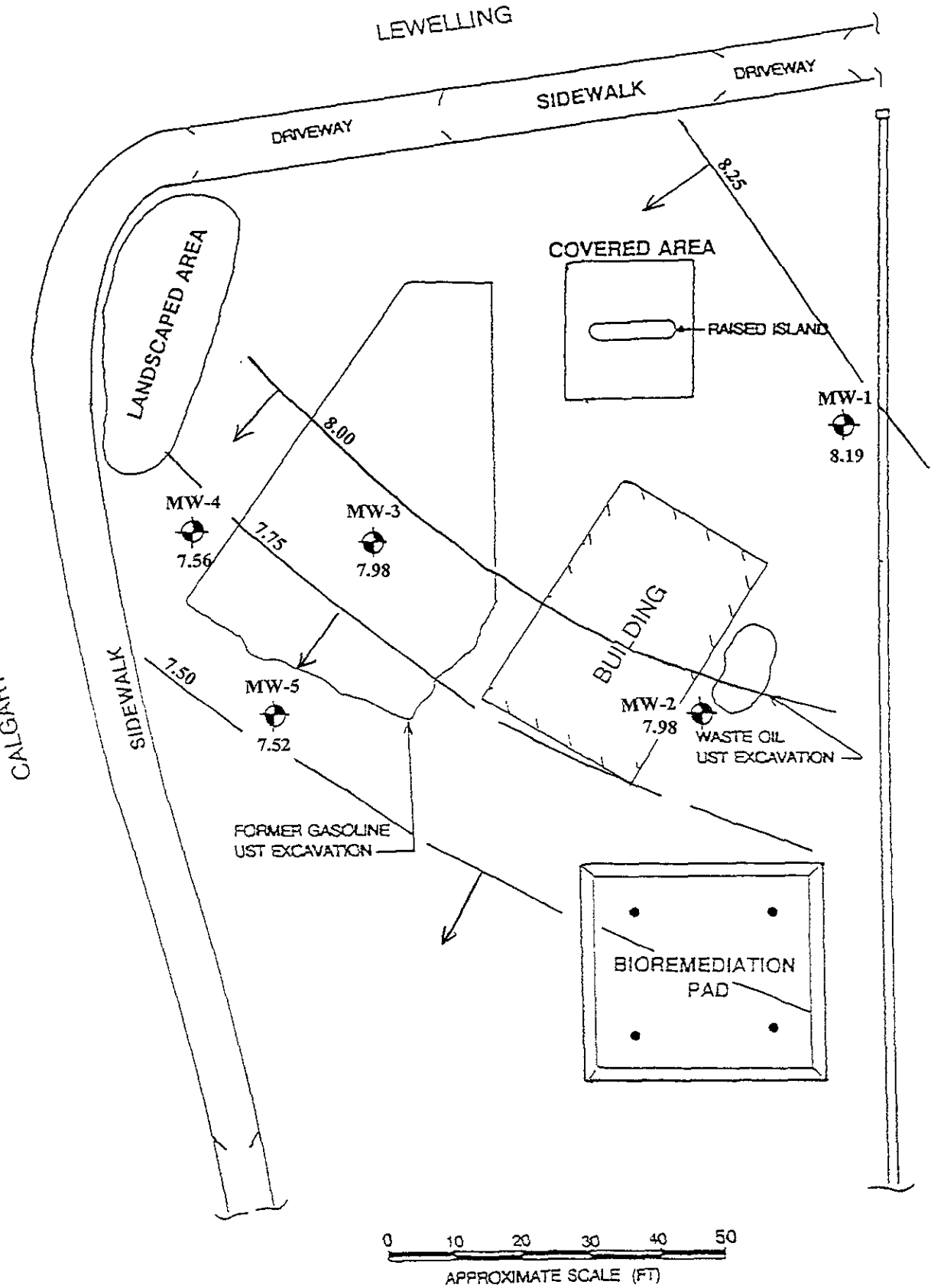
centurywest
ENGINEERING CORPORATION



DESIGNED BY:	CHECKED BY:	FIGURE 1 SITE VICINITY MAP CWEC: 20507-001-01	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:				



DESIGNED BY:	CHECKED BY:	FIGURE 2 03/15/95 GROUND WATER FLOW MAP CWEC: 20507-001-03	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:				



DESIGNED BY:	CHECKED BY:	FIGURE 3 08/03/95 GROUND WATER FLOW MAP CWEC: 20507-001-03	DATE:	FIGURE:
DRAWN BY:	SCALE:		CENTURY WEST ENGINEERING	
DWG. NO.:				

APPENDIX A

GROUND WATER SAMPLING DATA SHEETS

(March 15, 1995)

CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. _____ WELL NO. MW-1

PROJECT NAME _____ PROJECT NO. _____

DATE 3/15 TIME 1019 ELEV. TOP OF CASING _____

WELL DIAMETER _____ WELL DEPTH _____ SCREEN INTERVAL _____

H2O LEVEL INIT. 3.95 FIN. _____

CALC. PURGE H2O COL. _____ FT. (X) ** = _____ (X) 3 = _____ GALS.

LAB ANALYSIS _____

LABORATORY _____ PURGE/SAMPLE METHOD _____

WEATHER CONDITIONS _____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
		2	1.51	2.77	7.21	clear no odor
		4	63.2	1.53	7.36	sl. MURKY - SAN
		6	63.9	1.53	"	SAME
		8	62.2	1.67	7.37	"
		10	63.0	1.51	7.35	"

SAMPLE CREW _____

REMARKS _____

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

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CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. MW-2 WELL NO. ~~3~~ MW-2

PROJECT NAME _____ PROJECT NO. _____

DATE 1/07 TIME _____ ELEV. TOP OF CASING _____

WELL DIAMETER _____ WELL DEPTH _____ SCREEN INTERVAL _____

H2O LEVEL INIT. 3.09 FIN. _____

CALC. PURGE H2O COL. _____ FT. (X) ** = _____ (X) 3 = _____ GALS.

LAB ANALYSIS _____

LABORATORY _____ PURGE/SAMPLE METHOD _____

WEATHER CONDITIONS _____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
	2		67.9	~~.66~~	8.27	SL MUDDY NO O/SH
	4		64.2	.63	7.33	SAME
	6		66.6	.55	7.43	"
	8		63.5	.54	7.41	"
	10		62.5	.56	7.42	"

SAMPLE CREW _____

REMARKS _____

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

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CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. MW-3 WELL NO. MW-3

PROJECT NAME _____ PROJECT NO. TL

DATE 3/15 TIME 10:57 ELEV. TOP OF CASING _____

WELL DIAMETER _____ WELL DEPTH _____ SCREEN INTERVAL _____

H2O LEVEL INIT. 3.25 ~~ELEV.~~

CALC. PURGE H2O COL. _____ FT. (X) ** = _____ (X) 3 = _____ GALS.

LAB ANALYSIS _____

LABORATORY _____ PURGE/SAMPLE METHOD _____

WEATHER CONDITIONS _____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
	←	2	6.88	5.55	7.58	cl no odor
		4	16.8	4.60	7.63	SL MUDDY - SAME
		6	15.2	4.36	7.58	" V
		8	65.6	5.12	7.52	"
		10	64.3	4.32	7.61	"

SAMPLE CREW _____

REMARKS _____

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

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CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. MW-4 WELL NO. MW-4

PROJECT NAME _____ PROJECT NO. _____

DATE 3/15 TIME 11:30 ELEV. TOP OF CASING _____

WELL DIAMETER _____ WELL DEPTH _____ SCREEN INTERVAL _____

H2O LEVEL INIT. 3.57 → FIN. 3.89

CALC. PURGE H2O COL. _____ FT. (X) ** = ~~3.~~ _____ (X) 3 = _____ GALS.

LAB ANALYSIS _____

LABORATORY _____ PURGE/SAMPLE METHOD _____

WEATHER CONDITIONS _____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
		2	68.2	4.60	6.86	clear NO O/SH
		4	64.8	2.18	7.20	SL murky SL O/NO SH
NOTE: Pump rate slowed dramatically (to ≈ 1/2 PRE AT 8 g/m		6	64.6	4.11	7.05	SAME
	≈ 6 gals.	7	65.3	4.41	6.88	"
		8	65.7	4.58	"	"
		8½	66.5	4.81	6.80	"

SAMPLE CREW _____

REMARKS _____

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO._____ WELL NO. MW-5

PROJECT NAME_____ PROJECT NO. J.C

DATE 3/15 TIME_____ ELEV. TOP OF CASING _____

WELL DIAMETER_____ WELL DEPTH_____ SCREEN INTERVAL_____

H2O LEVEL INIT. 3.15 FIN. 2.48 !

CALC. PURGE H2O COL._____FT. (X) ** =_____ (X) 3 =_____GALS.

LAB ANALYSIS_____

LABORATORY_____ PURGE/SAMPLE METHOD_____

WEATHER CONDITIONS_____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
	2		68.6	7.38	7.21	cl SL o /NO SH
	4		66.2	2.53	7.18	SL MURKY - SAME
	6		66.0	2.36	7.16	SAME
	8		66.5	2.67	7.09	SL MURKY SL/M HC O -NO SH
FLOW RATE DROPPED AT 8 GALS	10		65.8	2.63	7.02	SAME

SAMPLE CREW _____

REMARKS_____

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

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GROUND WATER SAMPLING DATA SHEETS
(August 3, 1995)

CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. MW-1 WELL NO. MW-1

PROJECT NAME Johnny Ln PROJECT NO.

DATE 8/3/95 TIME ELEV. TOP OF CASING

WELL DIAMETER WELL DEPTH SCREEN INTERVAL

H2O LEVEL INIT. 6.01 FIN.

CALC. PURGE H2O COL. FT. (X) ** = (X) 3 = GALS.

LAB ANALYSIS

LABORATORY PURGE/SAMPLE METHOD

WEATHER CONDITIONS

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
	0		73.5	3.02	6.81	clear no o/sht
	2		72.6	2.33	7.44	SAME
	4		71.5	2.22	7.53	"
	6		70.0	2.25	7.58	"
	8		69.1	2.26	7.45	"

SAMPLE CREW

REMARKS

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. _____ WELL NO. MW-2

PROJECT NAME Jonny Cake PROJECT NO. _____

DATE 8/3 TIME _____ ELEV. TOP OF CASING _____

WELL DIAMETER _____ WELL DEPTH _____ SCREEN INTERVAL _____

H20 ~~LEVEL~~ ELEV INIT. ~~7.28~~ FIN. (5.72 6.9)

CALC. PURGE H20 COL. _____ FT. (X) ** = _____ (X) 3 = _____ GALS.

LAB ANALYSIS _____

LABORATORY _____ PURGE/SAMPLE METHOD _____

WEATHER CONDITIONS _____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
	0		72.2	0.82	7.10	clear no o/s/H
	2		70.5	.84	7.04	grey "
	4		70.6	.96	7.19	"
	6		70.5	1.05	7.25	"
	8		69.8	1.03	7.21	Sand

SAMPLE CREW _____

REMARKS _____

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

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CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. MW-3 WELL NO. MW-3

PROJECT NAME _____ PROJECT NO. _____

DATE 8/3/95 TIME _____ ELEV. TOP OF CASING _____

WELL DIAMETER _____ WELL DEPTH _____ SCREEN INTERVAL _____

H2O LEVEL INIT. _____ FIN. _____

CALC. PURGE H2O COL. _____ FT. (X) ** = _____ (X) 3 = _____ GALS.

LAB ANALYSIS _____

LABORATORY _____ PURGE/SAMPLE METHOD _____

WEATHER CONDITIONS _____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
	0		75.5	4.96	7.84	clear no odor
	2		74.6	5.46	7.82	grey "
	4		74.1	5.51	7.81	SAME
	6		73.8	4.65	7.98	"
	8		73.7	5.09	7.96	"

SAMPLE CREW _____

REMARKS _____

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

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CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. MW-4 WELL NO. MW-4

PROJECT NAME Johnny Li PROJECT NO. 28857

DATE 8/3/95 TIME _____ ELEV. TOP OF CASING _____

WELL DIAMETER _____ WELL DEPTH _____ SCREEN INTERVAL _____

H2O LEVEL INIT. _____ FIN. _____

CALC. PURGE H2O COL. _____ FT. (X) ** = _____ (X) 3 = _____ GALS.

LAB ANALYSIS _____

LABORATORY _____ PURGE/SAMPLE METHOD _____

WEATHER CONDITIONS _____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
	0		7.21	5.52	7.55	clear no o/s
	2		7.16	5.75	7.30	grey "
	4		7.07	6.30	7.31	" "
	6		68.3	6.56	7.16	" "
Pumped dry	8		67.7	5.45	7.31	" "

SAMPLE CREW _____

REMARKS _____

** (2" = 0.163 GAL/FT) (4" = 0.653 GAL/FT)

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CENTURY WEST ENGINEERING

GROUNDWATER SAMPLING RECORD

****

SAMPLE NO. MW-5 WELL NO. MW-5

PROJECT NAME Jimmy Lee PROJECT NO. _____

DATE 8/3 TIME _____ ELEV. TOP OF CASING _____

WELL DIAMETER _____ WELL DEPTH _____ SCREEN INTERVAL _____

H2O LEVEL INIT. _____ FIN. _____

CALC. PURGE H2O COL. _____ FT. (X) ** = _____ (X) 3 = _____ GALS.

LAB ANALYSIS _____

LABORATORY _____ PURGE/SAMPLE METHOD _____

WEATHER CONDITIONS _____

****

TIME	VOLUME PUMPED (GALS.)	PUMP RATE (GPM)	TEMP. (C)	COND.	pH	REMARKS (TURBIDITY)
	0		* 72.5	3.76	8.14	Clear SLIGHT ODOR NO SHEEN
	2		73.3	3.49	7.48	grey - SAME
	4		71.7	"	7.36	SAME
	6		69.1	3.51	7.29	"
	8		68.5	3.30	7.22	"

SAMPLE CREW _____

REMARKS _____

** (2" = 0.163 GAL/FT) (4" = 0.[redacted] GAL/FT)

Century West Engineering Corporation / Engineers and Scientists
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APPENDIX B

LABORATORY DATA REPORTS AND CHAIN OF CUSTODY RECORDS THIRD QUARTERLY SAMPLING

(March 15, 1995)

Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

CENTURY WEST ENGINEERING
7950 DUBLIN BLVD
DUBLIN, CA 94568

Date: March 23, 1995

Attn: BOB BOGAR

Laboratory Number : 80858

Project Number/Name : 20507-001-03

This report has been reviewed and

approved for release.

Senior Chemist
Account Manager

Certified Laboratories

825 Arnold Dr., Suite 114
Martinez, California 94553
(510) 229-1512 / fax (510) 229-1526

1555 Burke St., Unit I
San Francisco, California 94124
(415) 647-2081 / fax (415) 821-7123

309 S. Cloverdale St., Suite B-24
Seattle, Washington 98108
(206) 763-2992 / fax (206) 763-8429

Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

CENTURY WEST ENGINEERING
Attn: BOB BOGAR

Project 20507-001-03
Reported on March 24, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Chronology

Laboratory Number 80858

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-1	03/15/95	03/16/95	03/20/95	03/20/95	BC201.05	01
MW-2	03/15/95	03/16/95	03/20/95	03/20/95	BC201.05	02
MW-3	03/15/95	03/16/95	03/20/95	03/20/95	BC201.05	03
MW-4	03/15/95	03/16/95	03/20/95	03/20/95	BC201.05	04
MW-5	03/15/95	03/16/95	03/21/95	03/21/95	BC211.05	05

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
BC201.05-01	Method Blank	MB		Water	03/20/95	03/20/95
BC201.05-02	SYS-EFF	MS	80862-03	Water	03/20/95	03/20/95
BC201.05-03	SYS-EFF	MSD	80862-03	Water	03/20/95	03/20/95
BC201.05-04	Laboratory Spike	LS		Water	03/20/95	03/20/95
BC201.05-05	Laboratory Spike Duplicate	LSD		Water	03/20/95	03/20/95
BC211.05-01	Method Blank	MB		Water	03/21/95	03/21/95
BC211.05-02	SYS-EFF	MS	80862-03	Water	03/21/95	03/21/95
BC211.05-03	SYS-EFF	MSD	80862-03	Water	03/21/95	03/21/95

Certified Laboratories

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CENTURY WEST ENGINEERING
Attn: BOB BOGAR

Project 20507-001-03
Reported on March 24, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
80858-01	MW-1	Water	1.0	-
80858-02	MW-2	Water	1.0	-
80858-03	MW-3	Water	1.0	-
80858-04	MW-4	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	80858-01 Conc. ug/L	RL	80858-02 Conc. ug/L	RL	80858-03 Conc. ug/L	RL	80858-04 Conc. ug/L	RL
Gasoline_Range	ND	50	55	50	78	50	57	50
Benzene	ND	0.5	1.6	0.5	0.9	0.5	2.6	0.5
Toluene	ND	0.5	1.0	0.5	1.2	0.5	2.8	0.5
Ethyl Benzene	ND	0.5	1.0	0.5	0.9	0.5	2.5	0.5
Total Xylenes	ND	0.5	3.7	0.5	2.2	0.5	8.0	0.5
> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	102		90		86		78	

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CENTURY WEST ENGINEERING
Attn: BOB BOGAR

Project 20507-001-03
Reported on March 24, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
80858-05	MW-5	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	80858-05 Conc. ug/L	RL
Gasoline_Range	110	50
Benzene	1.0	0.5
Toluene	0.8	0.5
Ethyl Benzene	0.9	0.5
Total Xylenes	1.6	0.5
Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	103	

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Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 80858
Method Blank(s)

	BC201.05-01		BC211.05-01	
	Conc. ug/L	RL	Conc. ug/L	RL
Gasoline_Range	ND	50	ND	50
Benzene	ND	0.5	ND	0.5
Toluene	ND	0.5	ND	0.5
Ethyl Benzene	ND	0.5	ND	0.5
Total Xylenes	ND	0.5	ND	0.5
>> Surrogate Recoveries (%) <<				
Trifluorotoluene (SS)	98		100	

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Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 80858

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
BC201.05 04 / 05 - Laboratory Control Spikes						
Gasoline_Range		314	278/277	89/88	65-135	1
Benzene		20	21/21	105/105	65-135	0
Toluene		20	20/21	100/105	65-135	5
Ethyl Benzene		20	20/20	100/100	65-135	0
Total Xylenes		60	62/62	103/103	65-135	0
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				93/95	50-150	
For Water Matrix (ug/L)						
BC201.05 02 / 03 - Sample Spiked: 80862 - 03						
Gasoline_Range	ND	314	255/250	81/80	65-135	1
Benzene	ND	20	22/23	110/115	65-135	4
Toluene	ND	20	21/21	105/105	65-135	0
Ethyl Benzene	ND	20	21/21	105/105	65-135	0
Total Xylenes	ND	60	62/62	103/103	65-135	0
Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				95/94	50-150	
For Water Matrix (ug/L)						
BC211.05 02 / 03 - Sample Spiked: 80862 - 03						
Gasoline_Range	ND	2000	2097/2073	105/104	65-135	1
Benzene	ND	20	22/23	110/115	65-135	4
Toluene	ND	20	21/21	105/105	65-135	0
Ethyl Benzene	ND	20	21/21	105/105	65-135	0
Total Xylenes	ND	60	62/62	103/103	65-135	0
Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				95/94	50-150	

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Narrative:

Definitions:

ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

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Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

ENTURY WEST ENGINEERING
Attn: BOB BOGAR

Project 20507-001-03
Reported on March 27, 1995

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Chronology

Laboratory Number 80858

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-2	03/15/95	03/16/95	03/20/95	03/20/95	BC201.08	02

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
BC201.08-01	Method Blank	MB		Water	03/20/95	03/20/95
BC201.08-02	Laboratory Spike	LS		Water	03/20/95	03/20/95
BC201.08-03	RESEVOIR	MS	80879-01	Water	03/20/95	03/20/95
BC201.08-04	RESEVOIR	MSD	80879-01	Water	03/20/95	03/20/95

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CENTURY WEST ENGINEERING
Attn: BOB BOGAR

Project 20507-001-03
Reported on March 27, 1995

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
80858-02	MW-2	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	80858-02 Conc. ug/L	RL
Chloromethane	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Chloroethane	ND	0.5
Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5
Dichloromethane	ND	0.5
t-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
c-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
c-1,3-Dichloropropene	ND	0.5
1,2-Dichloropropane	ND	0.5
t-1,3-Dichloropropene	ND	0.5
Bromodichloromethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene	73	

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Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Quality Assurance and Control Data

Laboratory Number: 80858
Method Blank(s)

	BC201.08-01 Conc. ug/L	RL
Chloromethane	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Chloroethane	ND	0.5
Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5
Dichloromethane	ND	0.5
t-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
c-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
c-1,3-Dichloropropene	ND	0.5
1,2-Dichloropropane	ND	0.5
t-1,3-Dichloropropene	ND	0.5
Bromodichloromethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
>> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene	94	

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Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Quality Assurance and Control Data

Laboratory Number: 80858

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
BC201.08 02 / - Laboratory Control Spikes						
1,1-Dichloroethene		100	81	81	50-189	
Trichloroethene		100	122	122	53-161	
Chlorobenzene		100	106	106	57-171	
Surrogate Recoveries (%) <<						
4-Bromofluorobenzene				76	50-125	
For Water Matrix (ug/L)						
BC201.08 03 / 04 - Sample Spiked: 80879 - 01						
1,1-Dichloroethene	ND	100	101/108	101/108	50-189	7
Trichloroethene	ND	100	124/134	124/134	53-161	8
Chlorobenzene	ND	100	105/110	105/110	57-171	5
Surrogate Recoveries (%) <<						
4-Bromofluorobenzene				75/71	50-125	

Definitions:

ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

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Chain of Custody and Analysis Request

40838

Page ..... of .....

Company: Century West Engineering
Address: 7980 Dublin Blvd.
City, State, Zip: Dublin CA 94568
Phone: (510) 551-7774 Fax: 551-7776
Project Manager: J. Grubl
Alternate Contact: Bob Bogar
Project No.: 20507-001-03 P.O. No.

TURN AROUND TIME
(circle one)
Same Day 72 Hrs.
24 Hrs. 48 Hrs.
Normal 5 Day

Superior Precision Analytical Inc.
P.O. Box 1545
Martinez, California 94553
Martinez I: (510) 229-1512
Martinez II: (510) 229-0166
San Francisco: (415) 647-2081

Section II: Analysis Request

Sampler:
Regulatory Agency:

Sample Identification	S = Soil A = Air W = Water Matrix		TPH-G (Water)		HVOCs Gas (8010)		SVOCs 625/8270							Date Sampled	Time Sampled	# of Containers	Preservatives (yes or no)	Sampling Remarks: Bioremediation, UST, Monitoring, Recent Contamination, Unknown Compounds, COMMENTS:
1 BB ~~5.7~~																		
2 BB ~~5.12~~																		
3 BB ~~5.13~~																		
4																		
5 MW-1			✓											3/15		2	Y	2 VOAs
6 MW-2			✓		✓	✓	✓							"		6/1	Y	6 VOAs, 1 liter
7 MW-3			✓											"		2	Y	2 VOAs
8 MW-4			✓											"		2	Y	2 VOAs
9 MW-5			✓											"		2	Y	2 VOAs
10																		
11																		
12																		

Relinquished By: Bob Bog	Date/Time 3/16/95 9:55	Received By: S Black	Date/Time 3/16/95 9:55	Lab: Please initial the following:
Organization:		Organization: Cerco		Samples Stored in Ice: yes 5.2°C
Reliquished By: S Black	Date/Time 3/16/95 10:57	Received By:	Date/Time	Appropriate Containers:
Organization: Cerco		Organization:		Samples Preserved:
Relinquished By:	Date/Time	Received By: G. Howell	Date/Time	VOAs without headspace:
Organization:		Laboratory: Edfmtz	3/16/95 11:00	Comments:

Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

April 8, 1995

Mr. Bob Bogar
Century West Engineering
7950 Dublin Blvd.
Dublin, CA 94568

Client Project No: 20507-001-03

Dear Mr. Bogar,

Attached is our analytical report for the samples received on March 16, 1995 for the above project.

As per my conversation with Jim Gribi, we are unable to report 8270 results for sample MW-2. During the extraction of this sample an emulsion formed due to the matrix of the sample and we were unable recover the solvent. There was insufficient sample to attempt to re-extract the sample.

We appreciate the opportunity to provide you with analytical services. If you have any questions please feel free to contact me at 510-229-1512.

Sincerely,

Cecilia G. Joaquin

Cecilia G. Joaquin
Account Manager
Senior Chemist

APPENDIX C

LABORATORY DATA REPORTS
AND CHAIN OF CUSTODY RECORDS
FOURTH QUARTERLY SAMPLING
(August 3, 1995)

Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

CENTURY WEST ENGINEERING
7950 DUBLIN BLVD
DUBLIN, CA 94568

Date: August 15, 1995

Attn: JIM GRIBI

Laboratory Number : 82200

Project Number/Name : 20507-001-03

This report has been reviewed and

approved for release.

Senior Chemist
Account Manager

Certified Laboratories

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ENTURY WEST ENGINEERING
ttn: JIM GRIBI

Project 20507-001-03
Reported on August 15, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Chronology

Laboratory Number 82200

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-1	08/03/95	08/04/95	08/08/95	08/08/95	BH081.04	01
MW-2	08/03/95	08/04/95	08/08/95	08/08/95	BH081.04	02
MW-3	08/03/95	08/04/95	08/08/95	08/08/95	BH081.04	03
MW-4	08/03/95	08/04/95	08/08/95	08/08/95	BH081.04	04
MW-5	08/03/95	08/04/95	08/08/95	08/08/95	BH081.04	05

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
BH081.04-02	MW-7	MS	82202-02	Water	07/28/95	07/28/95
BH081.04-03	MW-7	MSD	82202-02	Water	07/28/95	07/28/95
BH081.04-04	Method Blank	MB		Water	08/09/95	08/08/95

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CENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-03
Reported on August 15, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
82200-01	MW-1	Water	1.0	-
82200-02	MW-2	Water	1.0	-
82200-03	MW-3	Water	1.0	-
82200-04	MW-4	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	82200-01 Conc. ug/L	RL	82200-02 Conc. ug/L	RL	82200-03 Conc. ug/L	RL	82200-04 Conc. ug/L	RL
Gasoline_Range	ND	50	ND	50	160	50	ND	50
Benzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5
Toluene	ND	0.5	ND	0.5	1.0	0.5	ND	0.5
Ethyl Benzene	ND	0.5	ND	0.5	ND	0.5	ND	0.5
Total Xylenes	ND	0.5	ND	0.5	0.6	0.5	ND	0.5
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	110		104		124		103	

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Attn: JIM GRIBI

Project 20507-001-03
Reported on August 15, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
82200-05	MW-5	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	82200-05 Conc. ug/L	RL
Gasoline_Range	ND	50
Benzene	0.6	0.5
Toluene	ND	0.5
Ethyl Benzene	ND	0.5
Total Xylenes	ND	0.5
> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	109	

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by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 82200

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L) BH081.04 02 / 03 - Sample Spiked: 82202 - 02						
Gasoline_Range	ND	320	350/380	109/119	65-135	9
Benzene	ND	20	19/22	95/110	65-135	15
Toluene	ND	20	20/22	100/110	65-135	10
Ethyl Benzene	ND	20	20/22	100/110	65-135	10
Total Xylenes	ND	60	58/66	97/110	65-135	13
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				103/103	50-150	

Definitions:
ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

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Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 82200
Method Blank(s)

	BH081.04-04 Conc. ug/L	 RL
Gasoline_Range	ND	50
Benzene	ND	0.5
Toluene	ND	0.5
Ethyl Benzene	ND	0.5
Total Xylenes	ND	0.5
>> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	102	

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ENTURY WEST ENGINEERING
ttn: JIM GRIBI

Project 20507-001-03
Reported on August 14, 1995

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Chronology

Laboratory Number 82200

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-2	08/03/95	08/04/95	08/09/95	08/09/95	BH091.07	02

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
BH091.07-01	Method Blank	MB		Water	08/09/95	08/09/95
BH091.07-02	Laboratory Spike	LS		Water	08/09/95	08/09/95
BH091.07-03	PM395S7	MS	82183-05	Water	08/09/95	08/09/95
BH091.07-04	PM395S7	MSD	82183-05	Water	08/09/95	08/09/95

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ENTURY WEST ENGINEERING
Attn: JIM GRIBI

Project 20507-001-03
Reported on August 14, 1995

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
82200-02	MW-2	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	82200-02 Conc. ug/L	RL
Chloromethane	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Chloroethane	ND	0.5
Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5
Dichloromethane	ND	0.5
t-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	9.7	0.5
c-1,2-Dichloroethene	25	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
c-1,3-Dichloropropene	ND	0.5
1,2-Dichloropropane	ND	0.5
t-1,3-Dichloropropene	ND	0.5
Bromodichloromethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5

>> Surrogate Recoveries (%) <<

4-Bromofluorobenzene	103

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Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Quality Assurance and Control Data

Laboratory Number: 82200
Method Blank(s)

BH091.07-01

	Conc. ug/L	RL
Chloromethane	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Chloroethane	ND	0.5
Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5
Dichloromethane	ND	0.5
t-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
c-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
c-1,3-Dichloropropene	ND	0.5
1,2-Dichloropropane	ND	0.5
t-1,3-Dichloropropene	ND	0.5
Bromodichloromethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
>> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene	97	

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ENTURY WEST ENGINEERING
ttn: JIM GRIBI

Project 20507-001-03
Reported on August 15, 1995

EPA SW-846 Method 8270 Semivolatile Organics by GC/MS

Chronology

Laboratory Number 82200

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
MW-2	08/03/95	08/04/95	08/10/95	08/14/95	BH102.24	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
BH102.24-01	Method Blank	MB	Water	08/10/95	08/14/95
BH102.24-02	Laboratory Spike	LS	Water	08/10/95	08/14/95
BH102.24-03	Laboratory Spike Duplicate	LSD	Water	08/10/95	08/14/95

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Project 20507-001-03
Reported on August 15, 1995

EPA SW-846 Method 8270 Semivolatile Organics by GC/MS

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
82200-02	MW-2	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	82200-02 Conc. ug/L	RL
bis(2-chloroethyl)ether	ND	10
aniline	ND	10
phenol	ND	10
2-chlorophenol	ND	10
1,3-dichlorobenzene	ND	10
1,4-dichlorobenzene	ND	10
1,2-dichlorobenzene	ND	10
benzyl alcohol	ND	10
bis-(2-chloroisopropyl)ether	ND	10
2-methylphenol	ND	10
hexachloroethane	ND	10
n-nitroso-di-n-propylamine	ND	10
4-methylphenol	ND	10
nitrobenzene	ND	10
isophorone	ND	10
2-nitrophenol	ND	10
2,4-dimethylphenol	ND	10
bis(2-chloroethoxy)methane	ND	10
2,4-dichlorophenol	ND	10
1,2,4-trichlorobenzene	ND	10
naphthalene	ND	10
benzoic acid	ND	10
4-chloroaniline	ND	10
hexachlorobutadiene	ND	10
4-chloro-3-methylphenol	ND	10
2-methyl-naphthalene	ND	10
hexaclorocyclopentadiene	ND	10
2,4,6-trichlorophenol	ND	10
2,4,5-trichlorophenol	ND	10
2-chloronaphthalene	ND	10
2-nitroaniline	ND	10
acenaphthylene	ND	10

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Project 20507-001-03
Reported on August 15, 1995

EPA SW-846 Method 8270 Semivolatile Organics by GC/MS

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
82200-02	MW-2	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	82200-02 Conc. ug/L	RL
dimethylphthlate	ND	10
2,6-dinitrotoluene	ND	10
Acenaphthene	ND	10
3-nitroaniline	ND	10
2,4-dinitrophenol	ND	10
dibenzofuran	ND	10
2,4-dinitrotoluene	ND	10
4-nitrophenol	ND	10
fluorene	ND	10
4-chlorophenyl-phenylether	ND	10
diethylphthlate	ND	10
4-nitroaniline	ND	10
4,6-dinitro-2-methylphenol	ND	10
n-nitrosodiphenylamine	ND	10
4-bromo-phenyl-phenylether	ND	10
hexachlorobenzene	ND	10
pentachlorophenol	ND	10
phenanthrene	ND	10
anthracene	ND	10
di-n-butylphthlate	ND	10
fluoranthene	ND	10
benzidine	ND	10
pyrene	ND	10
butylbenzylphthlate	ND	10
3.3'-dichlorobenzidine	ND	10
Benzo(a)Anthracene	ND	10
Chrysene	ND	10
bis(2-ethylhexyl)phthalate	ND	10
di-n-octylphthalate	ND	10
Benzo(b,k)fluoranthene	ND	10
9H-Carbazole	ND	10
Benzo(a)Pyrene	ND	10

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Reported on August 15, 1995

EPA SW-846 Method 8270 Semivolatile Organics by GC/MS

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
82200-02	MW-2	Water	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	82200-02 Conc. ug/L	RL
Indeno(1,2,3)Pyrene	ND	10
dibenzo[a,h]anthracene	ND	10
Benzo(g,h,i)Perylene	ND	10
>> Surrogate Recoveries (%) <<		
2-fluorophenol	65	
phenol-d5	78	
nitrobenzene-d5	87	
2-fluorobiphenyl	86	
2,4,6-tribromophenol	39	
terphenyl-d14	101	

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EPA SW-846 Method 8270 Semivolatile Organics by GC/MS

Quality Assurance and Control Data

Laboratory Number: 82200
Method Blank(s)

	BH102.24-01 Conc. ug/L	RL
bis(2-chloroethyl)ether	ND	10
aniline	ND	10
phenol	ND	10
2-chlorophenol	ND	10
1,3-dichlorobenzene	ND	10
1,4-dichlorobenzene	ND	10
1,2-dichlorobenzene	ND	10
benzyl alcohol	ND	10
bis-(2-chloroisopropyl)ether	ND	10
2-methylphenol	ND	10
hexachloroethane	ND	10
n-nitroso-di-n-propylamine	ND	10
4-methylphenol	ND	10
nitrobenzene	ND	10
isophorone	ND	10
2-nitrophenol	ND	10
2,4-dimethylphenol	ND	10
bis(2-chloroethoxy)methane	ND	10
2,4-dichlorophenol	ND	10
1,2,4-trichlorobenzene	ND	10
naphthalene	ND	10
benzoic acid	ND	10
4-chloroaniline	ND	10
hexachlorobutadiene	ND	10
4-chloro-3-methylphenol	ND	10
2-methyl-naphthalene	ND	10
hexaclorocyclopentadiene	ND	10
2,4,6-trichlorophenol	ND	10
2,4,5-trichlorophenol	ND	10
2-chloronaphthalene	ND	10
2-nitroaniline	ND	10
acenaphthylene	ND	10
dimethylphthlate	ND	10
2,6-dinitrotoluene	ND	10
Acenaphthene	ND	10
3-nitroaniline	ND	10
2,4-dinitrophenol	ND	10
dibenzofuran	ND	10

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EPA SW-846 Method 8270 Semivolatile Organics by GC/MS

Quality Assurance and Control Data

Laboratory Number: 82200
Method Blank(s)

	BH102.24-01 Conc. ug/L	RL
2,4-dinitrotoluene	ND	10
4-nitrophenol	ND	10
fluorene	ND	10
4-chlorophenyl-phenylether	ND	10
diethylphthlate	ND	10
4-nitroaniline	ND	10
4,6-dinitro-2-methylphenol	ND	10
n-nitrosodiphenylamine	ND	10
4-bromo-phenyl-phenylether	ND	10
hexachlorobenzene	ND	10
pentachlorophenol	ND	10
phenanthrene	ND	10
anthracene	ND	10
di-n-butylphthlate	ND	10
fluoranthene	ND	10
benzidine	ND	10
pyrene	ND	10
butylbenzylphthlate	ND	10
3,3'-dichlorobenzidine	ND	10
Benzo(a)Anthracene	ND	10
chrysene	ND	10
bis(2-ethylhexyl)phthalate	ND	10
di-n-octylphthalate	ND	10
benzo(b,k)fluoranthene	ND	10
9H-Carbazole	ND	10
Benzo(a)Pyrene	ND	10
Indeno(1,2,3)Pyrene	ND	10
dibenzo[a,h]anthracene	ND	10
Benzo(g,h,i)Perylene	ND	10
>> Surrogate Recoveries (%) <<		
2-fluorophenol	61	
phenol-d5	68	
nitrobenzene-d5	82	
2-fluorobiphenyl	81	
2,4,6-tribromophenol	20	
terphenyl-d14	127	

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EPA SW-846 Method 8270 Semivolatile Organics by GC/MS

Quality Assurance and Control Data

Laboratory Number: 82200

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L) BH102.24 02 / 03 - Laboratory Control Spikes						
phenol		100	83/82	83/82	12-110	1
2-chlorophenol		100	71/71	71/71	27-123	0
1,4-dichlorobenzene		50	38/38	76/76	36-97	0
n-nitroso-di-n-propylamine		50	49/49	98/98	41-116	0
1,2,4-trichlorobenzene		50	36/36	72/72	39-98	0
4-chloro-3-methylphenol		100	70/71	70/71	23-97	1
Acenaphthene		50	49/47	98/94	46-118	4
2,4-dinitrotoluene		50	32/33	64/66	24-96	3
4-nitrophenol		100	9/12	9/12	10-80	29
pentachlorophenol		100	10/12	10/12	9-103	18
pyrene		50	61/52	122/104	26-127	16
<< Surrogate Recoveries (%) <<						
2-fluorophenol				71/71	21-110	
phenol-d5				82/81	10-110	
nitrobenzene-d5				95/94	35-114	
2-fluorobiphenyl				91/90	43-116	
2,4,6-tribromophenol				48/53	10-123	
terphenyl-d14				112/106	33-141	

Definitions:
ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

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82200

Chain of Custody and Analysis Request

Page ___ of ___

Company: CENTURY WEST ENGINEERING
Address: 7950 Dublin Blvd (STE 203)
City, State, Zip: Dublin Blvd 94568
Phone: (510) 551-7774 Fax: 551-7776
Project Manager: J GRIBI
Alternate Contact: Bob Bogar
Project No.: 20507-001-03 P.O. No. SAME

TURN AROUND TIME (circle one)
Same Day 72 Hrs.
24 Hrs. 48 Hrs.
Normal 5 Day (circled)

Superior Precision Analytical Inc.
P.O. Box 1545
Martinez, California 94553

Martinez I: (510) 229-1512
Martinez II: (510) 229-0166
San Francisco: (415) 647-2081

Section II: Analysis Request

Sampler:
Regulatory Agency:

Sample Identification	Matrix (S=Soil A=Air W=Water)	TPH-G/BTEX		HVOCs 601/8010		SVOCs 625/8270								Date Sampled	Time Sampled	# of Containers	Preservatives (yes or no)	Sampling Remarks: Bioremediation, UST, Monitoring, Recent Contamination, Unknown Compounds, COMMENTS:
1 MW-1	W	✓												8/3		2		
2 MW-2	W	✓		✓		✓								"		6		4 VOAs / 2 ltrs
3 MW-3	W	✓												"		2		
4 MW-4	W	✓												"		2		
5 MW-5	W	✓												"		2		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

Please initial: [initials]
Samples Stored in ice: Yes 4°
[illegible] containers: Yes
[illegible] headspace

Relinquished By: [signature] Organization: (CWE)	Date/Time 8/3/95 3:57pm	Received By: [signature] Organization: AERO	Date/Time 8/3/95 3:57pm	
Reliquished By: [signature] Organization: AERO	Date/Time 8/4/95 9:50A	Received By: [crossed out] Organization: [crossed out]	Date/Time	
Relinquished By: [crossed out] Organization: [crossed out]	Date/Time	Received By: [signature] Laboratory: SPA	Date/Time 8-4-95 950	

~~Lab: Please initial the following:~~
Samples Stored in Ice: ______
Appropriate Containers: ______
Samples Preserved: ______
VOAs without headspace: ______
Comments: ______