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ENVIRONMENTAL PROTECTION
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November 15, 1996

Ms. Susan Hugo
Alameda County Health Care
Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: 1150 Park Avenue, Emeryville, CA
STID #1777

Dear Ms. Hugo:

Enclosed is the 3rd Quarter 1996 status report for the subject New Century Beverage Co. ground water investigation. This report addresses hydrocarbon occurrences beneath the subject property in the vicinity of two former fuel tanks operated by the New Century Beverage Co., as discussed in Weiss Associates' January 27, 1995 Remedial Action Plan. Two other hydrocarbon occurrences in ground water beneath the facility have been shown to be the responsibility of other parties. Pursuant to your August 7, 1995 letter, we will submit quarterly status reports on site activities for these two occurrences in the future.

I certify under penalty of perjury that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true and accurate, and I am in agreement with the conclusions and/or recommendations in the report. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please call Jim Ponton or Carolyn Atwood of Weiss Associates at (510) 450-6000 if you have any questions or comments on the enclosed technical work plan.

Sincerely,
New Century Beverage Co.

Jerry Tidwell

Enc.
JDP/CJA

cc: Paul Morici, Pepsi-Cola Corp.
Paul Milmed, Esq., White & Case

Mr. Ray Plock,
Raymond Plock & Associates
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Piedmont, CA 94611-3702

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Weiss Associates *Environmental and Geologic Services*

5500 Shellmound Street, Emeryville, CA 94608-2411 *Fax: 510-547-5043* *Phone:* ***510-450-6000***

November 15, 1996

Mr. Jerry Tidwell
Pepsi-Cola Corporation
29000 Hesperian Blvd.
Hayward, California 94545

Re: **Third Quarter 1996 Status Report**
1150 Park Avenue, Emeryville, CA
WA Project # 14-0307-19

Dear Mr. Tidwell:

This report documents the Third Quarter 1996 (July 1996 - September 1996) ground water monitoring activities conducted by Weiss Associates (WA) for the New Century Beverage Company site located at 1150 Park Avenue, Emeryville, California (Figure 1). In September 1996, WA measured water levels in all site wells and collected ground water samples from select site wells for hydrocarbon analysis. These activities are described below. Secondly, this status report documents ground water sampling in upgradient wells MW-1 and MW-2 for PNAs, conducted in July to determine if PNAs were migrating onsite from an offsite, upgradient source.

In October and November of 1995, WA completed excavation of source area soils in the vicinity of the two former underground storage tanks on the site, in accordance with the January 1995 Remedial Action Plan (RAP) that was approved by the Alameda County Health Care Services Agency (ACHCSA) in August 1995. In November, WA completed additional characterization of soils in this area, collecting soil samples from borings B-50 through B-63. These results were presented to the ACHCSA in a meeting in June of 1996, and are included in their final form herein. In addition, this status report documents additional soil sampling completed on July 1996 to determine the presence or absence of Polynuclear Aromatic Hydrocarbons as related to the former underground storage tanks (UST). The draft data was presented to the ACHCSA in the June 1996 meeting, and is presented in final form here.

Based on the August 1995 approval of the Remedial Action Plan for this site by the ACHCSA, four quarters of ground water monitoring data subsequent to excavation of source area soils were required for this site. The third quarter sampling event represents the fourth of the required four events. Therefore, we have not included the usual schedule for a subsequent quarterly sampling event, pending ACHCSA's direction as to future site activities, if any.

Water Level Measurements

On September 26, 1996, WA measured water levels in all onsite monitoring wells.

Historical water level measurements and calculated ground water elevations are shown on Table 1, and ground water elevation contours and estimated flow direction are shown on Figure 2.

During the reporting period, ground water elevations and flow direction were generally consistent with historical data. Ground water level elevations decreased between 0.10 and 2.12 ft in all wells as compared to Second Quarter 1996 ground water level elevations. Third Quarter 1996 ground water elevation data indicate that shallow ground water flowed generally southwestward on September 26, 1996. This southwestward ground water flow direction is consistent with historical data for the site.

Ground Water Sampling and Analysis

On July 29 and September 26, 1996, WA collected ground water samples for chemical analysis from monitoring wells MW-5, -6, -7, -8, -10, -11, -12, -13, and -14. At least three well volumes of ground water were purged from each well that did not purge dry, using dedicated PVC bailers. In these wells, the ground water pH, temperature and electrical conductivity were monitored until stabilization to ensure that a representative sample was collected. The samples were decanted from the dedicated PVC bailers into appropriate containers, and immediately refrigerated for shipment to Superior Analytical Laboratory (SAL), a State certified laboratory located in Martinez, California, or Curtis and Tompkins (CT), a State certified laboratory located in Berkeley, California. A blind duplicate sample from monitoring well MW-13 was submitted for analysis as a quality control measure.

On July 29, 1996, ground water samples were collected and analyzed for:

- Polynuclear Aromatic Hydrocarbons (PNAs) for wells MW-1 and -2 using EPA Methods 8030/3510;

On September 26, 1996, ground water samples were collected and analyzed for:

- Total volatile petroleum hydrocarbons as gasoline (TVPH-G) for wells MW-5, -7, -8, -11, -12, -13, and -14 using the California Department of Health Services (DHS) Leaking Underground Fuel Tank (LUFT) Method (modified EPA Method 8015);

- Total extractable petroleum hydrocarbons (TEPH) for wells MW-5, -6, -7, -8, -10, -11, -12, -13, and -14 using the DHS LUFT Method (modified EPA Method 8015);

- Benzene, toluene, ethyl benzene, and total xylenes (BTEX) for wells MW-5, -6, -7, -8, -10, -11, -12, -13, and -14 using EPA Method 8020 (Purgeable Aromatic Compounds); and

- Methyltributylether (MTBE) for well MW-7 using EPA Method 8020 (Purgeable Aromatic Compounds).

Analytic results are presented in Table 2 along with historical results for the monitoring wells. PNA results are presented in Table 3 along with historical results for PNA analyses.

Ground Water Analytic Results and Discussion

Hydrocarbon concentrations in shallow ground water samples for this period are generally consistent with historical trends, and ranged up to 4.6 parts per million (ppm) total extractable hydrocarbons (TEPH) in MW-5, and 4.9 ppm total volatile hydrocarbons (TVPH) in MW-13.

TVPH-G were detected in monitoring wells MW-5 and MW-13. TEPH were detected in monitoring wells MW-5, -6, -12, and -13. The hydrocarbons detected in wells MW-12 and -13 were reported by SAL as a lighter hydrocarbons in the range of diesel, but not resembling a diesel fingerprint.

BTEX compounds were detected in monitoring wells MW-5, -12, and -13. Benzene concentrations exceeding the 0.001 ppm maximum contaminant level (MCL) were detected in wells MW-5, -12 and -13. Benzene isoconcentration contours for select site wells are presented on Figure 3.

No MTBE was detected by the laboratory analysis for the sample from well MW-7.

To determine whether the PNAs detected in MW-5 and -13 originate from an upgradient source, ground water samples were collected from MW-1 and -2 on July 29, 1996 for analysis by EPA Method 8310/3510. No PNAs were detected by the laboratory analysis for the samples from wells MW-1 and -2.

Soil Sampling and Analysis

Following source removal of soils in the vicinity of two former underground storage tanks in October and November of 1995, WA completed soil borings B-50 through B-63 in November 1995 to further characterize the extent of hydrocarbon impacted soils in the vicinity of former diesel tank UST#2. Samples were analyzed for TVPH-G by EPA method 8015 modified, TEPH-D by EPA method 8015 modified, and BETX by EPA method 8020. Figure 4 shows the sampling locations, and the analytical results are shown in Table 4. Post excavation soil samples collected in 1994 in the vicinity of former gasoline UST#1, following removal of the tank and reported in the RAP, indicated that the remaining soils in the vicinity of #1 were below the 100 ppm TPH target level provided by

the ACHCSA in their approval of the RAP. Therefore, no additional samples were collected in this area.

In May of 1996, WA conducted subslab soil sampling in support of demolition activities, with samples collected from borings B-64 through B-89 as shown on Figure 4. The results of this sampling are unrelated to remedial action at the site for the former USTs and are tasks not reported here.

In July 1996, WA collected additional soil samples near former UST#2. To specifically determine the presence or absence of PNAs in surface soils and subsurface soils in the vicinity of former diesel UST#2, soils samples from B-96 and B-97 were collected at 1.5 and 7.5 feet, and analyzed for BETX, TEPH-D, and PNAs, the latter by EPA method 8310/3550. Samples from B-94 and B-95 were collected and held pending the outcome of samples in the vicinity, and were not analyzed. Analytic results for borings B-96 and B-97 are presented in Table 5.

Soil Analytic Results and Discussion

Soil samples collected in November of 1995 in the vicinity of UST#2 and reported in Table 4 herein indicate that soils with TEPH as diesel above the 100 ppmv target level established by the ACHCSA remain in place on site outside the extent of the source excavation area on the north and west sides. The maximum concentration detected was 1,300 ppmv as TEPH-D in boring B-58, on the northeast corner of the excavation. Sample B-96, collected subsequently in July 1996 just south of B-58 along the edge of the source excavation boundary, had the second-highest TEPH-D concentration at 880 ppmv. The results in Table 4 also show that one or more BETX compounds were detected at ppb levels from borings to the north of the excavation area.

B-96 and B-97 were sampled at two depths in July 1996 to determine the presence or absence of PNAs possibly associated with diesel fuel: 1.5 feet to characterize surface soils and 7.5 feet to characterize subsurface soils. These borings were directly to the east and west of the UST#2 excavation extent, respectively. No PNAs were detected in surface or subsurface soils.

The field work presented in this report was conducted under the supervision of James D. Ponton, the Weiss Associates project manager for the New Century Beverage Company Emeryville, California, site.

Weiss Associates appreciates the opportunity to provide environmental consulting services to the New Century Beverage Company. Please call James D. Ponton or Carolyn J. Atwood at (510) 450-6000 if you have any questions or comments regarding this report.

Sincerely,
Weiss Associates

James D. Ponton, R.G.
Project Geologist

Carolyn J. Atwood, REA
Senior Project Manager

Attachments:
Figure 1. Site Location Map
Figure 2. Ground Water Elevation Contours and Estimated Flow Direction - September 26, 1996
Figure 3. Benzene Isoconcentration Contours in Ground Water - September 26, 1996
Figure 4. Site Map and Sampling Locations
Table 1: Historical Ground Water Elevations
Table 2: Ground Water Analytical Results
Table 3: Polynuclear Aromatic Hydrocarbons in Ground Water
Table 4: Analytic Results for Soil Samples, November 1995
Table 5: Hydrocarbons and pH in Soil, July 1996
Attachment A - Analytical Reports and Chain-of-Custody

cc: Paul Morici, Pepsi-Cola Corporation, 1 Pepsi Way, MD 850, Somers, NY 10589
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FIGURES

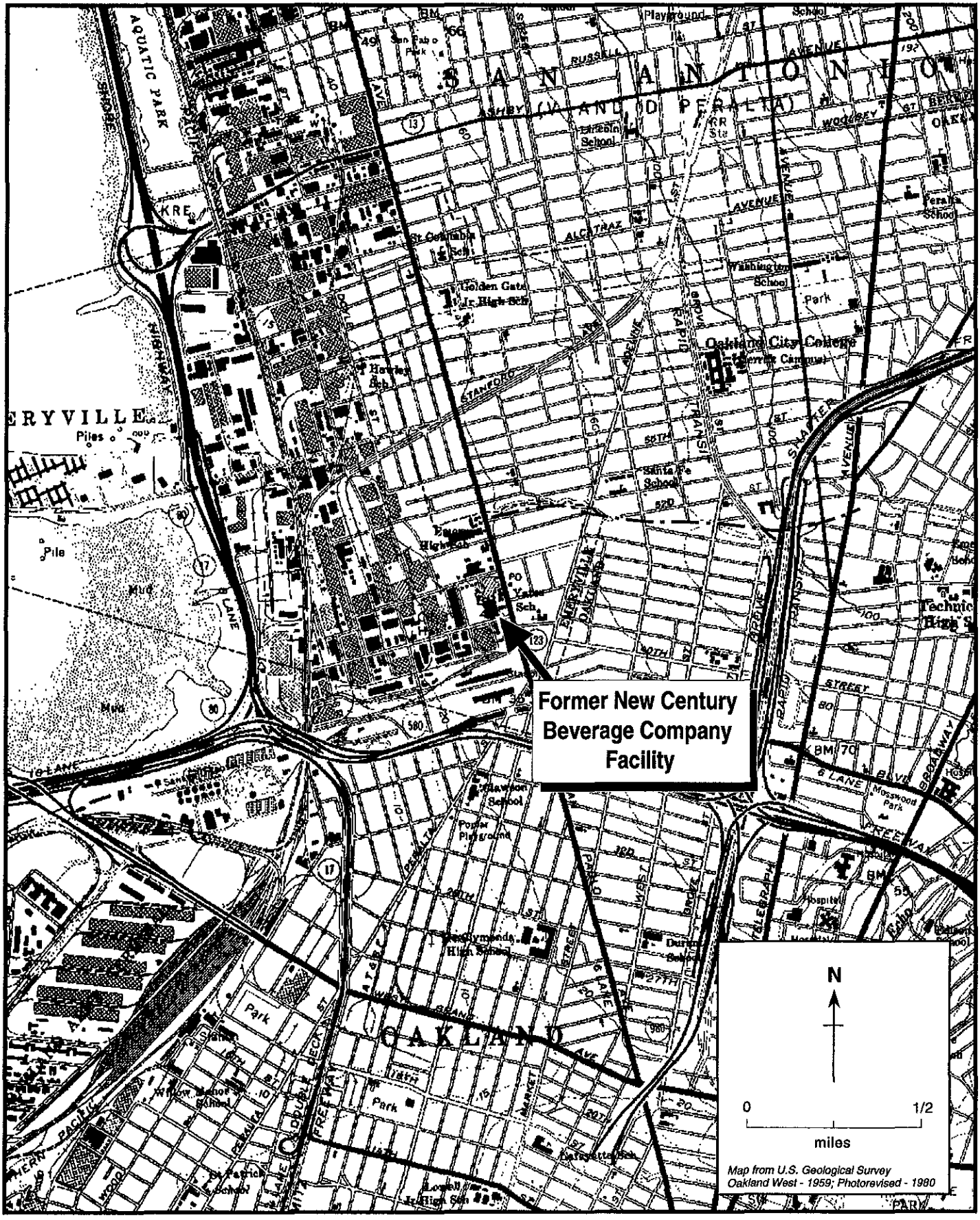


Figure 1. Site Vicinity Map - Former New Century Beverage Company Facility, 1150 Park Avenue, Emeryville, California

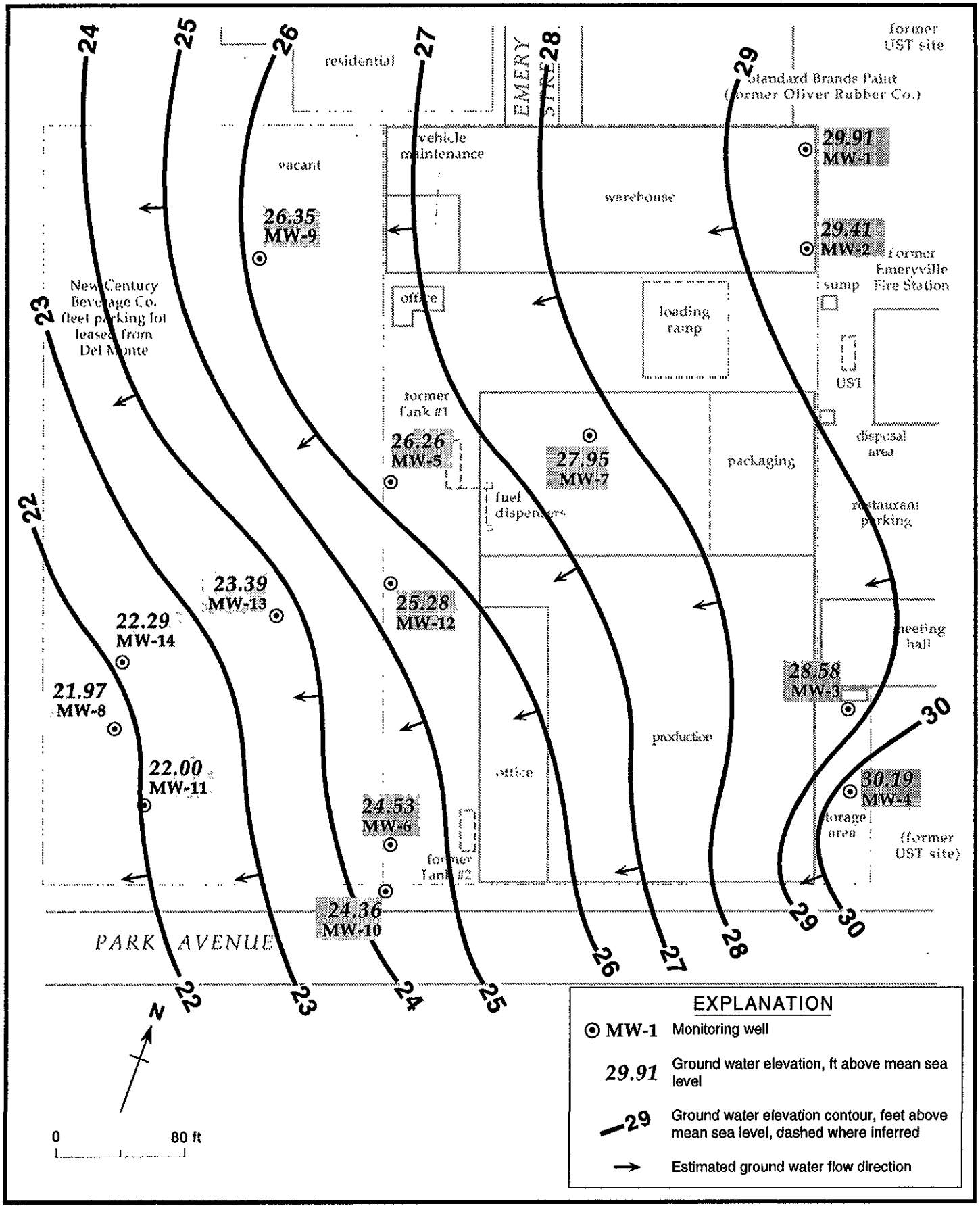


Figure 2. Ground Water Elevation Contours and Estimated Flow Direction - September 26, 1996 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California

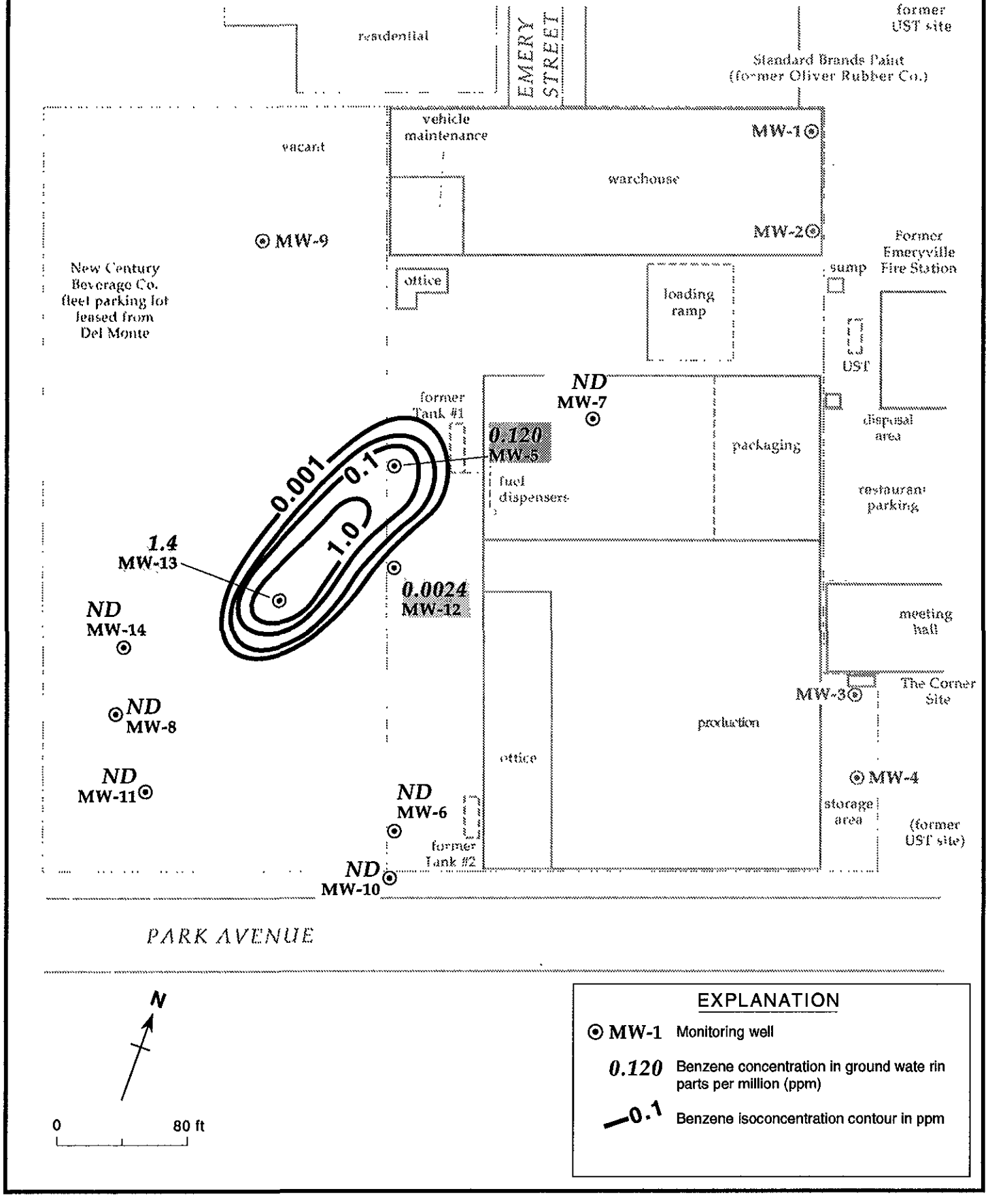
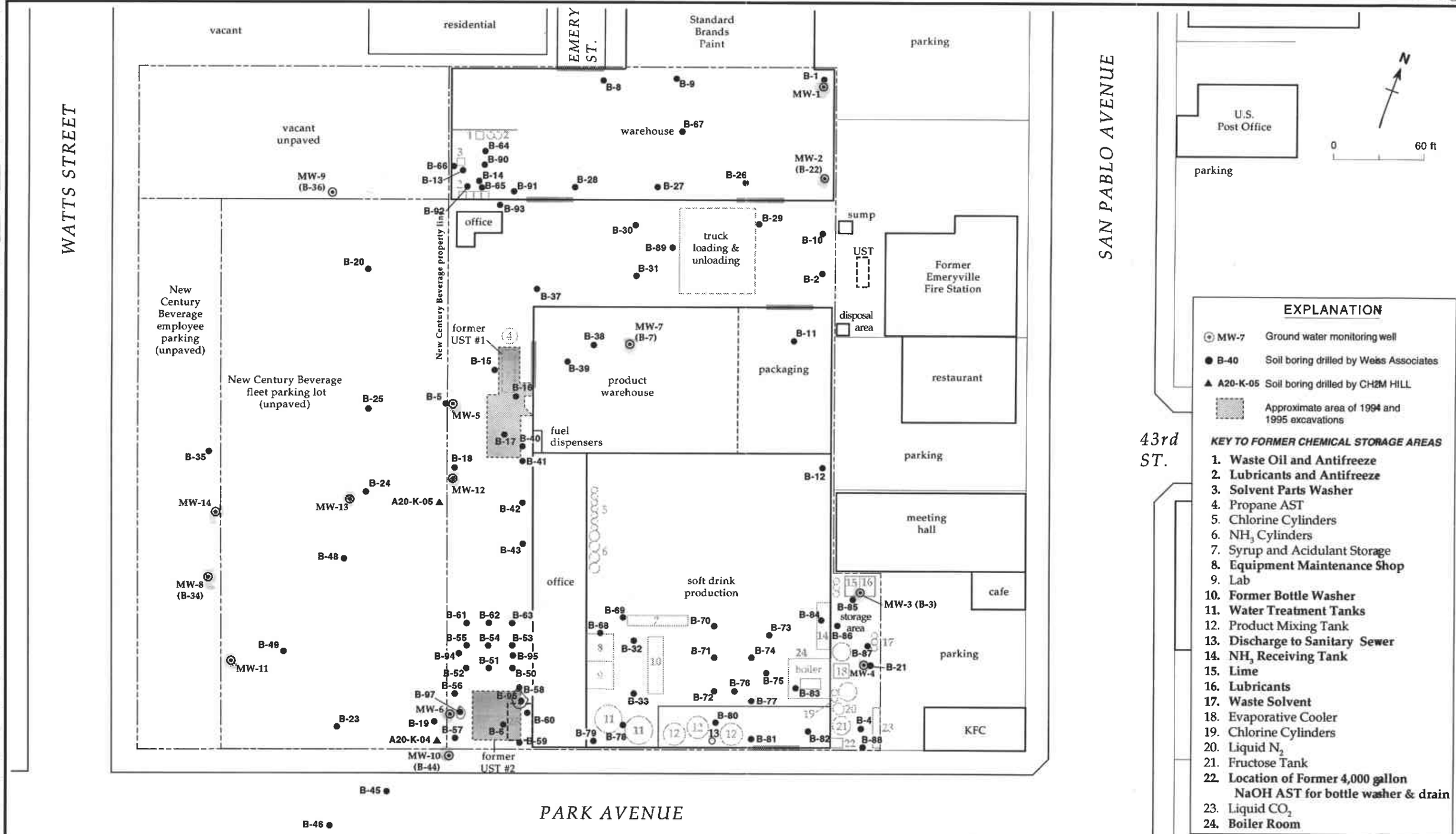


Figure 3. Benzene Isoconcentration Contours in Ground Water - September 26, 1996 - New Century Beverage Company, 1150 Park Avenue, Emeryville, California



EXPLANATION

- MW-7 — Ground water monitoring well
- B-40 — Soil boring drilled by Weiss Associates
- A20-K-05 — Soil boring drilled by CH2M HILL
- Approximate area of 1994 and 1995 excavations

KEY TO FORMER CHEMICAL STORAGE AREAS

1. **Waste Oil and Antifreeze**
2. **Lubricants and Antifreeze**
3. **Solvent Parts Washer**
4. Propane AST
5. Chlorine Cylinders
6. NH_3 Cylinders
7. Syrup and Acidulant Storage
8. **Equipment Maintenance Shop**
9. Lab
10. **Former Bottle Washer**
11. **Water Treatment Tanks**
12. Product Mixing Tank
13. **Discharge to Sanitary Sewer**
14. **NH_3 Receiving Tank**
15. **Lime**
16. **Lubricants**
17. **Waste Solvent**
18. Evaporative Cooler
19. Chlorine Cylinders
20. Liquid N_2
21. Fructose Tank
22. **Location of Former 4,000 gallon NaOH AST for bottle washer & drain**
23. Liquid CO_2
24. **Boiler Room**

Figure 4. Ground Water Monitoring Well and Soil Boring Locations - Former New Century Beverage Company Facility, 1150 Park Avenue, Emeryville, California

TABLES

Table 1. Historical Ground Water Elevations, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California.

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	03/27/94	38.74	5.90	32.84
	03/29/94		5.89	32.85
	04/15/94		6.24	32.50
	05/20/94		5.79	32.95
	02/28/95		5.13	33.61
	06/27/95		7.69	31.05
	09/21/95		8.25	30.19
	12/20/95		5.94	32.80
	03/27/96		4.96	33.78
	06/25/96		6.81	31.93
	09/26/96		**8.83**	**29.91**
MW-2	03/27/94	38.87	6.57	32.30
	03/29/94		6.58	32.29
	04/15/94		6.86	32.01
	05/20/94		6.45	32.42
	02/28/95		5.64	33.23
	06/27/95		7.34	31.53
	09/21/95		8.80	30.07
	12/20/95		6.81	32.06
	03/27/96		5.78	33.09
	06/25/96		7.34	31.53
	09/26/96		**9.46**	**29.41**
MW-3	03/29/94	40.79	10.69	30.10
	04/15/94		10.90	29.89
	05/20/94		10.81	29.98
	02/28/95		10.35	30.44
	06/27/95		10.43	30.36
	09/21/95		10.65	30.14
	12/20/95		10.65	30.14
	03/27/96		10.50	30.29
	06/25/96		10.73	30.06
	09/26/96		**12.21**	**28.58**
MW-4	03/27/94	40.15	8.23	31.92
	03/29/94		8.21	31.94
	04/15/94		8.78	31.37
	05/20/94		8.54	31.61
	02/28/95		7.71	32.44
	06/27/95		7.90	32.25
	09/21/95		8.50	31.65
	12/20/95		8.05	32.10
	03/27/96		7.74	32.41
	06/25/96		8.29	31.86
	09/26/96		**9.96**	**30.19**

Table 1. Historical Ground Water Elevations, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California.

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-5	03/27/94	36.49	8.02	28.47
	03/29/94		7.93	28.56
	04/15/94		8.10	28.39
	05/20/94		7.88	28.61
	10/20/94		9.45	27.04
	02/28/95		7.57	28.92
	06/27/95		8.99	27.50
	09/21/95		9.56	26.91
	12/20/95		9.02	27.47
	03/27/96		7.60	28.89
	06/25/96		8.70	27.79
	09/26/96		**10.23**	**26.26**
MW-6	03/27/94	35.52	9.60	25.92
	03/29/94		9.59	25.93
	04/15/94		9.64	25.88
	05/20/94		9.47	26.05
	10/20/94		10.51	25.01
	02/28/95	35.53[1]	8.54	26.99
	06/27/95		10.02	25.51
	09/21/95		10.47	25.05
	12/20/95 [a]		---	---
	03/27/96 [b]		9.01	---
	06/25/96	35.48[2]	9.96	25.52
	09/26/96		**10.95**	**24.53**
MW-7	03/27/94	37.53	7.25	30.28
	03/29/94		7.27	30.26
	04/15/94		7.47	30.06
	05/20/94		7.25	30.28
	10/20/94		8.87	28.66
	02/28/95		6.89	30.64
	06/27/95		7.90	29.63
	09/21/95		8.81	28.72
	12/20/95		7.10	30.43
	03/27/96		6.67	30.86
	06/25/96		8.01	29.52
	09/26/96		**9.58**	**27.95**
MW-8	04/05/94	33.11	9.03	24.08
	04/15/94		8.94	24.17
	05/20/94		8.70	24.41
	10/20/94		10.00	23.11
	02/28/95		8.48	24.63
	06/27/95		9.64	23.47
	09/21/95		9.83	23.28

Table 1. Historical Ground Water Elevations, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California.

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-8 cont.	12/20/95		8.80	24.31
	03/27/96		8.83	24.28
	06/25/96		10.11	23.00
	09/26/96		**11.14**	**21.97**
MW-9	04/05/94	36.06	7.60	28.46
	04/15/94		7.60	28.46
	05/20/94		7.39	28.67
	02/28/95		6.85	29.21
	06/27/95		8.31	27.75
	09/21/95		8.75	27.31
	12/20/95		7.73	28.33
	03/27/96		7.48	28.58
	06/25/96		8.18	27.88
	09/26/96		**9.71**	**26.35**
MW-10	10/20/94	35.03	10.14	24.89
	02/28/95		8.98	26.05
	06/27/95		9.59	25.44
	09/21/95		10.00	25.03
	12/20/95		8.88	26.15
	03/27/96		8.98	26.05
	06/25/96		9.74	25.29
	09/26/96		**10.67**	**24.36**
MW-11	10/20/94	32.74	9.71	23.03
	02/28/95		7.66	25.08
	06/27/95		8.86	23.88
	09/21/95		9.44	23.30
	12/20/95		8.81	23.93
	03/27/96		8.07	24.67
	06/25/96		9.72	23.02
	09/26/96		**10.74**	**22.00**
MW-12	10/20/94	36.18	12.66	23.52
	02/28/95		7.60	28.58
	06/27/95		9.56	26.62
	09/21/95		10.17	26.01
	12/20/95		8.19	27.99
	03/27/96		8.66	27.52
	06/25/96		9.63	26.55
	09/26/96		**10.90**	**25.28**
MW-13	02/28/95	34.65	8.72	25.93
	06/27/95		8.99	25.66
	09/21/95		10.37	24.28
	12/20/95		10.20	24.45

Table 1. Historical Ground Water Elevations, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California.

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-13	03/27/96		9.22	25.43
cont.	06/25/96		11.16	23.49
	09/26/96		**11.26**	**23.39**
MW-14	06/27/95	33.68	9.88	23.80
	09/21/95		10.07	23.61
	12/20/95		9.02	24.66
	03/27/96		9.15	24.53
	06/25/96		10.08	23.60
	09/26/96		**11.39**	**22.29**

Notes:

[1] Resurveyed 3/13/95.

[2] Resurveyed 5/3/96 by PLS Surveys, Inc., Alameda, CA.

[a] Well MW-6 damaged by excavation, therefore no water level was taken at MW-6 on 12/20/95.

[b] Well MW-6 was repaired 1/5/96. Well MW-6 top-of-casing elevation will be resurveyed during 5/96.

No ground water elevation calculated at well on 3/27/96

Table 2. Ground Water Analytical Results, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California.

Well/ Boring ID	Date Sampled	TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	Other HVOCs	MTBE
		<---------- parts per million (ug/L) ----------									
MW-1	03/29/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND	---
	05/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	---
MW-2	03/29/94	2.4	37 (D)	0.017	ND (0.001)	0.005	0.015	ND	ND	ND	---
	05/20/94	1.9	6.7	0.021	0.0086	0.0061	0.0059	ND	ND	ND	---
MW-3	03/29/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND	---
	05/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	---
MW-4	03/29/94	0.13	ND (1)	ND	ND	ND	ND	ND	ND	0.017 CB 0.004 1,2-DCB	---
	05/20/94	0.22	[b]	0.0006	0.0015	0.0011	0.0035	ND	ND	0.017 CB 0.005 1,2-DCB	---
	06/01/94	---	ND	---	---	---	---	---	---		---
MW-5	03/29/94	2.1	30 (K)	0.39	ND (0.003)	ND (0.003)	0.18	ND	ND	ND	---
	05/20/94	2.3	2.7 (D)	0.49	0.005	0.033	0.23	ND	ND	ND	---
	10/20/94	0.77	9(K)	0.23	ND(0.001)	0.019	0.077	---	---	---	---
split[d]	10/20/94	---	ND	---	---	---	---	---	---	---	---
	02/28/95	1.2	3.6 (D)	0.33	0.0016	0.041	0.013	---	---	---	---
	06/27/95	0.72	2.1 (D)	0.28	ND	ND	ND	---	---	---	ND
	09/21/95	0.71	3.5[g]	0.24	0.0021	0.045[j]	ND	---	---	---	---
	12/20/95	0.86	6.10[g]	0.28	0.003	0.039	0.0059	---	---	---	---
	03/27/96	1.6[g]	7.5[g]	0.38	0.0008	0.0017	0.031	---	---	---	---
	05/22/96[n]	---	---	0.27	0.0045	0.0026	0.01	---	---	---	---
	06/25/96	0.75	30[p]	0.18	0.0018	ND	0.0058	---	---	---	---
	09/26/96	**0.29**	**4.6**	**0.120**	**0.0033**	**0.0026**	**0.0091**	---	---	---	---
MW-6	03/29/94	ND	5 (D)	ND	ND	ND	ND	ND	ND	ND	---
	05/20/94	ND	2.4 (D)	ND	ND	ND	ND	ND	ND	ND	---
	10/20/94	0.055	ND	ND	ND	0.0021	0.0024	---	---	---	---
split[e]	10/20/94	---	0.27 (D)	---	---	---	---	---	---	---	---
	02/28/95	---	0.78 (D)	ND	ND	ND	ND	---	---	---	---
	06/27/95	ND	0.51 (D)	ND	ND	ND	ND	---	---	---	ND
	09/21/95	---	0.96[g,h]	ND	ND	ND	ND	---	---	---	---
	12/20/95[k]										

Table 2. Ground Water Analytical Results, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California. (continued)

Well/ Boring ID	Date Sampled	TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	Other HVOCs	MTBE
		<---------- parts per million (mg/L) ---------->									
MW-6	03/27/96	---	1.5[g,h]	0.0009	ND	ND	ND	---	---	---	---
(cont.)	05/22/96[n]	---	---	ND	ND	ND	ND	---	---	---	---
	06/25/96	ND	1.3[q]	ND	ND	ND	ND	---	---	---	---
	09/26/96	**---**	**140**	**ND**	**ND**	**ND**	**ND**	**---**	**---**	**---**	**---**
MW-7	03/29/94	0.16	ND (1)	ND	ND	ND	ND	ND	ND	ND	---
dup	03/29/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND	---
	05/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	---
split[a]	05/20/94	ND	ND	ND	ND	ND	ND	ND (0.0005)	ND (0.0005)	ND	---
dup	05/20/94	ND	[b]	ND	ND	ND	ND	ND	ND	ND	---
	06/01/94	---	ND	---	---	---	---	---	---	---	---
	10/20/94	ND	ND	ND	ND	ND	ND	---	---	---	---
	02/28/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	06/27/95	ND	ND	ND	ND	ND	ND	---	---	---	ND
	09/21/95	ND	0.110[g]	ND	ND	ND	ND	---	---	---	ND
	12/20/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	03/27/96	ND	ND	ND	ND	ND	ND	---	---	---	ND
	06/25/96	ND	0.1[r]	ND	0.0032	ND	0.0006	---	---	---	ND
	09/26/96	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**---**	**---**	**---**	**ND**
MW-8	04/05/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND	---
split[a]	04/05/94	ND(0.01)	ND (1)	ND(0.0003)	0.0004	ND(0.0003)	ND(0 0003)	ND	ND	ND	---
	05/20/94	ND	ND[c]	ND	ND	ND	ND	ND	ND	ND	---
	10/20/94	ND	ND	ND	ND	ND	ND	---	---	---	---
split[e]	10/20/94	---	ND	---	---	---	---	---	---	---	---
	02/28/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	06/27/95	ND	ND	ND	ND	ND	ND	---	---	---	ND
	09/21/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	12/20/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	03/27/96	ND	ND	ND	ND	ND	ND	---	---	---	---
	06/25/96	ND	0.06[r]	ND	ND	ND	ND	---	---	---	---
	09/26/96	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**---**	**---**	**---**	**---**
MW-9	04/05/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND	---
	05/20/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	---
MW-10	10/20/94	ND	ND	ND	ND	ND	ND	---	---	---	---

Table 2. Ground Water Analytical Results, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California. (continued)

Well/ Boring ID	Date Sampled	TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	Other HVOCs	MTBE
		<---------- parts per million (mg/L) ----------									
split[e]	10/20/94	---	ND	---	---	---	---	---	---	---	---
	02/28/95	---	ND	ND	ND	ND	ND	---	---	---	---
MW-10	06/27/95	ND	ND	ND	ND	ND	ND	---	---	---	ND
(cont.)	09/21/95	---	ND	ND	ND	ND	ND	---	---	---	---
	12/20/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	03/27/96	---	ND	ND	ND	ND	ND	---	---	---	---
	06/25/96	---	0.07[r]	ND	ND	ND	ND	---	---	---	---
	09/26/96	**---**	**ND**	**ND**	**ND**	**ND**	**ND**	**---**	**---**	**---**	**---**
MW-11	10/20/94	ND	ND	ND	ND	ND	ND	---	---	---	---
split[d]	10/20/94	ND	ND	ND(0.0003)	ND(0.0003)	ND(0.0003)	ND	---	---	---	---
	02/28/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	06/27/95	ND	ND	ND	ND	ND	ND	---	---	---	ND
	09/21/95	ND	0.10[g,t]	ND	ND	ND	ND	---	---	---	---
	12/20/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	03/27/96	ND	ND	ND	ND	ND	ND	---	---	---	---
	06/25/96	ND	0.05[r]	ND	ND	ND	ND	---	---	---	---
	09/26/96	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**---**	**---**	**---**	**---**
MW-12	10/20/94	0.087	0.13(K)	0.0063	ND	0.0014	0.0027	---	---	---	---
split[d]	10/20/94	0.057	ND	0.0073	ND(0.0003)	0.0016	0.0029	---	---	---	---
	02/28/95	0.16	0.077 (K)	0.018	ND	0.0028	0.0027	---	---	---	---
	06/27/95	ND	0.16 (K)	0.011	ND	ND	0.0009	---	---	---	ND
	09/21/95	ND	0.14[g,t]	0.0015	ND	ND	ND	---	---	---	---
	12/20/95	2.8	0.61[g,t]	0.420	0.018	0.170	0.500	---	---	---	---
	03/27/96	0.5[g]	0.38[g]	0.05	0.0009	0.018	0.0051	---	---	---	---
	05/22/96[n]	---	---	0.034	ND	0.013	0.0051	---	---	---	---
	06/25/96	0.12	0.35[q,s]	0.0093	ND	0.0027	0.0013	---	---	---	---
	09/26/96	**ND**	**0.140 [g,t]**	**0.0024**	**ND**	**ND**	**ND**	**---**	**---**	**---**	**---**
MW-13	02/28/95	5.8	1.0 (K)	0.76	0.021	0.049	0.58	---	---	---	---
dup	02/28/95	6.3	0.74 (K)	0.77	0.013	0 058	0.58	---	---	---	---
	06/27/95	4.7	0.35 (K)	1.6	0.01	0.26	0.40	---	---	---	ND (0.036)
dup	06/27/95	3.8	0.32 (K)	2.0	ND (0.018)	0.27	0.39	---	---	---	ND (0.072)
	09/21/95	4.1	0.34[g,t]	1.1	0.0034	0.15	0.123	---	---	---	---
	09/21/95	3.7	0.40[g,t]	1.1	0.008	0.13	0.158	---	---	---	---
	12/20/95	4.5	0.15[g]	1.7	0.012	0.16	0.273	---	---	---	---

Table 2. Ground Water Analytical Results, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California. (continued)

Well/ Boring ID	Date Sampled	TVH-G	TEH	Benzene	Toluene	Ethyl-benzene	Xylenes	1,2-DCA	PCE	Other HVOCs	MTBE
		<---------- parts per million (mg/L) ---------->									
dup	12/20/95	3.5	0.59[g,l]	1.2	0.013	0.086	0.258	---	---	---	---
dup	03/27/96	4.8[g]	0.23[g]	0.98	0.0041	0.12	0.16	---	---	---	---
	03/27/96	4.3[g]	0.39[g]	1.1	0.0031	0.13	0.13	---	---	---	---
MW-13	05/22/96[n]	---	---	0.310	0.0011	0.039	0.016	---	---	---	---
(cont.)	06/25/96	1.6	0.48[q,s]	0.6	0.0011	0.67	0.23	---	---	---	---
dup	06/25/96	1.5	0.40[q,s]	0.5	0.0014	0.64	0.23	---	---	---	---
	09/26/96	**4.9**	**0.140** [g,i]	**1.4**	**ND**	**0.24**	**0.786**	---	---	---	---
dup	**09/26/96**	**1.3**	**0.072** [g,i]	**0.54**	**ND**	**0.081**	**0.188**	---	---	---	---
MW-14	06/27/95	ND	ND	ND	ND	ND	ND	---	---	---	ND
	09/21/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	12/20/95	ND	0.120[g]	ND	ND	ND	ND	---	---	---	---
	03/27/96	ND	ND	0.0029	ND	ND	ND	---	---	---	---
	05/03/96[n]	---	---	ND	ND	ND	ND	---	---	---	---
	05/07/96[o]	---	---	ND	ND	ND	ND	---	---	---	---
	06/25/96	ND	0.07[r]	ND	ND	ND	ND	---	---	---	---
	09/26/96	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	---	---	---	---
Travel Blank	03/29/94	ND	---	ND	ND	ND	ND	ND	ND	ND	---
	04/05/94	ND	---	ND	ND	ND	ND	ND	ND	ND	---
	05/20/94	ND	---	ND	ND	ND	ND	ND	ND	ND	---
	10/20/94	ND	---	ND	ND	ND	ND	---	---	---	---
split[d]	10/20/94	ND	---	ND(0.0003)	ND(0.0003)	ND(0.0003)	ND	---	---	---	---
split[e]	10/20/94	ND	---	ND	ND	ND	ND	---	---	---	---
	03/27/96[m]	---	---	ND	ND	ND	ND	---	---	---	---
Bailer Blank	03/29/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND	---
	04/05/94	ND	ND (1)	ND	ND	ND	ND	ND	ND	ND	---
	05/20/94	ND	0 42[b]	ND	ND	ND	ND	ND	ND	ND	---
	02/28/95	ND	ND	ND	ND	ND	ND	---	---	---	---
	06/27/95	ND	ND	ND	ND	ND	ND	---	---	---	ND
		0.05	0.05 (K,D)	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001-0.02	0.002
MCL		NE	NE	0.001	0.1[f]	0.68	1.75	0.0005	0.005	0.13 1,2-DCB[f] 0.03 CB	NE

Table 2. Ground Water Analytical Results, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California (continued)

Abbreviations:

TVH-G = Total volatile hydrocarbons as gasoline detected by EPA Method 8015, modified by DHS note: Mineral spirits were also screened with this method for analyses prior to 10/20/94, however, all detectable TVH was characterized as gasoline.
TEH = Total extractable hydrocarbons [kerosene (K) and diesel (D)] detected by EPA Method 8015, modified per DHS notes: Hydraulic oil and motor oil were also screened with this method for analyses prior to 10/20/94, however, all detected TEH was characterized as kerosene or diesel. All reported kerosene-range TEH was characterized as a fraction of gasoline compounds by the analytical laboratory.
BTEX = Benzene, toluene, ethylbenzene, and xylenes.
HVOCs = Halogenated volatile organic compounds detected by EPA Method 8010
MTBE = Methyl-tert-butyl ether by EPA Method 8020
ND = Not detected at standard detection limit specified on the last row of the table
ND(**n**) = Not detected at detection limit of **n** ppm, due to dilution of sample prior to analysis
--- = Not analyzed
MCL = Maximum Contaminant Level for Drinking Water established by the California Department of Toxic Substances Control
NE = Not established

Notes:

Benzene, toluene, ethylbenzene, xylenes and MTBE were analyzed by EPA Method 8020.
Analyses performed by Curtis & Tompkins, Ltd. of Berkeley, CA except as noted (CA DHS certification # 1459)

a. Split duplicate analysis performed by GTEL Environmental Laboratories, Inc. of Concord, CA (CA DHS certification # E1075)

b. TEH as diesel was detected at 0.42 ppm in the bailer blank collected on 5/20/94, and similar concentrations were reported in well MW-4 (0.31 ppm) and MW-7 (0.45 ppm) samples. Since no TEH was detected in earlier MW-4 and MW-7 samples, this indicated the samples were contaminated with the sampling equipment. Samples were collected in wells MW-4 and MW-7 again on 6/01/94, and no TEH was detected in either sample, consistent with the 3/94 results.

Notes (cont.):

c. Although no TEH as diesel, kerosene or motor oil was reported, the laboratory reported a single peak on the gas chromatogram that was identified as pentatriacontane (a nonhazardous alkaline or paraffin organic compound C36H74) using EPA Method 8270 (Gas chromatography with Mass spectrometry)
d. Split duplicate analysis performed by WEST Laboratory of Sacramento, CA (CA DHS certification #1346)
e. Split duplicate analysis performed by Superior Precision Analytical Laboratories, Inc. of Martinez, CA (CA DHS certification #1542)
f. DTSC Recommended Action Level - no MCL established
g. Sample exhibits fuel pattern that does not resemble standard
h. Heavier hydrocarbons than indicated standard
i. Lighter hydrocarbons than indicated standard
j. Presence of this compound confirmed by second column; however, the confirmation concentration differed from the reported result by more than a factor of two
k. Well MW-6 damaged by excavation. Not sampled 12/20/95. Repaired 1/5/96.
l. Sample exhibits single unknown peak or peaks
m. Sample analyzed after expiration of holding time.
n. Analyses performed by Superior Analytical Laboratory, Martinez, California
o. Analyses performed by Sequoia Analytical, Walnut Creek, California
p. Lighter hydrocarbons were found in the range of diesel, but do not resemble a diesel fingerprint.
q. The pattern of the chromatogram resembles a weathered, aged or degraded diesel petroleum hydrocarbon
r. Heavier hydrocarbons were found in the range of diesel, but do not resemble a diesel fingerprint. Possible motor oil.
s. Sample also contains gasoline

Table 3. Polynuclear Aromatic Hydrocarbons in Ground Water, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California.

Well ID	Date Sampled	Naphthalene	Fluoranthene	Fluorene	Pyrene
		<----------parts per million---------->			
MW-1	07/29/96	ND	ND	ND	ND
MW-2	07/29/96	ND	ND	ND	ND
MW-5	06/25/96	ND	0.0005	0.0034	0.0005
MW-6	06/25/96	ND	ND	ND	ND
MW-13	06/25/96	0.0041	ND	0.0003	ND

Notes:

ND = Not detected above laboratory detection limit.

Table 4. Analytic Results for Soil Samples, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California - November 1995.

Boring ID	Boring Interval	Date Sampled	Unsaturated/ Saturated	TVPH-G	TEPH	Benzene	Toluene	Ethylbenzene	Xylenes
				<---------- Parts per million ---------->					
B50-5	4.25-5.0	11/30/95	Unsat.	<1	<1	<0.005	<0.005	<0.005	<0 005
B50-8	7.3-8.0	11/30/95	Unsat.	**3**	**540(D)**	<0.005	<0.005	<0.005	**0.039**
B50-10	*9.25-10.0*	*11/30/95*	*Sat.*	***7***	***490(D)***	*<0.005*	*<0.005*	*<0.005*	***0.11***
B51-5	4.3-5.0	11/30/95	Unsat.	<1	<1	<0.005	**0.009**	<0.005	**0.006**
B51-8	7.3-8.0	11/30/95	Unsat.	**5**	**560(D)**	<0.005	<0.005	<0.005	**0.068**
B51-10	*9.0-10.0*	*11/30/95*	*Sat.*	***6***	***480(D)***	*<0.005*	*<0.005*	*<0.005*	***0.079***
B52-5	4.65-5.0	11/30/95	Unsat.	<1	**27(D)**	<0.005	<0.005	<0.005	<0.005
B52-8	7.2-8.0	11/30/95	Unsat.	**3**	**440(D)**	<0.005	<0.005	<0.005	**0.046**
B52-10	*9.1-10.0*	*11/30/95*	*Sat.*	***12***	***110(D)***	*<0.005*	*<0.005*	*<0.005*	***0.16***
B53-5	4.25-5.0	11/30/95	Unsat.	<1	**1.4(D)**	<0.005	<0.005	<0.005	<0.005
B53-7	6.6-7.0	11/30/95	Unsat.	<1	**1(D)**	<0.005	<0.005	<0.005	<0.005
B53-10	*9.15-10.0*	*11/30/95*	*Sat.*	***5***	[illegible]	*<0.005*	*<0.005*	*<0.005*	***0.056***
B54-5	4.35-5.0	11/30/95	Unsat.	<1	<1	<0.005	<0.005	<0.005	<0.005
B54-8	7.35-8.0	11/30/95	Unsat.	<1	**16(D)**	<0.005	<0.005	<0.005	<0.005
B54-10	*9.35-10.0*	*11/30/95*	*Sat.*	***6***	[illegible]	*<0.005*	*<0.005*	*<0.005*	***0.089***
B55-5	4.4-5.0	11/30/95	Unsat.	<1	**2.1(D)**	<0.005	<0.005	<0.005	<0.005
B55-8	7.4-83.0	11/30/95	Unsat.	<1	**120(D)**	<0.005	**0.009**	<0.005	**0.010**
B55-10	*9.35-10.0*	*11/30/95*	*Sat.*	***8***	[illegible]	*<0 005*	*<0.005*	*<0 005*	***0.12***
B56-5	NR	11/30/95	Unsat.	---	---	---	---	---	---
B56-8	7.35-8.0	11/30/95	Unsat.	**2**	**510(D)**	<0.005	<0.005	<0.005	<0.005
B56-10	*9.4-10.0*	*11/30/95*	*Sat*	***3***	***880(D)***	*<0.005*	*<0.005*	*<0.005*	***0.044***
B57-5	4.45-5.0	11/30/95	Unsat.	<1	**1.2(D)**	<0.005	<0.005	<0.005	<0.005
B57-8	7.3-8.0	11/30/95	Unsat.	<1	**140(D)**	<0.005	<0.005	<0.005	<0.005
B57-10	*9.4-10.0*	*11/30/95*	*Sat.*	***5***	[illegible]	*<0.005*	*<0.005*	*<0.005*	***0.064***
B58-5	4.2-5.0	11/30/95	Unsat.	**3**	**830(D)**	<0.005	<0.005	<0.005	0.041
B58-8	7.35-8.0	11/30/95	Unsat.	**4**	[illegible]	<0.005	<0.005	<0.005	0.048
B58-10	*9.3-10.0*	*11/30/95*	*Sat.*	***7***	***980(D)***	*<0.005*	*0.007*	*0.031*	*0.09*
B59-5	4.4-5.0	11/30/95	Unsat.	<1	**1.4(D)**	<0.005	<0.005	<0.005	<0.005
B59-8	7.3-8.0	11/30/95	Unsat.	<1	<1	<0.005	<0.005	<0.005	<0.005
B59-10	*9.3-10.0*	*11/30/95*	*Sat.*	*<1*	*<1*	*<0.005*	*<0.005*	*<0 005*	*<0 005*
B60-5	NR	11/30/95	Unsat.	---	---	---	---	---	---
B60-8	7.6-8.0	11/30/95	Unsat.	<1	**95(D)**	<0.005	<0.005	<0.005	<0.005
B60-10	*9.5-10.0*	*11/30/95*	*Sat.*	*2*	[illegible]	*<0 005*	*<0 005*	*<0 005*	*<0.005*
B61-5	4.25-5.0	11/30/95	Unsat.	<1	**1.8(D)**	<0.005	<0.005	<0.005	<0.005
B61-8	7.35-8.0	11/30/95	Unsat.	<1	**3.2(D)**	<0.005	<0.005	<0.005	<0.005
B61-10	*9.3-10.0*	*11/30/95*	*Sat.*	***21***	[illegible]	[illegible]	***0.031***	*<0.005*	***0.14***

Table 4. Analytic Results for Soil Samples, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California - November 1995.

Boring ID	Boring Interval	Date Sampled	Unsaturated/ Saturated	TVPH-G	TEPH	Benzene	Toluene	Ethylbenzene	Xylenes
				<---------- Parts per million---------->					
B62-5	4.45-5.0	11/30/95	Unsat.	<1	**1.2(D)**	<0.005	<0.005	<0.005	<0.005
B62-7	6.55-8.0	11/30/95	Unsat.	<1	**1.6(D)**	<0.005	<0.005	<0.005	<0.005
B62-10	*9.2-10.0*	*11/30/95*	*Sat.*	*5*	***560(D)***	*<0.005*	*<0.005*	*<0.005*	***0.061***
B63-3	3.2-3.8	11/30/95	Unsat.	<1	**1.9(D)**	<0 005	<0.005	<0.005	<0.005
B63-8	7.2-8.0	11/30/95	Unsat.	<1	<1	**0.009**	**0.04**	**0.007**	**0.033**
B63-10	*9.3-10.0*	*11/30/95*	*Sat*	*<1*	***1.1(D)***	*<0.005*	*<0.005*	*<0.005*	*<0.005*
PRG							1.9	870	3,400
MCL							0.001	0.1*	0.68

Abbreviations.

Sat/Usat = Indicates whether or not sample was saturated with ground water
TVPH-G = Total volatile petroleum hydrocarbons as gasoline detected by EPA Method 8015, modified per California Department of Health Services (DHS). Note. Mineral spirits were also screened with this method, however, all detected TVPH were characterized as gasoline.
TEPH = Total extractable petroleum hydrocarbons [kerosene (K), diesel (D), and motor oil (MO) range] detected by EPA Method 8015, modified by DHS Note: Hydraulic oil was also screened with this method, however, no hydraulic oil was reported in any samples
NR = No recovery at time of sampling
--- = Not analyzed
PRG = US EPA Region IX Preliminary Remediation Goal for residential soil
MCL = California Maximum Contaminant Level for Drinking Water established by the California Department of Toxic Substances Control (DTSC)

Notes.

Analyses performed by Superior Analytical Laboratory of Martinez, California
*DTSC Recommended Action Level - no MCL established

Table 5. Hydrocarbons and pH in Soil, Former New Century Beverage Facility, 1150 Park Avenue, Emeryville, California - July 1996.

Borehole-Sample Depth (ft)	Date Samped	Analytic Lab	pH	TEPH-D	TEPH-U	TVPH-G	TVPH-U	PNA
				<---------- parts per million ---------->				
B96-1.5	07/29/96	SAL	---	340.0	nf	---	---	nf
B96-7.5	07/29/96	SAL	---	880.0	---	---	---	nf
B97-1.5	07/29/96	SAL	---	<1	nf	---	---	nf
B97-7.5	07/29/96	SAL	---	460.0	---	---	---	nf

Abbreviations:

TEPH-D = Total Extractable Petroleum Hydrocarbons - Diesel
TEPH-U = Total Extractable Petroleum Hydrocarbons - Unknown hydrocarbons
TVPH-G = Total Volatile Petroleum Hydrocarbons - Gasoline range
TVPH-U = Total Volatile Petroleum Hydrocarbons - Unknown hydrocarbons
PNA = Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3550
SAL = Superior Analytical Laboratory, Martinez, California
--- = Not analyzed
nf = None found

ATTACHMENT A

LABORATORY ANALYTIC REPORTS AND CHAIN-OF-CUSTODY FORMS

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

ANALYTICAL REPORT

Prepared for:

Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608

Date: 04-OCT-96
Lab Job Number: 126988
Project ID: 14-0307-19
Location: N/A

Reviewed by: Damara Moore

Reviewed by: _____

TEH-Tot Ext Hydrocarbons

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126988-001	3Q7-05	30174	09/26/96	10/01/96	10/02/96	
126988-002	3Q7-08	30174	09/26/96	10/01/96	10/02/96	
126988-003	3Q7-11	30174	09/26/96	10/01/96	10/03/96	
126988-004	3Q7-12	30174	09/26/96	10/01/96	10/03/96	

Matrix: Water

		MW-5	MW-8	MW-11	MW-12
Analyte	Units	126988-001	126988-002	126988-003	126988-004
Diln Fac:		1	1	1	1
Diesel C12-C22	ug/L	4600 Y	<50	<50	140 YL
Surrogate					
Hexacosane	%REC	111	104	97	103

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

TEH-Tot Ext Hydrocarbons

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126988-005	3Q7-13	30174	09/26/96	10/01/96	10/03/96	
126988-006	3Q7-15	30174	09/26/96	10/01/96	10/03/96	
126988-007	3Q7-14	30174	09/26/96	10/01/96	10/03/96	
126988-008	3Q7-06	30174	09/26/96	10/01/96	10/03/96	

Matrix: Water

		MW-13	MW-13dup	MW-14	MW-6
Analyte	Units	126988-005	126988-006	126988-007	126988-008
Diln Fac:		1	1	1	100
Diesel C12-C22	ug/L	140 YL	72 YL	<50	140000
Surrogate					
Hexacosane	%REC	119	104	100	DO

DO: Surrogate diluted out
Y: Sample exhibits fuel pattern which does not resemble standard
L: Lighter hydrocarbons than indicated standard

TEH-Tot Ext Hydrocarbons

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126988-009	3Q7-10	30174	09/26/96	10/01/96	10/03/96	
126988-010	3Q7-07	30174	09/26/96	10/01/96	10/03/96	

Matrix: Water

Analyte	Units	126988-009 (MW-10)	126988-010 (MW-7)
Diln Fac:		1	1
Diesel C12-C22	ug/L	<50	<50
Surrogate			
Hexacosane	%REC	103	101

Curtis & Tompkins, Ltd.

Lab #: 126988 BATCH QC REPORT

TEH-Tot Ext Hydrocarbons	
Client: Weiss Associates	Analysis Method: CA LUFT (EPA 8015M)
Project#: 14-0307-19	Prep Method: EPA 3520

METHOD BLANK

Matrix: Water	Prep Date: 10/01/96
Batch#: 30174	Analysis Date: 10/02/96
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC31776

Analyte	Result	
Diesel C12-C22	<50	
Surrogate	**%Rec**	**Recovery Limits**
Hexacosane	106	60-140

Curtis & Tompkins, Ltd.

Lab #: 126988 BATCH QC REPORT

TEH-Tot Ext Hydrocarbons	
Client: Weiss Associates	Analysis Method: CA LUFT (EPA 8015M)
Project#: 14-0307-19	Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water	Prep Date: 10/01/96
Batch#: 30174	Analysis Date: 10/02/96
Units: ug/L	
Diln Fac: 1	

BS Lab ID: QC31777

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	2214	89	60-140
Surrogate	%Rec	Limits		
Hexacosane	105	60-140		

BSD Lab ID: QC31778

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	2495	101	60-140	12	35
Surrogate	%Rec	Limits				
Hexacosane	119	60-140				

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: Weiss Associates
Project#: 14-0307-19

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126988-001	3Q7-05	30196	09/26/96	10/03/96	10/03/96	
126988-002	3Q7-08	30196	09/26/96	10/03/96	10/03/96	
126988-003	3Q7-11	30196	09/26/96	10/03/96	10/03/96	
126988-004	3Q7-12	30196	09/26/96	10/03/96	10/03/96	

Matrix: Water

		MW-5	MW-8	MW-11	MW-12
Analyte	Units	126988-001	126988-002	126988-003	126988-004
Diln Fac:		1	1	1	1
Gasoline	ug/L	290	<50	<50	<50
Surrogate					
Trifluorotoluene	%REC	93	93	94	95
Bromobenzene	%REC	126 *	88	89	91

* Values outside of QC limits

BTXE

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126988-001	3Q7-05	30196	09/26/96	10/03/96	10/03/96	
126988-002	3Q7-08	30196	09/26/96	10/03/96	10/03/96	
126988-003	3Q7-11	30196	09/26/96	10/03/96	10/03/96	
126988-004	3Q7-12	30196	09/26/96	10/03/96	10/03/96	

Matrix: Water

Analyte	Units	126988-001	126988-002	126988-003	126988-004
Diln Fac:		1	1	1	1
Benzene	ug/L	120	<0.5	<0.5	2.4C
Toluene	ug/L	3.3	<0.5	<0.5	<0.5
Ethylbenzene	ug/L	2.6	<0.5	<0.5	<0.5
m,p-Xylenes	ug/L	1.8	<0.5	<0.5	<0.5
o-Xylene	ug/L	7.3	<0.5	<0.5	<0.5
Surrogate					
Trifluorotoluene	%REC	95	97	99	100
Bromobenzene	%REC	101	99	100	101

C: Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two

TVH-Total Volatile Hydrocarbons

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126988-005	3Q7-13	30196	09/26/96	10/03/96	10/03/96	
126988-006	3Q7-15	30196	09/26/96	10/03/96	10/03/96	
126988-007	3Q7-14	30196	09/26/96	10/03/96	10/03/96	
126988-010	3Q7-07	30196	09/26/96	10/03/96	10/03/96	

Matrix: Water

		MW-13	MW-13dup	MW-14	MW-7
Analyte	Units	126988-005	126988-006	126988-007	126988-010
Diln Fac:		10	5	1	1
Gasoline	ug/L	4900	1300	<50	<50
Surrogate					
Trifluorotoluene	%REC	94	95	95	91
Bromobenzene	%REC	91	91	88	87

BTXE

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126988-005	3Q7-13	30196	09/26/96	10/03/96	10/03/96	
126988-006	3Q7-15	30196	09/26/96	10/03/96	10/03/96	
126988-007	3Q7-14	30196	09/26/96	10/03/96	10/03/96	
126988-010	3Q7-07	30196	09/26/96	10/03/96	10/03/96	

Matrix: Water

Analyte	Units	126988-005 (MW-13)	126988-006 (MW-13 DUP)	126988-007 (MW-14)	126988-010 (MW-7)
Diln Fac:		10	5	1	1
Benzene	ug/L	1400	540	<0.5	<0.5
Toluene	ug/L	<5	<2.5	<0.5	<0.5
Ethylbenzene	ug/L	240	81	<0.5	<0.5
m,p-Xylenes	ug/L	730	170	<0.5	<0.5
o-Xylene	ug/L	56	18	<0.5	<0.5
Surrogate					
Trifluorotoluene	%REC	97	99	98	96
Bromobenzene	%REC	99	100	99	98

BTXE

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
126988-008	3Q7-06	30196	09/26/96	10/03/96	10/03/96	
126988-009	3Q7-10	30196	09/26/96	10/03/96	10/03/96	

Matrix: Water

Analyte	Units	126988-008 (MW-6)	126988-009 (MW-10)
Diln Fac:		1	1
Benzene	ug/L	<0.5	<0.5
Toluene	ug/L	<0.5	<0.5
Ethylbenzene	ug/L	<0.5	<0.5
m,p-Xylenes	ug/L	<0.5	<0.5
o-Xylene	ug/L	<0.5	<0.5
Surrogate			
Trifluorotoluene	%REC	86	96
Bromobenzene	%REC	88	99

Curtis & Tompkins, Ltd.

Lab #: 126988 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Weiss Associates	Analysis Method: CA LUFT (EPA 8015M)
Project#: 14-0307-19	Prep Method: EPA 5030

METHOD BLANK

Matrix: Water	Prep Date: 10/02/96
Batch#: 30196	Analysis Date: 10/02/96
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC31853

Analyte	Result	
Gasoline	<50	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	92	69-120
Bromobenzene	83	70-122

Curtis & Tompkins, Ltd.

Lab #: 126988 BATCH QC REPORT

BTXE

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: EPA 8020
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 30196
Units: ug/L
Diln Fac: 1

Prep Date: 10/02/96
Analysis Date: 10/02/96

MB Lab ID: QC31853

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

Surrogate	%Rec	Recovery Limits
Trifluorotoluene	96	58-130
Bromobenzene	94	62-131

Curtis & Tompkins, Ltd.

Lab #: 126988 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 30196
Units: ug/L
Diln Fac: 1

Prep Date: 10/02/96
Analysis Date: 10/02/96

LCS Lab ID: QC31854

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	2062	2000	103	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	104	69-120
Bromobenzene	100	70-122

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

Curtis & Tompkins, Ltd.

Lab #: 126988 BATCH QC REPORT

BTXE	
Client: Weiss Associates	Analysis Method: EPA 8020
Project#: 14-0307-19	Prep Method: EPA 5030
LABORATORY CONTROL SAMPLE	
Matrix: Water	Prep Date: 10/02/96
Batch#: 30196	Analysis Date: 10/02/96
Units: ug/L	
Diln Fac: 1	

LCS Lab ID: QC31855

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	16.7	20	84	80-120
Toluene	18	20	90	80-120
Ethylbenzene	17.7	20	89	80-120
m,p-Xylenes	36.1	40	90	80-120
o-Xylene	18.3	20	92	80-120

Surrogate	%Rec	Limits
Trifluorotoluene	99	58-130
Bromobenzene	99	62-131

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

Lab #: 126988

BATCH QC REPORT

BTXE

Client: Weiss Associates
Project#: 14-0307-19

Analysis Method: EPA 8020
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: 3Q7-06
Lab ID: 126988-008
Matrix: Water
Batch#: 30196
Units: ug/L
Diln Fac: 1

Sample Date: 09/26/96
Received Date: 09/27/96
Prep Date: 10/03/96
Analysis Date: 10/03/96

MS Lab ID: QC31856

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Benzene	20	<0.5	16.6	83	75-125
Toluene	20	<0.5	17.8	89	75-125
Ethylbenzene	20	<0.5	18.1	91	75-125
m,p-Xylenes	40	<0.5	36.6	92	75-125
o-Xylene	20	<0.5	17.8	89	75-125

Surrogate	%Rec	Limits
Trifluorotoluene	96	58-130
Bromobenzene	100	62-131

MSD Lab ID: QC31857

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Benzene	20	17.1	86	75-125	3	20
Toluene	20	18.2	91	75-125	2	20
Ethylbenzene	20	18.2	91	75-125	1	20
m,p-Xylenes	40	37.2	93	75-125	2	20
o-Xylene	20	18.2	91	75-125	2	20

Surrogate	%Rec	Limits
Trifluorotoluene	97	58-130
Bromobenzene	100	62-131

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

WEISS ASSOCIATES
5500 Shellmound St., Emeryville, CA 94608
Phone: 415-547-5420 FAX: 415-547-5043

12698

Please send analytic results and a copy of the signed chain of custody form to: JIM PONTON

Project ID: 14-0307-19

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Lab Personnel: 1) Specify analytic method and detection limit in report.
2) Notify us if there are any anomalous peaks on GC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

Sampled by: DAVE CHARLES / PAUL CADDOZA Laboratory Name: CURTIS & TOMPKINS

	No. of Containers	Sample ID	Container Type	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
1	3	307-05	W/V	9/24/96	40 ml	N	Y	NONE	TVH-G / BETX	8015/8020	N	
2	3	307-08						HCL				
3	3	307-11										
4	3	307-12										
5	3	307-13										
6	3	307-15										
7	3	307-14							BETX			
8	3	307-06										
9	3	307-10							TVH-G / BETX / MTBE			ANALYZE FOR BETX ONLY IF BETX DETECTED IN 307-07, 307-08 OR 307-14
10	3	307-07							HOLD	HOLD		
11	3	307-16										

1 David Charl 9/24/96 1710
Released by (Signature), Date
1 Weiss Assoc.
Affiliation
2 [signature] 9/24/96 1740
Received by (Signature), Date
2 WEISS
Affiliation

3 [signature] 9/27/96 11:10
Released by (Signature), Date
3 WEISS
Affiliation
4 [signature]
Shipping Carrier, Method, Date
CGT 9/27/96 1120
4 Affiliation

5 Released by (Signature), Date
5 Affiliation
6 Received by Lab Personnel, Date
6 Affiliation, Telephone
X Seal intact?

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other;
Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

PAGE 1 OF 2

WEISS ASSOCIATES
5500 Shellmound Street, Emeryville, CA 94608
Phone: 415-547-5420 Fax: 415-547-5043

Please send analytic results and a copy of the signed chain of custody form to:

Jim Ponton

Project ID: 14-0307-19

Lab Personnel:

☐ PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

1) Specify analytic method and detection limit in report.
2) Notify us if there are any anomalous peaks in GC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: D. CHARLES / PAUL CARDOZA Laboratory Name: CURTIS & TOMPKINS

No. of Containers	Sample ID	Container Type[1]	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
1	3Q7-05	w/BG	9/26/96	1l	N	Y	NONE	TEH-D	LUFT	N	
1	3Q7-06										
1	3Q7-07										
1	3Q7-08										
1	3Q7-10										
1	3Q7-11										
1	3Q7-12										
1	3Q7-13										
1	3Q7-14										
1	3Q7-15										

1 David Charl 9/26/96 17:10
Released by (Signature), Date

1 Weiss Assoc.
Affiliation

2 [illegible] 9/26/96 17:10
Received by (Signature), Date

2 WEISS
Affiliation

3 [illegible] 9/27/96 11:10
Released by (Signature), Date

3 WEISS
Affiliation

4 [illegible] 9/27/96 11:10
Shipping Carrier, Method, Date

4 CCT
Affiliation

5 _____
Released by (Signature), Date

5 _____
Affiliation

6 _____ X _____
Received by Lab Personnel, Date Seal intact?

6 _____
Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other;
Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

D:\ALL\ADMIN\FORMS\COC.WP2

Superior Analytical Laboratory

Date: August 21, 1996

Weiss Associates
5500 Shellmound. Suite 100
Emeryville, CA 94608

Attn: JIM PONTON

Laboratory Number : 21672

Project Number/Name : 14-0307-20

Dear JIM PONTON:

Attached is Superior Analytical Laboratory report for the samples received on July 30, 1996. This report has been reviewed and approved for release. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after August 29, 1996, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

Afsaneh Salimpour
Project Manager

Weiss Associates *Environmental and Geologic Services*

5500 Shellmound Street, Emeryville, CA 94608-2411 FAX: 510-547-5043 Phone: 510-450-6000

TRANSMITTAL

DATE:	August 13, 1996	PROJECT #:	14-0307-20
TO:	Afsaneh Salimpour	PHONE:	(510) 313-0850
COMPANY:	Superior Analytical Laboratory	FAX:	(510) 229-0916

FROM: Paul Nuti, (510) 450-6164

21672-1

ENCLOSED PLEASE FIND: **Follow-Up Request For Additional Analyses**
WA Project Number: 14-0307-20
LAB Number: 21672

VIA:	FAX:	AS:	FOR:
☑ Fax	# of pages: 1 (including this cover)	☑ Per our phone call	☐ Your information
☐ 1st Class Mail	☐ Hard Copy to follow	☑ You requested	☐ Return to you
☐ Overnight Delivery		☐ Is required	☑ Your action
☐ UPS (Surface)		☐ We believe you may be interested	☐ Your review & comments
☐ Courier			

Please call (510) 450-6000 if there are any problems with transmission.

COMMENTS:

Afsaneh:

As we discussed during our phone conversation on August 12, 1996, WA requested that you run a fuel fingerprint analysis for total extractable petroleum hydrocarbons on samples B96-1.5 (Lab ID 21672-20) and B97-1.5 (Lab ID 21672-23). Please send results to Jim Ponton; Jim can be reached at (510) 450-6130.

Please contact Jim or me if you have any questions regarding this transmittal.

Thank You

Superior
Analytical Laboratory

CASE NARRATIVE

Weiss Associates
Project Number/Name: 14-0307-20
Laboratory Number: 21672

Sample Receipt

Twenty Five soil samples were received by Superior Analytical Laboratory on July 30, 1996. Additional request for Two samples on August 12,1996. Cooler temperature was 4.2°C

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analysed for method 8015M.

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553
1555 Burke Street - Suite A - San Francisco, California 94124

Superior
Analytical Laboratory

Weiss Associates
Attn: JIM PONTON

Project 14-0307-20

Revised on August 14, 1996

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Chronology

Laboratory Number 21672

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
B96-1.5	07/29/96	07/30/96	08/12/96	08/13/96	CH121.21	20
B97-1.5	07/29/96	07/30/96	08/12/96	08/12/96	CH121.21	23

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CH121.21-01	Method Blank	MB	Soil	08/12/96	08/12/96
CH121.21-02	Laboratory Spike	LS	Soil	08/12/96	08/12/96
CH121.21-03	Laboratory Spike Duplicate	LSD	Soil	08/12/96	08/12/96
CH121.21-04	3210805SP-1	MS 21715-01	Soil	08/12/96	08/12/96
CH121.21-05	3210805SP-1	MSD 21715-01	Soil	08/12/96	08/12/96

Superior
Analytical Laboratory

Weiss Associates
Attn: JIM PONTON

Project 14-0307-20

Revised on August 14, 1996

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21672-20	B96-1.5	Soil	20.0	-
21672-23	B97-1.5	Soil	1.0	-

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

Compound	21672-20 Conc. mg/kg	RL	21672-23 Conc. mg/kg	RL
Stoddard	ND	200	ND	10
Kerosene	ND	200	ND	10
Jet Fuel	ND	200	ND	10
Mineral Spirits	ND	200	ND	10
Diesel:	340	20	ND	1
Bunker Oil	ND	2000	ND	100
Motor Oil	ND	2000	ND	100
>> Surrogate Recoveries (%) <<				
Tetracosane	107		98	

Superior
Analytical Laboratory

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 21672
Method Blank(s)

• CG311.29-01

	Conc. mg/Kg	RL
Stoddard	ND	10
Kerosene	ND	10
Jet Fuel	ND	10
Mineral Spirits	ND	10
Diesel:	ND	1
Bunker Oil	ND	100
Motor Oil	ND	20
>> Surrogate Recoveries (%) <<		
Tetracosane	93	

Superior
Analytical Laboratory

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 21672

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (mg/Kg) CH121.21 02 / 03 - Laboratory Control Spikes						
Diesel:		33	46/37	139/112	50-150	22
>> Surrogate Recoveries (%) <<						
Tetracosane				118/105	50-150	
For Soil Matrix (mg/Kg) CH121.21 04 / 05 - Sample Spiked: 21715 - 01						
Diesel:	20	33	45/40	76/61	50-150	22
>> Surrogate Recoveries (%) <<						
Tetracosane				162I/132	50-150	

Superior
Analytical Laboratory

arrative:

- The surrogate recovery was high due to the presence of interfering compounds in the sample.

Definitions:

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

Superior Analytical Laboratory

Weiss Associates
5500 Shellmound. Suite 100
Emeryville, CA 94608

Date: August 9, 1996

Attn: JIM PONTON

Laboratory Number : 21665

Project Number/Name : 14-0307-20

Dear JIM PONTON:

Attached is Superior Analytical Laboratory report for the samples received on July 29, 1996. This report has been reviewed and approved for release. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after August 28, 1996, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

Afsaneh Salimpour
Project Manager

Superior
Analytical Laboratory

CASE NARRATIVE

Weiss Associates
Project Number/Name: 14-0307-20
Laboratory Number: 21665

Sample Receipt

Two water samples were received by Superior Analytical Laboratory on July 29, 1996.

Cooler temperature was 1.4°C

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analysed for method 8310.

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553
1555 Burke Street • Suite A • San Francisco, California 94124

Superior Analytical Laboratory

[redacted]iss Associates
Attn: JIM PONTON

Project 14-0307-20
Reported on August 6, 1996

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3510

Chronology

Laboratory Number 21665

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
0796-01	07/29/96	07/29/96	07/31/96	08/05/96	CF311.43	01
0796-02	07/29/96	07/29/96	07/31/96	08/05/96	CF311.43	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CF311.43-01	Method Blank	MB	Water	07/31/96	08/05/96
CF311.43-02	Laboratory Spike	LS	Water	07/31/96	08/05/96
CF311.43-03	Laboratory Spike Duplicate	LSD	Water	07/31/96	08/05/96

Superior Analytical Laboratory

Weiss Associates
Attn: JIM PONTON

Project 14-0307-20
Reported on August 6, 1996

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3510

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21665-01	0796-01	Water	1.0	-
21665-02	0796-02	Water	1.0	-

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

Compound	21665-01 Conc. ug/L	RL	21665-02 Conc. ug/L	RL
Naphthalene	ND	2.0	ND	2.0
Acenaphthylene	ND	2.0	ND	2.0
Acenaphthene	ND	2.0	ND	2.0
Fluoranthene	ND	0.1	ND	0.1
Phenanthrene	ND	0.5	ND	0.5
Anthracene	ND	0.5	ND	0.5
Fluorene	ND	0.2	ND	0.2
Pyrene	ND	0.1	ND	0.1
Chrysene	ND	0.1	ND	0.1
Benzo(a)Anthracene	ND	0.1	ND	0.1
Benzo(b)Fluoranthene	ND	0.05	ND	0.05
Benzo(k)Fluoranthene	ND	0.05	ND	0.05
Benzo(a)Pyrene	ND	0.05	ND	0.05
Indeno(1,2,3)Pyrene	ND	0.1	ND	0.1
Dibenzo(a,h)Anthracene	ND	0.1	ND	0.1
Benzo(g,h,i)Perylene	ND	0.1	ND	0.1
>> Surrogate Recoveries (%) <<				
1-Fluoronaphthene	86		100	

Superior Analytical Laboratory

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3510

Quality Assurance and Control Data

Laboratory Number: 21665
Method Blank(s)

	CF311.43-01 Conc. ug/L	RL
Naphthalene	ND	2.0
Acenaphthylene	ND	2.0
Acenaphthene	ND	2.0
Fluoranthene	ND	0.1
Phenanthrene	ND	0.5
Anthracene	ND	0.5
Fluorene	ND	0.2
Pyrene	ND	0.1
Chrysene	ND	0.1
Benzo(a)Anthracene	ND	0.1
Benzo(b)Fluoranthene	ND	0.05
Benzo(k)Fluoranthene	ND	0.05
Benzo(a)Pyrene	ND	0.05
Indeno(1,2,3)Pyrene	ND	0.1
Dibenzo(a,h)Anthracene	ND	0.1
Benzo(g,h,i)Perylene	ND	0.1
>> Surrogate Recoveries (%) <<		
1-Fluoronaphthene	89	

Superior
Analytical Laboratory

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3510

Quality Assurance and Control Data

Laboratory Number: 21665

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L) CF311.43 02 / 03 - Laboratory Control Spikes						
Naphthalene		40	36/33	90/83	70-130	8
Acenaphthylene		40	26/26#	65/65	70-130	0
Acenaphthene		40	29/29	73/73	70-130	0
Phenanthrene		40	28/28	70/70	70-130	0
Anthracene		40	30/30	75/75	70-130	0
Fluorene		40	36/37	90/93	70-130	3
Benzo(k)Fluoranthene		40	32/32	80/80	70-130	0
> Surrogate Recoveries (%) <<						
1-Fluoronaphthene				88/84	50-150	

- LCS recovery was out of control limits.

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)

Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608
Phone: 510-450-6000 Fax: 510-547-5043
AguaTierra Associates Incorporated, DBA

Please send analytic results and a copy of the signed chain of custody form to:
Jim Ponton
Project ID: 14-0307-20

21665

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

1) Specify analytic method and detection limit in report.
2) Notify us if there are any anomalous peaks in GC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: Paul Cardoza Laboratory Name: SPA

No. of Containers	Sample ID	Container Type[1]	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
								Polynuclear			
2	0796-01	W/BG	7/29/96	1L	N	Y	None	Aromatic Hydrocarbons	8310/3510	N	
↓	0796-02	↓	↓	↓	↓	↓	↓	↓	↓	↓	

Please Initial: DC
Samples Stored in ice. yes
Appropriate containers yes
Samples preserved
VOA's without headspace
Comments: temp: 1.4

1 Paul Cardoza 7/29/96
Released by (Signature), Date

1 Weiss Assoc.
Affiliation

2 Dennis Clamon 7/29/96 3:26
Received by (Signature), Date

2 ~~Dennis Clamon 7/29/96 3:26~~ SAL
Affiliation

3 Dennis Clamon 7/29/96 4:05
Released by (Signature), Date

3 GL
Affiliation

4 _____
Shipping Carrier, Method, Date

4 _____
Affiliation

5 _____
Released by (Signature), Date

5 _____
Affiliation

6 Dennis Clamon 7/29/96 4:22
Received by Lab Personnel, Date

6 GL
Affiliation, Telephone

x _____
Seal intact?

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other;
Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered YY/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]

K:\OFFICE\FORMS\CHAINOC.DOC

Superior Analytical Laboratory

Weiss Associates
5500 Shellmound. Suite 100
Emeryville, CA 94608

Date: August 8, 1996

Attn: JIM PONTON

Laboratory Number : 21672

Project Number/Name : 14-0307-20

Dear JIM PONTON:

Attached is Superior Analytical Laboratory report for the samples received on July 30, 1996. This report has been reviewed and approved for release. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after August 29, 1996, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

Afsaneh Salimpour
Project Manager

Superior
Analytical Laboratory

CASE NARRATIVE

Weiss Associates
Project Number/Name: 14-0307-20
Laboratory Number: 21672

Sample Receipt

Twenty Five soil samples were received by Superior Analytical Laboratory on July 30, 1996.

Cooler temperature was 4.2°C

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analysed for methods 6010, 8010, 8015M, and 8310.

8310:

- Surrogate recovery was low for sample:B97-1.5 .The analyses was repeated with similar effects.

- Reporting limits raised for samples: B96-1.5 ,B96-7.5,and B97-7.5 due to matrix interference. Samples contain significant levels of petroleum hydrocarbons.

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553
1555 Burke Street • Suite A • San Francisco, California 94124

Superior Analytical Laboratory

Weiss Associates
Attn: JIM PONTON

Project 14-0307-20
Reported on August 6, 1996

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3550

Chronology

Laboratory Number 21672

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
B96-1.5	07/29/96	07/30/96	08/01/96	08/06/96	CH011.64	20
B96-7.5	07/29/96	07/30/96	08/01/96	08/06/96	CH011.64	21
B97-1.5	07/29/96	07/30/96	08/01/96	08/05/96	CH011.64	23
B97-7.5	07/29/96	07/30/96	08/01/96	08/06/96	CH011.64	24

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CH011.64-01	Method Blank	MB	Soil	08/01/96	08/05/96
CH011.64-02	Laboratory Spike	LS	Soil	08/01/96	08/05/96
CH011.64-03	Laboratory Spike Duplicate	LSD	Soil	08/01/96	08/05/96
CH011.64-04	B97-1.5	MS 21672-23	Soil	08/01/96	08/05/96
CH011.64-05	B97-1.5	MSD 21672-23	Soil	08/01/96	08/05/96

Superior Analytical Laboratory

eiss Associates
ttn: JIM PONTON

Project 14-0307-20
Reported on August 6, 1996

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3550

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21672-20 @	B96-1.5	Soil	100.0	-
21672-21 @	B96-7.5	Soil	100.0	-
21672-23	B97-1.5	Soil	1.0	-
21672-24 @	B97-7.5	Soil	100.0	-

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

Compound	21672-20 Conc. ug/Kg	RL	21672-21 Conc. ug/Kg	RL	21672-23 Conc. ug/Kg	RL	21672-24 Conc. ug/Kg	RL
Naphthalene	ND	20000	ND	20000	ND	200	ND	20000
Acenaphthylene	ND	20000	ND	20000	ND	200	ND	20000
Acenaphthene	ND	20000	ND	20000	ND	200	ND	20000
Fluoranthene	ND	1000	ND	1000	ND	10	ND	1000
Phenanthrene	ND	5000	ND	5000	ND	50	ND	5000
Anthracene	ND	5000	ND	5000	ND	50	ND	5000
Fluorene	ND	2000	ND	2000	ND	20	ND	2000
Pyrene	ND	1000	ND	1000	ND	10	ND	1000
Chrysene	ND	1000	ND	1000	ND	10	ND	1000
Benzo(a)Anthracene	ND	1000	ND	1000	ND	10	ND	1000
Benzo(b)Fluoranthene	ND	500	ND	500	ND	5	ND	500
Benzo(k)Fluoranthene	ND	500	ND	500	ND	5	ND	500
Benzo(a)Pyrene	ND	500	ND	500	ND	5	ND	500
Indeno(1,2,3)Pyrene	ND	1000	ND	1000	ND	10	ND	1000
Dibenzo(a,h)Anthracene	ND	1000	ND	1000	ND	10	ND	1000
Benzo(g,h,i)Perylene	ND	1000	ND	1000	ND	10	ND	1000
>> Surrogate Recoveries (%) <<								
1-Fluoronaphthene	63		119		28K		83	

Superior
Analytical Laboratory

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3550

Quality Assurance and Control Data

Laboratory Number: 21672
Method Blank(s)

	CH011.64-01 Conc. ug/Kg	RL
Naphthalene	ND	200
Acenaphthylene	ND	200
Acenaphthene	ND	200
Fluoranthene	ND	10
Phenanthrene	ND	50
Anthracene	ND	50
Fluorene	ND	20
Pyrene	ND	10
Chrysene	ND	10
Benzo(a)Anthracene	ND	10
Benzo(b)Fluoranthene	ND	5
Benzo(k)Fluoranthene	ND	5
Benzo(a)Pyrene	ND	5
Indeno(1,2,3)Pyrene	ND	10
Dibenzo(a,h)Anthracene	ND	10
Benzo(g,h,i)Perylene	ND	10
>> Surrogate Recoveries (%) <<		
1-Fluoronaphthene	85	

Superior Analytical Laboratory

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3550

Quality Assurance and Control Data

Laboratory Number: 21672

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (ug/Kg) CH011.64 02 / 03 - Laboratory Control Spikes						
Naphthalene		6700	6500/6200	97/93	70-130	4
Acenaphthylene		6700	6000/5800	90/87	70-130	3
Acenaphthene		6700	5900/5700	88/85	70-130	3
Phenanthrene		6700	6200/6000	93/90	70-130	3
Anthracene		6700	6200/6000	93/90	70-130	3
Fluorene		6700	6000/5700	90/85	70-130	6
Benzo(k)Fluoranthene		6700	6500/6300	97/94	70-130	3
> Surrogate Recoveries (%) <<						
1-Fluoronaphthene				81/83	-	
For Soil Matrix (ug/Kg) CH011.64 04 / 05 - Sample Spiked: 21672 - 23						
Naphthalene	ND	6700	4200R/4500	63/67	70-130	6
Acenaphthylene	ND	6700	4500R/4600	67/69	70-130	3
Acenaphthene	ND	6700	4700/4700	70/70	70-130	0
Phenanthrene	ND	6700	5400/5200	81/78	70-130	4
Anthracene	ND	6700	5200/5200	78/78	70-130	0
Fluorene	ND	6700	5000/4800	75/72	70-130	4
Benzo(k)Fluoranthene	ND	6700	5900/5600	88/84	70-130	5
> Surrogate Recoveries (%) <<						
1-Fluoronaphthene				55/54	-	

Superior
Analytical Laboratory

arrative:

- The surrogate recovery was low due to matrix effects. The analysis was repeated with similar effects.

- Reporting limits raised due to matrix interference. Samples contain significant levels of petroleum hydrocarbons.

R - MS and/or MSD recoveries were out of control limits. LCS / LCSD recoveries were within acceptable limits.

Definitions:

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

ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Superior
Analytical Laboratory

Weiss Associates
Attn: JIM PONTON

Project 14-0307-20
Reported on August 6, 1996

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Chronology

Laboratory Number 21672

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
B90-2.0	07/29/96	07/30/96	07/31/96	08/05/96	CG311.29	02
B91-2.0	07/29/96	07/30/96	07/31/96	08/02/96	CG311.29	05
B92-1.5	07/29/96	07/30/96	07/31/96	08/05/96	CG311.29	08
B93-1.5	07/29/96	07/30/96	07/31/96	08/05/96	CG311.29	11
B96-7.5	07/29/96	07/30/96	07/31/96	08/05/96	CG311.29	21
B97-7.5	07/29/96	07/30/96	07/31/96	08/05/96	CG311.29	24

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CG311.29-01	Method Blank	MB	Soil	07/31/96	07/31/96
CG311.29-02	Laboratory Spike	LS	Soil	07/31/96	07/31/96
CG311.29-03	Laboratory Spike Duplicate	LSD	Soil	07/31/96	07/31/96
CG311.29-04	B91-2.0	MS 21672-05	Soil	07/31/96	08/02/96
CG311.29-05	B91-2.0	MSD 21672-05	Soil	07/31/96	08/02/96

Superior Analytical Laboratory

eiss Associates
ttn: JIM PONTON

Project 14-0307-20
Reported on August 6, 1996

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21672-21	B96-7.5	Soil	10.0	-
21672-24	B97-7.5	Soil	10.0	-

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

Compound	21672-21 Conc. mg/kg	RL	21672-24 Conc. mg/kg	RL
Stoddard	ND	100	ND	100
Kerosene	ND	100	ND	100
Jet Fuel	ND	100	ND	100
Mineral Spirits	ND	100	ND	100
Diesel	880	10	460	10
Bunker Oil	ND	1000	ND	1000
Motor Oil	ND	1000	ND	1000
> Surrogate Recoveries (%) <<				
Tetracosane	110		97	

Superior
Analytical Laboratory

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 21672
Method Blank(s)

	CG311.29-01 Conc. mg/Kg	RL
Stoddard	ND	10
Kerosene	ND	10
Jet Fuel	ND	10
Mineral Spirits	ND	10
Diesel:	ND	1
Bunker Oil	ND	100
Motor Oil	ND	20
> Surrogate Recoveries (%) <<		
Tetracosane	93	

Superior Analytical Laboratory

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 21672

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (mg/Kg) CG311.29 02 / 03 - Laboratory Control Spikes						
Diesel:		33	32/34	97/103	50-150	6
Surrogate Recoveries (%) << Tetracosane				86/101	50-150	
For Soil Matrix (mg/Kg) CG311.29 04 / 05 - Sample Spiked: 21672 - 05						
Diesel:	ND	33	26/30	79/91	50-150	14
Surrogate Recoveries (%) << Tetracosane				91/106	50-150	

Definitions:
ND = Not Detected
[illegible] = Reporting Limit
[illegible] = Not Analysed
RPD = Relative Percent Difference
[illegible]/L = parts per billion (ppb)
[illegible]/L = parts per million (ppm)

ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Superior
Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 21672
Method Blank(s)

	CG312.05-01 Conc. mg/kg	RL
Gasoline_Range	ND	1
> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene	91	

Superior Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 21672

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Soil Matrix (mg/kg)				
	CG312.05 03 / - Laboratory Control Spikes					
Gasoline_Range		10	9.0	90	65-135	
> Surrogate Recoveries (%) <						
4-Bromofluorobenzene				111	50-150	
		For Soil Matrix (mg/kg)				
	CG312.05 07 / 08 - Sample Spiked: 21672 - 02					
Gasoline_Range	ND	10	8.2/8.2	82/82	65-135	0
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene				84/84	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)

Superior Analytical Laboratory

Weiss Associates
Attn: JIM PONTON

Project 14-0307-20
Reported on August 1, 1996

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

Chronology

Laboratory Number 21672

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
B96-1.5	07/29/96	07/30/96	08/01/96	08/01/96	CH011.08	20
B97-1.5	07/29/96	07/30/96	07/31/96	07/31/96	CG311.07	23

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
CH011.08-01	Method Blank	MB		Soil	08/01/96	08/01/96
CH011.08-02	Laboratory Spike	LS		Soil	08/01/96	08/01/96
CH011.08-03	SP(2-5)	MS	21662-02	Soil	08/01/96	08/01/96
CH011.08-04	SP(2-5)	MSD	21662-02	Soil	08/01/96	08/01/96
CG311.07-01	Method Blank	MB		Soil	07/31/96	07/31/96
CG311.07-02	Laboratory Spike	LS		Soil	07/31/96	07/31/96
CG311.07-03	Laboratory Spike Duplicate	LSD		Soil	07/31/96	07/31/96
CG311.07-04	B97-1.5	MS	21672-23	Soil	07/31/96	07/31/96
CG311.07-05	B97-1.5	MSD	21672-23	Soil	07/31/96	07/31/96

Superior Analytical Laboratory

eiss Associates
ttn: JIM PONTON

Project 14-0307-20
Reported on August 1, 1996

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21672-20	B96-1.5	Soil	1.0	-
21672-23	B97-1.5	Soil	1.0	-

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

Compound	21672-20 Conc. ug/Kg	RL	21672-23 Conc. ug/Kg	RL
Chloromethane	ND	5.0	ND	5.0
Vinyl Chloride	ND	5.0	ND	5.0
Bromomethane	ND	5.0	ND	5.0
Chloroethane	ND	5.0	ND	5.0
Trichlorofluoromethane	ND	5.0	ND	5.0
1,1-Dichloroethene	ND	5.0	ND	5.0
Dichloromethane	ND	5.0	ND	5.0
t-1,2-Dichloroethene	ND	5.0	ND	5.0
1,1-Dichloroethane	ND	5.0	ND	5.0
c-1,2-Dichloroethene	ND	5.0	ND	5.0
Chloroform	ND	5.0	ND	5.0
1,1,1-Trichloroethane	ND	5.0	ND	5.0
Carbon tetrachloride	ND	5.0	ND	5.0
1,2-Dichloroethane	ND	5.0	ND	5.0
Trichloroethene	ND	5.0	ND	5.0
c-1,3-Dichloropropene	ND	5.0	ND	5.0
1,2-Dichloropropane	ND	5.0	ND	5.0
t-1,3-Dichloropropene	ND	5.0	ND	5.0
Bromodichloromethane	ND	5.0	ND	5.0
1,1,2-Trichloroethane	ND	5.0	ND	5.0
Tetrachloroethene	ND	5.0	ND	5.0
Dibromochloromethane	ND	5.0	ND	5.0
Chlorobenzene	ND	5.0	ND	5.0
Bromoform	ND	5.0	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0	ND	5.0
1,3-Dichlorobenzene	ND	5.0	ND	5.0
1,2-Dichlorobenzene	ND	5.0	ND	5.0
1,4-Dichlorobenzene	ND	5.0	ND	5.0
>> Surrogate Recoveries (%) <<				
Bromochloromethane	75		105	

Superior Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 21672
Method Blank(s).

	CH011.08-01		CG311.07-01	
	Conc. ug/Kg	RL	Conc. ug/Kg	RL
Chloromethane	ND	5.0	ND	5.0
Vinyl Chloride	ND	5.0	ND	5.0
Bromomethane	ND	5.0	ND	5.0
Chloroethane	ND	5.0	ND	5.0
Trichlorofluoromethane	ND	5.0	ND	5.0
1,1-Dichloroethene	ND	5.0	ND	5.0
Dichloromethane	ND	5.0	ND	5.0
t-1,2-Dichloroethene	ND	5.0	ND	5.0
1,1-Dichloroethane	ND	5.0	ND	5.0
c-1,2-Dichloroethene	ND	5.0	ND	5.0
Chloroform	ND	5.0	ND	5.0
1,1,1-Trichloroethane	ND	5.0	ND	5.0
Carbon tetrachloride	ND	5.0	ND	5.0
1,2-Dichloroethane	ND	5.0	ND	5.0
Trichloroethene	ND	5.0	ND	5.0
c-1,3-Dichloropropene	ND	5.0	ND	5.0
2,2-Dichloropropane	ND	5.0	ND	5.0
t-1,3-Dichloropropene	ND	5.0	ND	5.0
Bromodichloromethane	ND	5.0	ND	5.0
1,1,2-Trichloroethane	ND	5.0	ND	5.0
Tetrachloroethene	ND	5.0	ND	5.0
Dibromochloromethane	ND	5.0	ND	5.0
Chlorobenzene	ND	5.0	ND	5.0
Bromoform	ND	5.0	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0	ND	5.0
1,3-Dichlorobenzene	ND	5.0	ND	5.0
1,2-Dichlorobenzene	ND	5.0	ND	5.0
1,4-Dichlorobenzene	ND	5.0	ND	5.0
Surrogate Recoveries (%) <<				
Bromochloromethane	95		92	

Superior Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 21672

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (ug/Kg)						
CH011.08 02 / - Laboratory Control Spikes						
1,1-Dichloroethene		100	120	120	44-184	
Trichloroethene		100	110	110	55-141	
Chlorobenzene		100	120	120	63-158	
>> Surrogate Recoveries (%) <<						
Bromochloromethane				87	50-125	
For Soil Matrix (ug/Kg)						
CG311.07 02 / 03 - Laboratory Control Spikes						
1,1-Dichloroethene		100	120/110	120/110	44-184	9
Trichloroethene		100	120/120	120/120	55-141	0
Chlorobenzene		100	130/120	130/120	63-158	8
> Surrogate Recoveries (%) <<						
Bromochloromethane				98/78	50-125	
For Soil Matrix (ug/Kg)						
CH011.08 03 / 04 - Sample Spiked: 21662 - 02						
1,1-Dichloroethene	ND	100	130/130	130/130	44-184	0
Trichloroethene	ND	100	130/120	130/120	55-141	8
Chlorobenzene	ND	100	120/120	120/120	63-158	0
> Surrogate Recoveries (%) <<						
Bromochloromethane				57/69	50-125	
For Soil Matrix (ug/Kg)						
CG311.07 04 / 05 - Sample Spiked: 21672 - 23						
1,1-Dichloroethene	ND	100	160/150	160/150	44-184	6

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 21672

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
Trichloroethene	ND	100	150/140	150/140	55-141	7
Chlorobenzene	ND	100	140/130	140/130	63-158	0
> Surrogate Recoveries (%) <<						
Bromochloromethane				86/76	50-125	

Definitions:

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

ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

216 TO

Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608
Phone: 510-450-6000 Fax: 510-547-5043
AguaTierra Associates Incorporated, DBA

Please send analytic results and a copy of the signed chain of custody form to:
Jim Ponton
Project ID: 14-0307-20

Lab Personnel:

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

Please Initial: yw
Samples Stored in ice. yw
Appropriate containers yw
Samples preserved
VOA's without headspace
Comments: T = 4.2°C

1) Specify analytic method and detection limit in report.
2) Notify us if there are any anomalous peaks in QC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS: CALL US. N/A

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: Elizabeth Brosna
Laboratory Name: Superior

No. of Containers	Sample ID	Container Type[1]	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
1	B90-1.5	S	7/29/96	6"x2"	N	Y	N	TTLC - Lead		N	
1	B90-2.0							TPH-G, TEPH	8015M, 8015M		
1	B90-2.5										HOLD
1	B90-4.0										HOLD
1	B91-2.0							TPH-G, TEPH	8015M, 8015M		
1	B91-3.0										HOLD
1	B91-4.0										HOLD
1	B92-1.5							TPH-G, TEPH	8015M, 8015M		
1	B92-2.0										HOLD
1	B92-4.0										HOLD
1	B93-1.5							TPH-G, TEPH	8015M, 8015M		
1	B93-3.0										HOLD
1	B93-4.0										HOLD

1 Elizabeth Brosna 7/30/96
Released by (Signature), Date

3 Dennis Clarke 7/30/96 1:04
Released by (Signature), Date

5
Released by (Signature), Date

1 WA
Affiliation

3 GL
Affiliation

5
Affiliation

2 Dennis Clarke 7/30/96 9:38
Received by (Signature), Date

4
Shipping Carrier, Method, Date

6 Ryan W. Poulsen SAL
Received by Lab Personnel, Date

x yes.
Seal intact?

2 GL
Affiliation

4
Affiliation

6 SAL 07/30/96 @ 14:30
Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered YY/N); 4 = Refrigerated (Y/N)

5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]

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21677

Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608
Phone: 510-450-6000 Fax: 510-547-5043
AguaTierra Associates Incorporated, DBA

Please send analytic results and a copy of the signed chain of custody form to:
Jim Ponton
Project ID: 14-0307-20

Lab Personnel: **PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.**

Please Initial: yes
Samples Stored in ice. yes
Appropriate containers yes
Samples preserved Y/N
VOA's without headspace yes
Comments: T = 4.2°C

1) Specify analytic method and detection limit in report.
2) Notify us if there are any anomalous peaks in GC or other scans.
3) ~~ANY QUESTIONS/CLARIFICATIONS:~~ CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: Elizabeth Brogna
Laboratory Name: Superior

No. of Containers	Sample ID	Container Type[1]	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
1	B94-1.5	S	7/29/96	6"x2"	N	Y	N			N	HOLD
1	B94-7.5										HOLD
1	B94-9.5										HOLD
1	B95-1.5										HOLD
1	B95-7.5										HOLD
1	B95-9.5										HOLD
1	B96-1.5							Halog. VOCs, PAH's	8010, 8310/3510		
1	B96-7.5							PAH's, TEPH	8310/3510, 8015M		
1	B96-9.5										HOLD
1	B97-1.5							HVOC's, PAH's	8010, 8310/3510		
1	B97-7.5							PAH's, TEPH	8310/3510, 8015M		
1	B97-9.5	↓	↓	↓	↓	↓	↓			↓	HOLD

1 Released by (Signature), Date: [illegible] 7/30/96
1 Affiliation: WA
2 Received by (Signature), Date: [illegible] 7/30/96 9:33
2 Affiliation: GAL

3 Released by (Signature), Date: [illegible] 7/30/96 1305
3 Affiliation: GAL
4 Shipping Carrier, Method, Date:
4 Affiliation:

5 Released by (Signature), Date:
5 Affiliation:
6 Received by Lab Personnel, Date: [illegible] x Seal intact? yes
6 Affiliation, Telephone: GAL 7/30/96 @ 1430

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; - Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered YY/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]

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Superior Analytical Laboratory

Weiss Associates
5500 Shellmound. Suite 100
Emeryville, CA 94608

Date: July 3, 1996

Attn: JIM PONTON

Laboratory Number : 21533

Project Number/Name : 14-0307-19

Dear JIM PONTON:

Attached is Superior Analytical Laboratory report for the samples received on June 26, 1996. This report has been reviewed and approved for release. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after July 26, 1996, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

Afsaneh Salimpour
Project Manager

Superior
Analytical Laboratory

CASE NARRATIVE

Weiss Associates
Project Number/Name: 14-0307-19
Laboratory Number: 21533

Sample Receipt

Twenty Four water samples were received by Superior Analytical Laboratory on June 26, 1996.

Cooler temperature was .5°C

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analysed for methods , 8015M, 8020, and 8310.

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553
1555 Burke Street • Suite A • San Francisco, California 94124

Superior Analytical Laboratory

Weiss Associates
Attn: JIM PONTON

Project 14-0307-19
Reported on July 2, 1996

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3510

Chronology

Laboratory Number 21533

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
2Q307-05	06/25/96	06/26/96	07/01/96	07/02/96	CG011.43	22
2Q307-06	06/25/96	06/26/96	07/01/96	07/02/96	CG011.43	23
2Q307-13	06/25/96	06/26/96	07/01/96	07/02/96	CG011.43	24

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CG011.43-01	Method Blank	MB	Water	07/01/96	07/01/96
CG011.43-02	Laboratory Spike	LS	Water	07/01/96	07/01/96
CG011.43-03	Laboratory Spike Duplicate	LSD	Water	07/01/96	07/01/96

Superior Analytical Laboratory

eiss Associates
Attn: JIM PONTON

Project 14-0307-19
Reported on July 2, 1996

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3510

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21533-22	2Q307-05	Water	1.0	-
21533-23	2Q307-06	Water	1.0	-
21533-24	2Q307-13	Water	1.0	-

RESULTS OF ANALYSIS

Compound	21533-22 Conc. ug/L	RL	21533-23 Conc. ug/L	RL	21533-24 Conc. ug/L	RL
Naphthalene	ND	2.0	ND	2.0	4.1	2.0
Acenaphthylene	ND	2.0	ND	2.0	ND	2.0
Acenaphthene	ND	2.0	ND	2.0	ND	2.0
Fluoranthene	0.5	0.1	ND	0.1	ND	0.1
Phenanthrene	ND	0.5	ND	0.5	ND	0.5
Anthracene	ND	0.5	ND	0.5	ND	0.5
Fluorene	3.4	0.2	ND	0.2	0.3	0.2
Pyrene	0.5	0.1	ND	0.1	ND	0.1
Chrysene	ND	0.1	ND	0.1	ND	0.1
Benzo(a)Anthracene	ND	0.1	ND	0.1	ND	0.1
Benzo(b)Fluoranthene	ND	0.05	ND	0.05	ND	0.05
Benzo(k)Fluoranthene	ND	0.05	ND	0.05	ND	0.05
Benzo(a)Pyrene	ND	0.05	ND	0.05	ND	0.05
Indeno(1,2,3)Pyrene	ND	0.1	ND	0.1	ND	0.1
Dibenzo(a,h)Anthracene	ND	0.1	ND	0.1	ND	0.1
Benzo(g,h,i)Perylene	ND	0.1	ND	0.1	ND	0.1
>> Surrogate Recoveries (%) <<						
1-Fluoronaphthene	70		98		90	

Superior
Analytical Laboratory

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3510

Quality Assurance and Control Data

Laboratory Number: 21533
Method Blank(s)

	CG011.43-01 Conc. ug/L	RL
Naphthalene	ND	2.0
Acenaphthylene	ND	2.0
Acenaphthene	ND	2.0
Fluoranthene	ND	0.1
Phenanthrene	ND	0.5
Anthracene	ND	0.5
Fluorene	ND	0.2
Pyrene	ND	0.1
Chrysene	ND	0.1
Benzo(a)Anthracene	ND	0.1
Benzo(b)Fluoranthene	ND	0.05
Benzo(k)Fluoranthene	ND	0.05
Benzo(a)Pyrene	ND	0.05
Indeno(1,2,3)Pyrene	ND	0.1
Dibenzo(a,h)Anthracene	ND	0.1
Benzo(g,h,i)Perylene	ND	0.1
>> Surrogate Recoveries (%) <<		
1-Fluoronaphthene	80	

Superior Analytical Laboratory

Polynuclear Aromatic Hydrocarbons by SW-846 Methods 8310/3510

Quality Assurance and Control Data

Laboratory Number: 21533

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L) CG011.43 02 / 03 - Laboratory Control Spikes						
Naphthalene		20	15/16	75/80	70-130	6
Acenaphthylene		20	16/16	80/80	70-130	0
Acenaphthene		20	16/16	80/80	70-130	0
Phenanthrene		20	17/18	85/90	70-130	6
Anthracene		20	17/17	85/85	70-130	0
Fluorene		20	16/17	80/85	70-130	6
Benzo(k)Fluoranthene		20	18/18	90/90	70-130	0
> Surrogate Recoveries (%) <<						
1-Fluoronaphthene				75/80	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)

2153

Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608
Phone: 510-450-6000 Fax: 510-547-5043
AguaTierra Associates Incorporated, DBA

Please send analytic results and a copy of the signed chain of custody form to:
Jim Ponton
Project ID: 14-0307-19

Lab Personnel: Please Initial: RE
Samples Stored in ice. Yes
Appropriate containers Yes
Samples preserved Yes
VOA's without headspace N/A
Comments: 1 = 0.5°C

PLEASE INCLUDE QA/QC DATA IF BOX IS CHECKED.

1) Specify analytic method and detection limit in report.
2) Notify us if there are any anomalous peaks in GC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: Anni Kreml

Laboratory Name: Superior

No. of Containers	Sample ID	Container Type[1]	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
1	2Q307-05	W/B	6/25/96	1L	N	Y	None	TEH-D	LUFT	N	
	-06										
	-07										
	-08										
	-10										
	-11										
	-12										
	-13										
	-14										
	-15										
	-05							Polynuclear Aromatics	EPA 8100		
	-06										
	-13										

1 Released by (Signature), Date: 6/26/96
1 Affiliation: Weiss
2 Received by (Signature), Date: 6/26/96
2 Affiliation: WA

3 Released by (Signature), Date: 6/26/96
3 Affiliation: WA
4 Shipping Carrier, Method, Date:
4 Affiliation:

5 Released by (Signature), Date:
5 Affiliation:
6 Received by Lab Personnel, Date:
6 Affiliation, Telephone: 6/26/96 10:25
Seal intact? x

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other;
Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered YY/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]

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secured overnight

Superior Analytical Laboratory

Weiss Associates
5500 Shellmound. Suite 100
Emeryville, CA 94608

Date: December 3, 1995

Attn: JIM PONTON

Laboratory Number : 20559

Project Number/Name : 14-0307-86

This report has been reviewed and

approved for release.

Senior Chemist
Account Manager

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553
1555 Burke Street • Suite A • San Francisco, California 94124

Superior
Analytical Laboratory

eiss Associates
Attn: JIM PONTON

Project 14-0307-86
Reported on December 3, 1995

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Chronology

Laboratory Number 20559

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
B58-5	11/30/95	11/30/95	12/01/95	12/03/95	BL012.21	01
B58-8	11/30/95	11/30/95	12/01/95	12/03/95	BL012.21	02
B58-10	11/30/95	11/30/95	12/01/95	12/03/95	BL012.21	03
B59-5	11/30/95	11/30/95	12/01/95	12/01/95	BL012.21	04
B59-8	11/30/95	11/30/95	12/01/95	12/01/95	BL012.21	05
B59-10	11/30/95	11/30/95	12/01/95	12/01/95	BL012.21	06
B60-8	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	07
B60-10	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	08
B57-5	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	09
B57-8	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	10
B57-10	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	11
B61-5	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	12
B61-8	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	13
B61-10	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	14
B62-5	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	15
B62-7	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	16
B62-10	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	17
B63-3	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	18
B63-8	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	19
B63-10	11/30/95	11/30/95	12/01/95	12/02/95	BL012.21	20
B50-5	11/30/95	11/30/95	12/01/95	12/02/95	BL022.21	21
B50-8	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	22
B50-10	11/30/95	11/30/95	12/01/95	12/04/95	BL012.21	23
B51-5	11/30/95	11/30/95	12/01/95	12/02/95	BL022.21	24
B51-8	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	25
B51-10	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	26
B52-5	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	27
B52-8	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	28
B52-10	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	29
B53-5	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	30
B53-7	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	31
B53-10	11/30/95	11/30/95	12/01/95	12/04/95	BL012.21	32
B54-5	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	33
B54-8	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	34
B54-10	11/30/95	11/30/95	12/01/95	12/04/95	BL012.21	35
B55-5	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	36
B55-8	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	37
B55-10	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	38
B56-8	11/30/95	11/30/95	12/01/95	12/03/95	BL012.21	39

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Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

B56-10	11/30/95	11/30/95	12/01/95	12/03/95	BL022.21	40

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
BL012.21-01	Method Blank	MB	Soil	12/01/95	12/02/95
BL012.21-02	Laboratory Spike	LS	Soil	12/01/95	12/02/95
BL012.21-03	Laboratory Spike Duplicate	LSD	Soil	12/01/95	12/02/95
BL012.21-04	B59-10	MS 20559-06	Soil	12/01/95	12/02/95
BL012.21-05	B59-10	MSD 20559-06	Soil	12/01/95	12/02/95
BL022.21-01	Method Blank	MB	Soil	12/01/95	12/03/95
BL022.21-02	Laboratory Spike	LS	Soil	12/01/95	12/03/95
BL022.21-03	Laboratory Spike Duplicate	LSD	Soil	12/01/95	12/03/95
BL022.21-04	B58-8	MS 20559-02	Soil	12/01/95	12/03/95
BL022.21-05	B58-8	MSD 20559-02	Soil	12/01/95	12/03/95

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LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-01	B58-5	Soil	10.0	-
20559-02	B58-8	Soil	20.0	-
20559-03	B58-10	Soil	10.0	-
20559-04	B59-5	Soil	1.0	-

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

Compound	20559-01 Conc. mg/kg	RL	20559-02 Conc. mg/kg	RL	20559-03 Conc. mg/kg	RL	20559-04 Conc. mg/kg	RL
Diesel:	830	10	1300	20	980	10	1.4	1
>> Surrogate Recoveries (%) <<								
Tetracosane	180@		190@		161@		96	

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LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-05	B59-8	Soil	1.0	-
20559-06	B59-10	Soil	1.0	-
20559-07	B60-8	Soil	1.0	-
20559-08	B60-10	Soil	20.0	-

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

Compound	20559-05 Conc. mg/kg	RL	20559-06 Conc. mg/kg	RL	20559-07 Conc. mg/kg	RL	20559-08 Conc. mg/kg	RL
Diesel:	ND	1	ND	1	95	1	1400	20
>> Surrogate Recoveries (%) <<								
Tetracosane	100		104		104		113	

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LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-09	B57-5	Soil	1.0	-
20559-10	B57-8	Soil	2.0	-
20559-11	B57-10	Soil	20.0	-
20559-12	B61-5	Soil	1.0	-

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

Compound	20559-09 Conc. mg/kg	RL	20559-10 Conc. mg/kg	RL	20559-11 Conc. mg/kg	RL	20559-12 Conc. mg/kg	RL
Diesel:	1.2	1	140	2	1100	20	1.8	1
>> Surrogate Recoveries (%) <<								
Tetracosane	98		130		176@		105	

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LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-13	B61-8	Soil	1.0	-
20559-14	B61-10	Soil	10.0	-
20559-15	B62-5	Soil	1.0	-
20559-16	B62-7	Soil	1.0	-

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

Compound	20559-13 Conc. mg/kg	RL	20559-14 Conc. mg/kg	RL	20559-15 Conc. mg/kg	RL	20559-16 Conc. mg/kg	RL
Diesel:	3.2	1	300	10	1.2	1	1.6	1
Surrogate Recoveries (%) <<								
Tetracosane	109		157@		103		101	

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LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-17	B62-10	Soil	10.0	-
20559-18	B63-3	Soil	1.0	-
20559-19	B63-8	Soil	1.0	-
20559-20	B63-10	Soil	1.0	-

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

Compound	20559-17 Conc. mg/kg	RL	20559-18 Conc. mg/kg	RL	20559-19 Conc. mg/kg	RL	20559-20 Conc. mg/kg	RL
Diesel:	560	10	1.9	1	ND	1	1.1	1
> Surrogate Recoveries (%) <<								
Tetracosane	154@		100		106		101	

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LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-21	B50-5	Soil	1.0	-
20559-22	B50-8	Soil	100.0	-
20559-23	B50-10	Soil	10.0	-
20559-24	B51-5	Soil	1.0	-

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

Compound	20559-21 Conc. mg/kg	RL	20559-22 Conc. mg/kg	RL	20559-23 Conc. mg/kg	RL	20559-24 Conc. mg/kg	RL
Diesel:	ND	1	540	100	490	10	ND	1
>> Surrogate Recoveries (%) <<								
Tetracosane	80		BB		217@		86	

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LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-25	B51-8	Soil	20.0	-
20559-26	B51-10	Soil	20.0	-
20559-27	B52-5	Soil	1.0	-
20559-28	B52-8	Soil	1.0	-

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

Compound	20559-25 Conc. mg/kg	RL	20559-26 Conc. mg/kg	RL	20559-27 Conc. mg/kg	RL	20559-28 Conc. mg/kg	RL
Diesel:	560	20	480	20	27	1	440	1
>> Surrogate Recoveries (%) <<								
Tetracosane	84		170@		88		377@	

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by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-29	B52-10	Soil	20.0	-
20559-30	B53-5	Soil	1.0	-
20559-31	B53-7	Soil	1.0	-
20559-32	B53-10	Soil	10.0	-

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

Compound	20559-29 Conc. mg/kg	RL	20559-30 Conc. mg/kg	RL	20559-31 Conc. mg/kg	RL	20559-32 Conc. mg/kg	RL
Diesel:	110	20	1.4	1	1.0	1	9800	10
> Surrogate Recoveries (%) <<								
Tetracosane	BB		86		82		179@	

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by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-33	B54-5	Soil	1.0	-
20559-34	B54-8	Soil	1.0	-
20559-35	B54-10	Soil	10.0	-
20559-36	B55-5	Soil	1.0	-

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

Compound	20559-33 Conc. mg/kg	RL	20559-34 Conc. mg/kg	RL	20559-35 Conc. mg/kg	RL	20559-36 Conc. mg/kg	RL
Diesel:	ND	1	16	1	13000	10	2.1	1
>> Surrogate Recoveries (%) <<								
Tetracosane	78		88		188i		91	

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Total Extractable Petroleum Hydrocarbons
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LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-37	B55-8	Soil	20.0	-
20559-38	B55-10	Soil	100.0	-
20559-39	B56-8	Soil	20.0	-
20559-40	B56-10	Soil	100.0	-

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

Compound	20559-37 Conc. mg/kg	RL	20559-38 Conc. mg/kg	RL	20559-39 Conc. mg/kg	RL	20559-40 Conc. mg/kg	RL
Diesel:	120	20	1500	100	510	20	880	100
>> Surrogate Recoveries (%) <<								
Tetracosane	197@		BB		269@		BB	

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Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 20559
Method Blank(s)

	BL012.21-01		BL022.21-01	
	Conc. mg/kg	RL	Conc. mg/kg	RL
Diesel:	ND	1	ND	1
>> Surrogate Recoveries (%) <<				
Tetracosane	115		131	

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Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 20559

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (mg/Kg) BL012.21 02 / 03 - Laboratory Control Spikes						
Diesel:		33	30/34	91/103	50-150	12
>> Surrogate Recoveries (%) << Tetracosane				114/126	50-150	
For Soil Matrix (mg/Kg) BL022.21 02 / 03 - Laboratory Control Spikes						
Diesel:		33	34/33	103/100	50-150	3
>> Surrogate Recoveries (%) << Tetracosane				108/104	50-150	
For Soil Matrix (mg/Kg) BL012.21 04 / 05 - Sample Spiked: 20559 - 06						
Diesel:	ND	33	29/32	88/97	50-150	10
>> Surrogate Recoveries (%) << Tetracosane				109/112	50-150	
For Soil Matrix (mg/Kg) BL022.21 04 / 05 - Sample Spiked: 20559 - 02						
Diesel:	ND	33	200C/170C	606/515	50-150	16
>> Surrogate Recoveries (%) << Tetracosane				BB/BB	50-150	

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rrative:

Surrogate recovery high due to matrix interference.

BB -Surrogate was diluted out.

urrogate was diluted out.
- The Matrix Spike recovery is not meaningful due to the high concentration of the analyte in the sample relative to the spike

efinitions:

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

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Project 14-0307-86
Reported on December 3, 1995
Revised on December 8, 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 20559

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
B58-5	11/30/95	11/30/95	12/05/95	12/05/95	BL051.37	01
B58-8	11/30/95	11/30/95	12/05/95	12/05/95	BL051.37	02
B58-10	11/30/95	11/30/95	12/05/95	12/05/95	BL051.37	03
B59-5	11/30/95	11/30/95	12/05/95	12/05/95	BL051.37	04
B59-8	11/30/95	11/30/95	12/05/95	12/05/95	BL051.37	05
B59-10	11/30/95	11/30/95	12/05/95	12/05/95	BL051.37	06
B60-8	11/30/95	11/30/95	12/05/95	12/05/95	BL051.37	07
B60-10	11/30/95	11/30/95	12/05/95	12/05/95	BL051.37	08
B57-5	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	09
B57-8	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	10
B57-10	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	11
B61-5	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	12
B61-8	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	13
B61-10	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	14
B62-5	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	15
B62-7	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	16
B62-10	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	17
B63-3	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	18
B63-8	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	19
B63-10	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	20
B50-5	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	21
B50-8	11/30/95	11/30/95	11/30/95	11/30/95	BK301.37	22
B50-10	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	23
B51-5	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	24
B51-8	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	25
B51-10	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	26
B52-5	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	27
B52-8	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	28
B52-10	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	29
B53-5	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	30
B53-7	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	31
B53-10	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	32
B54-5	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	33
B54-8	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	34
B54-10	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	35

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Project 14-0307-86
Reported on December 3, 1995
Revised on December 8, 1995

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

B55-5	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	36
B55-8	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	37
B55-10	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	38
B56-8	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	39
B56-10	11/30/95	11/30/95	12/01/95	12/01/95	BL011.37	40

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
BK301.37-15	Method Blank	MB		Soil	12/01/95	12/01/95
BL011.37-02	B57-5	MS	20559-09	Soil	12/01/95	12/01/95
BL011.37-03	B57-5	MSD	20559-09	Soil	12/01/95	12/01/95
BL011.37-04	Laboratory Spike	LS		Soil	12/01/95	12/01/95
BK301.37-05	Laboratory Spike	LS		Soil	11/30/95	11/30/95
BK301.37-06	Laboratory Spike Duplicate	LSD		Soil	11/30/95	11/30/95
BK301.37-07	95-2946-QS	MS	20553-01	Soil	11/30/95	11/30/95
BK301.37-08	95-2946-QS	MSD	20553-01	Soil	11/30/95	11/30/95
BK301.37-14	95-2946-QS	DUP	20553-01	Soil	11/30/95	11/30/95
BL051.37-02	Laboratory Spike	LS		Soil	12/05/95	12/05/95
BL051.37-04	B-2 @ 25'	MS	20533-03	Soil	12/05/95	12/05/95
BL051.37-05	B-2 @ 25'	MSD	20533-03	Soil	12/05/95	12/05/95
BK301.37-02	Method Blank	MB		Soil	11/30/95	11/30/95
BL011.37-01	Method Blank	MB		Soil	12/01/95	12/01/95
BL051.37-09	Method Blank	MB		Soil	12/05/95	12/05/95
BK301.37-09	95-2946-QS	MS	20553-01	Soil	11/30/95	11/30/95
BK301.37-10	95-2946-QS	MSD	20553-01	Soil	11/30/95	11/30/95
BK301.37-12	Laboratory Spike	LS		Soil	11/30/95	11/30/95
BL011.37-05	B57-5	MS	20559-09	Soil	12/01/95	12/01/95
BL011.37-06	B57-5	MSD	20559-09	Soil	12/01/95	12/01/95
BL011.37-07	Laboratory Spike	LS		Soil	12/01/95	12/01/95
BL051.37-03	Laboratory Spike	LS		Soil	12/05/95	12/05/95
BL051.37-06	B-2 @ 25'	MS	20533-03	Soil	12/05/95	12/05/95
BL051.37-08	B-2 @ 25'	MSD	20533-03	Soil	12/05/95	12/05/95

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Project 14-0307-86
Reported on December 3, 1995
Revised on December 8, 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
20559-01	B58-5	Soil	1.0	-
20559-02	B58-8	Soil	1.0	-
20559-03	B58-10	Soil	1.0	-
20559-04	B59-5	Soil	1.0	-

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

Compound	20559-01 Conc. mg/kg	RL	20559-02 Conc. mg/kg	RL	20559-03 Conc. mg/kg	RL	20559-04 Conc. mg/kg	RL
Gasoline_Range	3	1	4	1	7	1	ND	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	0.007	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	0.031	0.005	ND	0.005
Xylenes	0.041	0.005	0.048	0.005	0.090	0.005	ND	0.005
> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	112		110		107		113	

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Gasoline Range Petroleum Hydrocarbons and BTXE
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Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-05	B59-8	Soil	1.0	-
20559-06	B59-10	Soil	1.0	-
20559-07	B60-8	Soil	1.0	-
20559-08	B60-10	Soil	1.0	-

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

Compound	20559-05 Conc. mg/kg	RL	20559-06 Conc. mg/kg	RL	20559-07 Conc. mg/kg	RL	20559-08 Conc. mg/kg	RL
Gasoline_Range	ND	1	ND	1	ND	1	2	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	ND	0.005	ND	0.005	ND	0.005	ND	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	106		102		106		107	

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Project 14-0307-86
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Revised on December 8, 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
20559-09	B57-5	Soil	1.0	-
20559-10	B57-8	Soil	1.0	-
20559-11	B57-10	Soil	1.0	-
20559-12	B61-5	Soil	1.0	-

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

Compound	20559-09 Conc. mg/kg	20559-09 RL	20559-10 Conc. mg/kg	20559-10 RL	20559-11 Conc. mg/kg	20559-11 RL	20559-12 Conc. mg/kg	20559-12 RL
Gasoline_Range	ND	1	ND	1	5	1	ND	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	ND	0.005	ND	0.005	0.064	0.005	ND	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	93		95		88		92	

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Project 14-0307-86
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Revised on December 8, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
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Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-13	B61-8	Soil	1.0	-
20559-14	B61-10	Soil	1.0	-
20559-15	B62-5	Soil	1.0	-
20559-16	B62-7	Soil	1.0	-

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

Compound	20559-13 Conc. mg/kg	RL	20559-14 Conc. mg/kg	RL	20559-15 Conc. mg/kg	RL	20559-16 Conc. mg/kg	RL
Gasoline_Range	ND	1	21	1	ND	1	ND	1
Benzene	ND	0.005	0.12	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	0.031	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	ND	0.005	0.14	0.005	ND	0.005	ND	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	90		119		95		90	

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Project 14-0307-86
Reported on December 3, 1995
Revised on December 8, 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
20559-17	B62-10	Soil	1.0	-
20559-18	B63-3	Soil	1.0	-
20559-19	B63-8	Soil	1.0	-
20559-20	B63-10	Soil	1.0	-

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

Compound	20559-17 Conc. mg/kg	RL	20559-18 Conc. mg/kg	RL	20559-19 Conc. mg/kg	RL	20559-20 Conc. mg/kg	RL
Gasoline_Range	5	1	ND	1	ND	1	ND	1
Benzene	ND	0.005	ND	0.005	0.009	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	0.040	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	0.007	0.005	ND	0.005
Xylenes	0.061	0.005	ND	0.005	0.033	0.005	ND	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	93		98		89		90	

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Project 14-0307-86
Reported on December 3, 1995
Revised on December 8, 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
20559-21	B50-5	Soil	1.0	-
20559-22	B50-8	Soil	1.0	-
20559-23	B50-10	Soil	1.0	-
20559-24	B51-5	Soil	1.0	-

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

Compound	20559-21 Conc. mg/kg	RL	20559-22 Conc. mg/kg	RL	20559-23 Conc. mg/kg	RL	20559-24 Conc. mg/kg	RL
Gasoline_Range	ND	1	3	1	7	1	ND	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	0.009	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	ND	0.005	0.039	0.005	0.11	0.005	0.006	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	89		88		99		112	

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Reported on December 3, 1995
Revised on December 8, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
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Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-25	B51-8	Soil	1.0	-
20559-26	B51-10	Soil	1.0	-
20559-27	B52-5	Soil	1.0	-
20559-28	B52-8	Soil	1.0	-

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

Compound	20559-25 Conc. mg/kg	RL	20559-26 Conc. mg/kg	RL	20559-27 Conc. mg/kg	RL	20559-28 Conc. mg/kg	RL
Gasoline_Range	5	1	6	1	ND	1	3	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	0.068	0.005	0.079	0.005	ND	0.005	0.046	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	107		102		107		103	

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Gasoline Range Petroleum Hydrocarbons and BTXE
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Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-29	B52-10	Soil	1.0	-
20559-30	B53-5	Soil	1.0	-
20559-31	B53-7	Soil	1.0	-
20559-32	B53-10	Soil	1.0	-

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

Compound	20559-29 Conc. mg/kg	RL	20559-30 Conc. mg/kg	RL	20559-31 Conc. mg/kg	RL	20559-32 Conc. mg/kg	RL
Gasoline_Range	12	1	ND	1	ND	1	5	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	0.16	0.005	ND	0.005	ND	0.005	0.056	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	87		103		102		98	

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Revised on December 8, 1995

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Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-33	B54-5	Soil	1.0	-
20559-34	B54-8	Soil	1.0	-
20559-35	B54-10	Soil	1.0	-
20559-36	B55-5	Soil	1.0	-

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

Compound	20559-33 Conc.	RL	20559-34 Conc.	RL	20559-35 Conc.	RL	20559-36 Conc.	RL
	mg/kg		mg/kg		mg/kg		mg/kg	
Gasoline_Range	ND	1	ND	1	6	1	ND	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	ND	0.005	ND	0.005	0.089	0.005	ND	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	108		103		100		107	

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Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-37	B55-8	Soil	1.0	-
20559-38	B55-10	Soil	1.0	-
20559-39	B56-8	Soil	1.0	-
20559-40	B56-10	Soil	1.0	-

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

Compound	20559-37 Conc. mg/kg	RL	20559-38 Conc. mg/kg	RL	20559-39 Conc. mg/kg	RL	20559-40 Conc. mg/kg	RL
Gasoline_Range	ND	1	8	1	2	1	3	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	0.009	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	0.010	0.005	0.12	0.005	ND	0.005	0.044	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	104		90		104		102	

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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: 20559
Method Blank(s)

	BK301.37-15		BK301.37-02		BL011.37-01		BL051.37-09	
	Conc. mg/kg	RL	Conc. mg/kg	RL	Conc. mg/kg	RL	Conc. mg/kg	RL
Gasoline_Range			ND	1	ND	1	ND	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	ND	0.005	ND	0.005	ND	0.005	ND	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	104		106		86		107	

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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: 20559

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (mg/kg)						
BL011.37 04 / - Laboratory Control Spikes						
Benzene		0.200	0.213	107	65-125	
Toluene		0.200	0.210	105	65-125	
Ethyl Benzene		0.200	0.219	110	65-125	
Xylenes		0.600	0.623	104	65-125	
> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				87	50-150	
For Soil Matrix (mg/kg)						
BK301.37 05 / 06 - Laboratory Control Spikes						
Benzene		0.200	0.21/0.22	105/110	65-125	5
Toluene		0.200	0.21/0.22	105/110	65-125	5
Ethyl Benzene		0.200	0.21/0.21	105/105	65-125	0
Xylenes		0.600	0.59/0.61	98/102	65-125	4
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				104/103	50-150	
For Soil Matrix (mg/kg)						
BL051.37 02 / - Laboratory Control Spikes						
Benzene		0.200	0.22	110	65-125	
Toluene		0.200	0.23	115	65-125	
Ethyl Benzene		0.200	0.23	115	65-125	
Xylenes		0.600	0.65	108	65-125	
> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				103	50-150	

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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: 20559

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Soil Matrix (mg/kg)				
	BK301.37 12 / - Laboratory Control Spikes					
Gasoline_Range		20	20	100	65-135	
		For Soil Matrix (mg/kg)				
	BL011.37 07 / - Laboratory Control Spikes					
Gasoline_Range		20	20	100	65-135	
		For Soil Matrix (mg/kg)				
	BL051.37 03 / - Laboratory Control Spikes					
Gasoline_Range		20	20	100	65-135	
		For Soil Matrix (mg/kg)				
	BL011.37 02 / 03 - Sample Spiked: 20559 - 09					
Benzene	ND	0.200	0.226/0.227	113/114	65-125	1
Toluene	ND	0.200	0.225/0.227	113/114	65-125	1
Ethyl Benzene	ND	0.200	0.221/0.223	111/112	65-125	1
Xylenes	ND	0.600	0.631/0.636	105/106	65-125	1
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				88/87	50-150	
		For Soil Matrix (mg/kg)				
	BK301.37 07 / 08 - Sample Spiked: 20553 - 01					
Benzene	ND	0.200	0.21/0.22	105/110	65-125	5

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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: 20559

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
Toluene	ND	0.200	0.21/0.22	105/110	65-125	5
Ethyl Benzene	ND	0.200	0.21/0.22	105/110	65-125	5
Xylenes	ND	0.600	0.60/0.62	100/103	65-125	3
=> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				104/104	50-150	
For Soil Matrix (mg/kg)						
BL051.37 04 / 05 - Sample Spiked: 20533 - 03						
Benzene	ND	0.200	0.22/0.22	110/110	65-125	0
Toluene	ND	0.200	0.23/0.23	115/115	65-125	0
Ethyl Benzene	ND	0.200	0.23/0.22	115/110	65-125	4
Xylenes	ND	0.600	0.65/0.63	108/105	65-125	3
=> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				102/104	50-150	
For Soil Matrix (mg/kg)						
BK301.37 09 / 10 - Sample Spiked: 20553 - 01						
Gasoline_Range	ND	20	20/20	100/100	65-135	0
For Soil Matrix (mg/kg)						
BL011.37 05 / 06 - Sample Spiked: 20559 - 09						
Gasoline_Range	ND	20	19/19	95/95	65-135	0
For Soil Matrix (mg/kg)						
BL051.37 06 / 08 - Sample Spiked: 20533 - 03						
Gasoline_Range	ND	20	19/19	95/95	65-135	0

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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: 20559
Sample Duplicates

QC Batch BK301.37-14
20553-01 Sample

	DUP	mg/kg	RPD	Limit
Gasoline_Range				
Benzene	ND	ND	0	25
Toluene	ND	ND	0	25
Ethyl Benzene	ND	ND	0	25
Xylenes	ND	ND	0	25
>> Surrogate Recoveries (%) <<				
Trifluorotoluene (SS)	106	ND		

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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Project 14-0107-86
Reported on December 4, 1995

EPA SW-846 Method 6010 and/or 7000 Series Metals
Extracted by STLC Method

Chronology

Laboratory Number 20559

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
B57-5	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	09
B61-5	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	12
B63-3	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	18
B50-10	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	23
B51-5	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	24
B52-5	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	27
B53-10	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	32
B54-10	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	35
B55-10	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	38
B56-10	11/30/95	11/30/95	12/04/95	12/04/95	BL041.44	40

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
BL041.44-01	Method Blank	MB	Soil	12/04/95	12/04/95
BL041.44-02	Laboratory Spike	LS	Soil	12/04/95	12/04/95
BL041.44-03	Laboratory Spike Duplicate	LSD	Soil	12/04/95	12/04/95
BL041.44-04	TCMID1,TCE1,TCE3,TCE4	MS 20564-02	Soil	12/04/95	12/04/95
BL041.44-05	TCMID1,TCE1,TCE3,TCE4	MSD 20564-02	Soil	12/04/95	12/04/95

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Project 14-0307-86.
Reported on December 4, 1995

EPA SW-846 Method 6010 and/or 7000 Series Metals
Extracted by STLC Method

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-09	B57-5	Soil	1.0	-
20559-12	B61-5	Soil	1.0	-
20559-18	B63-3	Soil	1.0	-
20559-23	B50-10	Soil	1.0	-

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

Compound	20559-09 Conc. mg/L	RL	20559-12 Conc. mg/L	RL	20559-18 Conc. mg/L	RL	20559-23 Conc. mg/L	RL
Lead (SW-846 6010)	ND	0.5	ND	0.5	ND	0.5	ND	0.5

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Project 14-0307-86
Reported on December 4, 1995

EPA SW-846 Method 6010 and/or 7000 Series Metals
Extracted by STLC Method

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-24	B51-5	Soil	1.0	-
20559-27	B52-5	Soil	1.0	-
20559-32	B53-10	Soil	1.0	-
20559-35	B54-10	Soil	1.0	-

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

Compound	20559-24 Conc. mg/L	RL	20559-27 Conc. mg/L	RL	20559-32 Conc. mg/L	RL	20559-35 Conc: mg/L	RL
Lead (SW-846 6010)	ND	0.5	ND	0.5	ND	0.5	ND	0.5

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553
1555 Burke Street • Suite A • San Francisco, California 94124

Superior
Analytical Laboratory

Weiss Associates
Attn: JIM PONTON

Project 14-0307-86
Reported on December 4, 1995

EPA SW-846 Method 6010 and/or 7000 Series Metals
Extracted by STLC Method

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
20559-38	B55-10	Soil	1.0	-
20559-40	B56-10	Soil	1.0	-

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

Compound	20559-38 Conc. mg/L	RL	20559-40 Conc. mg/L	RL
Lead (SW-846 6010)	ND	0.5	ND	0.5

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EPA SW-846 Method 6010 and/or 7000 Series Metals
Extracted by STLC Method

Quality Assurance and Control Data

Laboratory Number: 20559
Method Blank(s)

	BL041.44-01	
	Conc.	RL
	mg/L	
Lead (SW-846 6010)	ND	0.5

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Superior Analytical Laboratory

EPA SW-846 Method 6010 and/or 7000 Series Metals
Extracted by STLC Method

Quality Assurance and Control Data

Laboratory Number: 20559

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (mg/L) BL041.44 02 / 03 - Laboratory Control Spikes						
Lead (SW-846 6010)		10	9.2/9.5	92/95	75-125	3
For Soil Matrix (mg/L) BL041.44 04 / 05 - Sample Spiked: 20564 - 02						
Lead (SW-846 6010)	0.2	10	9.5/10.1	93/99	75-125	6

Definitions:
ND = Not Detected
[illegible] = Reporting Limit
[illegible] = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
[illegible]/L = parts per million (ppm)

ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

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1555 Burke Street • Suite A • San Francisco, California 94124

2859

Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608
Phone: 510-450-6000 Fax: 510-547-5043
AquaTerra Associates Incorporated, DBA

Please send analytic results and a copy of the signed chain of custody form to:
Jim Panton

Project ID: 14-0307-86

1) Specify analytic method and detection limit in report.
2) Notify us if there are any anomalous peaks in GC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS CALL US

CHAIN-OF-CUSTODY RECORD AND ANALYTICAL INSTRUCTIONS

Sampled by: Joyce Adams

Laboratory Name: STL

No. of Containers	Sample ID	Container Type	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
1	B58-5	Acetate tube	11/30/95		N	Y		TPH-D, TPH-G, BETX	8015, 8015/8020	N	
	B58-8										
	B58-10										
	B59-5										
	B59-8										
	B59-10										
	B60-8										
	B60-10										
	B57-5 #							TPH-D TPH-G, BETX B	8015, 8015/8020	48 HR	STL lead analysis
	B57-8							TPH-D, TPH-G, BETX	8015, 8015/8020		
	B57-10										
	B61-5 #										STL lead analysis
	B61-8										

Please initial:
Samples stored in ice
Appropriate containers
Samples preserved
VOA's without headspace
Comments:

1 Joyce Adams 11/30/95
Released by (Signature), Date

1 Weiss Associates
Affiliation

2 [signature] 11/30/95
Received by (Signature), Date

2 Supervisor 3:30
Affiliation

3 [signature] 11/30/95
Released by (Signature), Date

3 Supervisor 4:23
Affiliation

4
Shipping Carrier, Method, Date

4
Affiliation

5
Released by (Signature), Date

5
Affiliation

6 [signature] 11/30/95
Received by Lab Personnel, Date / Seal intact?

6 STL 313-0788
Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined. 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

Environmental and Geologic Services
6500 Shellmound Street, Emeryville, CA 94608
Phone: [redacted] Fax: [redacted]
AguaTerra Associates Incorporated, DBA

Jim Pinton

Project ID: 14-0307-86

1) Specify analytic method and [redacted] detection limits [redacted] report [redacted]
2) Notify us if there are any anomalous peaks in GC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: Joyce Adams Laboratory Name: STL

No. of Containers	Sample ID	Container Type	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
1	B61-10	Acetate Tube	11/30/95		N	Y	None	TPH-D, TPH-G, BETX	8015, 8015/8020	48hr	
"	B62-5	"	"		"	"	"	"	"	"	
"	B62-7	"	"		"	"	"	"	"	"	
"	B62-10	"	"		"	"	"	"	"	"	
"	B63-3 *	"	"		"	"	"	"	"	"	STLC lead analysis
"	B63-8	"	"		"	"	"	"	"	"	
"	B63-10	"	"		"	"	"	"	"	"	
"	B50-5	"	"		"	"	"	"	"	"	
"	B50-8	"	"		"	"	"	"	"	"	
"	B50-10 *	"	"		"	"	"	"	"	"	STLC lead analysis
"	B51-5 *	"	"		"	"	"	"	"	"	STLC lead analysis
"	B51-8	"	"		"	"	"	"	"	"	
"	B51-10	"	"		"	"	"	"	"	"	
↓	B52-5 *	↓	↓		↓	↓	↓	↓	↓	↓	STLC lead analysis

1 Joyce Adams 11/30/95
Released by (Signature), Date

1 Weiss Associates
Affiliation

2 [signature] 11/30/95
Received by (Signature), Date

2 Superior 3:30
Affiliation

3 [signature] 11/30/95
Released by (Signature), Date

3 Superior 4:23
Affiliation

4
Shipping Carrier, Method, Date

4
Affiliation

5
Released by (Signature), Date

5
Affiliation

6 [signature] 11/30/95
Received by Lab Personnel, Date

6 STL 510-486-0868
Affiliation, Telephone

X
Seal intact?

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other; Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround IN = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

D:\ALL\ADMIN\FORMS\COC.WP2

Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608
Phone: 510-450-6000 Fax: 510-547-5043
AquaTerra Associates Incorporated, DBA

of the signed chain of custody form to:

Project ID: 14-0307

1) Specify analytical method and detection limit in report.
2) Notify us if there are any anomalous peaks in GC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: Joyce Adams Laboratory Name: SAL

No. of Containers	Sample ID	Container Type	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
1	B-52-8	acetate liner	11/30/95		N	Y	NONE	TPH-D, TPH-G, BETX	8015, 8015/8020	48hr	
	B52-10										
	B53-5										
	B53-7										
	B53-10*										STLC lead analysis
	B54-5										
	B54-8										
	B54-10*										STLC lead analysis
	B55-5										
	B55-8										
	B55-10*										STLC lead analysis
	B56-8										
	B56-10*										STLC lead analysis

1 Joyce Adams 11/30/95
Released by (Signature), Date

1 Weiss Associates
Affiliation

2 [signature] 11/30/95
Received by (Signature), Date

2 Superior B:38
Affiliation

3 [signature] 11/30/95
Released by (Signature), Date

3 Superior 4:23
Affiliation

4
Shipping Carrier, Method, Date

4
Affiliation

5
Released by (Signature), Date

5
Affiliation

6 [signature] 11/30/95 x
Received by Lab Personnel, Date Seal intact?

6 SAL 317-0768
Affiliation, Telephone

1 Sample Type Codes: W = Water, S = Soil, Describe Other; Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B - Clear/Brown Glass, Describe Other;
Cap Codes: PT = Plastic, Teflon Lined 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
5 Turnaround [N = Normal, W = 1 Week, R = 24 Hour, HOLD (write out)]
ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

D:\ALL\ADMIN\FORMS\COC.WP2