Oakland 834-7741?

CET Environmental Services, Inc.

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August 11, 1995

Ms. Gwen M. Brennan
Office/Building Manager
Dreyer's Grand Ice Cream
5929 College Avenue
Oakland, California 94618

Subject: **Second Quarter 1995 Groundwater Monitoring Report**
Dreyer's Grand Ice Cream
5929 College Avenue, Oakland, California
(CET Project Number 3534-001)

Dear Ms. Brennan:

CET Environmental Services, Inc. (CET) is pleased to present this report which summarizes the groundwater monitoring activities for the second quarter 1995 at the subject property. These activities included the recording of groundwater level measurements, groundwater sample collection, and laboratory sample analyses.

INTRODUCTION

This report presents the results of groundwater monitoring activities conducted by CET Environmental Services, Inc. (CET) during the second quarter 1995, at the Dreyer's Grand Ice Cream facility, 5929 College Avenue, Oakland, California (herein referred to as the subject property or site).

The location of the facility is presented on Plate 1, and a site plan showing current groundwater monitoring well locations is shown on Plate 2, Attachment A.

BACKGROUND

Site Location and Description

The subject site is located in the City of Oakland, California, approximately 0.25 miles north of California Highway 24 and approximately 0.25 miles south of the Berkeley city limits (Plate 1, Attachment A). The property is bounded by Claremont Avenue to the northwest, College

Avenue to the east, and Chabot Road to the south (Plate 2, Attachment A). The site topography is relatively flat, at an elevation of approximately 172.5 feet above mean sea level (MSL) with a slight slope to the southwest. The subject site is currently occupied by the corporate offices and adjacent parking lot of Dreyer's Grand Ice Cream, Inc.

History of Underground Tank Removal & Subsequent Subsurface Investigations

On December 13, 1989, one 1,000-gallon and one 8,000-gallon gasoline tank, two 4,000-gallon diesel tanks and one 2,000-gallon diesel tank were removed from the southeast corner of the property by Petroleum Engineering, Inc. of Santa Rosa, CA (before construction of the current office building at the site). Two 1,000-gallon waste oil tanks were also removed from the mid-southwest portion of the property during December, 1989. The approximate locations of the former underground tank excavations are shown on Plate 2, Attachment A. Subsequent soil sample analyses by Pace Laboratories, collected on December 14, 1989 indicated that Total Petroleum Hydrocarbons (TPH) as gasoline (TPH/g) concentrations in soil samples from the bottoms of the fuel tank excavations ranged from 30 milligrams per kilogram (mg/Kg), or parts per million (ppm) to 320 ppm. TPH diesel (TPH/d) concentrations ranged from 17 ppm to 350 ppm. Benzene concentrations in the same soil samples ranged from 46 micrograms per Kilogram (ug/Kg), or parts per billion (ppb), to 1,300 ppb.

On February 6, 1990, personnel from Aqua Terra Technologies, Inc. (ATT), the former consultant for this project, observed the excavation of about 100 cubic yards of soil from the waste oil tank excavation. Based on soil sample analytical results, maximum concentrations of oil and grease and diesel were 5,915 ppm and 1,800 ppm, respectively. Soil sample results for the tank pit, following overexcavation, indicated the presence of oil and grease in one confirmation sample at 120 ppm. Analysis for TPH/g and TPH/d were not performed on the confirmation samples. No benzene, toluene, ethylbenzene and total xylene (BTEX) constituents were detected in the tank excavation soil samples. All soils excavated from the waste oil tank pit were disposed at a Class II landfill.

On February 12, 1990, the onsite contractor reportedly removed an additional 400 to 450 cubic yards of soil from the bottom of the excavation. The removal was apparently required because the clayey soils could not be properly compacted. ATT was notified of the overexcavation activities after the excavation had been backfilled; testing within the overexcavated area was apparently not performed. ATT was retained to test the stockpiled soils. The average TPH/g concentration was 170 ppm. The soils were aerated on site to concentrations below 100 ppm and were disposed by others at a licensed landfill facility.

During the period July 16 through July 18, 1991, ATT installed three groundwater monitoring wells (MW1, MW2, and MW3) on the subject property ranging in depths from 27 to 30 feet below ground surface (bgs). Two of the wells, MW2 and MW3, were installed adjacent to the

waste oil and fuel tank excavations, respectively, in the presumed downgradient groundwater flow direction. MW2 and MW3 were constructed using four inch diameter casing and screen. MW1, a 2-inch diameter well, was installed upgradient and west of both tank areas. Analytical results for the three wells indicated relatively high levels of TPH/g and BTEX analytes in MW2 and MW3.

During the period February 24 through March 8, 1993, ATT conducted a Powercore soil and groundwater sampling program involving nine sampling locations with borings ranging in depth from 17 to 25 feet (sampling locations are shown on Plate 2, Attachment A). Six groundwater samples were collected and submitted for analysis. Three of the borings were dry. None of the water samples contained detectable petroleum hydrocarbons. Gasoline constituents were detected in soil samples from boring PC8, located west of the former waste oil tank excavation and in soil samples from PC4, located offsite beneath the north side of Chabot Road. TPH concentrations were at or less than 12 ppm. Due to core refusal, groundwater and soil quality could not be evaluated at several locations.

Monitoring wells MW4, MW5, and MW6 were installed on August 20 and August 21, 1993 under the supervision of CET (well locations are shown on Plate 2, Attachment A). The extent of soil contamination at the subject site, based on existing data appears to be limited to the unsaturated zone soils in the immediate vicinity of the former fuel tank and waste oil tank pits, and to a band of unsaturated zone soils between approximate depths of about 10 to 12 feet bgs (within the zone of groundwater fluctuation) in the vicinity of the following borings: MW2, MW3, MW4, MW5, MW6, B1, PC4, and PC8 (Plate 2, Attachment A). The greatest thickness of affected unsaturated zone soils appears to be in the vicinity of MW3. In general, the relative concentration of TPH/d in soil at the subject site is low when compared to TPH/g and BTEX.

Petroleum hydrocarbon compounds have been consistently detected at significant concentrations in groundwater samples from monitoring wells MW2, MW3, MW4, MW5, and MW6. In general, the relative concentration of TPH/d in groundwater at the subject site is low when compared to TPH/g and BTEX. The two wells with the highest concentrations of TPH/g and BTEX are MW2 and MW5. The extent of the petroleum hydrocarbon constituents in groundwater west of MW5 and in the vicinity of MW6 has not been defined.

CET personnel conducted a review of the Leaking Underground Fuel Tank (L.U.F.T.) List, and the North Bay Toxics List at the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), on November 10, 1993. No sites were found on the North Bay Toxics List within a one half-mile radius of the subject site; eight sites were found on the LUST list within a half mile of the subject property. Two of the eight sites, the Shell and Chevron service stations, are located within several blocks of the subject site. The former Chevron service station appears to be down or cross gradient to the subject site; and the Shell service station appears to be generally upgradient. The occasional presence of historic low levels

of TPH/d and benzene in MW1 groundwater samples may be related to the affected groundwater at the Shell facility. Significant groundwater contamination from petroleum hydrocarbons has been detected at both sites.

It is currently unknown whether the former gasoline and diesel tank pit was the main source for gasoline detected in groundwater at the subject site, or whether the waste oil tank pit has contributed to the gasoline plume. Based on the analytical results for soil samples collected from boring B1 and MW4, the affected groundwater should be treated as one plume from a remediation standpoint.

QUARTERLY SUMMARY

Activities relevant to the Dreyer's facility which have occurred during the Second Quarter 1995 include the following:

- Groundwater level measurements were taken from site wells on June 27, 1995,
- Groundwater samples were collected from site monitoring wells on June 27, 1995,
- Collected groundwater samples were transported to a state certified laboratory for analysis.

GROUNDWATER MONITORING SUMMARY

Groundwater Elevation Monitoring

Groundwater level measurements were recorded on June 27, 1995. Groundwater elevation contours and flow directions for this date are shown on Plate 3, Attachment A. Historic groundwater elevations are summarized in Table 1, Attachment B.

On June 27, 1995 the groundwater flow direction ranged from south 17° west at a calculated gradient of 0.02 feet per foot (ft/ft), to south 80° west at a calculated gradient of 0.03 ft/ft in the area of the former underground fuel tanks.

These groundwater flow directions are consistent with the reported regional groundwater flow. According to the Alameda County Flood Control and Water Conservation District (ACFCWCD), 1988, 205 (J) report: *Geohydrology and Groundwater - Quality Overview, East Bay Plain Area, Alameda County, California* ,the regional groundwater flow direction is toward the west-southwest.

Groundwater Sample Collection and Handling

On June 27, 1995 CET field personnel collected groundwater samples from all site monitoring wells (MW1 through MW6). The samples were transported and submitted in accordance with CET chain-of-custody protocol to GTEL Environmental Laboratories, Inc. of Concord, California. GTEL is accredited under the Environmental Laboratory Accreditation Program (ELAP) by the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substance Control. Copies of the sample collection records and chain-of-custody documents are presented in Attachment C.

Laboratory Analytical Methods

The samples were analyzed for total petroleum hydrocarbons as diesel and as gasoline (TPH/d and TPH/g, respectively), and for benzene, toluene, ethylbenzene, and total xylenes (BTEX). U.S. Environmental Protection Agency (EPA) Test Methods 3510/8015, 5030/8015, and 602 were used for TPH/d range hydrocarbons, TPH/g, and BTEX analyses, respectively.

Groundwater Sample Analytical Results

Cumulative analytical data for groundwater samples collected from site monitoring wells, from August 1991 through the June 1995 monitoring event, are summarized in Table 2 (Attachment B). A copy of the signed laboratory analytical report is presented in Attachment C. No TPH/d, TPH/g, or BTEX analytes were detected at or above the test method detection limits from sample MW1. In the remaining samples (MW2 through MW6), no TPH/d analytes were detected at or above the test method detection limits; TPH/g and BTEX analytes were detected in these samples at concentrations in a range consistant with previous analytical results.

PLANNED ACTIVITIES

The following routine activities are planned for the third quarter 1995.

- Collect groundwater level measurements from all site wells and collect groundwater samples from all site wells during the Third Quarter 1995. Groundwater samples will be analyzed for TPH/d, TPH/g and BTEX using EPA Methods 3510/8015, 5030/8015 and 602, respectively. A groundwater monitoring report, will be compiled after the completion of all third quarter activities.

RECOMMENDATIONS

Based on the existing data, CET recommends additional characterization work to be performed at the site as outlined in the CET report dated December 15, 1993, as well as the following remediation pilot test:

- CET recommends that a pilot vapor extraction/air sparging test be performed to determine the feasibility of this remedial technology at the subject site. Based on the historic analytical results, it appears that the majority of contamination is due to volatile, gasoline-range hydrocarbons. Vapor extraction/air sparging may be effective in the removal of petroleum hydrocarbons from affected soils and groundwater in the vicinity of the former underground tanks, and from areas overlain by structures where soil excavation is not feasible. The pilot test will involve extraction of petroleum hydrocarbon vapors and air injection from proposed and existing wells.

This report was compiled under the Limitations and Uncertainties presented in Attachment D.

Please do not hesitate to contact the undersigned, at (510) 652 - 7001, if you have any questions or comments regarding the contents of this report.

Sincerely,

CET ENVIRONMENTAL SERVICES, INC.

Benjamin Berman
Staff Scientist

Terrance Carter
Project Manager

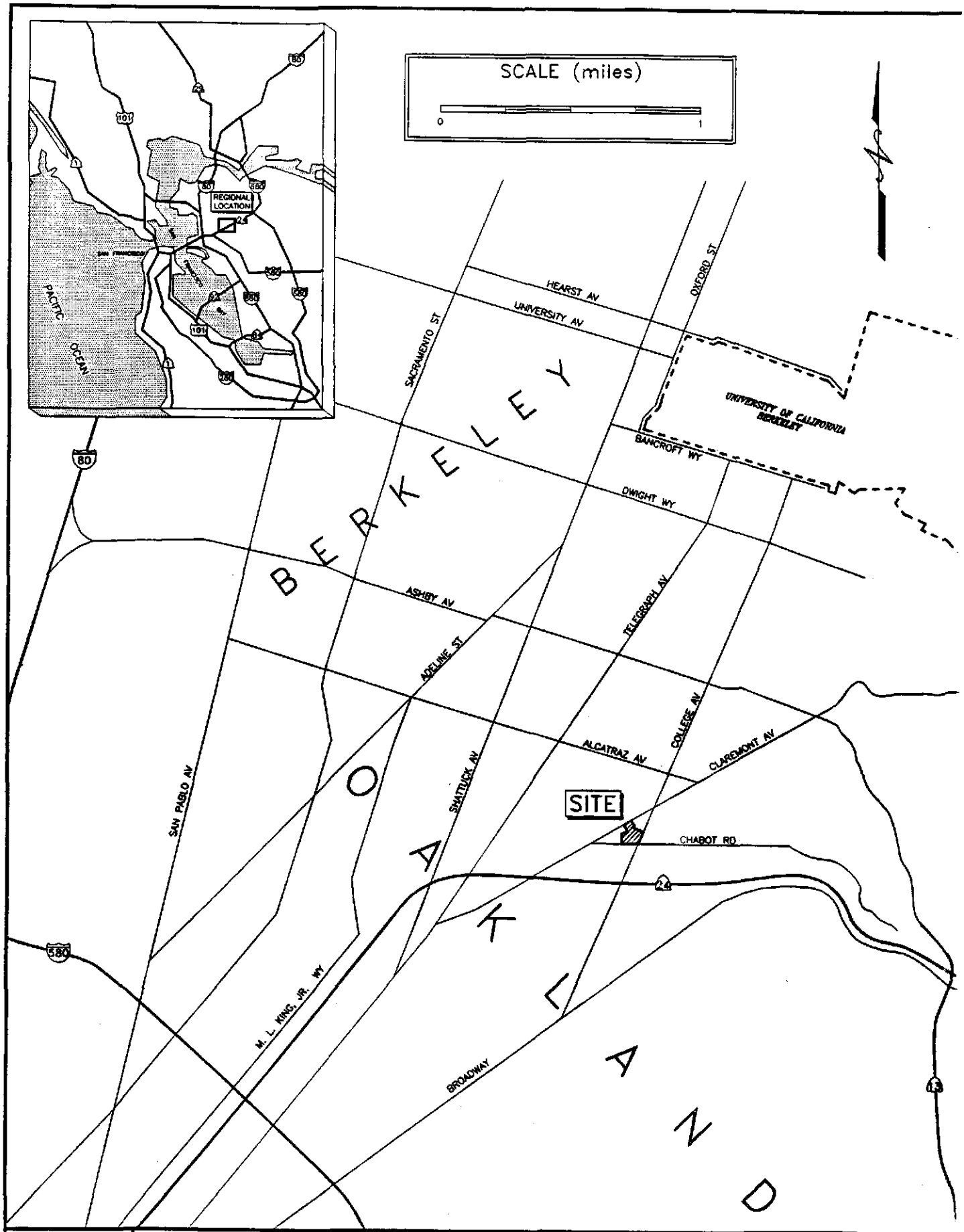
Aaron N. Stessman, P.E.
Senior Engineer

BB:

Attachments

ATTACHMENT A

Plates



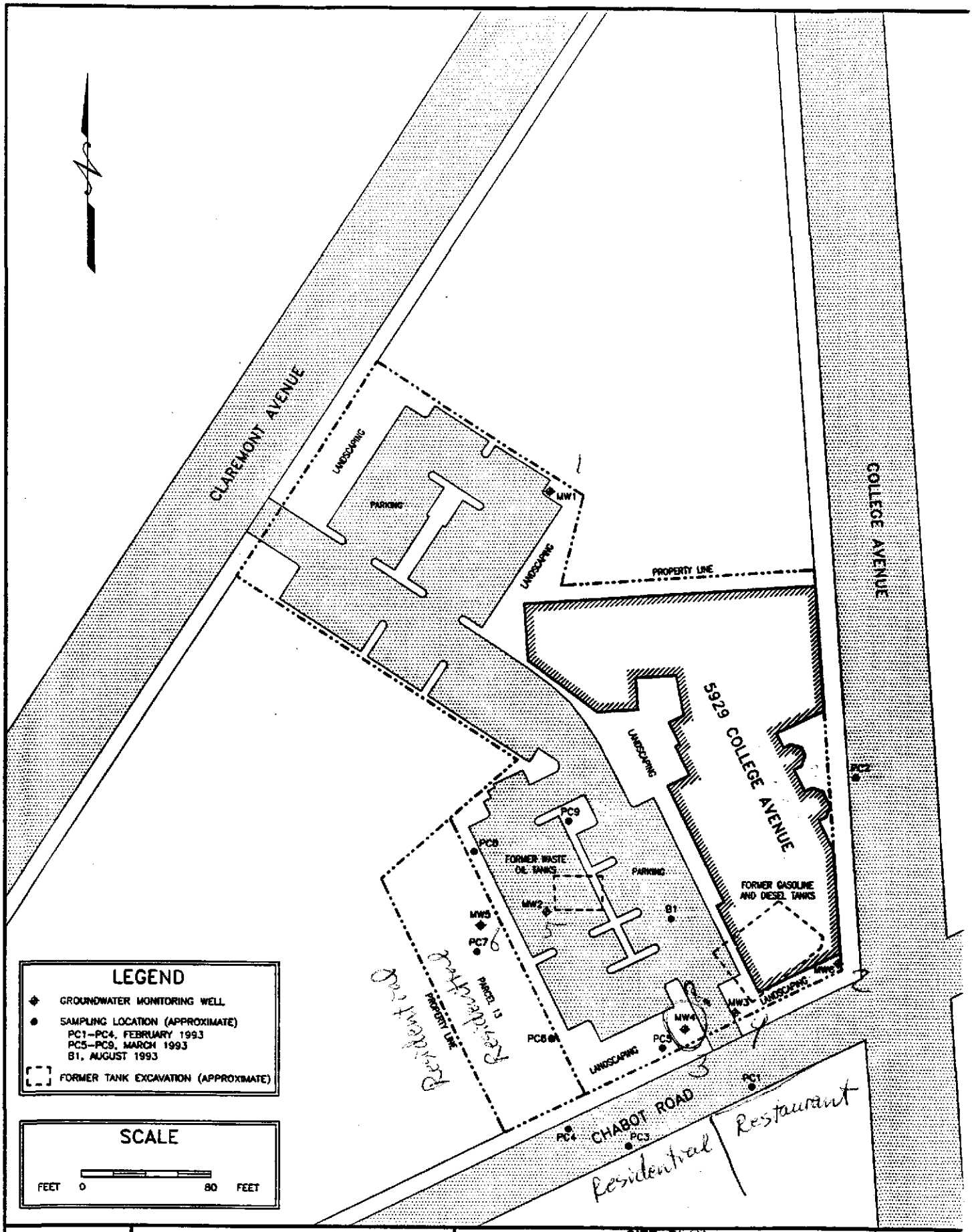
CET Environmental Services, Inc.

SITE LOCATION

DREYER'S GRAND ICE CREAM, INC.
5929 COLLEGE AVENUE
OAKLAND, CALIFORNIA

PLATE 1

JOB NUMBER	DATE	DRAWING	BY	REVISED
3534	08/95	LOC	J LONG	08/08



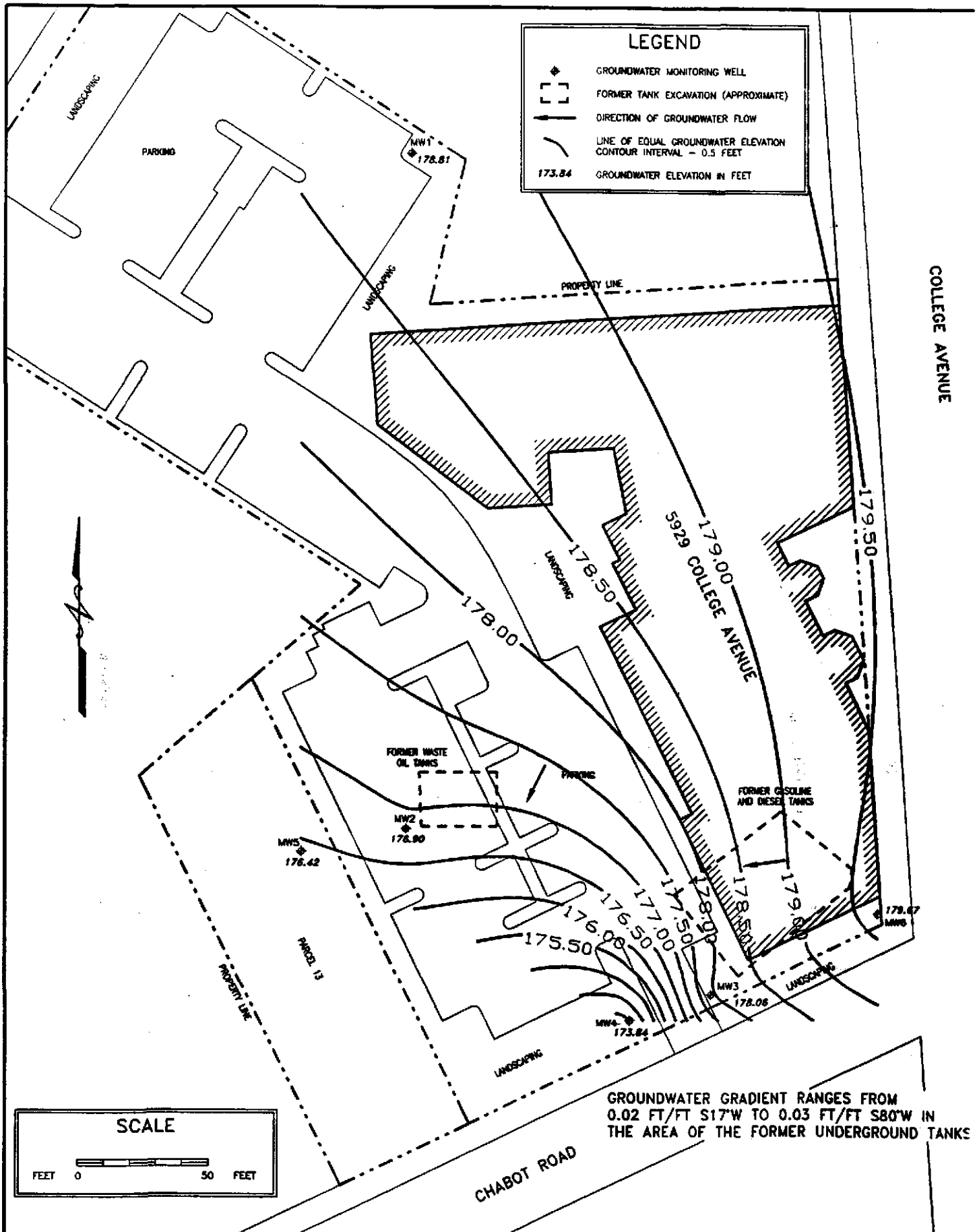
CET Environmental Services, Inc.

SITE PLAN

DREYER'S GRAND ICE CREAM, INC.
5929 COLLEGE AVENUE
OAKLAND, CALIFORNIA

JOB NUMBER	DATE	DRAWING	BY	REVISED
3534	08/95	PLAN	J LONG	08/08

PLATE 2



CET Environmental Services, Inc.

GROUNDWATER ELEVATIONS AND CONTOURS
06/27/95
DREYER'S GRAND ICE CREAM, INC.
5929 COLLEGE AVENUE
OAKLAND, CALIFORNIA

PLATE 3

JOB NUMBER	DATE	DRAWING	BY	REVISED
3534	08/95	GWL6-95	RASCHKE	08/08

ATTACHMENT B

Tables

Table 1 Groundwater Elevation Summary
Dreyer's Grand Ice Cream
5929 College Avenue
Oakland, California

Well No.	TOC Elevation (feet)	Date	Groundwater Depth[a] (feet)	Groundwater Elevation[b] (feet)
MW1		08/12/91	14.86	174.28
		12/04/91	16.16	172.98
		04/24/92	11.93	177.21
		05/04/92	12.15	176.99
		06/17/92	13.17	175.97
		07/15/92	13.66	175.48
		08/31/92	14.91	174.23
		09/14/92	15.18	173.96
		10/22/92	15.34	173.80
		11/20/92	15.27	173.87
		12/03/92	14.44	174.70
		01/18/93	7.85	181.29
		02/10/93	9.29	179.85
		03/10/93	9.88	179.26
		04/20/93	10.13	179.01
		05/01/93	—	—
		06/02/93	10.82	171.40
		07/09/93	11.62	170.60
		08/10/93	12.31	169.91
	189.12[c]	09/28/93	—	—
		10/08/93	13.68	175.44
		11/10/93	14.72	174.40
		12/08/93	14.28	174.84
		01/21/94	14.30	174.82
		02/02/94	13.06	176.06
		03/25/94	12.26	176.86
		04/29/94	12.55	176.57
		05/20/94	12.59	176.53
		06/06/94	12.96	176.16
		07/27/94	13.81	175.31
		08/30/94	14.29	174.83

Table 1 Groundwater Elevation Summary
Dreyer's Grand Ice Cream
5929 College Avenue
Oakland, California
(continued)

Well No.	TOC Elevation (feet)	Date	Groundwater Depth[a] (feet)	Groundwater Elevation[b] (feet)
MW1	189.12	09/20/94	14.55	174.57
		10/13/94	14.83	174.29
		11/15/94	11.00	178.12
		12/06/94	11.33	177.79
		06/27/95	10.31	178.81
MW2		08/12/92	12.26	172.97
		12/04/91	12.30	172.93
		04/24/92	10.00	175.23
		05/04/92	10.29	174.94
		06/17/92	10.86	174.37
		07/15/92	11.48	173.75
		08/31/92	12.02	173.21
		09/14/92	12.34	172.89
		10/22/92	12.37	172.86
		11/20/92	11.64	173.59
		12/03/92	11.95	173.28
		01/18/93	5.86	179.37
		02/10/93	8.20	177.03
		03/10/93	8.57	176.66
		04/20/93	8.95	176.28
		05/01/93	----	----
		06/02/93	9.10	176.74
		07/09/93	8.35	177.49
		08/10/93	8.45	177.39
	185.74[c]	09/28/93	----	----
		10/08/93	10.19	175.55
		11/10/93	11.15	174.59
		12/08/93	11.13	174.61
		01/21/94	11.40	174.34
		02/02/94	9.85	175.89

Table 1 Groundwater Elevation Summary
Dreyer's Grand Ice Cream
5929 College Avenue
Oakland, California
(continued)

Well No.	TOC Elevation (feet)	Date	Groundwater Depth[a] (feet)	Groundwater Elevation[b] (feet)
MW2		03/25/94	10.05	175.69
	185.74	04/29/94	9.86	175.88
		05/20/94	9.68	176.06
		06/06/94	10.27	175.47
		07/27/94	10.32	175.42
		08/30/94	11.01	174.73
		09/20/94	11.34	174.40
		10/13/94	11.42	174.32
		11/15/94	8.92	176.82
		12/06/94	8.79	176.95
		06/27/95	8.84	176.9
MW3		08/12/91	11.73	172.95
		12/04/91	11.65	173.03
		04/24/92	11.00	173.68
		05/04/92	11.09	173.59
		06/17/92	11.51	173.17
		07/15/92	11.84	172.84
		08/31/92	11.70	172.98
		09/14/92	11.74	172.94
		10/22/92	11.33	173.35
		11/20/92	10.58	174.10
		12/03/92	10.12	174.56
		01/18/93	8.42	176.26
		02/10/93	9.94	174.74
		03/10/93	10.19	174.49
		04/20/93	10.22	174.46
		05/01/93	---	---
		06/02/93	10.73	174.56
		07/09/93	10.03	175.26
		08/10/93	8.32	176.97

Table 1 Groundwater Elevation Summary
Dreyer's Grand Ice Cream
5929 College Avenue
Oakland, California
(continued)

Well No.	TOC Elevation (feet)	Date	Groundwater Depth[a] (feet)	Groundwater Elevation[b] (feet)
MW3	185.21[c]	09/28/93	----	----
		10/08/93	10.53	174.68
	185.21	11/10/93	11.22	173.99
		12/08/93	11.79	173.42
		01/21/94	12.02	174.19
		02/02/94	11.48	173.73
		03/25/94	11.26	173.95
		04/29/94	11.47	173.74
		05/20/94	11.16	174.05
		06/06/94	11.55	173.66
		07/27/94	9.78	175.43
		08/30/94	11.50	173.71
		09/20/94	11.74	173.47
		10/13/94	11.52	173.69
		11/15/94	10.28	174.93
		12/06/94	11.19	174.02
		06/27/95	7.15	178.06
MW4		09/28/93	----	----
		10/08/93	10.29	174.45
		11/10/93	11.14	173.60
		12/08/93	11.82	172.92
		01/21/94	12.07	172.67
		02/02/94	11.41	173.33
		03/25/94	11.03	173.71
	184.74	04/29/94	11.50	173.24
		05/20/94	11.13	173.61
		06/06/94	11.56	173.18
		07/27/94	9.57	175.17
		08/30/94	11.21	173.53
		09/20/94	11.56	173.18

Table 1 Groundwater Elevation Summary
Dreyer's Grand Ice Cream
5929 College Avenue
Oakland, California
(continued)

Well No.	TOC Elevation (feet)	Date	Groundwater Depth[a] (feet)	Groundwater Elevation[b] (feet)
MW4		10/13/94	11.40	173.34
		11/15/94	9.83	174.91
		12/06/94	10.85	173.89
		06/27/95	10.90	173.84
MW5		09/28/93	----	----
		10/08/93	9.84	174.91
		11/10/93	10.53	174.22
		12/08/93	10.69	174.06
		01/21/94	11.22	173.53
		02/02/94	8.80	175.95
	184.75	03/25/94	9.75	175.00
		04/29/94	9.00	175.75
		05/20/94	9.29	175.46
		06/06/94	9.74	175.01
		07/27/94	9.88	174.87
		08/30/94	10.44	174.31
		09/20/94	10.56	174.19
		10/13/94	10.87	173.88
		11/15/94	8.17	176.58
		12/06/94	7.98	176.77
		06/27/95	8.33	176.42
MW6	187.20[c]	09/28/93	----	----
		10/08/93	8.23	178.97
		11/10/93	7.74	179.46
		12/08/93	8.53	178.67
		01/21/94	8.46	178.74
		02/01/94	7.84	179.36
		03/25/94	7.72	179.48
		04/29/94	7.64	179.56
		05/20/94	7.60	179.60

Table 1 Groundwater Elevation Summary
Dreyer's Grand Ice Cream
5929 College Avenue
Oakland, California
(continued)

Well No.	TOC Elevation (feet)	Date	Groundwater Depth[a] (feet)	Groundwater Elevation[b] (feet)
MW6		06/06/94	7.91	179.29
		07/27/94	6.90	180.30
		08/30/94	8.10	179.10
		09/20/94	8.17	179.03
		10/13/94	8.21	178.99
	187.20	11/15/94	7.62	179.58
		12/06/94	8.15	179.05
		06/27/95	7.53	179.67

a. Depth to groundwater measured from the TOC.
b. Groundwater elevation is equal to the difference between the TOC elevation and groundwater depth.
c. Top of casing surveyed by a California licensed surveyor.

Table 2 Summary of Laboratory Analytical Results
Groundwater Samples
5929 College Avenue
Oakland, California

Well No./ Sample I.D.	Sample Collection Date	Concentration (µg/L)							
		TPH/d[a]	TPH/g[b]	B[c]	T[c]	E[c]	X[c]	Kerosene	Motor Oil
MW1	08/05/91	NA[d]	<50[e]	1.1	<0.5[e]	<0.5[e]	<0.5[e]	NA	NA
	12/04/91	<50[e]	<50[e]	<0.5[e]	<0.5	<0.5	<0.5	NA	NA
	03/10/93	85	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	06/02/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	10/08/93	<50	<50	<0.5	<0.5	<0.5	<0.5	<50	<50
	12/08/93	<50	<50	<0.5	<0.5	<0.5	<0.5	<50	<50
	03/25/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	06/06/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	09/20/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	12/06/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	06/27/95	<50	<50	<0.5	<0.5	<0.5	NA	NA	
MW2	08/05/91	1,900[f]	38,000	8,300	8,200	2,300	13,000	NA	NA
	12/04/91	<50	91,000	6,900	6,800	3,200	25,000	NA	NA
	03/10/93	89	59,000	5,800	5,300	3,100	15,000	NA	NA
	06/02/93	<50	58,000	50	68	70	170	NA	NA
	10/08/93	110	56,000	2,800	2,400	2,900	12,000	<50	<50
	12/08/93	<50	54,000	2,400	1,700	2,900	10,000	<50	<50
	03/25/94	<50	91,000	1,900	1,500	2,100	8,100	NA	NA
	06/06/94	<50	7,700	1,900	1,300	2,300	9,400	NA	NA
	09/20/94	<500	63,000	1,900	1,200	3,000	12,000	NA	NA
	12/06/94	<50	25,000	1,800	910	1,800	7,600	NA	NA
	06/27/95	<50	33,000	1,700	820	2,800	9,700	NA	NA
MW3	08/05/91	800[f]	3,300	3,900	160	95	150	NA	NA
	12/04/91	<50	10,000	3,300	88	80	130	NA	NA
	03/10/93	<50	8,100	2,000	31	240	30	NA	NA
	06/02/93	<50	14,000	11	13	16	49	NA	NA
	10/08/93	<50	7,600	2,400	<10	49	<10	<50	<50
	12/08/93	<50	3,800	340	3.9	29	13	<50	<50
	03/25/94	<50	5,700	500	10	21	25	NA	NA
	06/06/94	<50	12,000	1,100	23	33	43	NA	NA

Table 2 Summary of Laboratory Analytical Results
Groundwater Samples
5929 College Avenue
Oakland, California
(continued)

Well No./ Sample I.D.	Sample Collection Date	Concentration (µg/L)							
		TPH/d[a]	TPH/g[b]	B[c]	T[c]	E[c]	X[c]	Kerosene	Motor Oil
	09/20/94	<50	5,200	1,100	22	32	42	NA	NA
	12/06/94	<50	4,100	790	16	23	45	NA	NA
	06/27/95	<50	11,000	2,700	65	74	72	NA	NA
MW4	10/08/93	<50	1,400	<0.5	<0.5	2.9	3.1	<50	<50
	12/08/93	<50	2,800	460	<0.5	3.8	3.8	<50	<50
	03/25/94	<50	1,600	94	1.7	4.4	5.6	NA	NA
	06/0694	<50	12,000	3,100	15	11	13	NA	NA
	09/20/94	<50	1,900	6.2	2.4	7.1	8.7	NA	NA
	12/06/94	<50	1,000	0.7	<0.5	14	17	NA	NA
	06/27/95	<50	720	<0.5	<0.5	5.2	24	NA	NA
MW5	10/08/93	<50	31,000	4,000	1,200	1,800	5,100	<50	<50
	12/08/93	<50	25,000	2,600	110	1,700	2,400	<50	<50
	03/25/94	<50	41,000	2,400	500	1,400	2,800	NA	NA
	06/06/94	<50	42,000	2,500	320	1,700	3,000	NA	NA
	09/20/94	<50	23,000	2,100	170	1,500	2,400	NA	NA
	12/06/94	<50	16,000	800	35	1,300	1,600	NA	NA
	06/27/95	<50	25,000	3,200	750	2,500	7,900	NA	NA
MW6	10/08/93	<50	2,100	85	<0.5	70	190	<50	<50
	12/08/93	<50	3,800	74	<0.5	210	150	<50	<50
	03/25/94	<50	460	9.6	27	15	11	NA	NA
	06/06/94	<50	440	8.4	1.0	4.9	3.0	NA	NA
	09/20/94	<50	490	4.5	0.60	12	2.4	NA	NA
	12/06/94	<50	730	28	15	86	11	NA	NA
	06/27/95	<50	660	11	<0.5	20	22	NA	NA

a. TPH/d = total petroleum hydrocarbons as diesel
b. TPH/g = total petroleum hydrocarbons as gasoline
c. BTEX: B = benzene, T = toluene, E = ethylbenzene, X = total xylenes
d. NA = not analyzed
e. <50 and <0.5 = not detected at or above the test method detection limits
f. Petroleum hydrocarbons quantified as diesel are due to hydrocarbons that are lighter than diesel

ATTACHMENT C

Chain-of Custody Records
Laboratory Reports
Sample Collection Records

RECORD OF GROUNDWATER LEVEL MEASUREMENTS

Page 1 of 1

Date Measured: 6-27-95 Job No.: 3534-001

Site Location: Dreyer's, Oakland

Well location map attached? Yes ___ No X

Method of Measurement: X Electric well sounder,

___ Other: _____

Weather/Visibility: Cool, cloudy

Notes: _____

Well I.D.	Time (24 hr)	G.W.L. (1/100 ft)	G.W.L. 3x's?	B.O.W. (1/2ft)	Remarks
MW1	10:27	10.31'	30.93	30'	
MW2	10:44	8.84'	26.52	26'	Very strong odor
MW3	10:42	7.15'	21.45	26'	Strong odor
MW4	10:37	10.90'	32.7	20'	
MW5	10:30	8.33'	24.99	30'	Slight odor
MW6	10:35	7.53'	22.59	29'	

Measured by (Signature): B.T.

rev.2/13/90

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-27-95 Sample I.D.: MW1 Job No.: 3534-001

Site Location: Dreyer's, Oakland

No. of Containers: 4 / (check one): X Well Samples;

___Duplicates from well_____; ___Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): 10:31 Time: 10:27 B.O.W.(1/2'): 30' (28.5')

Method: X Electric Well Sounder; ___Other/_____

Meters calibrated: (Y) / N Well Loc. Map: Y / (N)

Calculated Purge Volume (4 casing volumes): 12.8 gallons

Purging Method: X Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr): 11:05, Product: Y / N
Sheen: Y / (N), Odor: Y / (N), Vapor:___ ppm / %LEL
Turbidity: Slightly, Color: CLEAR

Time Stop Purging (24 hr): 11:20, Product: Y / (N)
Sheen: Y / (N), Odor: Y / (N), Vapor:___ ppm / %LEL
Turbidity: slightly colored with sediment, Color: light Brown

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
11:05	18.1	7.~~13~~	-1448	4	
11:10	17.4°	8.19	-664	8	
11:15	17.4°	8.24	-672	12	
:					
:					

Sample Collection Time (24 hr): 11:27

Notes:_____

_____

_____

Collected By (signature): B. A

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-27-95 Sample I.D.: MW2 Job No.: 3534-001

Site Location: DREYERS, OAKLAND

No. of Containers: 4 / (check one): X Well Samples;

___Duplicates from well_____; ___Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): 8.84 Time: 10:44 B.O.W.(1/2'): 26' 26.5

Method: X Electric Well Sounder; ___Other/_____

0.653 Meters calibrated: (Y) / N Well Loc. Map: Y / (N)

Calculated Purge Volume (4 casing volumes): 45 gallons

Purging Method: X Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr): 1:37, Product: Y / (N)
Sheen: (Y) / N, Odor: (Y) / N, Vapor: ___ ppm / %LEL
Turbidity: clear, Color: clear

Time Stop Purging (24 hr): 14:00, Product: Y / (N)
Sheen: (Y) / N, Odor: (Y) / N, Vapor: ___ ppm / %LEL
Turbidity: clear, Color: clear

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
13:42 [illegible]	20.2	7.28	420	15	
13:48	19.4	6.97	260	30	
13:52	19.1	6.87	500		
:					
:					

Sample Collection Time (24 hr): 14:00

Notes:_____

_____

_____

Collected By (signature): B. B

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-27-95 Sample I.D.: MW3 Job No.: 3534-001

Site Location: DREYERS OAKLAND

No. of Containers: 4 / (check one): X Well Samples;

___ Duplicates from well _____; ___ Travel Blanks;

___ Field Blanks; ___ Other (explain)/ _____

W.L. (1/100'): 7.15 Time: 10:42 B.O.W. (1/2'): 26

Method: X Electric Well Sounder; ___ Other/ _____

Meters calibrated: (Y) / N Well Loc. Map: Y / (N)

Calculated Purge Volume (4 casing volumes): 49 gallons

Purging Method: X Disposable Bailer; ___ Teflon Bailer;

___ Other/ _____

Time Start Purging (24 hr): 12:55, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) / N, Vapor: ___ ppm / %LEL
Turbidity: slight, Color: light grey

Time Stop Purging (24 hr): 13:20, Product: Y / (N)
Sheen: Y / (N) Odor: (Y) / N, Vapor: ___ ppm / %LEL
Turbidity: medium, Color: grey

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
13:05	18	7.58	-1020	16	
13:10	18	7.49	-989	32	
13:20	18	7.65	—	49	
:					
:					

Sample Collection Time (24 hr): 13:25

Notes: Strong odor

Collected By (signature): B. B

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-27-95 Sample I.D.: MW4 Job No.: 3534-001

Site Location: DREYERS OAKLAND

No. of Containers : 4 /(check one): X Well Samples;

___Duplicates from well_____; ___Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): 10.90 Time : 10:37 B.O.W.(1/2'): 26'

Method: X Electric Well Sounder; ___Other/_____

Meters calibrated: (Y) / N Well Loc. Map: Y / (N)

Calculated Purge Volume (4 casing volumes): 6 gallons

Purging Method: X Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr): 10:45, Product: Y / N
Sheen: Y / (N), Odor: (Y) / N, Vapor: ___ ppm / %LEL
Turbidity: Slightly turbid, Color: Light Brown

Time Stop Purging (24 hr): 12:00, Product: Y / (N)
Sheen: Y / (N) Odor: (Y) N, Vapor: ___ ppm / %LEL
Turbidity: Slightly turbid, Color: Light brown

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
10:50	17.3	7.88	1900	2	
10:55	17.2	7.53	1775	4	
12:00	17.2	7.53	1745	6	
:					
:					

Sample Collection Time (24 hr): 12:00

Notes:_____

_____

_____

Collected By (signature): B. B

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-27-95 Sample I.D.: MW5 Job No.: 3534-001

Site Location: DREYERS, OAK

No. of Containers : 4 /(check one): X Well Samples;

___Duplicates from well ___; ___Travel Blanks;

___Field Blanks; ___Other (explain)/___

W.L.(1/100'): 8.33 Time : 10:30 B.O.W.(1/2'): 30 (29')

Method: ___Electric Well Sounder; ___Other/___

Meters calibrated: (Y) / N Well Loc. Map: Y / (N)

Calculated Purge Volume (4 casing volumes): 14 gallons

Purging Method: X Disposable Bailer; ___Teflon Bailer;

___Other/___

Time Start Purging (24 hr): 14:11, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) / N, Vapor: ___ ppm / %LEL
Turbidity: SLIGHT, Color: ALMOST CLEAR

Time Stop Purging (24 hr): 14:37, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) / N, Vapor: ___ ppm / %LEL
Turbidity: SLIGHTLY TURBID, Color: LIGHT BROWN

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
14:20	19.3	6.92	1080	5	
14:26	18.1	6.92	250	10	
14:35	18.2	6.92	1160	15	
:					
:					

Sample Collection Time (24 hr): 14:37

Notes: ___

Collected By (signature): B. B.

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 6-27-95 Sample I.D.: MW6 Job No.: 3534-001

Site Location: DREYERS, OAKLAND

No. of Containers: 4 / (check one): X Well Samples;

___Duplicates from well_____; ___Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): 7.53 Time: 10:35 B.O.W.(1/2'): 29 ✓

Method: ___Electric Well Sounder; ___Other/_____

Meters calibrated: Y / N Well Loc. Map: Y / N

Calculated Purge Volume (4 casing volumes): 49 gallons

Purging Method: X Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr): 12:05, Product: Y / (N)
Sheen: Y / (N), Odor: (Y) N, Vapor:____ ppm / %LEL
Turbidity: CLEAR, Color: CLEAR

Time Stop Purging (24 hr):_____, Product: Y / N
Sheen: Y / N, Odor: Y / N, Vapor:____ ppm / %LEL
Turbidity: Slightly turbid, Color: very light brown (almost c

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
12:21	18.2	8.14	1125	15	
12:30	18.4	7.78	1180	30	
12:37	18.3	7.74	1040	45	
:					
:					

Sample Collection Time (24 hr): 12:40

Notes:_____

_____

_____

Collected By (signature): B. B

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

4080 Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
(800) 423-7143 Outside CA
(510) 825-0720 FAX

July 13, 1995

Benjamin Berman
Cet Environmental Services, Inc.
5845 Doyle Street, Suite 104
Emeryville, CA 94608

RE: GTEL Client ID: CET02CET02
Login Number: C5060329
Project ID (number): 3534-001
Project ID (name): Dreyers/Oakland, CA

Dear Benjamin Berman:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 06/30/95 under Chain-of-Custody Number(s) 32279.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified by the Department of Health Service under Certification Number E1075.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Rashmi Shah
Laboratory Director

GTEL Client ID: CET02CET02
Login Number: C5060329
Project ID (number): 3534-001
Project ID (name): Dreyers/Oakland, CA

ANALYTICAL RESULTS

Volatile Organic
Method: EPA8020/1
Matrix: Aqueou

	GTEL Sample Number	C5060329-01	C5060329-02	C5060329-03	C5060329-04
	Client ID	MW 1	MW 2	MW 3	MW 4
	Date Sampled	06/28/95	06/28/95	06/28/95	06/28/95
	Date Analyzed	07/03/95	07/04/95	07/06/95	07/09/95
	Dilution Factor	1.00	50.0	10.0	1.00

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.5	ug/L	< 0.5	1700	2700	< 0.5
Toluene	0.5	ug/L	< 0.5	820	65.	< 0.5
Ethylbenzene	0.5	ug/L	< 0.5	2800	74.	5.2
Xylenes (total)	0.5	ug/L	< 0.5	9700	72.	24.
TPH as GAS	50.	ug/L	< 50.	33000	11000	720
BFB (Surrogate)	--	%	109.	116.	6.73	135.

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA8020/15:

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. Gasoline Range Hydrocarbo (TPH) quantitated by GC/FID with purge and trap. Acceptability limits for recovery in the Bromofluorobenzene (BFB) surrogate is 62-129%.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL Client ID: CET02CET02
Login Number: C5060329
Project ID (number): 3534-001
Project ID (name): Dreyers/Oakland. CA

ANALYTICAL RESULTS

Volatile Organic
Method: EPA8020/1
Matrix: Aqueou

GTEL Sample Number	C5060329-05	C5060329-06	--	--	
Client ID	MW 5	MW 6	--	--	
Date Sampled	06/28/95	06/28/95	--	--	
Date Analyzed	07/09/95	07/04/95	--	--	
Dilution Factor	25.0	1.00	--	--	

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.5	ug/L	3200	11.	--	--
Toluene	0.5	ug/L	750	< 0.5	--	--
Ethylbenzene	0.5	ug/L	2500	20.	--	--
Xylenes (total)	0.5	ug/L	7900	22.	--	--
TPH as GAS	50.	ug/L	25000	660	--	--
BFB (Surrogate)	--	%	117.	125.	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA8020/15:

"Test Methods for Evaluating Solid Waste. Physical/Chemical Methods". SW-846. Third Edition including promulgated Update 1. Gasoline Range Hydrocarbo (TPH) quantitated by GC/FID with purge and trap. Acceptability limits for recovery in the Bromofluorobenzene (BFB) surrogate is 62-129%.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL Client ID: CET02CET02 QUALITY CONTROL RESULTS
Login Number: C5060329 Volatile Organic
Project ID (number): 3534-001 Method: EPA8020/1
Project ID (name): Dreyers/Oakland, CA Matrix: Aqueou

Method Blank Results

QC Batch No: G070595-1
Date Analyzed: 05-JUL-95

Analyte	Method:EPA8020/15 Concentration: ug/L
Benzene	< 0.30
Toluene	< 0.30
Ethylbenzene	< 0.30
Xylenes (Total)	< 0.50
TPH as Gasoline	< 50.0

Notes:

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: CET02CET02
Project ID: Dreyers
Oakland, CA
Work Order Number: C5-06-0329

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Diesel in Water

Modified EPA Methods 3510/8015[a]

GTEL Sample Number		01	02[b]	03[b]	04[b]
Client Identification		MW-1	MW-2	MW-3	MW-4
Date Sampled		06/28/95	06/28/95	06/28/95	06/28/95
Date Extracted		06/30/95	06/30/95	06/30/95	06/30/95
Date Analyzed		07/09/95	07/09/95	07/09/95	07/09/95
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as Diesel	50	<50	<50	<50	<50
Detection Limit Multiplier		1	1	1	1
O-Terphenyl surrogate, % recovery		155[c]	129	165[c]	151[c]

GTEL Sample Number		05	06	GCJ 070695	
Client Identification		MW-5	MW-6	METHOD BLANK	
Date Sampled		06/28/95	06/28/95	--	
Date Extracted		06/30/95	06/30/95	06/30/95	
Date Analyzed		07/09/95	07/09/95	07/07/95	
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as Diesel	50	<50	<50	<50	
Detection Limit Multiplier		1	1	1	
O-Terphenyl surrogate, % recovery		147	123	120	

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986.
b. Hydrocarbon pattern is not characteristic of diesel.
c. Surrogate recovery is greater than upper control limits due to target compound interference.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL ENVIRONMENTAL LABORATORIES, INC.
4080 PIKE LANE, SUITE C
CONCORD, CA 94520
(510) 685-7852
(800) 423-7143

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

3224

Company Name: CET Environmental
Phone #: (510) 652-4781
Company Address: Emeryville office
FAX #:
Site Location: Oakland
Project Manager: Benjamin Berman
Client Project ID: (#) 3924.01 (NAME) Dreyers Oakland
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Benjamin Berman

Field Sample ID	GTEL Lab # (Lab Use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCl	HNO3	H2SO4	ICE	OTHER	Sampling: DATE	TIME
MW2	02	4	X									X		6/28	11:00
MW4	04	4	X									X		6/28	12:00
MW6	06	4	X									X		6/28	12:45

ANALYSIS REQUEST | OTHER

BTEX 602 ☐ 8020 ☐ with MTBE ☐
BTEX/Gas Hydrocarbons PID/FID ☐ with MTBE ☐
Hydrocarbons GC/FID Gas ☐ Diesel ☐ X
Hydrocarbon Profile (SIM/GC/MS) ☐
Oil and Grease 413.1 ☐ 413.2 ☐ SM5520 ☐
TPH/IR 418.1 ☐ SM 5520 ☐
EDB by 504 ☐ DBCP by 504 ☐
EPA 503.1 ☐ EPA 502.2 ☐
EPA 601 ☐ EPA 8010 ☐
EPA 602 ☐ EPA 8020 ☐
EPA 608 ☐ 8080 ☐ PCB only ☐
EPA 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐
EPA 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐
EPA 610 ☐ 8310 ☐
EP TOX Metals ☐ Pesticides ☐ Herbicides ☐
TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐
EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐
CAM Metals TTLC ☐ STLC ☐
Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐
Organic Lead ☐
Corrosivity ☐ Flash Point ☐ Reactivity ☐

TAT
Priority (24 hr) ☐
Expedited (48 hr) ☐
7 Business Days ☒
Other ____ Business Days ☐

Special Handling
GTEL Contact ____
Quote/Contract # ____
Confirmation # ____
P.O. # ____

QA/QC Level
Blue ☐ CLP ☐ Other ☐

SPECIAL DETECTION LIMITS

SPECIAL REPORTING REQUIREMENTS

REMARKS:

Lab Use Only Lot #: 5°C
Storage Location
Work Order #: 650603 29

CUSTODY RECORD

Relinquished by Sampler:	Date	Time	Received by:
B. Berman (Benjamin Berman) CET	6/29/95	17:00	Joe Wiley
Relinquished by:	Date	Time	Received by:
Joe Wiley	6/30/95	08:15	
Relinquished by:	Date	Time	Received by Laboratory:
	6/30/95	08:15	Waybill # Ronald C. Jensen