

1829 Clement Avenue Alameda, California 94501-1396		96 MAR 29	SiffE. G.f. Truck 1750 Ada	ring Facility	San Leandro, CA			
Mr. Dale	Mr. Dale Klettke				PM: Deborah Ur	nderwood		
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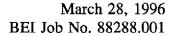
LETTER OF TRANSMITTAL

BEI Job No. 88288,001

COPY TO

SIGNED: Deborah Underwood If enclosures are not as noted, kindly notify Blymyer Engineers, Inc. at once.

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Mr. Mike Rogers ABF Freight System, Inc. 3801 Old Greenwood Road Fort Smith, AR 72903

Subject:

Fourth Quarter 1995 through First Quarter 1996 Groundwater Monitoring and Free Product Recovery

G.I. Trucking Facility 1750 Adams Avenue San Leandro, California

**STID 1373** 

Dear Mr. Rogers:

This letter documents the quarterly free product recovery and semi-annual groundwater monitoring activities performed during Fourth Quarter 1995 and First Quarter 1996 at the subject site (Figures 1 and 2).

## 1.0 Introduction

# 1.1 Background

Blymyer Engineers was retained by Milne Truck Lines in July 1986 to conduct precision testing and to install a monitoring system for three 12,000-gallon diesel, one 12,000-gallon gasoline, and one 800-gallon waste oil underground storage tank (UST) at the site, which is currently occupied by G.I. Trucking Company. All of the USTs were constructed of fiberglass. During precision testing, which required that the USTs be filled to capacity with product, all of the USTs tested tight except for the waste oil UST. The waste oil UST was uncovered to identify the source of the leak and to attempt to repair the UST. It was observed by a representative of the UST manufacturing company that the bottom of the waste oil UST was ruptured and damaged beyond repair. In December 1986, when the waste oil UST was removed, it was observed that the pea gravel and native soil surrounding the UST contained waste oil and there was approximately 3 inches of waste oil on the groundwater surface.

Groundwater and waste oil were removed from the waste oil UST basin during two pumping events, leaving only a sheen on groundwater. Approximately 45 cubic yards of contaminated pea gravel and native soil were removed and disposed of. It was noted that once the contaminated soil was removed, diesel fuel flowed into the excavation from the direction of the diesel USTs. The diesel fuel was removed via pumping on two occasions, leaving a sheen on groundwater. The excavation was subsequently filled to just below grade surface (bgs) with pea gravel and



resurfaced. A 12-inch-diameter free product recovery well with a passive skimmer, presently designated MW-1, was installed in the center of the former waste oil UST basin to recover any diesel fuel that accumulated after backfilling the excavation.

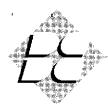
Four monitoring wells with total depths of approximately 25 feet bgs were also installed in the vicinity of the UST system to assess the extent of soil and groundwater contamination associated with the diesel USTs. The native soil consisted predominantly of sandy clay or clayey sand and silty clay. The soil samples collected from the soil bores contained petroleum hydrocarbon concentrations ranging from 71 to 210 parts per million, quantified using EPA Method 3550. No concentrations of Total Oil and Grease, by an unspecified analytical method, were detected in groundwater samples collected from the four monitoring wells.

The diesel USTs were re-tested in April 1987 during which all three USTs were certified as tight. Based on the test results, it was assumed by Blymyer Engineers that the diesel fuel removed from the excavation did not result from a UST leak, but that a damaged product line may have been the source. Any released diesel fuel was likely contained in the relatively higher permeability pea gravel.

Quarterly groundwater monitoring of the monitoring wells, presently designated MW-2 through MW-5, began in Fourth Quarter 1988. Since monitoring began, only groundwater samples collected from monitoring wells MW-2 and MW-3 have contained detectable concentrations of the analytes. Therefore, groundwater sample analysis for monitoring wells MW-4 and MW-5 was discontinued after Third Quarter 1995 in accordance with the Alameda County Health Care Services Agency's (ACHCSA's) letter dated August 14, 1995. Low concentrations of Total Petroleum Hydrocarbons (TPH) as diesel have been detected in groundwater samples collected from monitoring well MW-2 since Fourth Quarter 1994 and TPH as diesel has consistently been detected in groundwater samples collected from monitoring well MW-3 since First Quarter 1990. Low concentrations of toluene, below the California Department of Health Services and Environmental Protection Agency Maximum Contaminant Level (MCL), have been detected in a groundwater sample collected from monitoring well MW-2 during First Quarter 1995 and in a groundwater sample collected from monitoring well MW-3 during Third Quarter 1994. Groundwater flow direction has historically ranged between south and southeast.

Free product ranging in thickness from less than 0.2 feet to a sheen has been measured on groundwater in well MW-1 since quarterly monitoring began, and approximately 1.18 gallons of free product has been recovered since recovery activities began in November 1993.

During Second Quarter 1995, additional analyses of the waste oil suite were performed in accordance with the request of the ACHCSA. Although the waste oil released from the former waste oil UST was removed, the ACHCSA requested that the waste oil suite of analyses be



performed for confirmation. Analysis of TPH as motor oil was also performed to provide additional groundwater contaminant data. The analytical results, which were either non-detectable or below MCLs, indicated that diesel fuel, not waste oil, was the cause of groundwater contamination at the site.

Based on the data accumulated since 1988, Blymyer Engineers requested site closure from the ACHCSA in April 1995, considering the recent changes in the regulatory climate regarding plume definition and necessary closure conditions. In its letter dated July 27, 1995, the ACHCSA granted a reduced sampling frequency and discontinuation of the waste oil suite analyses. Blymyer Engineers inquired whether TPH as gasoline analysis was to be continued, because the status was not discussed in the ACHCSA letter. The ACHCSA stated that the need for the analysis would be evaluated, but that minimally, analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and TPH as diesel should be performed. The ACHCSA also stated that the concentrations of toluene, the "unstabilized" TPH as diesel concentrations, and the presence of free product, although minimal, needed to be addressed before closure could be granted.

Blymyer Engineers discussed these issues with the ACHCSA in August and November 1995. Because the toluene concentration units were misread as milligrams per liter (mg/L), instead of micrograms per liter (µg/L), the ACHCSA thought the toluene concentrations detected in groundwater collected from monitoring well MW-3 exceeded MCLs. Therefore, the ACHCSA's main concern was that a sheen or product layer still exists in recovery well MW-1 and the secondary concern was that the TPH as diesel concentrations were the highest during First Quarter 1995. It was concurred by Blymyer Engineers and ACHCSA that if an additional recovery well was installed in the backfill, downgradient of the southwest corner of the diesel UST basin (the inferred source), free product recovery would be expedited and the TPH as diesel concentrations in groundwater would likely decrease. In the meantime, the ACHCSA requested that semi-annual groundwater monitoring and quarterly free product recovery be continued. In February 1996, Blymyer Engineers notified the ACHCSA that installation of an additional recovery well was under consideration while groundwater monitoring and free product recovery is ongoing. At that time, the ACHCSA confirmed that analysis of TPH as gasoline was no longer necessary based on the existing data.



## 2.0 Data Collection

## 2.1 Groundwater Sample Collection

Groundwater samples were collected from monitoring wells MW-2 and MW-3 (Figure 2) on February 15, 1996. The groundwater samples were collected in accordance with the previously submitted Blymyer Engineers' Standard Operating Procedure No. 3, entitled *Groundwater Monitoring and Well Sampling Using a Bailer or Hand Pump, Revision No. 1*. The groundwater depth measurements and details of the monitoring well purging and sampling are presented on the Well Purging and Sampling Data sheets included as Attachment A. Historic and recent measurements of groundwater depth are presented in Table I. All purge and decontamination water was stored in Department of Transportation-approved, 55-gallon drums for future disposal.

## 2.2 Groundwater Sample Analytical Methods

The groundwater samples were submitted to Sequoia Analytical, a California-certified laboratory, on a standard 10-day turnaround time for analysis of BTEX by EPA Method 8020 and TPH as diesel by modified EPA Method 8015. As discussed in the last groundwater monitoring and free product report, the analytical results for TPH as diesel have been converted to mg/L from µg/L (since the laboratory was changed during Third Quarter 1995) in order to maintain consistency with results reported in the past. Tables II, III, and IV summarize the current and all previous analytical results for groundwater samples collected from the monitoring wells. The laboratory analytical report for the current sampling event is included as Attachment B.

# 2.3 Free Product Recovery

The EZY® passive skimmer was on a monthly operation and maintenance schedule, overseen by on-site personnel, until August 1994. Since then, the skimmer has been maintained quarterly by Blymyer Engineers, either in concurrence with groundwater monitoring in the first and third quarters of the year or independently of groundwater monitoring in the second and fourth quarters of the year. The skimmer was removed from monitoring well MW-1 on November 16, 1995, and on February 15, 1996, in order to recover any product that was contained in the skimmer. The groundwater depth, the thickness of any ponded product, and the volume of recovered product were measured on each site visit. On February 15, 1996, the skimmer was submerged due to a decrease in depth to groundwater since the last recovery event. The depth of the skimmer was adjusted to appropriately intersect the current depth of the groundwater surface. Table I presents historic and current groundwater and product depth measurements. Table V



contains a summary of the free product volume recovered during past events and the approximate cumulative volume of free product removed to date.

## 3.0 Discussion of Data

## 3.1 Groundwater Sample Analytical Results

Concentrations of TPH as diesel were detected in the groundwater samples collected from monitoring wells MW-2 and MW-3 (Table III) this quarter. The TPH as diesel concentration detected in the groundwater sample collected from monitoring well MW-2 was only slightly above the method detection limit. BTEX were not detected in the groundwater samples collected from the monitoring wells (Table II).

## 3.2 Recovered Free Product Data

In November 1995, approximately 0.25 gallons of free product were recovered from the skimmer, and in February 1996, there was no measurable free product to be recovered. The cumulative volume of free product removed since recovery began has amounted to approximately 1.18 gallons.

## 3.2 Groundwater Flow Direction and Gradient

Based on the depth-to-groundwater measurements this quarter, the groundwater flow direction in the vicinity of the underground storage tank basin was toward the south with a gradient of approximately 0.010 feet per foot.

### 4.0 Recommendations

- One recovery well should be installed in the southwest, downgradient corner of the UST basin to expedite free product recovery.
- Quarterly free product recovery and semi-annual groundwater monitoring should be
  continued in order to remove recoverable free product and to further assess trends in
  contaminant concentrations in groundwater at the site. Analysis of total dissolved solids,
  to assess the quality of groundwater, should be performed.



## 5.0 Limitations

Services performed by Blymyer Engineers have been provided in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. The scope of work for the project was conducted within the limitations prescribed by the client, G.I. Trucking Company. This report is not meant to represent a legal opinion. No other warranty, expressed or implied, is made. This report was prepared for the sole use of the client.

The next free product recovery event is scheduled for May 1996 and the next groundwater monitoring and free product recovery event is scheduled for August 1996. Please call Deborah Underwood at (510) 521-3773 with any questions or comments.

Sincerely,

Blymyer Engineers, Inc.

Deborah Underwood

Geologist

Mark Detterman, C.E.G. 1788

Senior Geologist

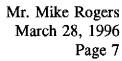




Table I:

Groundwater Depth Measurements

Table II:

Summary of Groundwater Sample Analytical Results; Benzene, Toluene,

Ethylbenzene, and Total Xylenes

Table III:

Summary of Groundwater Sample Analytical Results; TPH as Diesel

Table IV:

Summary of Groundwater Sample Analytical Results; TPH as Gasoline,

TPH as Motor Oil, TRPH, HVOCs, SVOCs, and Metals

Table V:

Free Product Recovery Measurements, Monitoring Well MW-1

Figure 1:

Site Location Map

Figure 2:

Site Plan and Groundwater Elevation Contours, February 15, 1996

Attachment A:

Well Purging and Sampling Data Sheets, dated February 15, 1996

Attachment B:

Laboratory Analytical Report, Sequoia Analytical, dated February 27, 1996

cc:

Mr. Dale Klettke, Alameda County Health Care Services Agency

Mr. Eddy So, San Francisco Bay Regional Water Quality Control Board

Mr. Mike Bakaldin, San Leandro Fire Department

Mr. Bob Hogencamp, G.I. Trucking Company

Mr. Tom McGuire, G.I. Trucking Company

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	Table I. Groundwater Depth Measurements BEI Job No. 88288.001, G.I. Trucking Facility, 1750 Adams Avenue, San Leandro, California									
Date Measured	MW-TOC Elevation		11	W-2 tion 100.24*	TOC Eleva	V-3 tion 100.22* tion 100.18 <sup>b</sup>	MW TOC Elevat			W-5 ation 99.60°
	Depth to Water/ Free Product	Water Surface Elevation	Depth to Water	Water Surface Elevation	Depth to Water	Water Surface Elevation	Depth to Water	Water Surface Elevation	Depth to Water	Water Surface Elevation
November 15, 1988	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
February 16, 1989	6.03/5.83	N/A	6.13	94.11	6.00	94.22	5.92	93.56	5.42	94.18
May 19, 1989	6.31/6.11	N/A	6.24	94.00	6.20	94.02	5.25	94.23	5.53	94.07
August 22, 1989	6.72/6.54	N/A	6,68	93.56	6.60	93.62	6.76	92.72	5.94	93.66
November 21, 1989	6.51	93.49	6.64	93.60	6.55	93.67	5.72	93.76	5.91	93.69
February 23, 1990	5.74	94.26	6.04	94.20	5.83	94.39	4.92	94.56	5.69	93.91
May 23, 1990	6.34/6.19	N/A	6.40	93.84	6.38	93.84	5.39	94.09	5.92	93.68
August 27, 1990	6.27	93.73	6.70	93.54	6.67	93.55	5.66	93.82	6.17	93.43
December 3, 1990	6.49	93.51	6.83	93.41	6.75	93.47	5.95	93.53	6.05	93.55
March 13, 1991	4.94	95.06	5.64	94.60	5,42	94.80	4.39	95.09	5.01	94.59
May 29, 1991	9.46	90.54	6.31	93.93	6.28	93.94	5.27	94.21	5.57	94.03
August 28, 1991	6.31/6.22	N/A	6.68	93.56	6.62	93.60	5.70	93.78	5.90	93.7
December 9, 1991	6.49/6.29	N/A	6.69	93.55	6.65	93.57	5.78	93.78	5.99	93.61
February 18, 1992	4.19/4.09	N/A	4.96	95.28	4.73	95.49	3.60	95.88	4.45	95.15
May 15, 1992	5.72/5.55	N/A	6.07	94.17	5.99	94.23	5.03	94.45	5.33	94.27
August 13, 1992	6.12/5.93	N/A	6.42	93.82	6.32	93.90	5.40	94.08	5.62	93.98
December 3, 1992	5.65/5.55	N/A	6.25	93.99	6.23	93.99	5.14	94.34	5.58	94.02
March 25, 1993	4.60	95.40	5.40	94.84	5.27	94.95	4.14	95.34	4.34	95.26
May 21, 1993	5.56/5.47	N/A	6.04	94.20	5.97	94.25	4.95	94.53	5.28	94.32
August 17, 1993	6.07/5.94	N/A	6.42	93.82	6.59	93.63	5.40	94.08	5.61	93.99
December 13, 1993	NM°	NM⁴	6.09	94.15	6.33	93.89	5.08	94.40	5.38	94.22
February 24, 1994	4.97	95.63	5.57	94.67	5.76	94.46	4.38	95.10	4.90	94.70
May 11, 1994	5.20	94.80	5.94	94.30	5.84	94.34	4.85	94.63	5.23	94.37
August 23, 1994	6.06/5.98	N/A	6.44	93.80	6.38	93.80	5.47	94.01	5.70	93.90
November 29, 1994	5.98	94.02	5.82	94.42	5.76	94.42	4.76	94.72	5.12	94.48

Table I. Groundwater Depth Measurements BEI Job No. 88288.001, G.I. Trucking Facility, 1750 Adams Avenue; San Leandro, California										
Date Measured	MW-1 TOC Elevation 100.00°		II	W-2 tion 100.24*	TOC Eleva	W-3 tion 100.22* tion 100.18*	MW TOC Elevat	=		W-5 ation 99.60*
	Depth to Water/ Free Product	Water Surface Elevation	Depth to Water	Water Surface Elevation	Depth to Water	Water Surface Elevation	Depth to Water	Water Surface Elevation	Depth to Water	Water Surface Elevation
February 15, 1995	4.93	95.07	5.68	95.56	5.60	95.58	NM	NM	NM	NM
May 18, 1995	4.99	95.01	NM	NM	NM	NM	NM	NM	NM	NM
August 16, 1995	6.46	93.54	6.19	94.05	6.11	94.07	5.16	94.32	5.47	94.13
November 16, 1995	5.21	94.79	NM	NM	NM	NM	NM	NM	NM	NM
February 15, 1996	4.68	95.32	5.62	94.62	5.48	94.70	4.40	95.08	4.90	94.70

TOC

= Top of casing
= Based on an arbitrary datum
= Resurveyed elevation, May 11, 1994
= Not measured due to equipment malfunction
= Non-applicable
= Not measured ь C

N/A NM

#### Table II. Summary of Groundwater Sample Analytical Results Benzene, Toluene, Ethylbenzene, and Total Xylenes, Modified EPA Method 8020 (µg/L) BEI Job No. 88288.001. G.E. Trucking Facility, 1750 Adams Avenue, San Leandro, California MW-1 MW-2 MW-3 MW-4 Date Sampled MW-5 November 15, 1988 Not Analyzed to May 21, 1993 August 17, 1993 < 0.5 < 0.5 <0.5 < 0.5 0.13 feet free product December 13, 1993 < 0.5 < 0.5 < 0.5 < 0.5 heavy product sheen < 0.5 < 0.5 < 0.5 < 0.5 February 24, 1994 heavy product sheen May 11, 1994 < 0.5 < 0.5 < 0.5 < 0.5 heavy product sheen < 0.5 $0.6^{\circ}$ < 0.5 < 0.5 August 23, 1994 0.08 feet free product November 29, 1994 heavy product sheen < 0.5 < 0.5 NA NA February 15, 1995 heavy product sheen 1.2ª ND NA NA August 16, 1995 < 0.5 < 0.5 NA NA heavy product sheen February 15, 1996 < 0.5 NA NA heavy product sheen < 0.5

μg/L = Micrograms per liter

<x = Detected concentration less than respective detection limit of x.</p>

a = Detected concentration of toluene.

NA = Not analyzed

ND = None of analytes detected above the detection limit; see individual laboratory report for respective detection limits.

#### Table III, Summary of Groundwater Sample Analytical Results TPH as Diesel, Modified EPA Method 8015 (mg/L) BEI Job No. 88288.001, G.I. Trucking Facility, 1750 Adams Avenue, San Leandro, California Date Sampled MW-1 MW-2 MW-3 MW-4 MW-5 November 15, 1988 0.22 feet free product < 0.20 < 0.20 < 0.20 < 0.20 February 16, 1989 0.20 feet free product < 0.09 < 0.09 < 0.09 < 0.09 May 19, 1989 0.20 feet free product < 0.08 < 0.08 < 0.08 <0.08 August 22, 1989 < 0.03 0.18 feet free product < 0.03 < 0.03 < 0.03 November 21, 1989 < 0.03 < 0.03 < 0.03 < 0.03 product sheen February 23, 1990 < 0.05 0.34 < 0.05 < 0.05 product sheen May 23, 1990 < 0.05 0.15 feet free product < 0.05 0.64 < 0.05 August 27, 1990 product sheen < 0.05 0.41 < 0.05 < 0.05 December 3, 1990 < 0.05 product sheen < 0.05 < 0.05 <0.05 March 13, 1991 product sheen < 0.05 1.3 < 0.05 < 0.05 May 29, 1991 product sheen < 0.05 0.54 < 0.05 < 0.05 August 28, 1991 0.09 feet free product < 0.05 0.24 < 0.05 < 0.05 December 9, 1991 0.20 feet free product < 0.05 0.20 < 0.05 < 0.05 February 18, 1992 < 0.05 < 0.05 0.09 feet free product < 0.05 0.89 May 15, 1992 < 0.05 0.17 feet free product < 0.05 0.38 < 0.05 August 13, 1992 0.19 feet free product < 0.05 0.20 < 0.05 < 0.05 December 3, 1992 < 0.05 <0.05 0.10 feet free product < 0.05 < 0.05 March 25, 1993 < 0.05 1.6 < 0.05 <0.05 product sheen May 21, 1993 < 0.05 0.72 < 0.05 < 0.05 0.09 feet free product August 17, 1993 0.13 feet free product < 0.05 0.48 < 0.05 < 0.05 December 13, 1993 heavy product sheen < 0.05 0.19 < 0.05 < 0.05 February 24, 1994 0.38 < 0.05 < 0.05 < 0.05 heavy product sheen May 11, 1994 0.58 < 0.05 heavy product sheen < 0.05 < 0.05 August 23, 1994 0.08 feet free product < 0.05 $0.45^{a}$ < 0.05 < 0.05 November 29, 1994 0.09 0.96° NA heavy product sheen NA February 15, 1995 0.1 1.7 heavy product sheen NA NA 1.1° August 16, 1995<sup>b</sup> 0.063° NA heavy product sheen NA February 15, 1996 heavy product sheen 0.079 1.3 NA NA

TPH

= Total Petroleum Hydrocarbons

mg/L

a b = Milligrams per liter

<x = Detected concentra NA = Not analyzed

= Detected concentration less than respective detection limit of x.

Laboratory reports that positive result appears to be due to the presence of a heavier hydrocarbon than diesel.
 Beginning this sampling event results are converted to mg/L, originally reported in µg/L.

c = Laboratory reports that an unidentified hydrocarbon, heavier than the diesel standard, was present between the carbon range of C9 to C24.

#### Table IV. Summary of Groundwater Sample Analytical Results\* TPH as Gasoline, TPH as Motor Oil, TRPH, HVOCs, SVOCs, and Metals BEI Job No. 88288.001, G.I. Trucking Facility, 1750 Adams Avenue, San Leandro, California Modified EPA Modified EPA Sample Date Sampled EPA Method EPA Method EPA Method **EPA** Method 8015 I.D. Method 8015 418.1 TRPH 601 HVOCs 8270 SVOCs Methods TPH as TPH as (µg/L) 6010 and (mg/L) (µg/L) gasoline 7421 motor oil\* $Metals^b$ (mg/L) (mg/L)(mg/L) MW-1 January 15, 1988 NA NA NA NA NA NA to August 23, 1994 November 29, 1994 NA NA NA NA NA NA February 15, 1995° NA NA NA NA NA NA August 16, 1995° NA NA NA NA NA NA MW-2 January 15, 1988 NA NA NA NA NA NA to August 23, 1994 November 29, 1994 < 0.05 ND ND $ND^d$ NA NA February 15, 1995 < 0.05 < 0.5 <5.0 ND ND 0.002 Pb\* August 16, 1995' NA NA NA NA NA NA MW-3 January 15, 1988 NA NA NA NA NA NA to August 23, 1994 November 29, 1994 < 0.05 NA NA ND ND ND February 15, 1995 < 0.05 ND 0.004 Pb\* < 0.5 < 5.0 ND 0.16 Zn\* August 16, 1995f NA NA NA NA NA NA

= Groundwater samples from monitoring wells MW-4 and MW-5 were not collected for analysis

TPH = Total Petroleum Hydrocarbons

HVOCs = Halogenated Volatile Organic Compounds

SVOCs = Semi-volatile Organic Compounds

mg/L = Milligrams per liter pg/L = Micrograms per liter

= TPH as motor oil analysis performed First Quarter 1995 only to provide additional groundwater chemistry data.

b = Metals analytical test includes: cadmium (Cd), chromium (Cr), lead (Pb), nickel (Ni), zinc (Zn).

c = Not analyzed due to presence of free product or product sheen in monitoring well.

d = Groundwater sample filtered and preserved before submittal to laboratory.

e = Detected analyte(s) and concentration(s) listed; see individual laboratory report for respective detection limit(s).

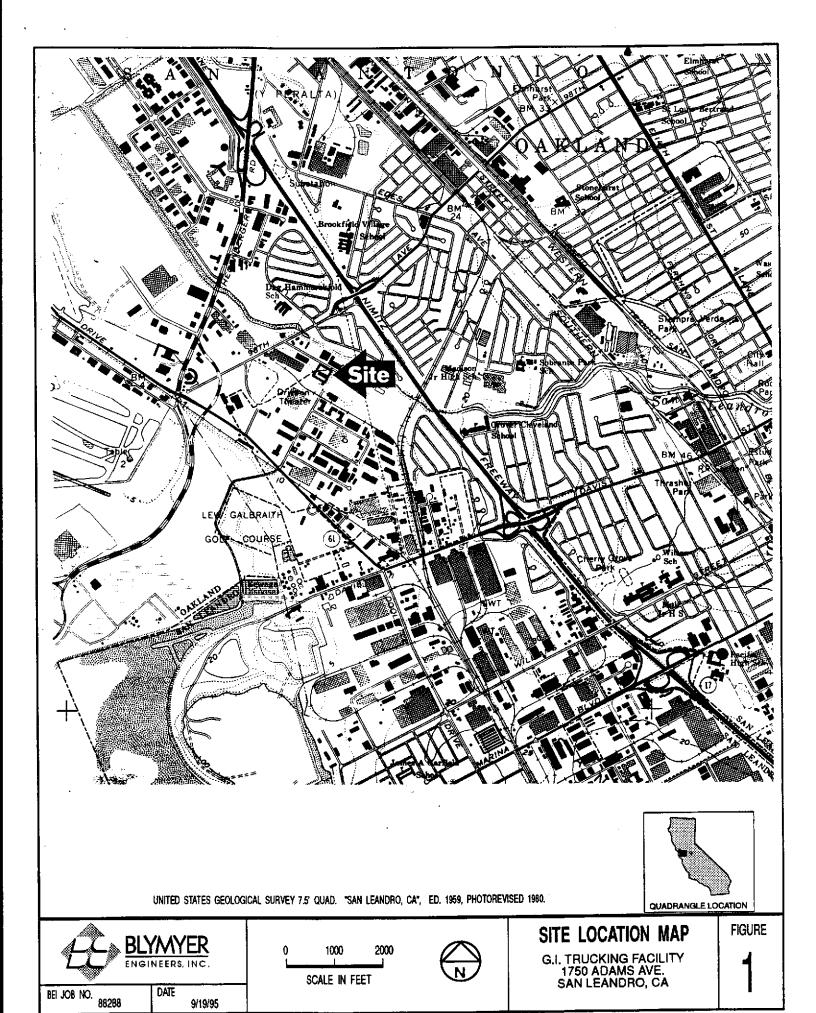
f = Analysis of groundwater samples for TPH as gasoline, TRPH, HVOCs, SVOCs, and metals was discontinued beginning this monitoring event.

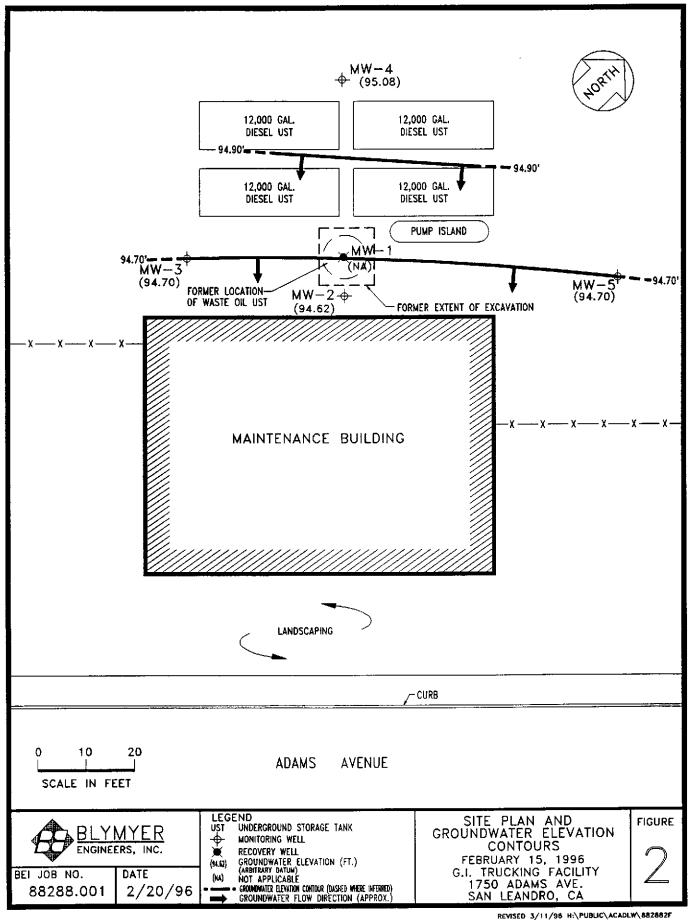
NA = Not analyzed

ND = None of analytes detected above the detection limit; see individual laboratory report for respective detection limits.

Table V. Free Product Recovery Measurements, Monitoring Well MW-1 BEI Job No. 88288.061, G.I. Trucking Facility, 1750 Adams Avenue, San Leandro, California				
Date Recovered	Volume Recovered (gallons)			
November 1988 to October 1993	No recovery performed			
November 1993	0.125			
December 1993	0.25			
January 1994	0.05			
February 1994	<0.05			
March 1994	<0.05			
April 1994	<0.05			
May 1994	<0.05			
June 1994	< 0.025			
July 1994	<0.025			
August 1994 <sup>a</sup>	0.1			
November 1994	0.1			
February 1995	<0.025			
May 1995	<0.025			
August 1995	No measurable product to recover			
November 1995	0.25			
February 1996	No measurable product to recover			
Cumulative Volume Recovered (approximate)	1.18			

a = Frequency of recovery activities decreased from monthly to quarterly after this recovery event.







# Attachment A

Well Purging and Sampling Data Sheets, dated February 15, 1996

# Well Purging and Sampling Data

Date	2/15/96	Project Number	88288.1	Project Name	G.I. Trucking
Well Number	MW-2	Boring Diameter	N/A	Casing Diameter	2*

Column of Liquid in Well	Volume to be R	emoved
Depth to product N/A	Gallons per foot of casing	= 0.17 gal/ft.
Depth to water 5.62 ft.	Column of water	× 17.63 ft.
Total depth of well 23.25 ft.	Volume of casing	= 3.00 gal.
Column of water 17.63 ft.	No. of valumes to remave	x 3
	Total volume to remove	= 9.00 gal.

Method of measuring liquid Oil/water interface probe

Method of purging well Disposable polyethylene bailer

Method of decontamination Liqui-nox and distilled water

	Physical appearance of water (clarity, color, particulates, odor)					
Initial	Clear, no odor					
During	Slightly silty, tan color, no odor					
Final	Slightly silty, tan color, no odor					

Field Analysis	Initial During			Final			
Time	10:26	10:32	10:38	10:44			
Temperature (F)	64.6	65.3	65.7	65.5			
Conductivity (us/cm)	738	748	751	754			
рН	7.68	7.63	7.52	7.51			
Method of measurement Hydac meter							
Total volume purged	9.00 gal.						
Comments	Sampled with disposable polyethylene bailer						

Amount of Sample
3-40ml VOAs w/ HCl
2-1L amber bottles

Signed/Sampler Att W W Date 2/15/96 Signed/Reviewer Stlunders Date 2/15/96					
Signed/Reviewer Mkunckunk Date 2/15/96	Signed/Sampler	May Mlan-	Date	2/15/26	
	Signed/Reviewer Sele	meme		2/15/96	

# Well Purging and Sampling Data

Date	2/15/96	Project Number	88288.1	Project Name	G. I. Trucking
Well Number	MW-3	Boring Diameter	N/A	Casing Diameter	2"

Column of Liquid in Well	Volume to be R	emoved
Depth to product N/A	Gallons per foot of casing	= 0.17 gal/ft.
Depth to water 5.48 ft.	Column of water	× 17.27 ft.
Total depth of well 22.75 ft.	Volume of casing	= 2.94 gal.
Column of water 17.27 ft.	No. of volumes to remove	x 3
	Total volume to remove	= 8.82 gal.

Method of measuring liquid Oil/water interface probe

Method of purging well Disposable polyethylene bailer

Method of decontermination Liqui-nox and distilled water

	Physical appearance of water (clarity, color, particulates, odor)
Initial	Clear, no odor
During	Silty, tan color, no odor
Final	Silty, tan color, no odor

Field Analysis	Initial	Du	Final						
Time	11:25	11:31	11:38	11:44					
Temperature (F)	65.2	66.5	66.7	66.9					
Conductivity (us/cm)	723	743	826	867					
pH	7.34	7.33	7.31	7.36					
Method of measurement Hydac meter									
Total volume purged	ged 9.00 gal.								
Comments	Sampled with disposable polyethylene bailer								

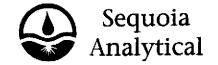
Sample Number	Amount of Sample
MW-3	3-40ml VOAs w/ HCl
	2-1L amber bottles
11	

Signed/Sampler Styll WMU	Date 2/15/96
Signed/Reviewer Allukun.	Date 2/15/96



# Attachment B

Laboratory Analytical Report, Sequoia Analytical, dated February 27, 1996



(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Blymyer Engineers 1829 Clement Street Alameda, CA 94501-1396

Attention: Debra Underwood

Client Proj. ID: 88288.1/GI Trucking/San Lean. Sampled: 02/15/96

Sample Descript: MW-2

Matrix: LIQUID

Analysis Method: EPA 8015 Mod Lab Number: 9602C49-01 Sampled: 02/15/96 Received: 02/16/96 Extracted: 02/22/96 Analyzed: 02/24/96

Reported: 02/27/96

QC Batch Number: GC0222960HBPEXY

Instrument ID: GCHP4A

# Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	79
Chromatogram Pattern: Unidentified HC		C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 15	50 10 <b>0</b>



Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Villelane

Noelle Lane

Project Manager



Redwood City, CA 5 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

1829 Clement Street Alameda, CA 94501-1396

Blymyer Engineers Client Proj. ID: 88288.1/Gl Trucking/San Lean. Sampled: 02/15/96

Received: 02/16/96

Sample Descript: MW-2 Matrix: LIQUID

Attention: Debra Underwood

Analysis Method: EPA 8020 Lab Number: 9602C49-01

Analyzed: 02/21/96 Reported: 02/27/96

QC Batch Number: GC022196BTEX21A

Instrument ID: GCHP21

## **BTEX Distinction**

Analyte	Detection Limit ug/L	Sample Results ug/L		
Benzene Toluene Ethyl benzene Xylenes (Total)	0.50 0.50 0.50 0.50	N.D. N.D. N.D. N.D.		
Surrogates Trifluorotoluene	Control Limits % 130	% Recovery 96		

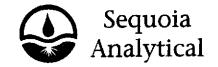
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Noelle Lane

Project Manager





Redwood City, CA . 3 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Blymyer Engineers 1829 Clement Street

GI Trucking/San Lean. Sampled: 02/15/96 88288.1/GI Trucking/San Lean. Client Proj. ID:

Received: 02/16/96

Alameda, CA 94501-1396

Sample Descript: MW-3 Matrix: LIQUID

Extracted: 02/22/96 Analyzed: 02/24/96

Attention: Debra Underwood

Analysis Method: EPA 8015 Mod Lab Number: 9602C49-02

Reported: 02/27/96

QC Batch Number: GC0222960HBPEXY

Instrument ID: GCHP4B

# Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L	
TEPH as Diesel	50		1300
Chromatogram Pattern: Unidentified HC			<b>C9-C</b> 24
Surrogates	Control Limits %	•	% Recovery
n-Pentacosane (C25)	50	150	152 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL ELAP #1210

Hilan

Noelle Lane

Project Manager





Redwood City, CA . Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Blymyer Engineers 1829 Clement Street

88288.1/Gl Trucking/San Lean. Client Proj. ID:

Sampled: 02/15/96 Received: 02/16/96

Alameda, CA 94501-1396

Attention: Debra Underwood

Sample Descript: MW-3 Matrix: LIQUID

Analysis Method: EPA 8020 Lab Number: 9602C49-02

Analyzed: 02/21/96 Reported: 02/27/96

QC Batch Number: GC022196BTEX21A

Instrument ID: GCHP21

## **BTEX Distinction**

Analyte	Detection Limit ug/L	Sample Results ug/L		
Benzene Toluene Ethyl benzene Xylenes (Total)	0.50 0.50 0.50 0.50	N.D. N.D. N.D. N.D.		
Surrogates Trifluorotoluene	<b>Control Limits</b> % 130	% <b>Recovery</b> 85		

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL ELAP #1210

Nottellane

Noelle Lane

Project Manager



Redwood City, CA 5. 3 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Blymyer Engineers 1829 Clement Street Client Project ID:

88288.1/G1 Trucking/San Lean.

Matrix:

Liquid

Alameda, CA 94501-1396 Attention: Debra Underwood

Work Order #:

9602C49 -01 - 02 Reported:

Feb 29, 1996

# QUALITY CONTROL DATA REPORT

Analyte:

Diesel

QC Batch#: GC022296OHBPEXY Analy. Method:

**EPA 8015 M** 

Prep. Method:

**EPA 3520** 

Analyst: MS/MSD #: J.Minket

Sample Conc.:

9602C49-01 79

Prepared Date: Analyzed Date:

2/22/96 2/24/96

Instrument I.D.#: Conc. Spiked:

GCHP4A 1000 ug/L

Resuit:

1800

MS % Recovery:

172

Dup. Result:

1900

MSD % Recov.:

182

RPD:

5.4

**RPD Limit:** 

0-50

LCS #:

**BLK022296YAS** 

Prepared Date: Analyzed Date:

2/22/96 2/24/96

Instrument I.D.#:

GCHP4A

Conc. Spiked:

1000 ug/L

LCS Result:

860

LCS % Recov.:

86

MS/MSD

LCS **Control Limits**  50-150

**SEQUOIA ANALYTICAL** 

Noelle Lane Project Manager Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9602C49.8BB <1>



Redwood City, CA 95 33 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

Blymyer Engineers 1829 Clement Street Client Project ID:

88288.1/G1 Trucking/San Lean.

Matrix:

Liquid

Alameda, CA 94501-1396 Attention: Debra Underwood

Work Order #:

9602C49 -01 - 02

Reported:

Feb 29, 1996

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl	Xylenes	
QC Batch#:	GC022196BTEX21A	GC022196BTEX21A	Benzene GC022196BTEX21A	GC022196BTEX21A	
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo	
MS/MSD #:	9602451-10	9602451-10	9602451-10	9 <b>602</b> 451-10	•
Sample Conc.:	N.D.]	N.D.1	N.D.]	N.D.]	
Prepared Date:	2	2/21/96	2/21/96	2/21/96	
Analyzed Date:		2/21/96	2/21/96	2/21/96	
nstrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	10 ug/L	
Resuit:	11	11	9.9	29	
MS % Recovery:	110	110	99	97	
Dup. Result:	11	12	11	32	
MSD % Recov.:		120	110	107	
RPD:	0.0	8.7	11	9.8	
RPD Limit:	0-50	0-50	0-50	0-50	

LCS #:	GBLK022196A	GBLK022196A	GBLK022196A	GBLK022196A		
Prepared Date:	2/21/96	2/21/96	2/21/96	2/21/96		
Analyzed Date:	2/21/96	2/21/96	2/21/96	2/21/96		
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21		
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L		
LCS Result:	12	11	10	29		
LCS % Recov.:	120	110	100	97		
He (Neb						 
MS/MSD		70.400	70.400	70-130	1	
LCS	70-130	70-130	70-130	· <del>-</del>	S	1
Control Limits	50-150	50-150	50-150	50-150		 

**SEQUOIA ANALYTICAL** 

Noelle Lane Project Manager Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortifled with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

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98288.1	PROJECT NA	UNE/LO Tv	cation Iche	ing San Leandro, CA			015)					İ				TURNAROUND TIME: Standard DAY(S)
SAMPLERS (SIGNATURE)	Ste	N	h	ing /san Leandro, CA W Mlum	NINEBS	TPH AS GASOLINE + BIXE (AIOD EPA 8015/8020)	TPH AS DIESEL (MOD EPA 8015)	VOC (EPA 624/8240)	EPA 625/8270	418.1)	BTXE (EPA 8020/602)					REMARKS:
DATE	TIME	COMP	GRAB	SAMPLE NAME/LOCATION	# OF CONTAINERS	TPH AS GAS	TPH AS DIE	NOC (EPA 6	) DOM: NESS	TXPH (EPA 418.1)	BTXE (EPA				992	9602049
2/15/96	11:00		X	MW-2	5		X				X					cooler at 2°C
2/15/96	12:05		×	MW-2 MW=3	S	-	×				X	_	-	-	-	conser at 2°C
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REQUESTED BY:	De	bri	લ	Under wood		RE	SULTS A	NO IM	OICE TO:	10	AB B	f 1 lyn	=rei 1482	ght - E	اوہم	ystems, Inc.
RELINQUISHER/BY: (SIG	LATURE)	W	س_	DATE / TIME RECEIVED BY: (SIGNATURE)	Tan	RE	LIXQUI	SHED B	Y: (SIGN	ATURE)			2,	DATE /		RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIG	NATURE)		·	DATE / TIME RECEIVED FOR LABORATORY BY: (	SIGNATURE)		DATE	/TIMI		RE	MARKS:					

WHITE Accompany Sample

YELLOW: BEI, After Lab Signs

PINK: Original Sampler

12 47