88288.1

LETTER OF TRANSMUUT

Mr. Mike Rogers

G.I. Trucking Facility

September 29, 1997

ATTENTION:

SUBJECT:

BEI Job No



Alameda, California 94501-1396

$(510)\ 521$	-3773 FAX:	(510) 865-2	594	San Leandro, California 😙						
	ing Company reight System, l	Inc.		ST	ID 1373					
3801 Old (	Greenwood Road	d	<del></del>	-	3 70					
Fort Smith	n, AR 72903									
□ Ir	are sending your voice opp of letter		□ Report □ Prints □ Plans	□ Work Order □ Change Order	□ Specifications □					
Copies	Date	Number		Description						
1	9/24/97		Final copy; Second	Final copy; Second Semi-Annual Groundwater Monitoring Event 1997						
			Groundwater Monitoring and Free Product Recovery							
The	se are transm	itted as ch	necked below:							
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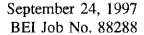
COPY TO: File SIGNED: Mark Detterman

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

Mr. Mike Bakaldin, San Leandro Fire Department

Mr. Dale Klettke, Alameda County Health Care Services Agency

Mr. Stan Lovell, G.I. Trucking Company Mr. Pat Mila, G.I. Trucking Company





Mr. Mike Rogers G.I. Trucking Company c/o ABF Freight System, Inc. 3801 Old Greenwood Road P.O. Box 10048 Fort Smith, AR 72917-0048

Subject:

Second Semi-Annual Groundwater Monitoring Event of 1997

and Free Product Recovery G.I. Trucking Facility

1750 Adams Avenue San Leandro, California

STID 1373

Dear Mr. Rogers:

This letter documents free product recovery and the second semi-annual groundwater monitoring event of 1997 at the subject site (Figures 1 and 2).

#### 1.0 Introduction

#### 1.1 Background

Blymyer Engineers, Inc., 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 tanks (USTs) 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 off the site. 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, previously designated MW-1 and currently designated RW-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 and 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 California Department of Health Services and Environmental Protection Agency Maximum Contaminant Levels (MCLs), 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 RW-1 since quarterly monitoring began, and approximately 1.18 gallons of free product have been recovered from well RW-1 since recovery activities began in November 1993.

Mr. Mike Rogers September 24, 1997 Page 3

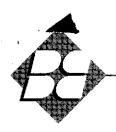


During Second Quarter 1995, additional analyses of the waste oil suite were performed in accordance with the request of the ACHCSA. Although the waste oil released from the former waste oil UST was removed, the ACHCSA requested that the waste oil suite of analyses be performed for confirmation. Analysis 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 of 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 primary concern was that a sheen or product layer still existed in recovery well RW-1 and its secondary concern was that the TPH as diesel concentrations were the highest during First Quarter 1995. Blymyer Engineers and ACHCSA agreed 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 was ongoing. At that time, the ACHCSA confirmed that analysis of TPH as gasoline was no longer necessary based on the existing data.

On June 6, 1996, Blymyer Engineers installed a second free product recovery well, RW-2, in the southwestern corner of the UST complex. On June 7, 1996, and June 10, 1996, Blymyer Engineers visited the site to determine if free product was appearing in well RW-2. A thin layer of relatively fresh free product was observed in both recovery wells, along with a darker product layer, on June 10, 1996. On June 11, 1996, Blymyer Engineers visited the site to further



investigate the situation and encountered an increased thickness of fresh free product in the recovery wells. On June 12, 1996, the discovery of an apparent diesel release was verbally reported to the ACHCSA.

As discussed in the Blymyer Engineers letter entitled *Unauthorized Release*, dated July 16, 1996, the source of the release appears to have been localized in the westernmost fuel pump manway. Specifically, gaskets in the fuel pump appear to have been the source of the leak. According to site personnel the fuel pump was repaired and placed back in service. An unknown volume of diesel product was released from this point. Based on an approximate assumed UST excavation area of 60 feet by 30 feet, 75% occupied by the existing USTs, an initial 0.25-foot thickness of clear free product, an assumed porosity of 30% for the pea gravel backfill, and a relatively flat gradient, an estimate for the release volume of approximately 250 gallons was calculated. In November 1996, during ongoing product recovery operations, site personnel verbally reported a total inventory loss of approximately 165 gallons.

Blymyer Engineers evaluated the use of passive free product skimmers at the site and, due to the low recovery rate by the passive skimmers, a Flexible Axial Peristaltic (FAP) pump was installed in RW-1 on August 8, 1996. The low recovery rate in the passive skimmers is likely related to the relatively higher viscosity of diesel in comparison to gasoline, and to potential biofouling of the skimmers by the older product.

Native soils surrounding the UST excavation consist of multiple layers of silty clay, clayey silt, and clayey fine sand. The hydraulic conductivity appears to be relatively low, based upon the trapping of older free product within the UST excavation years after the initial release and the low dissolved concentrations of TPH as diesel and BTEX in groundwater downgradient of the UST complex years after the initial release.

#### 2.0 Data Collection

#### 2.1 Groundwater Sample Collection

Groundwater samples were collected from monitoring wells MW-2 and MW-3 (Figure 2) on August 22, 1997. The groundwater samples were collected by Blaine Tech Services, Inc. (Blaine) in general accordance with the Blymyer Engineers' Standard Operating Procedure No. 3, previously forwarded. The groundwater depth measurements and details of the monitoring well purging and sampling are presented on the *Groundwater Sampling Report* and the *Water Level Report* generated by Blaine and 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 LEGEND Analytical Services (LEGEND), 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. 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 existing EZY® passive skimmer, installed in recovery well RW-1, was on a monthly operation and maintenance schedule, overseen by on-site personnel, until August 1994. Until June 1996, the passive skimmer had 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 groundwater depth, the thickness of any pooled product, and the volume of recovered product were measured on each site visit. Since discovery of the fresh product in the UST basin in June 1996, Blymyer Engineers purchased a second skimmer for placement in well RW-2. After difficulties in free product recovery were encountered, a FAP pump was installed in recovery well RW-1, while the newer passive skimmer remained in well RW-2. Upon discovery of the fresh product, Blymyer Engineers made daily or weekly visits to hand bail free product, to empty the skimmers, or to monitor the FAP pump operation. Due to decreased product thickness in well RW-1 in September 1996, difficulties in free product recovery were encountered. Consequently, the FAP pump was removed and reinstalled in well RW-2, and the newer passive skimmer was removed and reinstalled in well RW-1. On November 20, 1996, the FAP pump had reached the limits of operation and was subsequently removed from RW-2. Soak-eze® absorbent socks were installed in well RW-1 and the newer passive skimmer was installed in well RW-2 in order to obtain the residual product from each well. Inspection and change out, if required, of these recovery systems was initially conducted approximately every two weeks. Because significant measurable free product has not been encountered in either recovery well since November 1996, nor was there significant product absorbed onto the Soak-eze® absorbent socks, the monitoring of the socks was decreased to monthly beginning in February 1997, and to quarterly in April 1997. 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

TPH as diesel was detected in the groundwater sample collected from monitoring well MW-3 (Table III) this quarter. The TPH as diesel concentration detected in the groundwater sample collected from monitoring well MW-3 decreased from the last monitoring event, while the concentration of TPH as diesel detected in the groundwater sample from well MW-2 decreased to below the limit of detection this quarter. BTEX were again not detected in the groundwater samples collected from either monitoring well (Table II), nearly 15 months after discovery of the more recent release. Well MW-2 is approximately 2 feet downgradient from the edge of the waste oil UST excavation and BTEX do not appear to be have migrated beyond the UST basin.

#### 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. An increasing volume of product was removed beginning in June 1996 (Table V). Until the more recent release, the cumulative volume of free product removed since recovery began had only amounted to approximately 1.18 gallons. As of the date of monitoring (August 22, 1997) approximately 178 gallons of free product have been recovered at the site. This compares reasonably to the inventory loss of approximately 165 gallons reported by site personnel. Once again there was no measurable thickness of free product in either well RW-1 or well RW-2 on August 22, 1997, however approximately 100 milliliters of free product was recovered from the passive skimmer on that date.

#### 3.3 Groundwater Flow Direction and Gradient

Blymyer Engineers contoured groundwater elevations for the four monitoring wells outside of the UST complex this monitoring event to depict the general groundwater gradient at the site. Based on the depth-to-groundwater measurements in these wells during this monitoring event, the groundwater flow direction in the vicinity of the UST basin was toward the east at a gradient of approximately 0.019 feet per foot. This is a change from a historically flatter gradient and a historical flow direction that has been oriented more towards the south. A not unexpected higher groundwater level exists within the UST complex. If included in the groundwater contour map, this higher level would indicate a localized high, with somewhat outward radial flow, centered on the southern area of the UST complex.



#### 4.0 Tier I Risk-Based Analysis

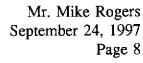
A quick review of site specific data (in particular the concentrations of BTEX) and subsequent comparison to the Tier I Table, as modified for California MCLs by the San Francisco Bay Regional Water Quality Control Board (RWQCB) from the American Society for Testing and Materials (ASTM) 1739-95 document entitled *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites* (RBCA), dated November 1995, indicates that no apparent health risk is present at the site due to the documented releases of diesel hydrocarbons.

#### 5.0 Summary and Recommendations

Free product recovery operations have essentially reduced the thickness of free product to a sheen, and have essentially removed all available free product. The detectable concentrations of TPH as diesel remain consistent, or are declining. Concentrations of BTEX remain nondetectable in wells within 2 feet downgradient of the edge of the UST basin approximately 15 months after the most recent release. No health risk is apparent from the site specific data when compared to the Tier I Look-up Table in the ASTM RBCA document, as modified for California MCLs. Therefore, Blymyer Engineers recommends closure for this site.

#### 6.0 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.





Please call Mark Detterman at (510) 521-3773 with any questions or comments.

Sincerely,

Blymyer Engineers, Inc.

Mark Detterman, C.E.G. 1788

Senior Geologist

Michael S. Lewis

Vice President, Technical Services

**Enclosures:** 

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, Recovery Wells RW-1 and RW-2

Figure 1: Site Location Map

Figure 2: Site Plan and Groundwater Elevation Contours, August 22, 1997

Attachment A: Groundwater Sampling Report 970822-S-1, and Water Level Report

970822-S-1.WL, Blaine Tech Services, Inc., dated September 17, 1997

Attachment B: Laboratory Analytical Report, LEGEND Analytical Services, dated

September 3, 1997

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. Stan Lovell, G.I. Trucking Company

Mr. Pat Mila, G.I. Trucking Company

	Table I. Groundwater Depth Measurements BEI Job No. 88288.001, G.I. Trucking Facility, 1750 Adams Avenue, San Leandro. California												
Date Measured	RW- TOC Elevati		TOC E	W-2 levation ).24"	TOC Eleva	W-3 tion 100.22* tion 100.18 <sup>b</sup>	TOC Elev	W-4 ation 99.48° ation 99.46° <sup>4</sup>		MW-5 TOC Elevation 99.60 <sup>a</sup>		RW-2 Not Surveyed	
	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	Depth to Water/Free Product	Water Surface Elevation	
November 15, 1988	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	
November 21, 1989	6.51	93.49	6.64	93.60	6.55	93.67	5.72	93.76	5.91	93.69	N/A	N/A	
February 23, 1990	5.74	94.26	6.04	94.20	5.83	94.39	4.92	94.56	5.69	93.91	N/A	N/A	
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	N/A	N/A	
August 27, 1990	6.27	93.73	6.70	93.54	6.67	93.55	5.66	93.82	6.17	93.43	N/A	N/A	
December 3, 1990	6.49	93.51	6.83	93.41	6.75	93.47	5.95	93.53	6.05	93.55	N/A	N/A	
March 13, 1991	4.94	95.06	5.64	94.60	5.42	94.80	4.39	95.09	5.01	94.59	N/A	N/A	
May 29, 1991	9.46	90.54	6.31	93.93	6.28	93.94	5.27	94.21	5.57	94.03	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	
March 25, 1993	4.60	95.40	5.40	94.84	5.27	94.95	4.14	95.34	4.34	95.26	N/A	N/A	
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	N/A	N/A	
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	N/A	N/A	
December 13, 1993	NM*	NM°	6.09	94.15	6,33	93.89	5.08	94.40	5.38	94.22	N/A	N/A	
February 24, 1994	4.97	95.63	5.57	94.67	5.76	94.46	4.38	95.10	4.90	94.70	N/A	N/A	
May 11, 1994	5.20	94.80	5.94	94.30	5.84	94.34	4.85	94.63	5.23	94.37	N/A	N/A	
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	N/A	N/A	
November 29, 1994	5.98	94.02	5.82	94.42	5.76	94.42	4.76	94.72	5.12	94.48	N/A	N/A	
February 15, 1995	4.93	95.07	5.68	95.56	5.60	95.58	NM	NM	NM	NM	N/A	N/A	
May 18, 1995	4.99	95.01	NM	NM	NM	NM	NM	NM	NM	NM	N/A	N/A	
August 16, 1995	6.46	93.54	6.19	94.05	6.11	94.07	5.16	94.32	5.47	94.13	N/A	N/A	
November 16, 1995	5.21	94.79	NM	NM	NM	NM	NM	NM	NM	NM	N/A	N/A	

	11	******************										<u> </u>
Date Measured	RW-1* TOC Elevation 100.00*		MW-2 TOC Elevation 100.24*		MW-3 TOC Elevation 100.22* TOC Elevation 100.18b		MW-4 TOC Elevation 99.48° TOC Elevation 99.46 <sup>4,d</sup>		MW-5 TOC Elevation 99.60*		RW-2 Not Surveyed	
	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	Depth to Water/Free Product	Water Surface Elevation
February 15, 1996	4.68	95.32	5.62	94.62	5.48	94.70	4.40	95.08	4.90	94.70	N/A	N/A
August 5, 1996	6.05/5.70	N/A	6.22	94.02	6.16	94.02	5.27	94.19	5.50	94.10	6.02/5.71	N/A
February 6, 1997	4.40	95.60	5.5	94.74	5.36	94.82	4.26	95.2	4.80	94.80	4.41	N/A
August 22, 1997	4.90	95.1	6.57	93.67	5.85	94.33	5.09	94.37	6.37	93.23	4.88	N/A

Notes: TOC = Top of casing

Based on an arbitrary datum

Resurveyed elevation, May 11, 1994
Not measured due to equipment malfunction =

TOC mark lost; Resurveyed elevation, August 16, 1996 d =

Not applicable N/A = NM Not measured

Formerly designated as well MW-1

Table II, Summary of Groundwater Sample Analytical Results Benzene, Toluene, Ethylbenzene, and Total Xylenes, Modified EPA Method 8020 (pg/L) BEI Job No. 88288.001, G.L. Trucking Facility, 1750 Adams Avenue, San Leandro, California										
Date Sampled	RW-1*	MW-2	MW-3	MW-4	MW-5	RW-2				
November 15, 1988 to May 21, 1993		Not Analyzed								
August 17, 1993	0.13 feet free product	<0.5	<0.5	<0.5	<0.5	N/A				
December 13, 1993	heavy product sheen	<0.5	<0.5	<0.5	<0.5	N/A				
February 24, 1994	heavy product sheen	<0.5	<0.5	<0.5	<0.5	N/A				
May 11, 1994	heavy product sheen	<0.5	<0.5	<0.5	<0.5	N/A				
August 23, 1994	0.08 feet free product	<0.5	0.6ª	<0.5	<0.5	N/A				
November 29, 1994	heavy product sheen	<0.5	<0.5	NA	NA	N/A				
February 15, 1995	heavy product sheen	1.2ª	ND	NA	NA	N/A				
August 16, 1995	heavy product sheen	<0.5	<0.5	NA	NA	N/A				
February 15, 1996	heavy product sheen	<0.5	<0.5	NA	NA	N/A				
August 5, 1996	0.35 feet free product	<0.5	<0.5	NA	NA	NA				
February 6, 1997	light sheen	< 0.5	<0.5	NA	NA	NA				
August 22, 1997	light sheen	<0.5	<0.5	NA	· NA	NA				

Notes:  $\mu g/L$  = Micrograms per liter

 $\leq x$  = Detected concentration less than respective detection limit of x.

a = Detected concentration of toluene.

N/A = Not applicable NA = Not analyzed

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

respective detection limits.

\* = Formerly designated as well MW-1

# 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

BEI Job No. 88288.001, G.L. Trucking Facility, 1750 Adams Avenue, San Leandro, California									
Date Sampled	RW-1*	MW-2	MW-3	MW-4	MW-5	RW-2			
November 15, 1988	0.22 feet free product	<0.20	<0.20	<0.20	<0.20	N/A			
February 16, 1989	0.20 feet free product	<0.09	<0.09	<0.09	<0.09	N/A			
May 19, 1989	0.20 feet free product	<0.08	<0.08	<0.08	<0.08	N/A			
August 22, 1989	0.18 feet free product	< 0.03	<0.03	<0.03	<0.03	N/A			
November 21, 1989	product sheen	<0.03	<0.03	<0.03	<0.03	N/A			
February 23, 1990	product sheen	<0.05	0.34	<0.05	<0.05	N/A			
May 23, 1990	0.15 feet free product	< 0.05	0.64	<0.05	<0.05	N/A			
August 27, 1990	product sheen	<0.05	0.41	<0.05	<0.05	N/A			
December 3, 1990	ртоduct sheen	< 0.05	<0.05	<0.05	<0.05	N/A			
March 13, 1991	product sheen	<0.05	1.3	<0.05	<0.05	N/A			
May 29, 1991	product sheen	<0.05	0.54	<0.05	<0.05	N/A			
August 28, 1991	0.09 feet free product	<0.05	0.24	<0.05	<0.05	N/A			
December 9, 1991	0.20 feet free product	<0.05	0.20	<0.05	<0.05	N/A			
February 18, 1992	0.09 feet free product	<0.05	0.89	<0.05	<0.05	N/A			
May 15, 1992	0.17 feet free product	<0.05	0.38	<0.05	<0.05	N/A			
August 13, 1992	0.19 feet free product	<0.05	0.20	<0.05	<0.05	N/A			
December 3, 1992	0.10 feet free product	<0.05	<0.05	<0.05	<0.05	N/A			
March 25, 1993	product sheen	<0.05	1.6	<0.05	< 0.05	N/A			
May 21, 1993	0.09 feet free product	<0.05	0.72	<0.05	<0.05	N/A			
August 17, 1993	0.13 feet free product	<0.05	0.48	<0.05	< 0.05	N/A			
December 13, 1993	heavy product sheen	<0.05	0.19	<0.05	<0.05	N/A			
February 24, 1994	heavy product sheen	< 0.05	0.38	< 0.05	<0.05	N/A			
May 11, 1994	heavy product sheen	< 0.05	0.58	< 0.05	< 0.05	N/A			
August 23, 1994	0.08 feet free product	< 0.05	0.45ª	< 0.05	<0.05	N/A			
November 29, 1994	heavy product sheen	0.09	0.96ª	NA	NA	N/A			
February 15, 1995	heavy product sheen	0.1*	1.7*	NA	NA	N/A			
August 16, 1995 <sup>b</sup>	heavy product sheen	0.063°	1.1°	NA	NA	N/A			
February 15, 1996	heavy product sheen	0.079	1.3	NA	NA	N/A			
August 5, 1996	0.35 feet free product	0.10 <sup>d</sup>	1.0 <sup>d</sup>	NA	NA	NA			
February 6, 1997	light sheen	0.14ª	2.4"	NA	NA	NA			
August 22, 1997	light sheen	<0.10	2.0*	NA	NA	NA			
	-	,							

#### Table III, Summary of Groundwater Sample Analytical Results, continued

Formerly designated as well MW-1

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Notes: TPH Total Petroleum Hydrocarbons mg/L Milligrams per liter = Detected concentration less than respective detection limit of x. <x = NA Not analyzed = Not applicable N/A = Laboratory reports that positive result appears to be due to the presence of a heavier a = hydrocarbon than diesel. Beginning this sampling event results are converted to mg/L, originally reported in µg/L. b = Laboratory reports that an unidentified hydrocarbon, heavier than the diesel standard, was c = present between the carbon range of C9 to C24. Laboratory reports a hydrocarbon heavier than the diesel standard was present, and that d = the method blank contained 0.05 mg/L TPH as diesel.

#### 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.L. Trucking Facility, 1750 Adams Avenue, San Leandro, California Sample Modified EPA Modified EPA EPA Method EPA Method Date Sampled EPA Method **EPA** I.D. Method 8015 Method 8015 601 HVOCs 8270 SVOCs 418.1 TRPH Methods TPH as TPH as (mg/L) $(\mu g/L)$ $(\mu g/L)$ 6010 and gasoline 7421 motor oila (mg/L)(mg/L)Metals<sup>b</sup> (mg/L) RW-1\*\* January 15, 1988 NA NA NA NA NA NA to August 23, 1994 November 29, 1994<sup>c</sup> NA NA NA NA NA NA February 15, 1995° NA NΑ NA NA NΑ 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 NA ND ND $ND^{d}$ NA February 15, 1995 < 0.05 < 0.5 < 5.0 ND ND 0.002 Pbe August 16, 1995<sup>r</sup> NA ΝA 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 $ND^{d}$ February 15, 1995 < 0.05 <0.5 <5.0 ND ND 0.004 Pb<sup>e</sup> 0.16 Zn\* August 16, 1995<sup>†</sup> NA NA NA NA NA NA

N	ol	te	s	:
IN	OI	le	5	

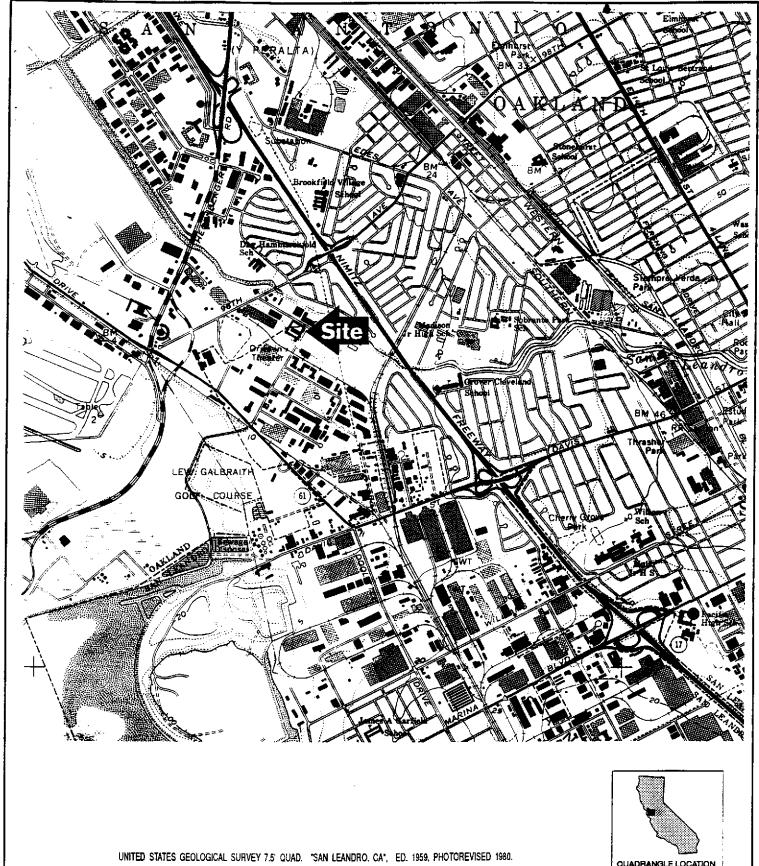
*	=	Groundwater samples from monitoring wells MW-4 and MW-5 were not collected for analysis
TPH	=	Total Petroleum Hydrocarbons
HVOCs	s =	Halogenated Volatile Organic Compounds
SVOCs	=	Semi-volatile Organic Compounds
mg/L	=	Milligrams per liter
μg/L	=	Micrograms per liter
a	=	TPH as motor oil analysis 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.
**	=	Formerly designated as well MW-1

	rements, Recovery Wells RW-1 and RW-2 , 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
June 1996	1.1
July 1996 <sup>b</sup>	3.75
August 1996	121
September 1996	30
October 1996	23
November 1996	Soak-eze® installed/trace in passive skimmer
December 1996	Soak-eze® installed/trace in passive skimmer
January 1997	Soak-eze* installed/0.1 gallon in passive skimmer
February 1 to 6, 1997	Soak-eze® installed/trace in passive skimmer
February 7 to August 22, 1997	Soak-eze® installed/100 ml in passive skimmer
Cumulative Volume Recovered (approximate)	178

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

b = Frequency of recovery activities increased after this recovery event.

ml = milliliters

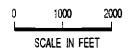






BEI JOB NO.

DATE 88288 9/19/95

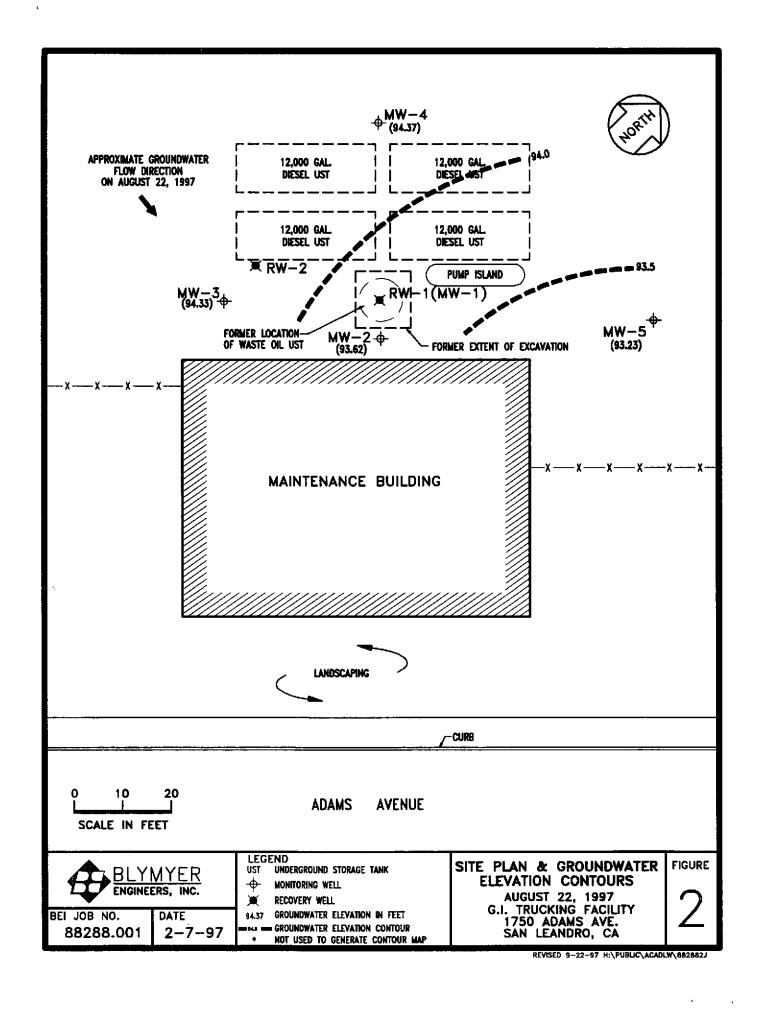




## SITE LOCATION MAP

G.I. TRUCKING FACILITY 1750 ADAMS AVE. SAN LEANDRO, CA

**FIGURE** 



#### Attachment A

Groundwater Sampling Report 970822-S-1

and

Water Level Report 970822-S-1.WL

Blaine Tech Services, Inc.

dated September 17, 1997



1680 ROGERS AVENUE SAN JOSE, CALIFORNIA 95112 (408) 573-7771 FAX (408) 573-0555 PHONE



Blymyer Engineers, Inc. 1829 Clement Ave. Alameda, CA 94501-1395

ATTN: Mark Determan

Site: G.I. Trucking Facility 1750 Adams Ave. San Leandro, California

Date: August 22, 1997

#### **GROUNDWATER SAMPLING REPORT 970822-S-1**

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results, or become involved with the marketing or installation of remedial systems.

This report deals with the groundwater well sampling performed by our firm in response to your request. Data collected in the course of our work at the site are presented in the TABLE OF WELL MONITORING DATA. This information was collected during our inspection, well evacuation and sample collection. Measurements include the total depth of the well and the depth to water. Water surfaces were further inspected for the presence of immiscibles. A series of electrical conductivity, pH, and temperature readings were obtained during well evacuation and at the time of sample collection.

#### STANDARD PRACTICES

#### **Evacuation and Sampling Equipment**

As shown in the TABLE OF WELL MONITORING DATA, the wells at this site were evacuated according to a protocol requirement for the removal of three case volumes of water, before sampling. The wells were evacuated using bailers.

Samples were collected using bailers.

Bailers: A bailer, in its simplest form, is a hollow tube which has been fitted with a check valve at the lower end. The device can be lowered into a well by means of a cord. When the bailer enters the water, the check valve opens and liquid flows into the interior of the bailer. The bottom check valve prevents water from escaping when the bailer is drawn up and out of the well.

Two types of bailers are used in groundwater wells at sites where fuel hydrocarbons are of concern. The first type of bailer is made of a clear material such as acrylic plastic and is used to obtain a sample of the surface and the near surface liquids, in order to detect the presence of visible or measurable fuel hydrocarbon floating on the surface. The second type of bailer is made of Teflon or stainless steel, and is used as an evacuation and/or sampling device.

Bailers are inexpensive and relatively easy to clean. Because they are manually operated, variations in operator technique may have a greater influence than would be found with more automated sampling equipment. Also, where fuel hydrocarbons are involved, the bailer may include near surface contaminants that are not representative of water deeper in the well.

#### **Decontamination**

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site.

#### **Effluent Materials**

The evacuation process creates a volume of effluent water which must be contained. Blaine Tech Services, Inc. will place this water in appropriate containers of the client's choice or bring new 55 gallon DOT 17 E drums to the site, which are appropriate for the containment of the effluent materials. The determination of how to properly dispose of the effluent water must usually await the results of laboratory analyses of the sample collected from the groundwater

well. If that sample does not establish whether or not the effluent water is contaminated, or if effluent from more than one source has been combined in the same container, it may be necessary to conduct additional analyses on the effluent material.

#### Sampling Methodology

Samples were obtained by standardized sampling procedures that follow an evacuation and sample collection protocol. The sampling methodology conforms to both State and Regional Water Quality Control Board standards and specifically adheres to EPA requirements for apparatus, sample containers and sample handling as specified in publication SW 846 and T.E.G.D. which is published separately.

#### Sample Containers

Sample containers are supplied by the laboratory performing the analyses.

#### Sample Handling Procedures

Following collection, samples are promptly placed in an ice chest containing deionized ice or an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

#### Sample Designations

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days, as jobs and projects often do.

#### Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under our standard chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date and signature of person accepting custody of the samples).

## TABLE OF WELL MONITORING DATA

MW-2			MW-3				
08/22/9	7			97			
			00,22,	<i>J</i> .			
2			2				
22.92			<del>-</del>				
6.57							
NONE			NONE.				
2.6			2.4				
NO			NO				
8.0			7.5				
BAILER			BAILER				
BAILER			BAILER				
9:27	9:31	9:35	9:56	9:59	10:03		
67.6	67.4	67.2	67.8	68.2	68.6		
7.4	7.5	7.5	7.2	7.2	7.2		
775	774	781	900	858	883		
>200	>200	>200	>200	>200	>200		
970822-5	1		970822	-s1			
4W − 2			E-WM				
LEGEND			LEGEND				
	2 22.92 6.57 NONE  2.6 NO 8.0 BAILER 9:27 57.6 7.4	08/22/97  2 22.92 6.57  NONE 2.6 NO 8.0  BAILER BAILER 9:27 9:31 67.6 67.4 7.5 774 9:200 >200	08/22/97  2 22.92 6.57  NONE 2.6 NO 8.0  BAILER BAILER 9:27 9:31 9:35 67.6 67.4 67.2 7.4 7.5 7.5 774 781 >200 >200 >200	08/22/97 08/22/ 2 2 22.92 20.98 6.57 5.85  NONE NONE	08/22/97  2 2 22.92 20.98 6.57  NONE  NONE  NONE  2.6  NO 8.0  7.5  BAILER BAILER BAILER BAILER BAILER  9:27 9:31 9:35 9:56 9:59 67.6 67.4 67.2 67.8 68.2 7.4 7.5 7.5 7.2 7.2 7.2 7.5 7.4 781 900 858 970822-\$1		

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	ONTAINERS	RFEX SFEX	DUCT ANAL	YSIS TO DETECT	ALL ANALYSES MUST MEET SPE SET BY CALIFORNIA DHS AND  EPA LIA OTHER	PROCE of Peport  Engineers Inc.  Deferman
MW-Z 8-22-97 940 W 5	×	( ×			ADD LINFORMATION STATUS	S  CONDITION   LAB SAMPLE #
MW-3 8-22-97 1010 W 5	,	x ×				
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SAMPLING DATE TIME SAMPLING					DECIHTO MEDED.	
COMPLETED					RESULTS NEEDED AS	Controlled"
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RELEASED BY DA	TE	ТІМІ	E	RECEIVED BY		DATE TIME
SHIPPED VIA DA	TE SENT	ТІМ	E SENT	COOLER#	••••	***



1680 ROGERS AVENUE SAN JOSE, CALIFORNIA 95112 (408) 573-7771 FAX (408) 573-0555 PHONE

September 17, 1997

Blymyer Engineers, Inc. 1829 Clement Ave. Alameda, CA 94501-1395

Attention: Mark Determan

SITE:

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

DATE:

August 22, 1997

#### Water Level Report 970822-S-1.WL

Personnel from our office were present at the site on Friday, August 22, 1997 to obtain water levels and service skimmers where applicable. Please note that we are reporting only the water levels, not elevations.

Well designation	Well diameter (in.)	Depth to Immiscible Liquid	Thickness of Immiscible Liquid	Volume of Immiscibles Removed (mL)	Depth to water (ft.)	Well	Top of Casing
MW-2	2				6.57	22.92	TOC
MW-3	2	~-			5.85	20.98	TOC
MW-4	2				5.09	22.20	TOC
MW-5	2				6.37	21.64	TOC
RW-1	12				4.90	10.10	TOC
RW-2	4			100	4.88	12.46	TOC

Kent E. Brown

KEB/aa

### Attachment B

Laboratory Analytical Report, LEGEND Analytical Services dated September 3, 1997

## LEGEND

## Analytical Services

3636 N. Laughlin Road, Suite 110 Santa Rosa, California 95403 707.526.7200 Fax 707.541.2333 E-Mail: info@legendlab.com

Mark Detterman Blymyer Engineers, Inc 1829 Clement Ave Alameda, CA 94501 Date: 09/03/1997

LEGEND Client Acct. No: 49500

LEGEND Job No: 97.01505 Received: 08/26/1997

Client Reference Information

G.I. Trucking, San Leandro/970822-S1

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Facsimile transmission of this report is non-confidential. If received in error, please contact sender immediately at the number listed and return the information to us by mail. Please refer to the enclosed "Key to Result Flags" for definition of terms. Should you have questions regarding procedures or results, please feel free to call me at (707) 541-2313.

Submitted by:

Ned Engleson Project Manager

Enclosure(s)

Client Name: Blymyer Engineers, Inc

Client Acct: 49500 LEGEND Job No: 97.01505 Date: 09/03/1997

ELAP Cert: 2193 Page: 2

Ref: G.I. Trucking, San Leandro/970822-S1

SAMPLE DESCRIPTION: MW-2

Date Taken: 08/22/1997 Time Taken: 09:40

LEGEND Sample No: 277748							Run
<b>.</b>		Reporting	Ī		Date	Date	Batch
Parameter	Results_ Flags	<u>Limit</u>	Units	Method	Extracted	Analyzed	No.
8020 (GC, Liquid)							
DILUTION FACTOR*	1					08/28/19 <b>97</b>	3891
Benzene	ND	0.50	ug/L	9020		08/28/1997	3891
Toluene	ND	0.50	ug/L	8020		08/28/1997	3891
Ethylbenzene	ИD	0.50	ug/L	8020		08/28/1997	3891
Xylenes (Total)	ND	0.50	ug/L	8020		08/28/1997	3891
SURROGATE RESULTS						08/28/1997	3 <b>891</b>
Bromofluorobenzene (SURR)	100		% Rec.	8020		08/28/1997	3891
M8015 (EXT., Liquid)					08/27/1997		
DILUTION FACTOR*	1					08/29/1997	1363
as Diesel	ND	0.10	mg/L	3510		08/29/19 <del>9</del> 7	1363
SURROGATE RESULTS			-			08/29/1997	1363
Ortho-terphenyl (SURR)	84		% Rec.	3510		08/29/1997	1363

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Client Name: Blymyer Engineers, Inc Date: 09/03/1997

Client Acct: 49500 ELAP Cert: 2193
LEGEND Job No: 97.01505 Page: 3

Ref: G.I. Trucking, San Leandro/970822-S1

SAMPLE DESCRIPTION: MW-3

Date Taken: 08/22/1997
Time Taken: 10:10
LEGEND Sample No: 277749

LEGEND Sample No: 277749			Reporting	ı	Date	Date	Run Batch	
Parameter	Results	Flags	<u>Limit</u>	Units	Method	Extracted	Analyzed	No.
8020 (GC, Liquid)								
DILUTION FACTOR*	1						08/28/1997	3891
Benzene	ND		0.50	ug/L	8020		08/28/1997	38 <b>91</b>
Toluene	ND		0.50	ug/L	8020		08/28/1997	3891
Ethylbenzene	ND		0.50	ug/L	8020		08/28/1997	3891
Xylenes (Total)	ND		0.50	ug/L	8020		08/28/1997	3891
SURROGATE RESULTS							08/28/1997	3891
Bromofluorobenzene (SURR)	100			% Rec.	9020		08/28/1997	3891
MB015 (EXT., Liquid)						08/27/1997		
DILUTION FACTOR*	1						08/29/1997	1363
as Diesel	2.0	DH	0.10	mg/L	3510		08/29/1997	1363
SURROGATE RESULTS				<u> </u>			08/29/1997	1363
Ortho-terphenyl (SURR)	109			% Rec.	3510		08/29/1997	1363

Client Name: Blymyer Engineers, Inc Date: 09/03.

LEGEND Job No: 97.01505

Date: 09/03/1997

Page: 4

Ref: G.I. Trucking, San Leandro/970822-S1

## CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Flags	<u>Units</u>	Date Analyzed	Analyst Initials	Run Batch Number
8020 (GC, Liquid)								
Benzene	95.0	18.99	20.0		ug/L	08/28/1997	сју	3891
Toluene	96.3	19.26	20.0		ug/L	08/28/1997	cj <b>y</b>	3891
Ethylbenzene	101.0	20.20	20.0		ug/L	08/28/1997	⊂jy	3891
Xylenes (Total)	100.8	60.49	60.0		ug/L	08/28/1997	¢ју	3891
Bromofluorobenzene (SURR)	100.0	100	100		% Rec.	08/28/1997	⊂jy	3891
M8015 (EXT., Liquid)								
as Diesel	97.5	975	1000		mg/L	08/29/1997	cjy	1363
Ortho-terphenyl (SURR)	91.0	91	100		% Rec.	08/29/1997	cjy	1363

Client Name: Blymyer Engineers, Inc

Client Acct: 49500 LEGEND Job No: 97.01505 Date: 09/03/1997

ELAP Cert: 2193 Page: 5

Ref: G.I. Trucking, San Leandro/970822-S1

## METHOD BLANK REPORT

Method Run Blank Batch Analyst Reporting Date Amount Initials Number Analyzed Flags Units Limit Found Parameter 8020 (GC, Liquid) 08/28/1997 cjy 3891 ug/L NĎ 0.50 Benzene 3891 08/28/1997 cjy 0.50 ug/L ND Toluene 3891 ug/L 08/28/1997 cjy 0.50 Ethylbenzene ND 08/28/1997 сју 3891 ug/L 0.50 ND Xylenes (Total) 08/28/1997 сју 3891 % Rec. 103 Bromofluorobenzene (SURR) MB015 (EXT., Liquid) 1363 сjу mg/L 08/29/1997 0.10 ND as Diesel 1363 የ Rec. 08/29/1997 сју 77 Ortho-terphenyl (SURR)

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Client Name: Blymyer Engineers, Inc Date: 09/03 LEGEND Job No: 97.01505

Date: 09/03/1997

Page: 6

Ref: G.I. Trucking, San Leandro/970822-S1

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE

D-11-1-1-1-1	Matrix Spike % Rec.	Dup	RPD	Spike Amount	Sample	Matrix Spike	Matrix Spike Dup. Conc.	Flags	Units	Date Analyzed	Run Batch	Sample Spiked
Parameter	3 1100.		1000	11111001111								277748
8020 (GC, Liquid)									/T	08/28/1997	3891	27774B
Benzene	100.9	100.9	0.0	4.45	ND	4.49	4.49		ug/L			_
Toluene	99.4	101.0	1.5	38.78	ND	38.53	39.17		ug/L	08/28/1997	389 <b>1</b>	277748
Bromofluorobenzene (SURR)	99.0	101.0	1.9	100	100	99	101		% Rec.	08/28/1997	3891	277748
	,,,,											277790
M8015 (EXT., Liquid)											2262	277790
as Diesel	88.4	90.5	2.3	1.89	0.7	2.37	2.41	DH	mg/L	08/29/1997	1363	*
Ortho-terphenyl (SURR)	95.0	98.0	3.1	100	92	95	98		* Rec.	08/29/1997	1363	277790

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.

Client Name: Blymyer Engineers, Inc Date: 09/03 LEGEND Job No: 97.01505

Date: 09/03/1997

Page: 7

Ref: G.I. Trucking, San Leandro/970822-S1

## LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Rec.	DUP LCS % Rec.	RPD	LCS Amount Found	DUP LCS Amount Found	LCS Amount Exp.	Flags	Units	Date Analyzed	Analyst Initials	Run Batch
M8015 (EXT., Liquid) as Diesel Ortho-terphenyl (SURR)	95.0 101.0			0.95 101		1.00		mg/L % Rec.	08/29/1997 08/29/1997		1363 1363

#### KEY TO RESULT FLAGS

```
: RPD between sample duplicates exceeds 30%.
     : RPD between sample duplicates or MS/MSD exceeds 20%.
*M
     : Correlation coefficient for the Method of Standard Additions is less than 0.995.
+
     : Sample result is less than reported value.
<
     : Value is between Method Detection Limit and Reporting Limit.
B-I
     : Analyte found in blank and sample.
     : The result confirmed by secondary column or GC/MS analysis.
C
     : Cr+6 not analyzed; Total Chromium concentration below Cr+6 regulatory level.
CNA
COMP : Sample composited by equal volume prior to analysis.
     : 2-Chloroethylvinyl ether cannot be determined in a preserved sample.
     : Due to the sample matrix, constant weight could not be achieved.
CWT
     : The result has an atypical pattern for Diesel analysis.
D-
     : The result for Diesel is an unknown hydrocarbon which consists of a single peak.
D1
     : ND for hydrocarbons, non-discrete baseline rise detected.
     : The result appears to be a heavier hydrocarbon than Diesel.
DH
     : The result appears to be a lighter hydrocarbon than Diesel.
DL
     : Elevated Reporting Limit due to Matrix.
DR
     : Surrogate diluted out of range.
DS
     : The result for Diesel is an unknown hydrocarbon which consists of several peaks.
DX
     : Compound quantitated at a 2X dilution factor.
FA
     : Compound quantitated at a 5X dilution factor.
FB
    : Compound quantitated at a 10% dilution factor.
FC
     : Compound quantitated at a 20% dilution factor.
FD
     : Compound quantitated at a 50% dilution factor.
FΕ
     : Compound quantitated at a 100% dilution factor.
FF
     : Compound quantitated at a 200X dilution factor.
FG
     : Compound quantitated at a 500% dilution factor.
FH
     : Compound quantitated at a 1000% dilution factor.
FI
     : Compound quantitated at a greater than 1000x dilution factor.
ਸ਼ੁਰ
     : Compound quantitated at a 25% dilution factor.
FΚ
     : Compound quantitated at a 250X dilution factor.
FL
     : The result has an atypical pattern for Gasoline.
G-
     : The result for Gasoline is an unknown single peak.
G1
     : The result appears to be a heavier hydrocarbon than Gasoline.
GH
     : The result appears to be a lighter hydrocarbon than Gasoline.
GL
     : The result for Gasoline is an unknown hydrocarbon which consists of several peaks.
GΧ
     : Analysis performed outside of the method specified holding time.
HT
     : Confirmation analyzed outside of the method specified holding time.
HTC
     : Prep procedure performed outside of the method specified holding time.
HTP
     : Received after holding time expired, analyzed ASAP after receipt.
HTR
     : Peaks detected within the quantitation range do not match standard used.
HΧ
     : Value is estimated.
J
     : Matrix Interference Suspected.
ΜI
MSA : Value determined by Method of Standard Additions.
MSA* : Value obtained by Method of Standard Additions; Correlation coefficient is <0.995.
     : Sample spikes outside of QC limits; matrix interference suspected.
NI1
     : Sample concentration is greater than 4X the spiked value; the spiked value is
NI2
        considered insignificant.
     : Matrix Spike values exceed established QC limits, post digestion spike is in
NI3
        control.
     : MS/MSD outside of control limits, serial dilution within control.
NI4
      : There is >40% difference between primary and confirmation analysis.
P
      : pH of sample > 2; sample analyzed past 7 days.
P7
RSC : Refer to subcontract laboratory report for QC data.
      : Matrix interference confirmed by repeat analysis.
S2
     : Thiocyanate not analyzed separately; total value is below the Reporting Limit for
SCN
        Free Cyanide.
     : Analysis performed by Selective Ion Monitoring.
SIM
     : Conc. of the total analyte ND; therefore this analyte is ND also.
TND
 UMDL : Undetected at the Method Detection Limit.
 UTD : Unable to perform requested analysis.
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FORM.FLAGS rev. 04/08/1997

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