

ELLIS PARTNERS, INC. ALSO  
HAZMAT

94 NOV 18 PM 3: 23

November 7, 1994

Ms. Eva Chu  
Department of Environmental Health  
Alameda County Health Care Services  
80 Swan Way, Room 200  
Oakland, CA 94612

RE: Beacon #604, 1619 1st Street  
Livermore, CA

Dear Eva:

Pursuant to the letter sent to you by Ultramar dated October 12, 1994, enclosed is an oversight report of the Ultramar investigation on the Livermore Arcade property.

Please contact me if you have any questions.

Sincerely,



James F. Ellis  
Partner

JFE/srg

cc: Terence Fox, Ultramar Inc.  
Cecil Fox, California R.W.Q.C.B.

encl. Ultramar Oversight Report dated 7/22/94

11/28 What are screened intervals for  
ms-01, 23, 24 and 04 at  
Livermore Arcade. These may  
be used to characterize plume  
from Beacon station

Leon Crain (916) 863-5916

ALCO  
HAZMAT

94 NOV 18 PM 3: 23

July 22, 1994

Mr. Jim Ellis  
Grubb & Ellis Realty Income Trust, L.T.  
351 California Street  
Suite 1120  
San Francisco, CA 94104

RE: REPORT OF GCL OVERSIGHT OF ULTRAMAR INC. INVESTIGATION ON  
LIVERMORE ARCADE SHOPPING CENTER PROPERTY

Dear Mr. Ellis:

On July 7 & 8, 1994, Ultramar, Inc. conducted an investigation on Livermore Arcade Shopping Center (LASC) property located northwest and down-gradient of the Beacon station at 1619 First Street, Livermore, California. The area of investigation covers the parking area directly south of the Safeway store on LASC property (figure 1). The purpose of the investigation was to evaluate the impact of the documented gasoline UST leak at the Beacon station on the groundwater beneath the LASC property. GCL provided oversight of the Ultramar investigation on behalf of Grubb & Ellis Realty Income Trust, L.T. (GERIT L.T.). This letter report summarizes the results of GCL's oversight activities.

The following individuals were on site during the investigation.

| <u>Personnel</u>           | <u>Representing</u>       |
|----------------------------|---------------------------|
| Patrick Montano            | GCL                       |
| Terry Fox (present 7/7/94) | Ultramar                  |
| Steven Liaty               | Acton, Mickelson, van Dam |
| Eugene Nunes               | West Hazmat Drilling      |

The investigation was conducted by Ultramar's consultant, Acton, Mickelson and van Dam, Inc. (AMD) and consisted of the following field activities.

Mr. Jim Ellis  
July 22, 1994  
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- soil samples were collected from each borehole at 15', 25', 35', and 40' below ground level using a split spoon sampler and were field screened for organic vapors
- selected soil samples from each borehole were submitted to the lab for THP-G (Gasoline) and BTEX analysis
- two soil borings (HP-2, HP-3) were drilled to a depth just above the top of the water table with penetration into the saturated zone using a hydropunch tool to facilitate collection of a groundwater sample
- one soil boring (HP-1) was drilled into the saturated zone to a depth of approximately 48 feet below ground level and a 2-inch slotted PVC casing was inserted in the borehole to facilitate collection of a groundwater sample
- groundwater samples from HP-1, HP-2, and HP-3 were submitted to the lab for THP-G (Gasoline) and BTEX analysis

The oversight work performed by GCL on behalf of GERIT L.T. consisted of the following:

- a review of existing information regarding past and ongoing environmental investigations at the Beacon station
- on-site oversight of Ultramar's investigation with documentation of AMD's field activities (GCL's field notes are included as Attachment 1)
- collection of split samples for lab analysis for TPH-G and BTEX from 3 soil samples collected by Ultramar
- collection of split samples for lab analysis for TPH-G and BTEX from 3 groundwater samples collected by Ultramar
- preparation of this letter report summarizing GCL's oversight activities of Ultramar's investigation and results of lab analysis

## METHOD OF INVESTIGATION

### **Soil Sample Collection**

The borehole was advanced to the desired sample depth with a hollow stem auger. Soil samples were collected from each borehole at 15', 25', 35', and 40' below ground level using a split spoon sampler with 3 six-inch-long brass tubes. Depending on sample recovery, two tubes from each sampling interval were capped with teflon liners and plastic end caps, sealed in a plastic bag, and placed on ice in a thermally insulated cooler pending selection of samples for laboratory analysis. Soil contained in the remaining sample tube was used for soil classification and field screening. Selected soil samples were sent to a state-certified analytical laboratory with chain-of-custody documentation for BTEX and TPH-G analysis.

### **Groundwater Sample Collection**

Groundwater samples were collected from HP-2 and HP-3 (figure 1) using the hydroPunch method. Representative groundwater samples were obtained by: (1) drilling borings to the static groundwater level (approximately 43 ft. below ground level) with a mobile drilling rig, (2) pushing a hydroPunch probe 2 to 3 feet into the groundwater table, (3) the outer metal portion of the probe was then lifted leaving the probe point and inner slotted PVC screen in place and exposed to the groundwater, (4) the slotted screen casing was allowed to fill with groundwater and bailed with a one-half inch diameter bailer. Groundwater samples were collected in appropriate laboratory-supplied containers, retained on ice in a thermally insulated cooler and submitted to a state-certified analytical laboratory with chain-of-custody documentation for BTEX and TPH-G analysis.

The hydroPunch method was abandoned after numerous unsuccessful attempts to recover a groundwater sample from the HP-1 location (figure 1). The borehole was advanced into groundwater to a depth of 48 feet below ground level with a hollow stem auger. A clean 2-inch slotted PVC casing was inserted into the borehole and allowed to fill with groundwater. A disposable bailer was used to purge approximately 5 gallons of water from the temporary well prior to collection of a groundwater sample. The groundwater sample was collected with a new disposable bailer, poured in laboratory-supplied containers, retained on ice in a thermally insulated cooler and submitted to a state-certified analytical laboratory with chain-of-custody documentation for BTEX and TPH-G analysis.

### **Equipment Decontamination**

All downhole drilling equipment was steam cleaned prior to use and between borings. Soil and groundwater sampling equipment was washed in an Alconox soap solution and rinsed with clean water after each use.

### **Waste Handling**

Decontamination wash and steam cleaning water was placed into D.O.T. approved watertight 55-gallon drum and stored on the Beacon station property at 1619 First Street, Livermore, California. Drill cuttings generated at each borehole were placed in the bed of a pick-up truck, removed from LASC property, and stockpiled on a plastic liner on the Beacon station property.

### **Borehole Closure**

Following soil and groundwater sample collection, all boring locations were backfilled with a neat cement grout containing approximately 5% bentonite. The backfill was then capped with a black cement. All sites were washed down with a steam cleaner following completion of the investigation.

### **SITE GEOLOGY**

In general, the site geology underlying the investigation area consists of: sandy silty gravel from ground level to approximately 20 feet below ground level (bgl); silty clay from 20 feet bgl to 34 feet bgl; and sandy silty gravel from 34 feet bgl to the total depth of the borehole. Groundwater was encountered at approximately 43 feet bgl at each borehole location.

### **RESULTS OF INVESTIGATION**

#### **Soil Samples**

Soil samples were collected from each borehole at approximately 15', 25', 35', and 40' below ground level for field screening with a photoionization detector (PID). The soil was removed from one 6-inch brass tube and placed in a zip-lock plastic bag and allowed to equilibrate prior to field screening. PID results of the field screening of samples collected from HP-1, HP-2, and HP-3 are provided below.

#### **Results of Soil PID Field Screening**

| <b>Sample Interval</b> | <b>HP-1</b> | <b>HP-2</b> | <b>HP-3</b> | <b>Soil Type</b>    |
|------------------------|-------------|-------------|-------------|---------------------|
| 14.0' - 15.5'          | 0 ppm       | 0 ppm       | 0 ppm       | Silty sandy gravel  |
| 24.0' - 25.5'          | 0 ppm       | 0 ppm       | 0 ppm       | Silty clay          |
| 34.0' - 35.5'          | 2 ppm       | 0 ppm       | 0 ppm       | Silty clay w/gravel |
| 40.0' - 41.5'          | NA          | 20 ppm      | 0 ppm       | Silty sandy gravel  |

NA = No PID screening due to minimal sample recovery

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Soil samples split with ADM personnel from the 40.0 to 41.5 foot interval from all three boring locations, were sent to K-Prime Laboratory in Richmond, CA for BTEX and TPH-G analysis. ADM personnel indicated that they were also sending soil from this interval to their lab for analysis. The results of the lab analysis of soil samples from HP-1, HP-2, and HP-3 are provided below. The analytical results as received from the lab are included as Attachment 2.

#### Results of Soil Sample Lab Analysis

| <b>Analytical Parameter</b> | <b>HP-1</b> | <b>HP-2</b> | <b>HP-3</b> |
|-----------------------------|-------------|-------------|-------------|
| TPH-G (Gasoline) (mg/kg)    | ND          | ND          | ND          |
| Benzene (ug/kg)             | 8.04        | ND          | ND          |
| Toluene (ug/kg)             | ND          | ND          | ND          |
| Ethylbenzene (ug/kg)        | ND          | ND          | ND          |
| Xylenes (total) (ug/kg)     | 24.5        | 60.1        | ND          |

ND = None detected, mg/kg = ppm, ug/kg = ppb

#### **Groundwater Samples**

Groundwater samples split with ADM personnel from all three boring locations, were sent to K-Prime Laboratory in Richmond, CA for BTEX and TPH-G analysis. The groundwater samples were collected from a depth of 48 feet bgl in HP-1, 46 feet bgl in HP-2, and 45 feet bgl in HP-3. The results of the lab analysis of groundwater samples from HP-1, HP-2, and HP-3 are provided below. The analytical results as received from the lab are included as Attachment 2.

#### Results of Groundwater Sample Lab Analysis

| <b>Analytical Parameter</b> | <b>HP-1</b> | <b>HP-2</b> | <b>HP-3</b> |
|-----------------------------|-------------|-------------|-------------|
| TPH-G (Gasoline) (mg/L)     | 52.1        | 4.12        | 0.68        |
| Benzene (ug/L)              | 6,760       | 326         | 4.92        |
| Toluene (ug/L)              | 429         | 6.04        | 0.738       |
| Ethylbenzene (ug/L)         | 2,590       | 40.3        | 1.62        |
| Xylenes (total) (ug/L)      | 17,300      | 594.2       | 5.05        |

ND = None detected, mg/L = ppm, ug/L = ppb

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If you have any questions or comments regarding the information provided, please contact us.

Sincerely,  
Geoscience Consultants, Ltd. (GCL)



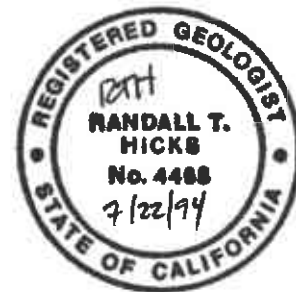
Patrick A. Montano  
Project Manager  
for Oversight Activities

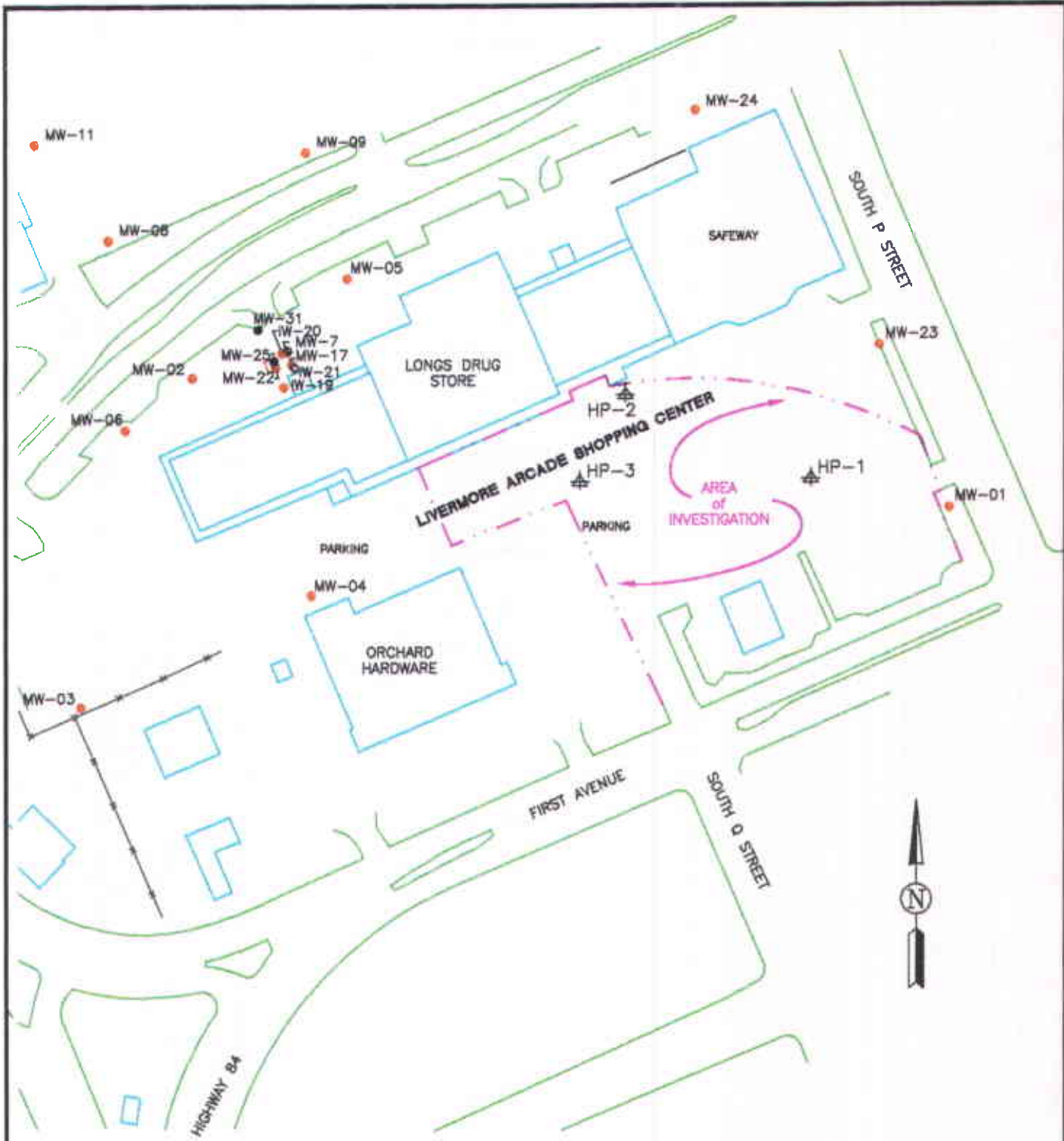
/3062/OVERSGHT.RPT

cc: Rhonda Methvin, GCL



Randall T. Hicks  
Principal in Charge





SCALE: 1" = 150'

**LEGEND**

▲ HYDRO-PUNCH BOREHOLE LOCATION

**GCL**



|                    |                |
|--------------------|----------------|
| CLIENT: GERIT L.T. |                |
| DATE: 7/13/94      | REV. NO.: 0    |
| AUTHOR: P.M.       | DRAWN BY: M.P. |
| CK'D BY: P.M.      | FILE: ULTRAMAR |

**FIGURE 1  
ULTRAMAR INC.  
INVESTIGATION  
SITE MAP**



7-7-94

(1)

0745 - ARRIVE ON SITE AT LASC  
SOUTH PARKING AREA.

ULTRAMAR CONSULTANT/DRILLERS  
ARE NOT HERE

CHECK WATER LEVEL @ MW-4  
= 38.15 ft.

TASK: OVERSIGHT AND SPLIT SAMPLES  
WITH ULTRAMAR CONSULTANT  
CONDUCTING HYDRO-PUNCT INVEST  
IN LASC SOUTH PARKING AREA  
TO DETERMINE EXTENT OF BTEX  
PLUME FROM BEACON STATION  
SE AND UPGRADIENT FROM LASC

PERSONNEL: P. MINTANO - GCL

WATER TABLE HAS DROPPED ~~4.31~~<sup>4</sup> 3.79'  
SINCE MAY 18, 1994.

MW4 - 5/18/94 = 34.34'  $\Delta = 3.79'$   
MW4 - 7/7/94 = 38.15'

I will adjust my contour map prepared  
~~earlier~~ accordingly -

Pat Mintano

2

7/7/94

0815 - Consultant / Drillers are not here.

0830 - Call Terry Fox, no answer, leave message

0855 - WEST HAZMAT DRILLING CORP. ARRIVES.

**WEST HAZMAT**  
Drilling Corp.

EUGENE J. NUNES

8261 Enterprise Drive • Newark, CA 94560  
(510) 494-8111 • FAX (510) 494-8144 • C-57 No. 554979

ACTON •  
MICKELSON •  
van DAM, INC.

Consulting Scientists, Engineers, and Geologists

STEVEN A. LIATY  
Assistant Staff Geologist

4511 Golden Foothill Parkway, Suite 1  
El Dorado Hills, CA 95762

(916) 939-7550  
Fax (916) 939-7570

7/8/94

3

0910 - STEVE LIATY of AMD Arrives.

0930 - Terry Fox ULTIMATE OF ARRIVES  
Drillers are decorating Auger.

1020 - DRILLERS SET-UP ON H-P-1

1030 - Begin drilling w/ 8' Auger, checking for utilities w/ hand Auger.

Auger to 14' Sandy Silty Gravel  
Collect Sample w/ Split Spoon from 14' to 15.5', No Hydrocarbon odor

AMD SAVES 1-BRASS IN ICE, MATCHING FROM 1-BRASS TUBE INTO BAGGIE FOR PID, 14' to 15.5' PID = 0 -

1105 - Continue drilling, to 21.5' for next sample.  
Hit Clay @ 20'

Start sample collection @ 24'

Pat Mink

(4)

7/7/94

No Hydrocarbon odor down to 24'

Hydrocarbon odor detect @ 32'

Collect Sample @ 25', PID = 0 -

Collect Sample @ 35' PID = 2 ppm

Collect Sample @ 40' No PID

Auger to 40', Stop, est. water table @ 41', will advance Hydro punch here.

Sample # 9407071230

Sample type Inverte (Split) H<sub>2</sub>O

Location HP-1 Screen depth ~ 48'

Instr. BTEX, TPH-G

Vol. 3-40 ml.

Preserv. None

ID 8043

Lab K-PRIME

Analyst P. Montano

1330 - The HP Tool was advanced to 42', in sandy gravelly material, this required numerous blows. bail was run ~~down~~ down the well, unable to go past 38'. The feeling is that the HP pipe was bent during advancement. We will

Rad. Hunt

7/7/94

(5)

try to modify (shorten) the bailer to get it past the band.

Modified bailer went past the band, hole was dry.

- Drill hole to 43'
- USE SPLIT SPOON TO ADVANCE
- HOLE to 44.5'
- DIVE HP TOOL TO 46'

Unable to recover water from Hydro punch tool.

1530 - Drill to 48' to attempt to set temp. well (abandon Hydro punch) 2" PVC inside Auger.

Bail ~ 5 gals. from temp well.

1600 - Collect Sample # id 9407071230  
Bailed H<sub>2</sub>O had Hydro odor

Soil Sample collected from 140' ~~at~~ that has been ICE, will be sent to Lab.

P. Montano

⑥

7-7-94

HP-1

Sample # 9407071620  
 Sample type Invert. (Split)  
 Location HP-1 Screen depth 40'  
 Analytes BTEX, TPH-G  
 Containers 1-1 1/2 x 6" Brass Preserv. Monie  
 COC # 8043 Lab K-Prime  
 Sampler P. Montano

Soil/Cutting loaded on AMD Truck  
to be stockpiled @ Beacon Station

Drillers are backfilling Borehole with  
Cement.

HP-1 is located  $\approx 110'$  NW OF MW-1  
and  $\approx 145'$  SW OF MW-23

1800 - Drillers complete Backfill of  
HP-1. Leave Site

Patrick Montano

7-8-94

HP-2

PERSONNEL: P. MONTANO - GCL  
 Steve LIATY - AMD  
 WEST HAZMAT DRILLING

TASK: CONTINUE Hydro-punch or TEMP  
well activities.

0600 - Arrive on site, Drillers and  
AMD are not here yet.

0630 - STEVE LIATY - AMD ARRIVES

0645 - Drillers arrive

~~Discuss~~ Discuss with Steve the possibility  
 of moving HP-2 further to the West.  
 Current location is ~~in breeze way~~ just  
 back of breeze way west of  
 Round table pizza. Steve indicates  
 that he was instructed by Terry  
 Fox to locate the HP there.

HP-2 IS LOCATED  $\approx 295'$  WEST OF  
South P Street West Curb.

0700 - Drillers are setting up over HP-2  
Location

Pat Montano

⑥

7/8/94

HP-2

0715 - Start Drilling @ HP-2

Dugger to 14' - material consist of gravel w/ sand and silt. No Hydro odor

Collect Sample from 14' to 15.5' w/ Split Spoon, PID = 0 - , Gravel, Sand, Silt

Continue drilling to 24' - material consist of Silty Clay. No Hydro. odor

AT ≈ 18' material changes to Silty Clay.

Collect Sample from 24' to 25.5' w/ Split Spoon, PID = 0 - , Silty Clay.

Continue drilling to 34', encounter minor gravel @ 30', Silty Clay @ 34', No Hydro odor

Collect Sample from 34' to 35.5' w/ Split Spoon, PID = 0 - , Silty Clay w/ minor pebbles

Continue drilling to 40', material contains more gravel

Pat Montano

7/8/94

HP-2

⑦

Collect Sample from 40' to 41.5' w/ Split Spoon, PID = 20 ppm, Gravelly Sand, Clay

Hydro carbon odor encountered @ ≈ 39'

Drill to 43', prepare to insert hydro-punch tool. Advance point to ≈ 46', open screen. Hole is producing water Sample, sample below exhibits slight Hydro-carbon odor.

Samp. # 9407081000  
 Sample type Insert (Split) H<sub>2</sub>O  
 Location HP-2 Screen depth ≈ 46'  
 Analytes BTEX, TPH-G  
 Containers 3-40 ml. Preserv. NONE  
 COC # 8046 Lab K-PRIME  
 Sampler P. Montano

Drillers are Grouting/Backfilling HP-2

Pat Montano

(10)

7/8/97

HP-2

Sample # 9407081005  
 Sample type TRIP Blank  
 Location LASC Screen depth \_\_\_\_\_  
 Analytes BTEX, TPH-G  
 Containers 3-40 ml. Preserv. None  
 COC # 8046 Lab K-PRIME  
 Sampler P. Montano

AMD has indicated that they will  
 send the Soil Sample from  
 HP-2, 40' to Lab.

Sample # 9407081010  
 Sample type Invest. (Split) Soil  
 Location HP-2 Screen depth 40'  
 Analytes BTEX, TPH-G  
 Containers 1-1/2" x 6" BUNS Preserv. None  
 COC # 8046 Lab K-PRIME  
 Sampler P. Montano

1200 - Begin drilling on HP-3 located  
 @ 105' SW of HP-2.

P. Montano

7/8/97

HP-3

(11)

Auger to 14', material consist of  
 Gravel, sand, silt, no Hydro-odor

Collect Sample from 14' to 15.5' w/ split  
 spoon, PID = -0 -, Gravel, Sand, Silt

Continue drilling to 24', material consist  
 of Gravel, Sand, and some Clay, no-Hydro odor

Collect Sample from 24' to 25.5' w/ split  
 spoon, PID = -0 -, Silty Clay

@ 25.5' material changed to silty clay

Continue drilling to 34', material consist  
 of Silty Clay 25.5' to 31', silty clay w/  
 pebbles 31' to 34', Rig is overheating

Collect Sample from 34' to 35.5' w/ split  
 spoon, PID = -0 -, Silty Clay w/ pebbles  
 Recovered only 6"

Begin to drill to 40' encounter gravel  
 @ 36', rig overheats again

P. Montano

(12)

7/8/94 HP-3

Very hard drilling area (gravel) encountered @ 36'

1500 - Able to drill to 40', collect split sam @ 40' to 41' feet recover 15" material composed of Gravel w/ sand & clay. no apparent Hydrocarbon odor. PID = -0 -

Auger to 43', drive split spoon to 44', material is saturated Gravel, sand, clay. PID = -0 - no apparent Hydrocarbon odor.

Insert hydro-pneum tool, drive 1', pull-up 3/4" to expose screen, Collect H<sub>2</sub>O Sample.

Sample # 9407081550  
 Sample type Invest. (Split) H<sub>2</sub>O  
 Location HP-3 Screen depth 45'  
 Analytes BTEX, TPH-G  
 Containers 3, 10 ml. Preserv. None  
 COC # 8041a Lab K-PRIME  
 Sampler P. Menden

(13)

7/8/94 HP-3

H<sub>2</sub>O sampled @ HP-3 exhibited Slight Hydrocarbon odor

Sample # 9407081600  
 Sample type Invest. (Split) Soil  
 Location HP-3 Screen depth 40  
 Analytes BTEX, TPH-G  
 Containers 1-1/2" x 6" Brass Preserv. None  
 COC # 8046 Lab K-PRIME  
 Sampler P. Menden

AMD indicates that they will send the 40' soil sample, I will send to Lab also. (above)

Steve w/ AMT says that HP-3 will be the test Hole for today, ULTRAMAN will review data collected today and determine if additional HP hole(s) are necessary on LASC property. Additional I spoke with Terry Fox, He says that the excess agreement was only good for 7-7, 8, -94. I checked access agreement, valid through 7-15-94. In any event Mr. Fox

(14) 7-8-94

has decided to:

- discontinue work for now
- review data collected to date
- decide if further work is necessary next week

Mr. Fox informed me that water sample collected from HP-1 yesterday contained BTEX (12 in. FAT from Lab.)

1640 - Drillers are grouting HP-3

1730 - Relinquish Samples to K-Prime representative, COC # 8043, 8046

Drillers finish all holes w/Block cement, All sites are cleaned-up and look good.

1830 - Leave Site

Det. Masten



**Attachment 2**

**Analytical Results**

# K PRIME, INC.

CONSULTING ANALYTICAL CHEMISTS

4197 Lakeside Dr., Suite 170  
Richmond, CA 94806  
(510) 222-4815  
Fax: 222-4817

## TRANSMITTAL

DATE: 7/13/94

TO: Ms. Annette Montoya  
GCL  
505 Marquette NW, Suite 1100  
Albuquerque, NM 87102

Acct#: 100-9411  
Project: 3062.001

Phone: (505) 842-0001  
FAX: (505) 842-0595

FROM: Richard A. Kagel, Ph.D. *RAK 7/15/94*  
Laboratory Director

SUBJECT: YOUR PROJECT #3062.001 LABORATORY RESULTS

Enclosed please find K Prime's laboratory reports for the following samples:

| SAMPLE ID                    | SAMPLE TYPE | DATE    | KPI LAB # |
|------------------------------|-------------|---------|-----------|
| 9407071230 } <i>HP-1</i>     | WATER       | 7/07/94 | 5038      |
| 9407071620 } <i>HP-1</i>     | SOIL        | 7/07/94 | 5039      |
| 9407081000 <i>HP-2</i>       | WATER       | 7/08/94 | 5040      |
| 9407081005 <i>TRIP BLANK</i> | WATER       | 7/08/94 | 5041      |
| 9407081010 <i>HP-2</i>       | SOIL        | 7/08/94 | 5042      |
| 9407081550 } <i>HP-3</i>     | WATER       | 7/08/94 | 5043      |
| 9407081600 } <i>HP-3</i>     | SOIL        | 7/08/94 | 5044      |

These samples were tested in our laboratory for BTEX by EPA 8020/602 and for TPH-G by EPA 8015M/CA DHS LUFT. Please call me if you have any questions or need further information.

Thank you for this opportunity to be of service.

K PRIME, INC.  
LABORATORY REPORT

OUR PROJECT: 9411  
YOUR PROJECT: 3062.001

SAMPLE ID: 9407071230  
LAB NO: 5038  
SAMPLE TYPE: WATER  
DATE SAMPLED: 7/7/94  
TIME SAMPLED: 12:30

METHOD: BTEX  
REFERENCE: EPA 8020

HP-1

DATE ANALYZED: 7/12/94  
UNITS: UG/L

| COMPOUND NAME | CAS NO.   | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------|-----------------|-------------|
| BENZENE       | 71-43-2   | 5.00            | 6,760       |
| TOLUENE       | 108-88-3  | 5.00            | 429         |
| ETHYLBENZENE  | 100-41-4  | 5.00            | 2,590       |
| M-&P-XYLENE   | 1330-20-7 | 5.00            | 12,600      |
| O-XYLENE      | 95-47-6   | 5.00            | 4,700       |

METHOD: TPH-G/D  
REFERENCE: EPA MOD 8015

DATE ANALYZED: 7/12/94  
UNITS: MG/L

| COMPOUND NAME | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------------|-------------|
| TPH-G         | 0.50            | 52.1        |
| TPH-D*        | 0.05            | NA          |

NOTES:

ND - NOT DETECTED AT STATED REPORTING LIMIT

NA - NOT APPLICABLE

\* - DIESEL RANGE EXTRACTABLES GC/FID PATTERN

|                                 |  |
|---------------------------------|--|
| DIESEL FUEL                     |  |
| DEGRADED DIESEL FUEL            |  |
| PETROLEUM - HEAVIER THAN DIESEL |  |
| PETROLEUM - LIGHTER THAN DIESEL |  |
| UNKNOWN EXTRACTABLES PATTERN    |  |

PREPARED BY:                       
DATE:                     

APPROVED BY:                       
DATE:

K PRIME, INC.  
LABORATORY REPORT

OUR PROJECT: 100-9411  
YOUR PROJECT: 3062.001

SAMPLE ID: 9407071620  
LAB NO: 5039  
SAMPLE TYPE: SOIL  
DATE SAMPLED: 7/7/94  
TIME SAMPLED: 16:20

METHOD: BTEX  
REFERENCE: EPA 8020

HP-1

DATE ANALYZED: 7/8/94  
UNITS: UG/KG

| COMPOUND NAME | CAS NO.   | REPORTING<br>LIMIT | SAMPLE<br>CONC |
|---------------|-----------|--------------------|----------------|
| BENZENE       | 71-43-2   | 5.0                | 8.04           |
| TOLUENE       | 108-88-3  | 5.0                | ND             |
| ETHYLBENZENE  | 100-41-4  | 5.0                | ND             |
| M-&P-XYLENE   | 1330-20-7 | 5.0                | 24.5           |
| O-XYLENE      | 95-47-6   | 5.0                | ND             |

METHOD: TPH-G/D  
REFERENCE: EPA MOD 8015

DATE ANALYZED: 7/8/94  
UNITS: MG/KG

| COMPOUND NAME | REPORTING<br>LIMIT | SAMPLE<br>CONC |
|---------------|--------------------|----------------|
| TPH-G         | 1.0                | ND             |
| TPH-D*        | 10.0               | NA             |

NOTES:

ND - NOT DETECTED AT STATED REPORTING LIMIT  
NA - NOT APPLICABLE

\* - DIESEL RANGE EXTRACTABLES GC/FID PATTERN

|                                 |  |
|---------------------------------|--|
| DIESEL FUEL                     |  |
| DEGRADED DIESEL FUEL            |  |
| PETROLEUM - HEAVIER THAN DIESEL |  |
| PETROLEUM - LIGHTER THAN DIESEL |  |
| UNKNOWN EXTRACTABLES PATTERN    |  |

PREPARED BY: AB  
DATE: 7/12/94

APPROVED BY: BAK  
DATE: 7/15/94

K PRIME, INC.  
LABORATORY REPORT  
  
OUR PROJECT: 9411  
YOUR PROJECT: 3062.001

SAMPLE ID: 9407081000  
LAB NO: 5040  
SAMPLE TYPE: WATER  
DATE SAMPLED: 7/8/94  
TIME SAMPLED: 10:00

METHOD: BTEX  
REFERENCE: EPA 8020

*HP-2*

DATE ANALYZED: 7/11/94  
UNITS: UG/L

| COMPOUND NAME | CAS NO.   | REPORTING<br>LIMIT | SAMPLE<br>CONC |
|---------------|-----------|--------------------|----------------|
| BENZENE       | 71-43-2   | 0.50               | 326            |
| TOLUENE       | 108-88-3  | 0.50               | 6.04           |
| ETHYLBENZENE  | 100-41-4  | 0.50               | 40.3           |
| M-&P-XYLENE   | 1330-20-7 | 0.50               | 558            |
| O-XYLENE      | 95-47-6   | 0.50               | 36.2           |

METHOD: TPH-G/D  
REFERENCE: EPA MOD 8015

DATE ANALYZED: 7/11/94  
UNITS: MG/L

| COMPOUND NAME | REPORTING<br>LIMIT | SAMPLE<br>CONC |
|---------------|--------------------|----------------|
| TPH-G         | 0.05               | 4.12           |
| TPH-D*        | 0.05               | NA             |

**NOTES:**

ND - NOT DETECTED AT STATED REPORTING LIMIT  
NA - NOT APPLICABLE

\* - DIESEL RANGE EXTRACTABLES GC/FID PATTERN

|                                 |                      |
|---------------------------------|----------------------|
| DIESEL FUEL                     | <input type="text"/> |
| DEGRADED DIESEL FUEL            | <input type="text"/> |
| PETROLEUM - HEAVIER THAN DIESEL | <input type="text"/> |
| PETROLEUM - LIGHTER THAN DIESEL | <input type="text"/> |
| UNKNOWN EXTRACTABLES PATTERN    | <input type="text"/> |

PREPARED BY: AB  
DATE: 7/12/94

APPROVED BY: RAK  
DATE: 7/15/94

K PRIME, INC.  
LABORATORY REPORT

SAMPLE ID: 9407081005  
LAB NO: 5041  
SAMPLE TYPE: WATER  
DATE SAMPLED: 7/8/94  
TIME SAMPLED: 10:05

OUR PROJECT: 9411  
YOUR PROJECT: 3062.001

METHOD: BTEX  
REFERENCE: EPA 8020

DATE ANALYZED: 7/8/94  
UNITS: UG/L

*TRIP  
BLANK  
(QA)*

| COMPOUND NAME | CAS NO.   | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------|-----------------|-------------|
| BENZENE       | 71-43-2   | 0.50            | ND          |
| TOLUENE       | 108-88-3  | 0.50            | ND          |
| ETHYLBENZENE  | 100-41-4  | 0.50            | ND          |
| M-&P-XYLENE   | 1330-20-7 | 0.50            | ND          |
| O-XYLENE      | 95-47-6   | 0.50            | ND          |

METHOD: TPH-G/D  
REFERENCE: EPA MOD 8015

DATE ANALYZED: 7/8/94  
UNITS: MG/L

| COMPOUND NAME | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------------|-------------|
| TPH-G         | 0.05            | ND          |
| TPH-D*        | 0.05            | NA          |

**NOTES:**

ND - NOT DETECTED AT STATED REPORTING LIMIT  
NA - NOT APPLICABLE

\* - DIESEL RANGE EXTRACTABLES GC/FID PATTERN

|                                 |  |
|---------------------------------|--|
| DIESEL FUEL                     |  |
| DEGRADED DIESEL FUEL            |  |
| PETROLEUM - HEAVIER THAN DIESEL |  |
| PETROLEUM - LIGHTER THAN DIESEL |  |
| UNKNOWN EXTRACTABLES PATTERN    |  |

PREPARED BY: AB  
DATE: 7/2/94

APPROVED BY: RAK  
DATE: 7/15/94

K PRIME, INC.  
LABORATORY REPORT

OUR PROJECT: 100-9411  
YOUR PROJECT: 3062.001

SAMPLE ID: 9407081010  
LAB NO: 5042  
SAMPLE TYPE: SOIL  
DATE SAMPLED: 7/8/94  
TIME SAMPLED: 10:10

METHOD: BTEX  
REFERENCE: EPA 8020

DATE ANALYZED: 7/8/94  
UNITS: UG/KG

COMPOUND NAME *HP-2* CAS NO. REPORTING LIMIT SAMPLE CONC

| COMPOUND NAME | CAS NO.   | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------|-----------------|-------------|
| BENZENE       | 71-43-2   | 5.0             | ND          |
| TOLUENE       | 108-88-3  | 5.0             | ND          |
| ETHYLBENZENE  | 100-41-4  | 5.0             | ND          |
| M-&P-XYLENE   | 1330-20-7 | 5.0             | 60.1        |
| O-XYLENE      | 95-47-6   | 5.0             | ND          |

METHOD: TPH-G/D  
REFERENCE: EPA MOD 8015

DATE ANALYZED: 7/8/94  
UNITS: MG/KG

COMPOUND NAME REPORTING LIMIT SAMPLE CONC

| COMPOUND NAME | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------------|-------------|
| TPH-G         | 1.0             | ND          |
| TPH-D*        | 10.0            | NA          |

NOTES:

ND - NOT DETECTED AT STATED REPORTING LIMIT  
NA - NOT APPLICABLE

\* - DIESEL RANGE EXTRACTABLES GC/FID PATTERN

|                                 |  |
|---------------------------------|--|
| DIESEL FUEL                     |  |
| DEGRADED DIESEL FUEL            |  |
| PETROLEUM - HEAVIER THAN DIESEL |  |
| PETROLEUM - LIGHTER THAN DIESEL |  |
| UNKNOWN EXTRACTABLES PATTERN    |  |

PREPARED BY: AS  
DATE: 7/12/94

APPROVED BY: RAK  
DATE: 7/15/94

K PRIME, INC.  
LABORATORY REPORT

SAMPLE ID: 9407081550  
LAB NO: 5043  
SAMPLE TYPE: WATER  
DATE SAMPLED: 7/8/94  
TIME SAMPLED: 15:50

OUR PROJECT: 9411  
YOUR PROJECT: 3062.001

METHOD: BTEX  
REFERENCE: EPA 8020

DATE ANALYZED: 7/11/94  
UNITS: UG/L

| COMPOUND NAME | CAS NO.   | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------|-----------------|-------------|
| BENZENE       | 71-43-2   | 0.50            | 4.92        |
| TOLUENE       | 108-88-3  | 0.50            | 0.738       |
| ETHYLBENZENE  | 100-41-4  | 0.50            | 1.62        |
| M-&P-XYLENE   | 1330-20-7 | 0.50            | 3.96        |
| O-XYLENE      | 95-47-6   | 0.50            | 1.09        |

METHOD: TPH-G/D  
REFERENCE: EPA MOD 8015

DATE ANALYZED: 7/11/94  
UNITS: MG/L

| COMPOUND NAME | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------------|-------------|
| TPH-G         | 0.05            | 0.680       |
| TPH-D*        | 0.05            | NA          |

NOTES:

ND - NOT DETECTED AT STATED REPORTING LIMIT  
NA - NOT APPLICABLE

\* - DIESEL RANGE EXTRACTABLES GC/FID PATTERN

|                                 |  |
|---------------------------------|--|
| DIESEL FUEL                     |  |
| DEGRADED DIESEL FUEL            |  |
| PETROLEUM - HEAVIER THAN DIESEL |  |
| PETROLEUM - LIGHTER THAN DIESEL |  |
| UNKNOWN EXTRACTABLES PATTERN    |  |

PREPARED BY: AB  
DATE: 7/12/94

APPROVED BY: AKK  
DATE: 7/15/94



K PRIME, INC.  
LABORATORY REPORT

OUR PROJECT: 100-9411  
YOUR PROJECT: 3062.001

SAMPLE ID: 9407081600  
LAB NO: 5044  
SAMPLE TYPE: SOIL  
DATE SAMPLED: 7/8/94  
TIME SAMPLED: 16:00

METHOD: BTEX  
REFERENCE: EPA 8020

DATE ANALYZED: 7/9/94  
UNITS: UG/KG

| COMPOUND NAME | CAS NO.   | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------|-----------------|-------------|
| BENZENE       | 71-43-2   | 5.0             | ND          |
| TOLUENE       | 108-88-3  | 5.0             | ND          |
| ETHYLBENZENE  | 100-41-4  | 5.0             | ND          |
| M-&P-XYLENE   | 1330-20-7 | 5.0             | ND          |
| O-XYLENE      | 95-47-6   | 5.0             | ND          |

METHOD: TPH-G/D  
REFERENCE: EPA MOD 8015

DATE ANALYZED: 7/8/94  
UNITS: MG/KG

| COMPOUND NAME | REPORTING LIMIT | SAMPLE CONC |
|---------------|-----------------|-------------|
| TPH-G         | 1.0             | ND          |
| TPH-D*        | 10.0            | NA          |

NOTES:

ND - NOT DETECTED AT STATED REPORTING LIMIT  
NA - NOT APPLICABLE

\* - DIESEL RANGE EXTRACTABLES GC/FID PATTERN

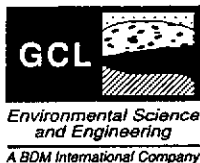
|                                 |  |
|---------------------------------|--|
| DIESEL FUEL                     |  |
| DEGRADED DIESEL FUEL            |  |
| PETROLEUM - HEAVIER THAN DIESEL |  |
| PETROLEUM - LIGHTER THAN DIESEL |  |
| UNKNOWN EXTRACTABLES PATTERN    |  |

PREPARED BY: RS  
DATE: 7/12/94

APPROVED BY: RAK  
DATE: 7/15/94

PROJ # 9411

No 8046



Albuquerque  
505 Marquette NW, Ste. 1100  
Albuquerque, NM 87102  
(505) 842-0001  
FAX: (505) 842-0595

Mid Atlantic Region  
4221 Forbes Blvd., Ste. 240  
Lanham, MD 20706-4325  
(301) 459-9677  
FAX: (301) 459-3064

NASA-WSTF  
PO Drawer MM  
Las Cruces, NM 88004  
(505) 524-5353  
FAX: (505) 524-5315

# Chain of Custody

Date 7-8-94 Page 1 Of 1

| Lab Name <u>K-Prime, Inc.</u><br>Address <u>4197 LAKESIDE DR. SUITE 40</u><br><u>RICHMOND, CA 94806</u><br>Telephone <u>510-222-4815</u> |        |            | Analysis Request                  |                                |                                  |                            |   |                                       |   |  |                                     |   |               |  |              |                    |                                   |                             |             |             |            |              |                        |                                 |                    |                      |      |      |   |
|--|--------|------------|-----------------------------------|--------------------------------|----------------------------------|----------------------------|---|---------------------------------------|---|--|-------------------------------------|---|---------------|--|--------------|--------------------|-----------------------------------|-----------------------------|-------------|-------------|------------|--------------|------------------------|---------------------------------|--------------------|----------------------|------|------|---|
| Samplers (SIGNATURES)<br><u>Pat Montano</u>  |        |            | Halogenated<br>Volatiles 601/6010 | Aromatic Volatiles<br>602/6020 | Phenols, Sub Phenols<br>604/6040 | Pesticides/PCB<br>608/6080 | Polynuclear Aromatic<br>Hydrocarbons 610/6310 | Volatiles Compounds<br>GC/MS 624/6240 | Base/Neu/Acid Compounds<br>GC/MS 625/6270 | Total Organic Carbon<br>(TOC) 415/9060 | Total Organic Halides<br>(TOX) 9020 | Petroleum<br>Hydrocarbons 418.1<br>TPH/BTEX | Modified 8015 | TCDF, Vol., Semi-Vol.,<br>Herbicides, Pesticides | TCDF, Metals | RCRA<br>Metals (8) | Priority Pollutant<br>Metals (13) | CAM Metals (18)<br>TLC/STLC | Flash Point | Corrosivity | Reactivity | Oil & Grease | Cyanide Total/Amenable | Chemical Oxygen<br>Demand (COD) | <u>BTEX, TAP-9</u> | Number of Containers |      |      |   |
| Sample Number  | Matrix | Location   |                                   |                                |                                  |                            |   |                                       |   |  |                                     |   |               |  |              |                    |                                   |                             |             |             |            |              |                        |                                 |                    |                      |      |      |   |
| 9407081000   | H2O    | HP-2       |                                   |                                |                                  |                            |   |                                       |   |  |                                     |   |               |  |              |                    |                                   |                             |             |             |            |              |                        |                                 |                    |                      | 5040 | 3    |   |
| 9407081005   | H2O    | Trip Blank |                                   |                                |                                  |                            |   |                                       |   |  |                                     |   |               |  |              |                    |                                   |                             |             |             |            |              |                        |                                 |                    |                      |      | 5041 | 3 |
| 9407081010   | SOIL   | HP-2       |                                   |                                |                                  |                            |   |                                       |   |  |                                     |   |               |  |              |                    |                                   |                             |             |             |            |              |                        |                                 |                    |                      |      | 5042 | 1 |
| <del>9408</del>  |        |            |                                   |                                |                                  |                            |   |                                       |   |  |                                     |   |               |  |              |                    |                                   |                             |             |             |            |              |                        |                                 |                    |                      |      |      |   |
| 9407081550   | H2O    | HP-3       |                                   |                                |                                  |                            |   |                                       |   |  |                                     |   |               |  |              |                    |                                   |                             |             |             |            |              |                        |                                 |                    |                      |      | 5043 | 3 |
| 9407081600   | SOIL   | HP-3       |                                   |                                |                                  |                            |   |                                       |   |  |                                     |   |               |  |              |                    |                                   |                             |             |             |            |              |                        |                                 |                    |                      |      | 5044 | 1 |

|                                 |                           |                |  |                              |  |                    |  |                             |  |
|---------------------------------|---------------------------|----------------|--|------------------------------|--|--------------------|--|-----------------------------|--|
| Project Information             |                           | Sample Receipt |  | Relinquished By 1.           |  | Relinquished By 2. |  | Relinquished By 3.          |  |
| Project <u>LIVERMORE (BTEX)</u> | Total No. of Containers   |                |  | <u>Patric Montano 1730</u>   |  |                    |  |                             |  |
| Project Director <u>MONTANO</u> | Chain of Custody Seals    |                |  | <u>Patric Montano 7-8-94</u> |  |                    |  |                             |  |
| Charge Code No. <u>3062.001</u> | Rec'd Good Condition/Cold |                |  | <u>GCL</u>                   |  |                    |  |                             |  |
| Shipping ID. No.                | Conforms to Record        |                |  | (Company)                    |  | (Company)          |  | (Company)                   |  |
| Via: <u>Pick-up</u>             | Lab No.                   |                |  | Received By 1.               |  | Received By 2.     |  | Received By (Laboratory) 3. |  |
|                                 |                           |                |  | <u>Armando Barcos 17:30</u>  |  |                    |  |                             |  |
|                                 |                           |                |  | <u>Armando Barcos 7/8/94</u> |  |                    |  |                             |  |
|                                 |                           |                |  | <u>K-Prime Inc</u>           |  |                    |  |                             |  |
| Special Instructions/Comments:  |                           |                |  |                              |  |                    |  |                             |  |