P.E.M PACIFIC ELECTRIC MOTOR CO.
1009 66TH AVE. • OAKLAND, CA 94621-3535

Rand R. Perry

TELEPHONE (510) 569-7621 • FAX (510) 639-4510

SOIL STOCKPILE CHARACTERIZATION SUMMARY REPORT PACIFIC ELECTRIC MOTOR CO. 1009 - 66TH AVENUE OAKLAND, CALIFORNIA

5/28/97 #565

Submitted to

Alameda County Environmental Health Department

Submitted on behalf of

Pacific Electric Motor Co.

Prepared by

ENVIRON Corporation
Emeryville, California

May 28, 1997
Project No. 03-5991A

ENVIRON

May 28, 1997

Mr. Rand R. Perry
Pacific Electric Motor Company
1009 - 66th Avenue
Oakland, CA 94621

Re: Soil Stockpile Characterization Summary Report
Pacific Electric Motor Co., 1009 - 66th Avenue, Oakland, California

Dear Mr. Perry:

This report summarizes the results of the characterization of several soil stockpiles currently located at the Pacific Electric Motor Co. (PEM) facility at 1009 - 66th Avenue in Oakland, California (the Site). This soil stockpile characterization effort was completed in accordance with ENVIRON's April 23, 1997 *Work Plan for Soil Stockpile Characterization*, as modified by the conditions described in the Alameda County Environmental Health Department's (ACEHD's) approval letter dated April 24, 1997 (Appendix A).

The primary objective of this soil stockpile characterization effort was to determine the concentrations of gasoline constituents in the on-site soil stockpiles in order to provide the basis for determining an appropriate recycling, treatment or disposal method. Following a brief description of the soil stockpiles, the remainder of this report summarizes sampling locations and methods, analytical methods, analytical results, and quality assurance/quality control (QA/QC) results. This work was conducted as part of the closure of a former underground gasoline storage tank at the Site, under the jurisdiction of the ACEHD.

Stockpile Descriptions

Four soil stockpiles are presently located on-site, which have been identified as Stockpiles 1,

2, 3, and 4 for reference purposes (Figure 1). Based on reports provided by PEM, it is ENVIRON's understanding that approximately 1,300 - 1,500 cubic yards of gasoline-impacted soil were previously excavated in 1995 during the removal of a 2,000 gallon gasoline underground storage tank (UST) at the Site and stockpiled near the northwest corner of the property (Stockpile 1). In addition, non-impacted soils and asphalt overlying the former UST were stockpiled separately (Stockpile 2) and two other soil stockpiles are located on-site, including one stockpile that consists of excess clean material that was used to backfill the excavated area (Stockpile 3) and another stockpile of unknown origin (Stockpile 4).

As shown on Figure 1, the shapes of these stockpiles are irregular, and Stockpile 1 has a maximum width and length, respectively, of approximately 80 ft and 110 ft. The height of Stockpile 1 ranges from the ground surface at the edges of the stockpile to about 13 feet near the north-central area of the stockpile. The volumes of Stockpiles 2 and 4, respectively, are estimated to be approximately 40 cubic yards and 20 cubic yards.

Stockpile 1 consists primarily of tan and grey colored silty clay and clay soil, with some large gravel, cobbles, and pieces of asphalt debris scattered throughout. Stockpile 2 consists of dark grey angular gravel, with sandy and fine-grained soils and large pieces of asphalt throughout. Stockpile 3 consists of a medium gray, well graded mixture of gravel, sand, and fine grained soils, resembling engineered fill typically used as base material for road and paving work. Stockpile 4 consists of a yellow to rusty-colored angular cobble and gravel mixture, with large pieces of rock and sandy and fine-grained soils mixed throughout.

Sampling Locations and Methods

Soil stockpile samples were collected by ENVIRON and its sampling subcontractor, Blaine Tech Services, Inc. (San Jose, CA) on April 25, 1997. Sampling locations and sampling methods for Stockpiles 1, 2, and 4 are summarized below. Soil samples were not collected from Stockpile 3 because the stockpile appears to consist of excess clean backfill, as noted above.

Stockpile 1

ENVIRON randomly selected 13 locations from a grid consisting of 59 10-ft by 10-ft numbered squares which was superimposed on a plan of Stockpile 1, as shown on Figure 2.

The randomly-selected soil sample locations for Stockpile 1 were located in the field by measuring the stockpile from the site boundary fences with a measuring tape and staking the sample location. At each location, the height of the stockpile was measured to within ±1 foot. In order to collect samples representative of all depths within the stockpile, four soil samples were collected at depths corresponding to 15%, 35%, 65%, and 85% of the total stockpile height at each location. The sample locations, discrete sample identifier codes, and field-measured depths are listed in Table 1.

Soil samples were collected from Stockpile 1 using hand augers to bore to the required depths. Upon reaching the required depth, the soil sample was retrieved from the hand auger and transferred immediately into pre-cleaned glass jars with Teflon lid liners. Each sample jar was identified by a unique sample identification code to identify the sample location and depth (e.g., 1-A corresponds to sample location number 1, sampled at 15% of the total stockpile depth at that location), and the date, time, and name of the sampler. Sample information was also recorded at the time of sampling on a sample log form. Soil samples were placed immediately into an ice chest with ice to cool the samples. Soil samples were handled and transported to the laboratory under standard chain-of-custody procedures.

Stockpiles 2 and 4

ENVIRON collected one 4-point composite sample each from Stockpiles 2 and 4. Sample locations and depths were selected at random spacings in the field to provide a representative sample of each soil stockpile. Samples from Stockpiles 2 and 4 were collected from approximately 6-12 inches below the surface of each stockpile because the rocky material in these stockpiles hindered deeper sampling with hand tools. A shovel was used to remove surface soils, and soil samples from Stockpiles 2 and 4 were collected using a stainless steel trowel. Soil samples were transferred immediately into pre-cleaned glass jars with Teflon lid liners. After collection, soil samples were handled as described above.

The soil sampling equipment was decontaminated by washing with a high pressure steam cleaner using tap water prior to sampling at each location. To verify proper equipment decontamination, one equipment blank (identified as sample 10-EB) consisting of distilled/deionized water poured over the hand auger and hand trowel after decontamination was collected in glass bottles containing the appropriate preservative. The glass soil jars and water bottles, and distilled/deionized water were supplied by the laboratory.

Analytical Methods

The samples were delivered by Federal Express overnight service to and analyzed by Chromalab, Inc. (Pleasanton, California). At the laboratory, equal portions of each of the four sub-samples collected at each location were combined into one composite sample. The composite sample identifier corresponds to the original sample identification code (e.g. composite sample 1-A,B,C,D is comprised of equal portions of samples 1-A, 1-B, 1-C, and 1-D). The composite samples were analyzed for total volatile hydrocarbons as gasoline (TVH-G) by USEPA Method 8015-Modified; benzene, toluene, ethyl benzene, and total xylenes (BTEX) by USEPA Method 8020; total petroleum hydrocarbons (TPH) as motor oil by USEPA Method 8015-Modified, and lead by USEPA Method 6010. The equipment blank sample was analyzed for TVH-G, BTEX, and lead only.

After the initial analyses, and in accordance with the conditions of ACEHD's work plan approval letter, the composite soil sample from Stockpile 1 containing the highest concentration of TPH as motor oil (sample 1-A,B,C,D) was also analyzed for TPH as diesel (TPH-D) by EPA Method 8015-Modified, selected metals parameters (including cadmium, chromium, nickel and zinc), purgeable halocarbons (HVOCs) by EPA Method 8010, and for semi-volatile organic compounds (SVOCs) by EPA Method 8270.

Analytical Results

Table 2 summarizes the initial analytical results for the 15 composite soil samples and equipment blank. These 15 composite soil samples were analyzed for TVH-G, TPH as motor oil, benzene, toluene, ethyl benzene, xylenes, and lead. Copies of these initial analytical results are included in Appendix B.

Following initial analysis of the 15 composite samples, composite sample 1-A,B,C,D was analyzed for the additional parameters listed above, because it contained the highest concentration of motor oil (140 mg/kg) in samples collected from Stockpile 1. This sample contained 55 mg/kg of TPH-D, 26 mg/kg of chromium, 37 mg/kg of nickel, and 66 mg/kg of zinc. Non-detectable concentrations of cadmium, volatile organic compounds, and semi-volatile organic compounds were reported for this sample. Copies of analytical results for these additional analyses on composite sample 1-A,B,C,D are included in Appendix C.

Quality Assurance and Quality Control (QA/QC) Results

The analytical laboratory reported that the samples were refrigerated upon receipt and received in good condition on April 28, 1997. Copies of chain of custody documentation for this soil stockpile sampling effort are included in Attachment C.

The laboratory analytical report included a standard batch quality control data package for each analytical method. QA/QC results for initial analyses and subsequent analyses on composite sample 1-A,B,C,D are summarized as follows:

Initial Analyses

Results for method blanks, method blank spikes, blank spike duplicates, matrix spikes, and matrix spike duplicates for all soil and water samples and analytical methods were found to be within acceptable limits. Surrogate compound recoveries for TVH-G and BTEX analyses performed on seven soil samples (1-A,B,C,D, 3-A,B,C,D, A,B,C,D, 9-A,B,C,D, 10-A,B,C,D, 11-A,B,C,D, and 12-A,B,C,D) were outside acceptable limits due to matrix interference. According to the laboratory, low surrogate recoveries are typically attributed to excessive retention (or sorption) of the compound by the soil matrix, as is commonly found in clay soils, and high surrogate recoveries are attributed to the presence of hydrocarbons with similar molecular weights as the surrogate compounds within the samples. In each case, the laboratory re-ran the surrogate analyses to verify the results. For five samples, (3-A,B,C,D, 8-A,B,C,D, 9-A,B,C,D, 10-A,B,C,D, and 11-A,B,C,D) TVH-G and BTEX reporting limits were increased due to matrix interference. The equipment blank results were below detection limits.

Subsequent Analyses

For the additional analyses on composite sample 1-A,B,C,D, phenol matrix spike and relative percent deviation values exceeded QC limits; however, blank spike and blank spike duplicate results verified batch precision and accuracy. Total extractable petroleum hydrocarbon matrix spike and matrix spike duplicate recoveries exceeded QC acceptance limits due to matrix interference; however blank spike and blank spike duplicate results met all QC criteria.

We have appreciated the opportunity to complete this soil stockpile characterization effort for Pacific Electric Motor Company. Please do not hesitate to contact us at (510) 655-7400 if you have any questions concerning this summary report.

Sincerely,

John H. Schroeter, P.E., R.E.A.
Manager

JHS:am
p:\am\wp\project\03-5991A\stkpile.wpd

Table 1 - Sampling Locations - Stockpile 1
Table 2 - Summary of Initial Analytical Results
Figure 1 - Site Plan
Figure 2 - Soil Stockpile Sampling Locations
Appendix A - ACEHD Work Plan Approval Letter
Appendix B - Analytical Results - Initial Soil Stockpile Samples
Appendix C - Additional Analytical Results (Composite Sample 1-A,B,C,D)
Appendix D - Chain of Custody Forms

TABLE 1
SAMPLING LOCATIONS - STOCKPILE 1
Pacific Electric Motor Company, Oakland, California

Composite Sample Number	Random Grid Number	Stockpile Depth* (ft)	Depth 1 (85%, ft bgs)	Depth 2 (65%, ft bgs)	Depth 3 (35%, ft bgs)	Depth 4 (15%, ft bgs)
1	1	4	0.6	1.5	2.5	3.5
2	8	3.5	0.5	1.0	2.0	3.0
3	13	13	2.0	4.5	8.5	11.0
4	19	12	2.0	4.0	8.0	10.0
5	22	4	0.6	1.5	2.5	3.5
6	30	8	1.2	3.0	5.0	7.0
7	24	13	2.0	4.5	8.5	11.5
8	34	6.5	1.0	2.5	4.25	5.5
9	37	7.5	1.0	2.5	5.0	6.5
10	38	12	2.0	4.0	8.0	10.0
11	45	9	1.5	3.0	6.0	7.5
12	49	8	1.2	3.0	5.0	7.0
13	55	3	0.5	1.0	2.0	2.5

NOTES:

Random Grid Numbers between 1 and 59 generated by Excel 5.0 "RANDBETWEEN()" function.
bgs = below ground surface (referenced to top of stockpile surface).
* Stockpile depths at randomly-selected sampling locations were measured to within ± 1 foot in the field. In some cases, sample depths were rounded to the nearest 0.5 foot.

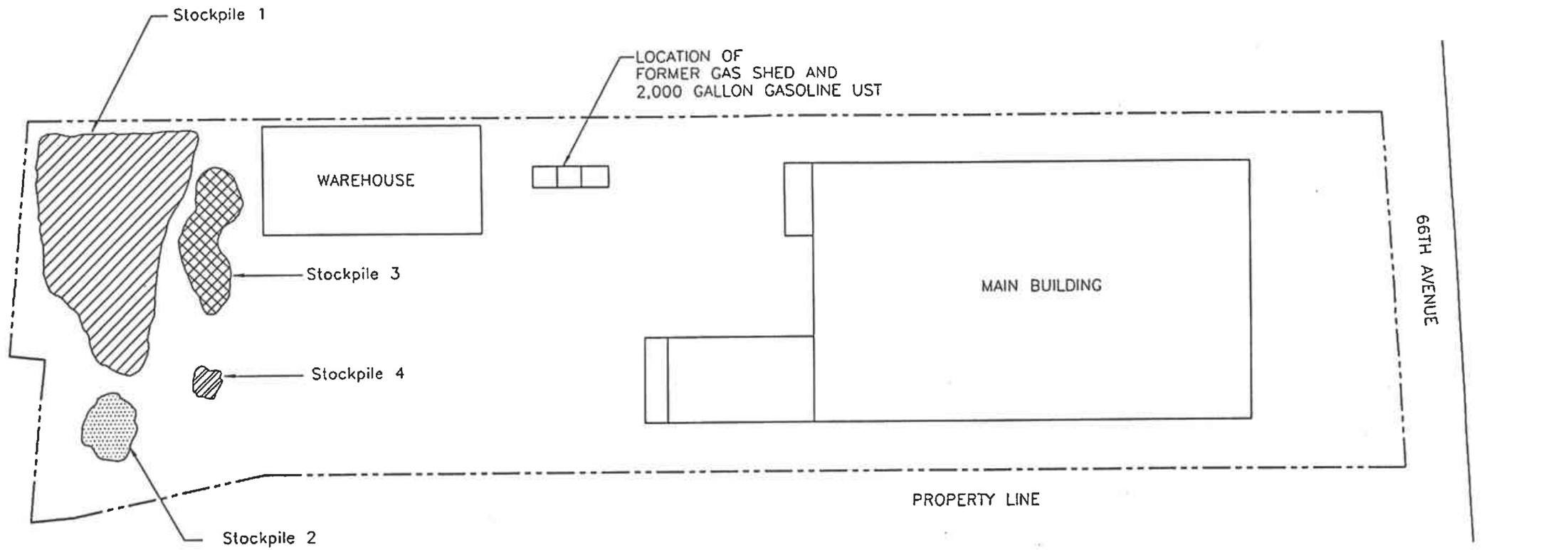
TABLE 2
SUMMARY OF INITIAL ANALYTICAL RESULTS
Pacific Electric Motor Company, Oakland, California

Sample ID Number	Corresponding Random Grid Number[8]	Gasoline (mg/kg)	Motor Oil (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Xylenes (mg/kg)	Lead (mg/kg)
Analytical Methods		8015M	8015M	8020A	8020A	8020A	8020A	3010A/6010A
1-A,B,C,D	1	< 1.0 [6]	140 [3]	<0.0050 [6]	<0.0050 [6]	<0.0050 [6]	<0.0050 [6]	27
2-A,B,C,D	8	<1.0	<50 [3]	<0.0050	<0.0050	<0.0050	<0.0050	11
3-A,B,C,D	13	64 [6,7]	<50 [3]	0.16 [6,7]	<0.11 [6,7]	0.78 [6,7]	3.9 [6,7]	9.2
4-A,B,C,D	19	9.3 [6]	<50 [3]	0.021 [6]	0.32 [6]	0.24 [6]	1.1 [6]	6.3
5-A,B,C,D	22	<1.0	<50 [3]	<0.0050	<0.0050	<0.0050	<0.0050	8.9
6-A,B,C,D	30	<1.0	<50 [3]	<0.0050	<0.0050	<0.0050	<0.0050	<5.0
7-A,B,C,D	24	<1.0	<50 [3]	<0.0050	<0.0050	<0.0050	0.0062	5.0
8-A,B,C,D	34	110 [7]	<50 [3]	<0.12 [7]	0.17 [7]	0.92 [7]	6.0 [7]	<5.0
9-A,B,C,D	37	96 [6,7]	<50 [3]	<0.12 [6,7]	0.55 [6,7]	0.99 [6,7]	6.3 [6,7]	<5.0
10-A,B,C,D	38	7.3 [6,7]	<50	0.017 [6,7]	<0.005 [6,7]	0.062 [6,7]	0.35 [6,7]	<5.0
11-A,B,C,D	45	200 [6,7]	<50	<0.40 [6,7]	<0.40 [6,7]	1.2 [6,7]	9.4 [6,7]	5.6
12-A,B,C,D	49	3.2 [6]	<50	0.0094 [6]	0.0050 [6]	0.046 [6]	0.22 [6]	<5.0
13-A,B,C,D	55	<1.0	<50	<0.0050	<0.0050	<0.0050	<0.0050	12
14-A,B,C,D	Stockpile 2	<1.0	63 [4]	<0.0050	<0.0050	<0.0050	<0.0050	8.7
15-A,B,C,D	Stockpile 4	<1.0	570 [5]	<0.0050	<0.0050	<0.0050	<0.0050	12
10-EB	Equipment Blank	<50 µg/L	NA	<0.50 µg/L	<0.50 µg/L	<0.50 µg/L	<0.50 µg/L	<5 µg/L

For reuse

Notes:

(1) Soil stockpile samples were collected by ENVIRON on April 25, 1997.
(2) NA = Not Analyzed
(3) Hydrocarbon in the diesel range was found in the sample.
(4) Diesel was found in the sample.
(5) Hydrocarbon in the late diesel range was found in the sample.
(6) Surrogate recovery was outside QA/QC limits due to matrix interference.
(7) Reporting limits increased due to matrix interference.
(8) Random grid numbers correspond to sample grid locations shown on Figure 2. Samples 14-A,B,C,D and 15-A,B,C,D consisted of 4-point composite samples collected from Stockpiles 2 and 4, respectively.



Note: Boundaries of existing soil stockpiles shown on this drawing are approximate and based on recent field observations.

EXPLANATION

- Approximate Extent of Stockpiled Soil from Previous UST Excavation Activities
- Approximate Extent of Clean Backfill Stockpile
- Approximate Extent of Excavated Soil Overlying Former UST
- Approximate Extent of Other Soil Stockpile

N

0 50 100

SCALE IN FEET

ENVIRON

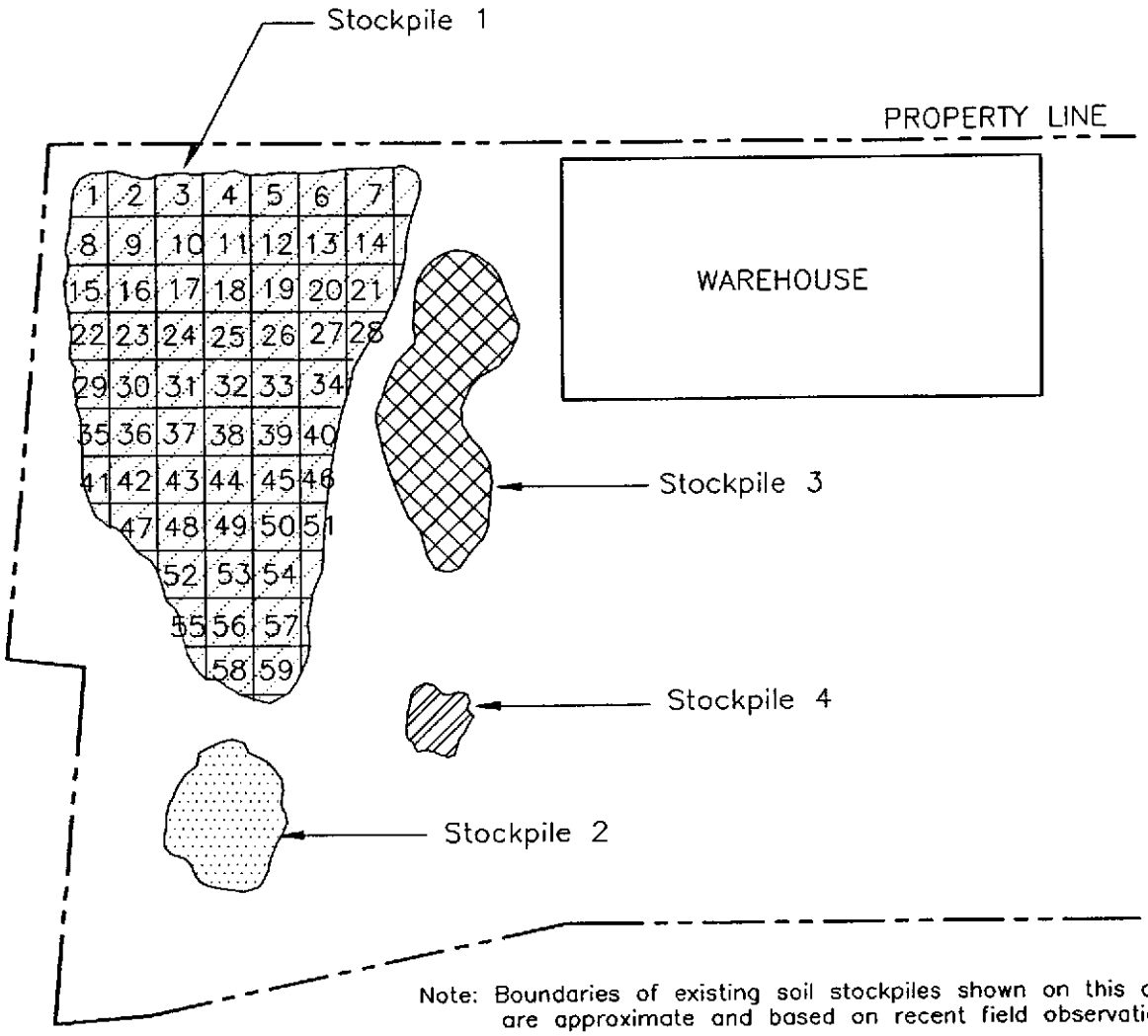
5820 Shellmound Street, Suite 700, Emeryville, California 94608

Site Plan
Pacific Electric Motor Co.
1009–66th Avenue
Oakland, California

DATE	CONTRACT NUMBER		FIGURE
4/23/97	03-5991A		1
DRAFTER: WJN	APPROVED: JHS	REVISED:	

C:\03591A\SITE

Source: Pacific Electric Motor Co. Drawing No. A-5029-D January 8, 1986



Note: Boundaries of existing soil stockpiles shown on this drawing are approximate and based on recent field observations.

EXPLANATION

- Approximate Extent of Stockpiled Soil from Previous UST Excavation Activities
- Approximate Extent of Clean Backfill Stockpile
- Approximate Extent of Excavated Soil Overlying Former UST
- Approximate Extent of Other Soil Stockpile
- 1 — Randomly – Selected Soil Sampling Grid Locations

N

0 40 80

SCALE IN FEET

Source: Pacific Electric Motor Co. Drawing No. A-5029-D January 8, 1986

C:\035991A\STOCK

ENVIRON 5820 Shellmound St., Suite 700, Emeryville, CA 94608	Soil Stockpile Sampling Grid & Sample Locations Pacific Electric Motor Co. 1009-66th Avenue Oakland, California	Figure 2

Drafter: WJN Date: 4/23/97 Contract Number: 03-5991A Approved: JHS Revised:

APPENDIX A
ACEHD WORK PLAN APPROVAL LETTER

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

April 24, 1997
StID # 565

Mr. Rand Perry
Pacific Electric Motor Co.
1009 66th Ave.
Oakland CA 94621

Re: Work Plan for Soil Stockpile Characterization at Pacific Electric Motor Co., 1009 66th Ave., Oakland CA 94621

Dear Mr. Perry:

Our office has received and reviewed the April 23, 1997 Environ work plan for soil characterization for the soils stockpiled at the above site. Three of the four piles of soils will be sampled randomly for location and at four different depths within the largest pile, pile 1.

This work plan is accepted with the following conditions:

1. Please add the analyte TPH as motor oil to your list of proposed analytes: TPHg, BTEX and lead. In addition, the soil sample exhibiting the highest level of TPH as motor oil should also be run for TPHd, chlorinated solvents, the metals cadmium, chromium, nickel and zinc and semi-volatiles. These other parameters are required for waste oil releases. Note, should contaminants be detected above respective MCLs, you may be required to statistically verify adequate sampling size.

2. Please provide any additional final reports for prior site investigation.

3. Please provide a work plan for additional site characterization for both soil and groundwater **within 30 days or by May 27, 1997.**

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan

Barney M. Chan
Hazardous Materials Specialist

c: Mr. Gary Norton, Serrano & Cone Inc., 2092 Omega Rd., Suite F
San Ramon, CA 94583
Mr. John Schroeter, Environ, 5820 Shellmound St., Suite 700,
Emeryville, CA 94608

sam-1009

APPENDIX B
ANALYTICAL RESULTS - INITIAL SOIL STOCKPILE SAMPLES

CHROMALAB, INC.

Environmental Services (SDB)

May 19, 1997 Submission #: 9704470

ENVIRON
5820 Shellmound St., Suite 700
Emeryville, CA 94608

Attn: John Schroeder

RE: Analysis for project PEM, number 03-5991A.

REPORTING INFORMATION

Samples were received cold and in good condition on April 28, 1997. They were refrigerated upon receipt and analyzed as described in the attached report. ChromaLab followed EPA or equivalent methods for all testing reported.

Deviation from standard conditions was found in the following:

- As noted, surrogate recoveries outside QC acceptance limits due to matrix interference.
- G/BTEX soil run #6648 had MS/MSD recoveries outside QC acceptance limits due to matrix interference. BS/BSD met all QC criteria.
- TEPH soil MS/MSD recoveries exceed QC acceptance limits due to matrix interference. BS/BSD verified batch precision and accuracy.

Client Sample ID	Matrix	Date collected	Sample #
1-A,B,C,D	SOIL	April 25, 1997	129216
Hydrocarbon in the Diesel range was found in sample 1-A,B,C,D.			
10-A,B,C,D	SOIL	April 25, 1997	129225
Hydrocarbon in the Diesel range was found in sample 10-A,B,C,D.			
10-EB	WTR	April 25, 1997	129231
11-A,B,C,D	SOIL	April 25, 1997	129226
12-A,B,C,D	SOIL	April 25, 1997	129227
13-A,B,C,D	SOIL	April 25, 1997	129228
14-A,B,C,D	SOIL	April 25, 1997	129229
Diesel was found in sample 14-A,B,C,D.			
15-A,B,C,D	SOIL	April 25, 1997	129230
Hydrocarbon in the late Diesel range was found in sample 15-A,B,C,D.			
2-A,B,C,D	SOIL	April 25, 1997	129217
Hydrocarbon in the Diesel range was found in sample 2-A,B,C,D.			
3-A,B,C,D	SOIL	April 25, 1997	129218
Hydrocarbon in the Diesel range was found in sample 3-A,B,C,D.			
4-A,B,C,D	SOIL	April 25, 1997	129219
Hydrocarbon in the Diesel range was found in sample 4-A,B,C,D.			

CHROMALAB, INC.

Environmental Services (SDB)

May 19, 1997

Submission #: 9704470
page 2

ENVIRON
5820 Shellmound St., Suite 700
Emeryville, CA 94608

Attn: John Schroeder

RE: Analysis for project PEM, number 03-5991A, continued.

5-A,B,C,D	SOIL	April 25, 1997	129220
Hydrocarbon in the Diesel range was found in sample 5-A,B,C,D.			
6-A,B,C,D	SOIL	April 25, 1997	129221
Hydrocarbon in the Diesel range was found in sample 6-A,B,C,D.			
7-A,B,C,D	SOIL	April 25, 1997	129222
Hydrocarbon in the Diesel range was found in sample 7-A,B,C,D.			
8-A,B,C,D	SOIL	April 25, 1997	129223
Hydrocarbon in the Diesel range was found in sample 8-A,B,C,D.			
9-A,B,C,D	SOIL	April 25, 1997	129224
Hydrocarbon in the Diesel range was found in sample 9-A,B,C,D.			

Jill Thomas
Quality Assurance Manager

Eric Tam
Laboratory Director

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **10-EB**
Spl#: 129231 *Matrix:* WATER
Sampled: April 25, 1997 *Run#:* 6685 *Analyzed:* May 5, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	80	1
BENZENE	N.D.	0.50	N.D.	102	1
TOLUENE	N.D.	0.50	N.D.	102	1
ETHYL BENZENE	N.D.	0.50	N.D.	102	1
XYLENES	N.D.	0.50	N.D.	105	1

Kayvan Kimyai
Chemist

Marianne Alexander
Gas/BTEX Supervisor

510-655-9517

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for Gasoline BTEX analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER
Lab Run#: 6685 *Analyzed:* May 5, 1997

Analyte	Spike Amount BSP (ug/L)	Spike Amount Dup (ug/L)	Spike Found BSP (ug/L)	Spike Found Dup (ug/L)	Spike Recov BSP (%)	Spike Recov Dup (%)	Control Limits	% RPD	% RPD Lim
GASOLINE	500	500	399	414	79.8	82.8	75-125	3.69	20
BENZENE	20.0	20.0	20.3	22.6	102	113	77-123	10.2	20
TOLUENE	20.0	20.0	20.4	22.4	102	112	78-122	9.34	20
ETHYL BENZENE	20.0	20.0	20.5	23.0	102	115	70-130	12.0	20
XYLENES	60.0	60.0	63.1	69.7	105	116	75-125	9.95	20

BS Smpl #: 130562
BSD Smpl #: 130563

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for Gasoline BTEX analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: WATER
Lab Run#: 6685 *Instrument:* 3400-5 *Analyzed:* May 6, 1997

Analyte	Spiked Sample Amount (ug/L)	Spike Amt MS (ug/L)	Spike Amt MSD (ug/L)	Amt Found MS (ug/L)	Amt Found MSD (ug/L)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
BENZENE	N.D.	20.0	20.0	20.9	21.3	104	106	65-135	1.90	20
TOLUENE	N.D.	20.0	20.0	20.9	21.4	104	107	65-135	2.84	20
ETHYL BENZENE	N.D.	20.0	20.0	20.6	21.6	103	108	65-135	4.74	20
XYLENES	1.0	60.0	60.0	65.0	68.1	107	112	65-135	4.57	20

Sample Spiked: 128179
Submission #: 9704404
Client Sample ID: 11042108

MS Smpl #: 130564
MSD Smpl #: 130565

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 1 sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod
Lab Run#: 6685
Matrix: WATER

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
129231-1	10-EB	TRIFLUOROTOLUENE	119	65-135
129231-1	10-EB	4-BROMOFLUOROBENZENE	98.4	65-135

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
130558-1	*Reagent blank (MDB)*	TRIFLUOROTOLUENE	110	65-135
130558-1	*Reagent blank (MDB)*	4-BROMOFLUOROBENZENE	89.0	65-135
130562-1	*Spiked blank (BSP)*	TRIFLUOROTOLUENE	110	65-135
130562-1	*Spiked blank (BSP)*	4-BROMOFLUOROBENZENE	105	65-135
130563-1	*Spiked blank duplicate (BSD)*	TRIFLUOROTOLUENE	110	65-135
130563-1	*Spiked blank duplicate (BSD)*	4-BROMOFLUOROBENZENE	110	65-135
130564-1	*Matrix spike (MS)*	TRIFLUOROTOLUENE	108	65-135
130564-1	*Matrix spike (MS)*	4-BROMOFLUOROBENZENE	139*	65-135
130565-1	*Matrix spike duplicate (MSD)*	TRIFLUOROTOLUENE	111	65-135
130565-1	*Matrix spike duplicate (MSD)*	4-BROMOFLUOROBENZENE	150*	65-135

*** Surrogate recoveries outside QC acceptance limits due to matrix interference.**

V132
QCSURR1229 ALEXANDM 07-May-97

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **1-A,B,C,D**
Spl#: 129216 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6648 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	81	1
BENZENE	N.D.	0.0050	N.D.	112	1
TOLUENE	N.D.	0.0050	N.D.	108	1
ETHYL BENZENE	N.D.	0.0050	N.D.	111	1
XYLENES	N.D.	0.0050	N.D.	109	1

Note: Surrogate recovery was outside QA/QC limits due to matrix interference. See Surrogate Summary page.

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Chemist

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **2-A,B,C,D**
Spl#: 129217 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6648 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	81	1
BENZENE	N.D.	0.0050	N.D.	112	1
TOLUENE	N.D.	0.0050	N.D.	108	1
ETHYL BENZENE	N.D.	0.0050	N.D.	111	1
XYLENES	N.D.	0.0050	N.D.	109	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: 3-A,B,C,D
Spl#: 129218 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6648 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	64	28	N.D.	81	100
BENZENE	0.16	0.11	N.D.	112	100
TOLUENE	N.D.	0.11	N.D.	108	100
ETHYL BENZENE	0.78	0.11	N.D.	111	100
XYLENES	3.9	0.11	N.D.	109	100

Note: Reporting Limits Increased Due To Matrix Interference. Surrogate recovery was outside QA/QC limits due to matrix interference. See Surrogate Summary page.

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **4-A,B,C,D**
Spl#: 129219 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	9.3	1.2	N.D.	76	1
BENZENE	0.021	0.0050	N.D.	102	1
TOLUENE	0.32	0.0050	N.D.	104	1
ETHYL BENZENE	0.24	0.0050	N.D.	109	1
XYLENES	1.1	0.0050	N.D.	107	1

Note: Surrogate recovery was outside QA/QC limits due to matrix interference. See Surrogate Summary page.

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **5-A,B,C,D**
Spl#: 129220 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	76	1
BENZENE	N.D.	0.0050	N.D.	102	1
TOLUENE	N.D.	0.0050	N.D.	104	1
ETHYL BENZENE	N.D.	0.0050	N.D.	109	1
XYLENES	N.D.	0.0050	N.D.	107	1

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Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **6-A,B,C,D**
Spl#: 129221 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	76	1
BENZENE	N.D.	0.0050	N.D.	102	1
TOLUENE	N.D.	0.0050	N.D.	104	1
ETHYL BENZENE	N.D.	0.0050	N.D.	109	1
XYLENES	N.D.	0.0050	N.D.	107	1

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CHROMALAB, INC.
Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **7-A,B,C,D**
Spl#: 129222 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	76	1
BENZENE	N.D.	0.0050	N.D.	102	1
TOLUENE	N.D.	0.0050	N.D.	104	1
ETHYL BENZENE	N.D.	0.0050	N.D.	109	1
XYLENES	0.0062	0.0050	N.D.	107	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **8-A,B,C,D**
Spl#: 129223 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	110	30	N.D.	76	100
BENZENE	N.D.	0.12	N.D.	102	100
TOLUENE	0.17	0.12	N.D.	104	100
ETHYL BENZENE	0.92	0.12	N.D.	109	100
XYLENES	6.0	0.12	N.D.	107	100

Note: Reporting Limits Increased Due To Matrix Interference.

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **9-A,B,C,D**
Spl#: 129224 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	96	29	N.D.	76	100
BENZENE	N.D.	0.12	N.D.	102	100
TOLUENE	0.55	0.12	N.D.	104	100
ETHYL BENZENE	0.99	0.12	N.D.	109	100
XYLENES	6.3	0.12	N.D.	107	100

Note: Reporting Limits Increased Due To Matrix Interference. Surrogate recovery was outside QA/QC limits due to matrix interference. See Surrogate Summary page.

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **10-A,B,C,D**
Spl#: 129225 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	7.3	1.0	N.D.	76	1
BENZENE	0.017	0.0050	N.D.	102	1
TOLUENE	N.D.	0.0050	N.D.	104	1
ETHYL BENZENE	0.062	0.0050	N.D.	109	1
XYLENES	0.35	0.0050	N.D.	107	1

Note: Reporting Limits Increased Due To Matrix Interference. Surrogate recovery was outside QA/QC limits due to matrix interference. See Surrogate Summary page.

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **11-A,B,C,D**
Spl#: 129226 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	200	100	N.D.	76	400
BENZENE	N.D.	0.40	N.D.	102	400
TOLUENE	N.D.	0.40	N.D.	104	400
ETHYL BENZENE	1.2	0.40	N.D.	109	400
XYLENES	9.4	0.40	N.D.	107	400

Note: Reporting Limits Increased Due To Matrix Interference. Surrogate recovery was outside QA/QC limits due to matrix interference. See Surrogate Summary page.

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **12-A,B,C,D**
Spl#: 129227 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	3.2	1.0	N.D.	76	1
BENZENE	0.0094	0.0050	N.D.	102	1
TOLUENE	0.0050	0.0050	N.D.	104	1
ETHYL BENZENE	0.046	0.0050	N.D.	109	1
XYLENES	0.22	0.0050	N.D.	107	1

Note: Surrogate recovery was outside QA/QC limits due to matrix interference. See Surrogate Summary page.

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **13-A,B,C,D**
Spl#: 129228 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	76	1
BENZENE	N.D.	0.0050	N.D.	102	1
TOLUENE	N.D.	0.0050	N.D.	104	1
ETHYL BENZENE	N.D.	0.0050	N.D.	109	1
XYLENES	N.D.	0.0050	N.D.	107	1

Kayvan Kimyai
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GC V132 O:BTEXQC0220
ALEXANOM 14:58

CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **14-A,B,C,D**
Spl#: 129229 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	76	1
BENZENE	N.D.	0.0050	N.D.	102	1
TOLUENE	N.D.	0.0050	N.D.	104	1
ETHYL BENZENE	N.D.	0.0050	N.D.	109	1
XYLENES	N.D.	0.0050	N.D.	107	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: **15-A,B,C,D**
Spl#: 129230 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6652 *Analyzed:* May 3, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	1.0	N.D.	76	1
BENZENE	N.D.	0.0050	N.D.	102	1
TOLUENE	N.D.	0.0050	N.D.	104	1
ETHYL BENZENE	N.D.	0.0050	N.D.	109	1
XYLENES	N.D.	0.0050	N.D.	107	1

Kayvan Kimyai
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CHROMALAB, INC.

Environmental Services (SDB)

May 14, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for Gasoline BTEX analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL
Lab Run#: 6648 *Analyzed:* May 2, 1997

Analyte	Spike Amount BSP (mg/Kg)	Spike Amount Dup (mg/Kg)	Found Spike BSP (mg/Kg)	Found Spike Dup (mg/Kg)	Recov BSP (%)	Recov Dup (%)	Control Limits	% RPD	% RPD Lim
GASOLINE	0.500	0.500	0.404	0.450	80.8	90.0	75-125	10.8	35
BENZENE	0.0200	0.0200	0.0224	0.0207	112	104	77-123	7.41	35
TOLUENE	0.0200	0.0200	0.0217	0.0201	108	100	79-122	7.69	35
ETHYL BENZENE	0.0200	0.0200	0.0222	0.0205	111	102	70-130	8.45	35
XYLENES	0.0600	0.0600	0.0653	0.0604	109	101	75-125	7.62	35

BS Smpl #: 130110
BSD Smpl #: 130111

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OC_BSD1226 RUDO 10:31:43

CHROMALAB, INC.

Environmental Services (SDB)

May 19, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for Gasoline BTEX analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL
Lab Run#: 6648 *Instrument:* 3400-3 *Analyzed:* May 2, 1997

Analyte	Spiked Sample Amount (mg/Kg)	Spike Amt MS (mg/Kg)	Spike Amt MSD (mg/Kg)	Amt Found MS (mg/Kg)	Amt Found MSD (mg/Kg)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
BENZENE	0.41	0.0322	0.0310	0.376	0.514	1170*	1660*	65-135	34.6	35
TOLUENE	0.018	0.0322	0.0310	0.0372	0.0462	115	149*	65-135	25.8	35
ETHYL BENZENE	0.071	0.0322	0.0310	0.0839	0.109	260*	351*	65-135	29.8	35
XYLENES	0.35	0.0965	0.0929	0.367	0.483	380*	520*	65-135	31.1	35

Sample Spiked: 129266
Submission #: 9704478
Client Sample ID: 66B30200-20.0

* Spike recoveries outside QC acceptance limits due to matrix interference. BS/BSD verified batch precision and accuracy.

MS Smpl #: 130112
MSD Smpl #: 130113

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Environmental Services (SDB)

May 19, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for Gasoline BTEX analysis.

Method: SW846 8020A Nov 1990 / 8015Mod

Matrix: SOIL
Lab Run#: 6652 *Instrument:* 3400-3 *Analyzed:* May 3, 1997

Analyte	Spiked Sample Amount (mg/Kg)	Spike Amt MS (mg/Kg)	Spike Amt MSD (mg/Kg)	Amt Found MS (mg/Kg)	Amt Found MSD (mg/Kg)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
BENZENE	N.D.	0.0184	0.0190	0.0159	0.0172	86.4	90.5	65-135	4.64	35
TOLUENE	N.D.	0.0184	0.0190	0.0149	0.0157	81.0	82.6	65-135	1.96	35
ETHYL BENZENE	N.D.	0.0184	0.0190	0.0146	0.0150	79.3	78.9	65-135	0.50	35
XYLENES	N.D.	0.0551	0.0571	0.0439	0.0439	79.7	76.9	65-135	3.58	35

Sample Spiked: 129230
Submission #: 9704470
Client Sample ID: 15-A,B,C,D

MS Smpl #: 130171
MSD Smpl #: 130172

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CHROMALAB, INC.

Environmental Services (SDB)

May 13, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 3 samples for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod
Lab Run#: 6648
Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
129216-1	1-A,B,C,D	TRIFLUOROTOLUENE	19.8*	65-135
129216-1	1-A,B,C,D	4-BROMOFLUOROBENZENE	82.4	65-135
129217-2	2-A,B,C,D	TRIFLUOROTOLUENE	87.6	65-135
129217-2	2-A,B,C,D	4-BROMOFLUOROBENZENE	86.2	65-135
129218-2	3-A,B,C,D	TRIFLUOROTOLUENE	127	65-135
129218-2	3-A,B,C,D	4-BROMOFLUOROBENZENE	274*	65-135

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
130109-1	*Reagent blank (MDB)*	TRIFLUOROTOLUENE	118	65-135
130109-1	*Reagent blank (MDB)*	4-BROMOFLUOROBENZENE	97.4	65-135
130110-1	*Spiked blank (BSP)*	TRIFLUOROTOLUENE	106	65-135
130110-1	*Spiked blank (BSP)*	4-BROMOFLUOROBENZENE	93.9	65-135
130111-1	*Spiked blank duplicate (BSD)*	TRIFLUOROTOLUENE	103	65-135
130111-1	*Spiked blank duplicate (BSD)*	4-BROMOFLUOROBENZENE	76.6	65-135
130112-1	*Matrix spike (MS)*	TRIFLUOROTOLUENE	338*	65-135
130112-1	*Matrix spike (MS)*	4-BROMOFLUOROBENZENE	92.1	65-135
130113-1	*Matrix spike duplicate (MSD)*	TRIFLUOROTOLUENE	446*	65-135
130113-1	*Matrix spike duplicate (MSD)*	4-BROMOFLUOROBENZENE	111	65-135

*** Surrogate recoveries outside QC acceptance limits due to matrix interference.**

V132
QCSURR1229 RUDO 13-May-97 09:3

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CHROMALAB, INC.

Environmental Services (SDB)

May 13, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 12 samples for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod
Lab Run#: 6652
Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
129219-2	4-A,B,C,D	TRIFLUOROTOLUENE	154*	65-135
129219-2	4-A,B,C,D	4-BROMOFLUOROBENZENE	82.4	65-135
129220-1	5-A,B,C,D	TRIFLUOROTOLUENE	65.7	65-135
129220-1	5-A,B,C,D	4-BROMOFLUOROBENZENE	76.2	65-135
129221-2	6-A,B,C,D	TRIFLUOROTOLUENE	89.6	65-135
129221-2	6-A,B,C,D	4-BROMOFLUOROBENZENE	74.7	65-135
129222-2	7-A,B,C,D	TRIFLUOROTOLUENE	87.1	65-135
129222-2	7-A,B,C,D	4-BROMOFLUOROBENZENE	108	65-135
129223-3	8-A,B,C,D	TRIFLUOROTOLUENE	111	65-135
129223-3	8-A,B,C,D	4-BROMOFLUOROBENZENE	79.8	65-135
129224-3	9-A,B,C,D	TRIFLUOROTOLUENE	104	65-135
129224-3	9-A,B,C,D	4-BROMOFLUOROBENZENE	75.1	65-135
129225-2	10-A,B,C,D	TRIFLUOROTOLUENE	196*	65-135
129225-2	10-A,B,C,D	4-BROMOFLUOROBENZENE	79.8	65-135
129226-2	11-A,B,C,D	TRIFLUOROTOLUENE	74.6	65-135
129226-2	11-A,B,C,D	4-BROMOFLUOROBENZENE	592*	65-135
129227-1	12-A,B,C,D	TRIFLUOROTOLUENE	425*	65-135
129227-1	12-A,B,C,D	4-BROMOFLUOROBENZENE	73.9	65-135
129228-2	13-A,B,C,D	TRIFLUOROTOLUENE	101	65-135
129228-2	13-A,B,C,D	4-BROMOFLUOROBENZENE	110	65-135
129229-2	14-A,B,C,D	TRIFLUOROTOLUENE	86.7	65-135
129229-2	14-A,B,C,D	4-BROMOFLUOROBENZENE	102	65-135
129230-1	15-A,B,C,D	TRIFLUOROTOLUENE	85.9	65-135
129230-1	15-A,B,C,D	4-BROMOFLUOROBENZENE	66.8	65-135

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
130169-1	*Reagent blank (MDB)*	TRIFLUOROTOLUENE	105	65-135
130169-1	*Reagent blank (MDB)*	4-BROMOFLUOROBENZENE	120	65-135
130170-1	*Spiked blank (BSP)*	TRIFLUOROTOLUENE	120	65-135
130170-1	*Spiked blank (BSP)*	4-BROMOFLUOROBENZENE	121	65-135

V132
QCSURR1229 RUDO 13-May-97 09:3

* Surrogate recoveries outside QC acceptance limits due to matrix interference.

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CHROMALAB, INC.

Environmental Services (SDB)

May 13, 1997

Submission #: 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 12 samples for Gasoline BTEX analysis.
Method: SW846 8020A Nov 1990 / 8015Mod
Lab Run#: 6652

130171-1	*Matrix spike (MS)*	TRIFLUOROTOLUENE	88.6	65-135
130171-1	*Matrix spike (MS)*	4-BROMOFLUOROBENZENE	60.4*	65-135
130172-1	*Matrix spike duplicate (MSD)*	TRIFLUOROTOLUENE	98.0	65-135
130172-1	*Matrix spike duplicate (MSD)*	4-BROMOFLUOROBENZENE	64.3*	65-135

*** Surrogate recoveries outside QC acceptance limits due to matrix interference.**

V132
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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **1-A,B,C,D**
Spl#: 129216 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	140	80	N.D.	--	4

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor

510-855-9517 GC 05/05

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **2-A,B,C,D**
Spl#: 129217 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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Chemist

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Semivolatiles Supervisor

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **3-A,B,C,D**
Spl#: 129218 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **4-A,B,C,D**
Spl#: 129219 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

Bruce Havlik
Chemist

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Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **5-A,B,C,D**
Spl#: 129220 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **6-A,B,C,D**
Spl#: 129221 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **7-A,B,C,D**
Spl#: 129222 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 1, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **8-A,B,C,D**
Spl#: 129223 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 1, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **9-A,B,C,D**
Spl#: 129224 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **10-A,B,C,D**
Spl#: 129225 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **11-A,B,C,D**
Spl#: 129226 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **12-A,B,C,D**
Spl#: 129227 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 1, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

Bruce Havlik
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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **13-A,B,C,D**
Spl#: 129228 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 1, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	N.D.	50	N.D.	--	1

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **14-A,B,C,D**
Spl#: 129229 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	63	50	N.D.	--	1

Bruce Havlik
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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for TEPH analysis.
Method: *EPA 8015M*

Client Sample ID: **15-A,B,C,D**
Spl#: 129230 *Matrix:* SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
MOTOR OIL	570	400	N.D.	--	20

Bruce Havlik
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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL
Lab Run#: 6598 *Analyzed:* May 1, 1997

Analyte	Spike Amount BSP (mg/Kg)	Spike Amount Dup (mg/Kg)	Found BSP (mg/Kg)	Found Dup (mg/Kg)	Spike Recov BSP (%)	Spike Recov Dup (%)	Control Limits	% RPD	% RPD Lim
Diesel	6.65	6.65	4.29	4.93	64.5	74.1	60-130	13.8	25

BS Smpl #: 129694
BSD Smpl #: 129695

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CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for TEPH analysis.

Method: EPA 8015M

Matrix: SOIL
Lab Run#: 6598 *Instrument:* *Analyzed:* May 2, 1997

Analyte	Spiked Sample Amount (mg/Kg)	Spike Amt MS (mg/Kg)	Spike Amt MSD (mg/Kg)	Amt Found MS (mg/Kg)	Amt Found MSD (mg/Kg)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
Diesel	6.65	6.66		8.78	9.27	132*	139*	60-130	5.17	25

Sample Spiked: 129266
Submission #: 9704478
Client Sample ID: 66B30200-20.0

* Spike recoveries outside QC acceptance limits due to matrix interference. BS/BSD verified batch precision and accuracy.

MS Smpl #: 129696
MSD Smpl #: 129697

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CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 15 samples for TEPH analysis.
Method: EPA 8015M
Lab Run#: 6598
Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
129216-1	1-A,B,C,D	O-TERPHENYL	91.3	60-130
129217-1	2-A,B,C,D	O-TERPHENYL	89.2	60-130
129218-1	3-A,B,C,D	O-TERPHENYL	89.1	60-130
129219-1	4-A,B,C,D	O-TERPHENYL	104	60-130
129220-1	5-A,B,C,D	O-TERPHENYL	94.7	60-130
129221-1	6-A,B,C,D	O-TERPHENYL	107	60-130
129222-1	7-A,B,C,D	O-TERPHENYL	85.9	60-130
129223-1	8-A,B,C,D	O-TERPHENYL	102	60-130
129224-1	9-A,B,C,D	O-TERPHENYL	90.4	60-130
129225-1	10-A,B,C,D	O-TERPHENYL	94.7	60-130
129226-1	11-A,B,C,D	O-TERPHENYL	85.4	60-130
129227-1	12-A,B,C,D	O-TERPHENYL	82.2	60-130
129228-1	13-A,B,C,D	O-TERPHENYL	80.9	60-130
129229-1	14-A,B,C,D	O-TERPHENYL	92.4	60-130
129230-1	15-A,B,C,D	O-TERPHENYL	90.2	60-130

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
129693-1	*Reagent blank (MDB)*	O-TERPHENYL	92.0	60-130
129694-1	*Spiked blank (BSP)*	O-TERPHENYL	94.3	60-130
129695-1	*Spiked blank duplicate (BSD)*	O-TERPHENYL	98.4	60-130
129696-1	*Matrix spike (MS)*	O-TERPHENYL	95.1	60-130
129697-1	*Matrix spike duplicate (MSD)*	O-TERPHENYL	96.2	60-130

S015
QCSURR1229 RUDO 09-May-97 12:2

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CHROMALAB, INC.

Environmental Services (SDB)

May 7, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Miscellaneous Metals analysis.
Method: *EPA 3010A/6010A Nov 1990*

Client Sample ID: **10-EB**
Spl#: 129231 *Matrix:* WATER *Extracted:* May 5, 1997
Sampled: April 25, 1997 *Run#:* 6673 *Analyzed:* May 6, 1997

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE (%)	DILUTION FACTOR
LEAD	N.D.	0.0050	N.D.	103	1

Christopher Arndt
Chemist

John S. Labash
Inorganics Supervisor

510-655-9517 GC 05/05

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CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for Miscellaneous Metals analysis.

Method: EPA 3010A/6010A Nov 1990

Matrix: WATER
Lab Run#: 6673 *Analyzed:* May 6, 1997

Analyte	Spike Amount BSP (mg/L)	Spike Amount Dup	Found BSP (mg/L)	Found Dup	Recov BSP (%)	Recov Dup (%)	Control Limits	% RPD	% RPD Lim
LEAD	0.500	0.500	0.516	0.498	103	99.6	80-120	3.36	20

BS Smpl #: 130495
BSD Smpl #: 130496

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OC_BSD1226 RUDO 12:15:12

CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for Miscellaneous Metals analysis.

Method: EPA 3010A/6010A Nov 1990

Matrix: WATER *Extracted:* May 5, 1997
Lab Run#: 6673 *Instrument:* *Analyzed:* May 6, 1997

Analyte	Spiked Sample Amount (mg/L)	Spike Amt MS (mg/L)	Spike Amt MSD (mg/L)	Amt Found MS (mg/L)	Amt Found MSD (mg/L)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
LEAD	ND	0.500	0.500	0.495	0.491	99.0	98.2	80-120	0.81	20

Sample Spiked: 130119
Submission #: 9705033
Client Sample ID: N-SED

MS Smpl #: 130498
MSD Smpl #: 130499

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CHROMALAB, INC.

Environmental Services (SDB)

May 5, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: 15 samples for Lead analysis.
Method: *EPA 3050A/7420A*

Matrix: SOIL *Extracted:* May 5, 1997
Sampled: April 25, 1997 *Run#:* 6663 *Analyzed:* May 5, 1997

Spl#	CLIENT SPL ID	LEAD (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
129216	1-A,B,C,D	27	5.0	N.D.	96.8	1
129217	2-A,B,C,D	11	5.0	N.D.	96.8	1
129218	3-A,B,C,D	9.2	5.0	N.D.	96.8	1
129219	4-A,B,C,D	6.3	5.0	N.D.	96.8	1
129220	5-A,B,C,D	8.9	5.0	N.D.	96.8	1
129221	6-A,B,C,D	N.D.	5.0	N.D.	96.8	1
129222	7-A,B,C,D	5.0	5.0	N.D.	96.8	1
129223	8-A,B,C,D	N.D.	5.0	N.D.	96.8	1
129224	9-A,B,C,D	N.D.	5.0	N.D.	96.8	1
129225	10-A,B,C,D	N.D.	5.0	N.D.	96.8	1
129226	11-A,B,C,D	5.6	5.0	N.D.	96.8	1
129227	12-A,B,C,D	N.D.	5.0	N.D.	96.8	1
129228	13-A,B,C,D	12	5.0	N.D.	96.8	1
129229	14-A,B,C,D	8.7	5.0	N.D.	96.8	1
129230	15-A,B,C,D	12	5.0	N.D.	96.8	1

Shafi Barekzai
Chemist

John S. Labash
Inorganics Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for Lead analysis.

Method: EPA 3050A/7420A

Matrix: SOIL
Lab Run#: 6663 *Analyzed:* May 5, 1997

Analyte	Spike Amount BSP (mg/Kg)	Spike Amount Dup (mg/Kg)	Found BSP (mg/Kg)	Found Dup (mg/Kg)	Spike Recov BSP (%)	Spike Recov Dup (%)	Control Limits	% RPD	% RPD Lim
LEAD	250	250	242	245	96.8	98.0	85-115	1.23	20

BS Smpl #: 130306
BSD Smpl #: 130307

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DC_BSD1226 RUDO 12:15:12

CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9704470

ENVIRON

Atten: John Schroeder

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for Lead analysis.

Method: EPA 3050A/7420A

Matrix: SOIL *Extracted:* May 9, 1907
Lab Run#: 6663 *Instrument:* *Analyzed:* May 5, 1997

Analyte	Spiked Sample Amount (mg/Kg)	Spike Amt MS (mg/Kg)	Spike Amt MSD (mg/Kg)	Amt Found MS (mg/Kg)	Amt Found MSD (mg/Kg)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
LEAD	27	250	250	284	283	103	102	85-115	0.97	20

Sample Spiked: 129216
Submission #: 9704470
Client Sample ID: 1-A,B,C,D

MS Smpl #: 130309
MSD Smpl #: 130310

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APPENDIX C
ADDITIONAL ANALYTICAL RESULTS (COMPOSITE SAMPLE 1-A,B,C,D)

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997 Submission #: 9705087

ENVIRON
5820 Shellmound St., Suite 700
Emeryville, CA 94608

Attn: John Schroeter

RE: Analysis for project PEM, number 03-5991A.

REPORTING INFORMATION

Samples were received cold and in good condition on April 28, 1997. They were refrigerated upon receipt and analyzed as described in the attached report. ChromaLab followed EPA or equivalent methods for all testing reported.

Deviation from standard conditions was found in the following:

- For 8270 analysis Phenol MS recovery and RPD exceeded the QC limits. BS/BSD verified batch precision and accuracy.
- TEPH MS/MSD recoveries exceed QC acceptance limits due to matrix interference. BS/BSD met all QC criteria.

Client Sample ID	Matrix	Date collected	Sample #
1-A,B,C,D	SOIL	April 25, 1997	130726

Jill Thomas
Quality Assurance Manager

Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Services (SDB)

May 9, 1997 *Submission #:* 9705087

ENVIRON
Atten: John Schroeter
Project: PEM *Project#:* 03-5991A
Received: April 28, 1997
re: One sample for Volatile Organics by GC/MS analysis.
Method: *SW846 Method 8260A Sept 1994*

Client Sample ID: **1-A,B,C,D**
Spl#: 130726 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6755 *Analyzed:* May 8, 1997

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--	1
BROMOFORM	N.D.	5.0	N.D.	--	1
BROMOMETHANE	N.D.	10	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--	1
CHLOROBENZENE	N.D.	5.0	N.D.	93.9	1
CHLOROETHANE	N.D.	10	N.D.	--	1
2-CHLOROETHYLVINYLETHER	N.D.	50	N.D.	--	1
CHLOROFORM	N.D.	5.0	N.D.	--	1
CHLOROMETHANE	N.D.	10	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	84.6	1
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--	1
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--	1
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	--	1
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--	1
TETRACHLOROETHENE	N.D.	5.0	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--	1
TRICHLOROETHENE	N.D.	5.0	N.D.	90.7	1
VINYL CHLORIDE	N.D.	5.0	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--	1

Note: Internal STD recovery was outside QA/QC limits due to matrix interference. Results bias high.

June Zhao
Chemist

Chip Poalinelli
Operations Manager

510-655-9517 GC 05/14

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CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for Volatile Organics by GC/MS analysi

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL
Lab Run#: 6755 *Analyzed:* May 8, 1997

Analyte	Spike Amount BSP (ug/Kg)	Spike Amount Dup (ug/Kg)	Found BSP (ug/Kg)	Found Dup (ug/Kg)	Spike Recov BSP (%)	Spike Recov Dup (%)	Control Limits	% RPD	% RPD Lim
CHLOROBENZENE	100	100	93.9	95.9	93.9	95.9	61-121	2.11	20
1,1-DICHLOROETHENE	100	100	84.6	88.1	84.6	88.1	65-125	4.05	20
TRICHLOROETHENE	100	100	90.7	90.9	90.7	90.9	74-134	0.22	20

BS Smpl #: 131220
BSD Smpl #: 131221

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OC_BSD1226 RUDO 12:01:51

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for Volatile Organics by GC/MS analysis.

Method: SW846 Method 8260A Sept 1994

Matrix: SOIL
Lab Run#: 6755 *Instrument:* *Analyzed:* May 8, 1997

Analyte	Spiked Sample Amount (ug/Kg)	Spike Amt MS (ug/Kg)	Spike Amt MSD (ug/Kg)	Amt Found MS (ug/Kg)	Amt Found MSD (ug/Kg)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
CHLOROBENZENE	ND	98.8	89.9	92.1	86.2	93.2	95.9	61-121	2.86	20
1,1-DICHLOROETHENE	ND	98.8	89.9	84.2	76.4	85.2	85.0	65-125	0.23	20
TRICHLOROETHENE	ND	98.8	89.9	89.7	83.3	90.8	92.6	74-134	1.96	20

Sample Spiked: 131009
Submission #: 9705113
Client Sample ID: KING/STANFORD

MS Smpl #: 131234
MSD Smpl #: 131235

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CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 1 sample for Volatile Organics by GC/MS
Method: SW846 Method 8260A Sept 1994
Lab Run#: 6755
Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
130726-1	1-A,B,C,D	4-BROMOFLUOROBENZENE	80.3	74-121
130726-1	1-A,B,C,D	D4-1,2-DICHLOROETHANE	107	70-121
130726-1	1-A,B,C,D	D8-TOLUENE	90.7	81-117

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
131219-1	*Reagent blank (MDB)*	4-BROMOFLUOROBENZENE	87.5	74-121
131219-1	*Reagent blank (MDB)*	D4-1,2-DICHLOROETHANE	94.7	70-121
131219-1	*Reagent blank (MDB)*	D8-TOLUENE	91.8	81-117
131220-1	*Spiked blank (BSP)*	4-BROMOFLUOROBENZENE	84.4	74-121
131220-1	*Spiked blank (BSP)*	D4-1,2-DICHLOROETHANE	89.3	70-121
131220-1	*Spiked blank (BSP)*	D8-TOLUENE	90.1	81-117
131221-1	*Spiked blank duplicate (BSD)*	4-BROMOFLUOROBENZENE	83.6	74-121
131221-1	*Spiked blank duplicate (BSD)*	D4-1,2-DICHLOROETHANE	91.8	70-121
131221-1	*Spiked blank duplicate (BSD)*	D8-TOLUENE	89.8	81-117
131234-1	*Matrix spike (MS)*	4-BROMOFLUOROBENZENE	86.6	74-121
131234-1	*Matrix spike (MS)*	D4-1,2-DICHLOROETHANE	91.8	70-121
131234-1	*Matrix spike (MS)*	D8-TOLUENE	93.1	81-117
131235-1	*Matrix spike duplicate (MSD)*	4-BROMOFLUOROBENZENE	88.5	74-121
131235-1	*Matrix spike duplicate (MSD)*	D4-1,2-DICHLOROETHANE	95.7	70-121
131235-1	*Matrix spike duplicate (MSD)*	D8-TOLUENE	94.8	81-117

V057
QCSURR1229 RUDO 16-May-97 12:0

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CHROMALAB, INC.

Environmental Services (SDB)

May 14, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: 1 sample for TPH - Diesel analysis.
Method: *EPA 8015M*

Matrix: SOIL *Extracted:* May 1, 1997
Sampled: April 25, 1997 *Run#:* 6598 *Analyzed:* May 2, 1997

Spl#	CLIENT SPL ID	DIESEL (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
130726	1-A,B,C,D	55	4.0	N.D.	64.5	4

Note: Hydrocarbon reported is in the late Diesel range and does not match our Diesel standard.

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor

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CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: SOIL
Lab Run#: 6598 *Analyzed:* May 1, 1997

Analyte	Spike Amount BSP (mg/Kg)	Spike Amount Dup (mg/Kg)	Found BSP (mg/Kg)	Found Dup (mg/Kg)	Spike Recov BSP (%)	Spike Recov Dup (%)	Control Limits	% RPD	% RPD Lim
DIESEL	6.65	6.65	4.29	4.93	64.5	74.1	60-130	13.8	25

BS Smpl #: 129694
BSD Smpl #: 129695

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CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for TPH - Diesel analysis.

Method: EPA 8015M

Matrix: SOIL
Lab Run#: 6598 *Instrument:* *Analyzed:* May 2, 1997

Analyte	Spiked Sample Amount (mg/Kg)	Spike Amt MS (mg/Kg)	Spike Amt MSD (mg/Kg)	Amt Found MS (mg/Kg)	Amt Found MSD (mg/Kg)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
DIESEL	ND	6.65	6.66	8.78	9.27	132*	139*	60-130	5.17	25

Sample Spiked: 129266
Submission #: 9704478
Client Sample ID: 66B30200-20.0

* **Spike recoveries outside QC acceptance limits due to matrix interference. BS/BSD verified batch precision and accuracy.**

MS Smpl #: 129696
MSD Smpl #: 129697

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Environmental Services (SDB)

May 16, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 1 sample for TPH - Diesel analysis.
Method: EPA 8015M
Lab Run#: 6598
Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
130726-1	1-A,B,C,D	O-TERPHENYL	110	60-130

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
129693-1	*Reagent blank (MDB)*	O-TERPHENYL	92.0	60-130
129694-1	*Spiked blank (BSP)*	O-TERPHENYL	94.3	60-130
129695-1	*Spiked blank duplicate (BSD)*	O-TERPHENYL	98.4	60-130
129696-1	*Matrix spike (MS)*	O-TERPHENYL	95.1	60-130
129697-1	*Matrix spike duplicate (MSD)*	O-TERPHENYL	96.2	60-130

S005
QCSURR1229 RUDO 16-May-97 12:0

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CHROMALAB, INC.

Environmental Services (SDB)

May 12, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Semivolatile Organic Compounds (B/NAs) analysis.
Method: *SW846 Method 8270A Nov 1990*

Client Sample ID: **1-A,B,C,D**
Spl#: 130726 *Matrix:* SOIL *Extracted:* May 7, 1997
Sampled: April 25, 1997 *Run#:* 6730 *Analyzed:* May 9, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
PHENOL	N.D.	1.0	N.D.	69.9	10
BIS(2-CHLOROETHYL)ETHER	N.D.	1.0	N.D.	--	10
2-CHLOROPHENOL	N.D.	1.0	N.D.	70.9	10
1,3-DICHLOROBENZENE	N.D.	1.0	N.D.	--	10
1,4-DICHLOROBENZENE	N.D.	1.0	N.D.	75.5	10
BENZYL ALCOHOL	N.D.	2.0	N.D.	--	10
1,2-DICHLOROBENZENE	N.D.	1.0	N.D.	--	10
2-METHYLPHENOL	N.D.	1.0	N.D.	--	10
BIS(2-CHLOROISOPROPYL)ETHER	N.D.	1.0	N.D.	--	10
4-METHYLPHENOL	N.D.	2.0	N.D.	--	10
N-NITROSO-DI-N-PROPYLAMINE	N.D.	1.0	N.D.	71.7	10
HEXACHLOROETHANE	N.D.	1.0	N.D.	--	10
NITROBENZENE	N.D.	1.0	N.D.	--	10
ISOPHORONE	N.D.	1.0	N.D.	--	10
2-NITROPHENOL	N.D.	1.0	N.D.	--	10
2,4-DIMETHYLPHENOL	N.D.	1.0	N.D.	--	10
BIS(2-CHLOROETHOXY)METHANE	N.D.	1.0	N.D.	--	10
2,4-DICHLOROPHENOL	N.D.	1.0	N.D.	--	10
1,2,4-TRICHLOROBENZENE	N.D.	1.0	N.D.	76.2	10
NAPHTHALENE	N.D.	1.0	N.D.	--	10
4-CHLOROANILINE	N.D.	2.0	N.D.	--	10
HEXACHLOROBUTADIENE	N.D.	1.0	N.D.	--	10
4-CHLORO-3-METHYLPHENOL	N.D.	2.0	N.D.	75.0	10
2-METHYLNAPHTHALENE	N.D.	1.0	N.D.	--	10
HEXACHLOROCYCLOPENTADIENE	N.D.	1.0	N.D.	--	10
2,4,6-TRICHLOROPHENOL	N.D.	1.0	N.D.	--	10
2,4,5-TRICHLOROPHENOL	N.D.	1.0	N.D.	--	10
2-CHLORONAPHTHALENE	N.D.	1.0	N.D.	--	10
2-NITROANILINE	N.D.	5.0	N.D.	--	10
DIMETHYL PHTHALATE	N.D.	5.0	N.D.	--	10
ACENAPHTHYLENE	N.D.	1.0	N.D.	--	10
3-NITROANILINE	N.D.	1.0	N.D.	--	10
ACENAPHTHENE	N.D.	1.0	N.D.	81.3	10
2,4-DINITROPHENOL	N.D.	5.0	N.D.	--	10
4-NITROPHENOL	N.D.	5.0	N.D.	54.1	10
DIBENZOFURAN	N.D.	1.0	N.D.	--	10
2,4-DINITROTOLUENE	N.D.	1.0	N.D.	63.9	10
2,6-DINITROTOLUENE	N.D.	2.0	N.D.	--	10
DIETHYL PHTHALATE	N.D.	5.0	N.D.	--	10
4-CHLOROPHENYL PHENYL ETHER	N.D.	1.0	N.D.	--	10

CHROMALAB, INC.

Environmental Services (SDB)

May 12, 1997

Submission #: 9705087
page 2

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Semivolatile Organic Compounds (B/NAs) analysis, continued.
Method: *SW846 Method 8270A Nov 1990*

Client Sample ID: **1-A,B,C,D**
Spl#: 130726 *Matrix:* SOIL *Extracted:* May 7, 1997
Sampled: April 25, 1997 *Run#:* 6730 *Analyzed:* May 9, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
FLUORENE	N.D.	1.0	N.D.	--	10
4-NITROANILINE	N.D.	5.0	N.D.	--	10
2-METHYL-4,6-DINITROPHENOL	N.D.	5.0	N.D.	--	10
N-NITROSO-DI-N-PHENYLAMINE	N.D.	1.0	N.D.	--	10
4-BROMOPHENYL PHENYL ETHER	N.D.	1.0	N.D.	--	10
HEXACHLOROBENZENE	N.D.	1.0	N.D.	--	10
PENTACHLOROPHENOL	N.D.	5.0	N.D.	48.4	10
PHENANTHRENE	N.D.	1.0	N.D.	--	10
ANTHRACENE	N.D.	1.0	N.D.	--	10
DI-N-BUTYL PHTHALATE	N.D.	20	N.D.	--	10
FLUORANTHENE	N.D.	1.0	N.D.	--	10
PYRENE	N.D.	1.0	N.D.	76.4	10
BUTYL BENZYL PHTHALATE	N.D.	5.0	N.D.	--	10
3,3'-DICHLOROBENZIDINE	N.D.	2.0	N.D.	--	10
BENZO(A)ANTHRACENE	N.D.	1.0	N.D.	--	10
BIS(2-ETHYLHEXYL)PHTHALATE	N.D.	5.0	N.D.	--	10
CHRYSENE	N.D.	1.0	N.D.	--	10
DI-N-OCTYL PHTHALATE	N.D.	5.0	N.D.	--	10
BENZO(B)FLUORANTHENE	N.D.	1.0	N.D.	--	10
BENZO(K)FLUORANTHENE	N.D.	2.0	N.D.	--	10
BENZO(A)PYRENE	N.D.	0.50	N.D.	--	10
INDENO(1,2,3 C,D)PYRENE	N.D.	2.0	N.D.	--	10
DIBENZO(A,H)ANTHRACENE	N.D.	2.0	N.D.	--	10
BENZO(G,H,I)PERYLENE	N.D.	2.0	N.D.	--	10
BENZOIC ACID	N.D.	5.0	N.D.	--	10

Note: Reporting limits raised due to matrix interference.

Michael Lee
Chemist

Chip Poalinelli
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

May 12, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for Semivolatile Organic Compounds (B/NAs) analysis.

Method: SW846 Method 8270A Nov 1990

Matrix: SOIL
Lab Run#: 6730 *Analyzed:* May 7, 1997

Analyte	Spike Amount BSP (mg/Kg)	Spike Amount Dup (mg/Kg)	Found BSP (mg/Kg)	Found Dup (mg/Kg)	Spike Recov BSP (%)	Recov Dup (%)	Control Limits	% RPD	% RPD Lim
PHENOL	1.96	1.97	1.37	1.30	69.9	66.0	26-90	5.74	35
2-CHLOROPHENOL	1.96	1.97	1.39	1.34	70.9	68.0	27-123	4.18	35
1,4-DICHLOROBENZENE	0.981	0.983	0.741	0.745	75.5	75.8	28-104	0.39	30
N-NITROSO-DI-N-PROPYLAMINE	0.981	0.983	0.703	0.708	71.7	72.0	25-114	0.41	39
1,2,4-TRICHLOROBENZENE	0.981	0.983	0.748	0.700	76.2	71.2	38-107	6.78	35
4-CHLORO-3-METHYLPHENOL	1.96	1.97	1.47	1.40	75.0	71.1	26-103	5.34	33
ACENAPHTHENE	0.981	0.983	0.798	0.816	81.3	83.0	49-102	2.07	30
4-NITROPHENOL	1.96	1.97	1.06	1.08	54.1	54.8	17-109	1.28	35
2,4-DINITROTOLUENE	0.981	0.983	0.627	0.593	63.9	60.3	28-89	5.80	38
PENTACHLOROPHENOL	1.96	1.97	0.949	0.940	48.4	47.7	11-114	1.46	35
PYRENE	0.981	0.983	0.750	0.773	76.4	78.6	25-117	2.84	35

BS Smpl #: 130929
BSD Smpl #: 130930

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CHROMALAB, INC.

Environmental Services (SDB)

May 12, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for Semivolatile Organic Compounds (B/NAs) analysis.

Method: SW846 Method 8270A Nov 1990

Matrix: SOIL
Lab Run#: 6730 *Instrument:* SATURN #2 *Analyzed:* May 8, 1997

Analyte	Spiked Sample Amount (mg/Kg)	Spike Amt MS (mg/Kg)	Spike Amt MSD (mg/Kg)	Amt Found MS (mg/Kg)	Amt Found MSD (mg/Kg)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
PHENOL	ND	1.96	1.96	1.09	2.20	55.6	112*	26-90	67.3*	35
2-CHLOROPHENOL	ND	1.96	1.96	1.20	1.35	61.2	68.9	27-123	11.8	35
1,4-DICHLOROBENZENE	ND	0.978	0.981	0.657	0.740	67.2	75.4	28-104	11.5	30
N-NITROSO-DI-N-PROPYLAMINE	ND	0.978	0.981	0.660	0.736	67.5	75.0	25-114	10.5	39
1,2,4-TRICHLOROBENZENE	ND	0.978	0.981	0.650	0.732	66.5	74.6	38-107	11.5	35
4-CHLORO-3-METHYLPHENOL	ND	1.96	1.96	1.23	1.49	62.8	76.0	26-103	19.0	33
ACENAPHTHENE	ND	0.978	0.981	0.700	0.807	71.6	82.3	49-102	13.9	30
4-NITROPHENOL	ND	1.96	1.96	0.846	1.03	43.2	52.6	17-109	19.6	35
2,4-DINITROTOLUENE	ND	0.978	0.981	0.512	0.612	52.4	62.4	28-89	17.4	38
PENTACHLOROPHENOL	ND	1.96	1.96	0.732	0.842	37.3	43.0	11-114	14.2	35
PYRENE	ND	0.978	0.981	0.614	0.672	62.8	68.5	25-117	8.68	35

Sample Spiked: 130286
Submission #: 9705049
Client Sample ID: A-23(S)

* Spike recovery and RPD exceeds QC limits. However, BS/BSD verified precision and accuracy.

MS Smpl #: 131182
MSD Smpl #: 131183

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CHROMALAB, INC.

Environmental Services (SDB)

May 12, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 1 sample for Semivolatile Organic Compounds
Method: SW846 Method 8270A Nov 1990
Lab Run#: 6730
Matrix: SOIL

Sample#	Client Sample ID	Surrogate	% Recovered	Recovery Limits
130726-1	1-A,B,C,D	NITROBENZENE-D5	86.8	23-120
130726-1	1-A,B,C,D	2-FLUOROBIPHENYL	69.6	30-115
130726-1	1-A,B,C,D	P-TERPHENYL-D14	68.4	18-137
130726-1	1-A,B,C,D	PHENOL-D5	82.4	24-113
130726-1	1-A,B,C,D	2-FLUOROPHENOL	89.4	25-121
130726-1	1-A,B,C,D	2,4,6-TRIBROMOPHENOL	85.2	19-122

Sample#	QC Sample Type	Surrogate	% Recovered	Recovery Limits
130928-1	*Reagent blank (MDB)*	NITROBENZENE-D5	70.4	23-120
130928-1	*Reagent blank (MDB)*	2-FLUOROBIPHENYL	68.0	30-115
130928-1	*Reagent blank (MDB)*	P-TERPHENYL-D14	76.7	18-137
130928-1	*Reagent blank (MDB)*	PHENOL-D5	69.7	24-113
130928-1	*Reagent blank (MDB)*	2-FLUOROPHENOL	68.8	25-121
130928-1	*Reagent blank (MDB)*	2,4,6-TRIBROMOPHENOL	62.8	19-122
130929-1	*Spiked blank (BSP)*	NITROBENZENE-D5	75.9	23-120
130929-1	*Spiked blank (BSP)*	2-FLUOROBIPHENYL	72.4	30-115
130929-1	*Spiked blank (BSP)*	P-TERPHENYL-D14	65.6	18-137
130929-1	*Spiked blank (BSP)*	PHENOL-D5	67.8	24-113
130929-1	*Spiked blank (BSP)*	2-FLUOROPHENOL	70.3	25-121
130929-1	*Spiked blank (BSP)*	2,4,6-TRIBROMOPHENOL	59.3	19-122
130930-1	*Spiked blank duplicate (BSD)*	NITROBENZENE-D5	72.2	23-120
130930-1	*Spiked blank duplicate (BSD)*	2-FLUOROBIPHENYL	76.1	30-115
130930-1	*Spiked blank duplicate (BSD)*	P-TERPHENYL-D14	71.8	18-137
130930-1	*Spiked blank duplicate (BSD)*	PHENOL-D5	73.4	24-113
130930-1	*Spiked blank duplicate (BSD)*	2-FLUOROPHENOL	69.4	25-121
130930-1	*Spiked blank duplicate (BSD)*	2,4,6-TRIBROMOPHENOL	60.4	19-122
131182-1	*Matrix spike (MS)*	NITROBENZENE-D5	64.1	23-120
131182-1	*Matrix spike (MS)*	2-FLUOROBIPHENYL	64.8	30-115
131182-1	*Matrix spike (MS)*	P-TERPHENYL-D14	57.1	18-137
131182-1	*Matrix spike (MS)*	PHENOL-D5	60.4	24-113

S101
QCSURR1229 MIKELEE 12-May-97 14

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CHROMALAB, INC.

Environmental Services (SDB)

May 12, 1997

Submission #: 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Surrogate** report for 1 sample for Semivolatile Organic Compounds
Method: SW846 Method 8270A Nov 1990
Lab Run#: 6730

131182-1	*Matrix spike (MS)*	2-FLUOROPHENOL	62.5	25-121
131182-1	*Matrix spike (MS)*	2,4,6-TRIBROMOPHENOL	49.7	19-122
131183-1	*Matrix spike duplicate (MSD)*	NITROBENZENE-D5	81.2	23-120
131183-1	*Matrix spike duplicate (MSD)*	2-FLUOROBIPHENYL	76.6	30-115
131183-1	*Matrix spike duplicate (MSD)*	P-TERPHENYL-D14	61.6	18-137
131183-1	*Matrix spike duplicate (MSD)*	PHENOL-D5	75.4	24-113
131183-1	*Matrix spike duplicate (MSD)*	2-FLUOROPHENOL	68.4	25-121
131183-1	*Matrix spike duplicate (MSD)*	2,4,6-TRIBROMOPHENOL	57.0	19-122

S101
QCSURR1229 MIKELEE 12-May-97 14

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

May 14, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: One sample for Miscellaneous Metals analysis.
Method: *EPA 3050A/6010A Nov 1990*

Client Sample ID: **1-A,B,C,D**
Spl#: 130726 *Matrix:* SOIL
Sampled: April 25, 1997 *Run#:* 6740 *Analyzed:* May 10, 1997

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE (%)	DILUTION FACTOR
CADMIUM	N.D.	0.50	N.D.	111	1
CHROMIUM	26	1.0	N.D.	108	1
NICKEL	37	1.0	N.D.	111	1
ZINC	66	1.0	N.D.	110	1

Christopher Arndt
Chemist

John S. Labash
Inorganics Supervisor

510-655-9517 GC 05/14

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CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Blank spike and duplicate** report for Miscellaneous Metals analysis.

Method: EPA 3050A/6010A Nov 1990

Matrix: SOIL
Lab Run#: 6740 *Analyzed:* May 9, 1997

Analyte	Spike Amount BSP (mg/Kg)	Spike Amount Dup (mg/Kg)	Found BSP	Found Dup	Recov BSP (%)	Recov Dup (%)	Control Limits	% RPD	% RPD Lim
CADMIUM	100	100	111	112	111	112	80-120	0.89	20
CHROMIUM	100	100	108	109	108	109	80-120	0.92	20
NICKEL	100	100	111	112	111	112	80-120	0.89	20
ZINC	100	100	110	111	110	111	80-120	0.90	20

BS Smpl #: 131027
BSD Smpl #: 131029

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OC_BSD1226 RLOO 13:32:03

CHROMALAB, INC.

Environmental Services (SDB)

May 16, 1997 *Submission #:* 9705087

ENVIRON

Atten: John Schroeter

Project: PEM *Project#:* 03-5991A
Received: April 28, 1997

re: **Matrix spike** report for Miscellaneous Metals analysis.

Method: EPA 3050A/6010A Nov 1990

Matrix: SOIL
Lab Run#: 6740 *Instrument:* *Analyzed:* May 10, 1997

Analyte	Spiked Sample Amount (mg/Kg)	Spike Amt MS (mg/Kg)	Spike Amt MSD (mg/Kg)	Amt Found MS (mg/Kg)	Amt Found MSD (mg/Kg)	Spike Recov MS (%)	Spike Recov MSD (%)	Control Limits	% RPD	% RPD Lim
CADMIUM	ND	100	100	90.2	92.4	90.2	92.4	80-120	2.41	20
CHROMIUM	32	100	100	121	124	89.0	92.0	80-120	3.31	20
NICKEL	45	100	100	130	134	85.0	89.0	80-120	4.60	20
ZINC	67	100	100	154	158	87.0	91.0	80-120	4.49	20

Sample Spiked: 130885
Submission #: 9705103
Client Sample ID: CC-1

MS Smpl #: 131030
MSD Smpl #: 131032

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APPENDIX D
CHAIN OF CUSTODY FORMS

[redacted] 470/12216-129251 [redacted] *FAX RESULTS ATTN: JOHN SCHROETER (510)655-4517 [redacted] Sheet 1 Of 1 [redacted]

ENVIRON
Counsel in Health and Environmental Science

5820 Shellmound St., Suite 700
Emeryville, California 94608
(510) 655-7400

CHAIN-of-CUSTODY FORM

*NOTE: COMPOSITE EACH SET OF SAMPLES (ie 1-A, 1-B, 1-C, 1-D)

5-DAY TAT

Level 2

JBT #: 9704470 REF: GCLEV2
LIENT: ENVIRON
UE: 05/05/97
EF #:33414

PROJECT NAME: PEM

CASE NO.: 03-5991A

ENVIRON SAMPLE ID.	COLLECTION DATE	COLLECTED BY (Initials)	MATRIX	TOTAL NO. OF CONTAINERS	ANALYSES: TPH-G + BETX (8015M + 8020)	LEAD (6010)	TPH-Motor Oil (3510/8015M)								
1-A	4/25	MWD	Soil	1	X	X	X								COMPOSITE portion of A, B, C, D Samples for Analysis Hold Remainder
1-B	↓	↓	↓	1	X	X	X								
1-C				1	X	X	X								
1-D				1	X	X	X								
2-A				1	X	X	X								COMPOSITE
2-B				1	X	X	X								
2-C				1	X	X	X								
2-D				1	X	X	X								
3-A	↓	↓	↓	1	X	X	X								composite w/3-B, 3-C, 3-D
TOTAL	X	X	X	9											

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:
[signature]	4/25/97	11:00	[signature]	GL	4/28/97	12:30

*NOTE: AFTER INITIAL ANALYSES, THE COMPOSITE WITH THE Highest TPH-Motor Oil Concentration will be analysed for: TPH-Diesel (8015M); other LUFT metals (Cd, Cr, Ni, Zn only) (6010); Purgeable (8010) and Semi-volatile Volatile Halocarbons; ORGANICS (8270)

ENVIRON
Counsel in Health and Environmental Science
5820 Shellmound St., Suite 700
Emeryville, California 94608
(510) 655-7400

CHAIN-of-CUSTODY FORM

PROJECT NAME: PEM

CASE NO.: 03-5991A

ENVIRON SAMPLE ID.	COLLECTION DATE	COLLECTED BY (Initials)	MATRIX	TOTAL NO. OF CONTAINERS	ANALYSES: TPH-G + BTEX (8015m + 8020)	LEAD (6010)	TPH-MOTOR OIL (3510/8015m)	5 DAY TAT Level 2 QA/QC	COMMENTS
3-B	4/25	MWD	SOIL	1	X	X	X		
3-C				1	X	X	X		COMPOSITE w/ 3-A
3-D				1	X	X	X		
4-A				1	X	X	X		
4-B				1	X	X	X		COMPOSITE
4-C				1	X	X	X		
4-D				1	X	X	X		
5-A				1	X	X	X		COMPOSITE
5-B				1	X	X	X		w/ 5-C + 5-D
TOTAL				9					

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:
[signature]	4/25/97	16:00	[signature]	C/L	4/28	1230

ENVIRON
Counsel in Health and Environmental Science
5820 Shellmound St., Suite 700
Emeryville, California 94608
(510) 655-7400

CHAIN-of-CUSTODY FORM

PROJECT NAME: PEM

CASE NO.: 03-5991A

ENVIRON SAMPLE ID.	COLLECTION DATE	COLLECTED BY (Initials)	MATRIX	TOTAL NO. OF CONTAINERS	ANALYSES: TPH-G + BETX (8015m + 8020)	LEAD (6010)	TPH-motor oil (3510/8015m)	5-DAY TAT LEVEL 2 QA/QC	COMMENTS
5-C	4/25	MWD	SOIL	1	X	X	X		COMPOSITE w/ 5A + 5B
5-D				1	X	X	X		
6-A				1	X	X	X		COMPOSITE
6-B				1	X	X	X		
6-C				1	X	X	X		
6-D				1	X	X	X		
7-A				1	X	X	X		COMPOSITE w/ 7-D
7-B				1	X	X	X		
7-C				1	X	X	X		
TOTAL				9					

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:
Matthew W. Day	4/25/97	16:00		L/L	4/28	1230

5314 Sheet 4 Of 7

ENVIRON
Counsel in Health and Environmental Science

CHAIN-of-CUSTODY FORM

5820 Shellmound St., Suite 700
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(510) 655-7400

PROJECT NAME: PEM

CASE NO.: 03-5991A

ENVIRON SAMPLE ID.	COLLECTION DATE	COLLECTED BY (initials)	MATRIX	TOTAL NO. OF CONTAINERS	ANALYSES: TPH-G + BETX	(8015M + 8020) LEAD	(6010) TPH-MOTOR OIL	(3510 / 8015M)	5-DAY TAT LEVEL 2 QA/QC	COMMENTS
7-D	4/25	MW	SOIL	1	X	X	X			COMPOSITE w/ 7-A, 7-B, 7-C
8-A				1	X	X	X			
8-B				1	X	X	X			COMPOSITE
8-C				1	X	X	X			
8-D				1	X	X	X			
9-A				1	X	X	X			
9-B				1	X	X	X			COMPOSITE
9-C				1	X	X	X			
9-D				1	X	X	X			
TOTAL				9						

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:
[illegible]	4/25/97	16:20		CL	4-28	1230

SENT BY:ENVIRON-Emeryville ; 4-28-97 ; 3:15PM ; 5106559517→ 510 484 1096;# 5

33414 Sheet 5 Of 7

ENVIRON
Counsel in Health and Environmental Science

CHAIN-of-CUSTODY FORM

5820 Shellmound St., Suite 700
Emeryville, California 94608
(510) 655-7400

PROJECT NAME: PEM

CASE NO.: 03-5991A

ENVIRON SAMPLE ID.	COLLECTION DATE	COLLECTED BY (initials)	MATRIX	TOTAL NO. OF CONTAINERS	ANALYSES: TPH-G + BETX (8015M + 8020)	LEAD (6010)	TPH-METHANOL OIL (3510 / 8015M)	5-DAY TAT LEVEL 2 QA/QC COMMENTS
10-A	4/25	MW	SOIL	1	X	X	X	
10-B				1	X	X	X	COMPOSITE
10-C				1	X	X	X	
10-D				1	X	X	X	
11-A				1	X	X	X	
11-B				1	X	X	X	
11-C				1	X	X	X	COMPOSITE
11-D				1	X	X	X	
12-A				1	X	X	X	COMPOSITE w/ 12-B, 12-C, 12-D
TOTAL				9				

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:
[illegible] Daly	4/25/97	16:00		CL	4-28	1230

33914

Sheet 6 Of 7

ENVIRON
Counsel in Health and Environmental Science
5820 Shellmound St., Suite 700
Emeryville, California 94608
(510) 655-7400

CHAIN-of-CUSTODY FORM

PROJECT NAME: PEM

CASE NO.: 03-5991A

ENVIRON SAMPLE ID.	COLLECTION DATE	COLLECTED BY (Initials)	MATRIX	TOTAL NO. OF CONTAINERS	ANALYSES: TPH-G + BETX (8015M + 8020)	LEAD (6010)	TPH-Motor Oil (3510 / 8015M)	5-DAY TAT Level 2 QA/QC COMMENTS
12-B	4/25	MWD	SOIL	1	X	X	X	COMPOSITE
12-C				1	X	X	X	w/ 12-A
12-D				1	X	X	X	
13-A				1	X	X	X	
B-B				1	X	X	X	COMPOSITE
13-C				1	X	X	X	
13-D				1	X	X	X	
14-A				1	X	X	X	COMPOSITE w/
14-B				1	X	X	X	14-C, 14-D
TOTAL								

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:
[illegible]	4/25/97	11:00	[signature]	CL	4/28	1230

33414

Sheet 7 Of 7

ENVIRON
Counsel in Health and Environmental Science
5820 Shellmound St., Suite 700
Emeryville, California 94608
(510) 655-7400

CHAIN-of-CUSTODY FORM

PROJECT NAME: PEM

CASE NO.: 03-5991A

ENVIRON SAMPLE ID.	COLLECTION DATE	COLLECTED BY (Initials)	MATRIX	TOTAL NO. OF CONTAINERS	ANALYSES: TPH-(G + BTEX) (8015 + 8020)	LEAD (6010)	TPH-MOTOR OIL (3510/8015M)	5-DAY TAT LEVEL 2 QA/QC	COMMENTS
14-C	4/15	MWD	SOIL	1	X	X	X		COMPOSITE W/
14-D				1	X	X	X		14-A, 14-D
15-A				1	X	X	X		
15-B				1	X	X	X		COMPOSITE
15-C			↓	1	X	X	X		
15-D			SOIL	1	X	X	X		
10-EB	↓	↓	WATER	5	X	X			WATER-ANALYZE
				—					
				—					
TOTAL				11					

Relinquished by:	Date:	Time:	Received by:	Company:	Date:	Time:
[illegible]	4/25/97	16:00		CL	4-28	1230

CHROMALAB, INC.

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: **ENVIRON** Date/Time Received: 04/28/97 | 1230

Reference/Submis: 33414 | 9704470 Received by: MN/GC

Checklist completed by: Chris Rowley 4/29/97 Reviewed by: MN 4/29
Signature | Date Initials | Date

Matrix: Soil Carrier name: Client - C/L FEDEX

Shipping container/cooler in good condition?	Yes ✓	No ___	Not Present ___
Custody seals intact on shipping container/cooler?	Yes ✓	No ___	Not Present ___
Custody seals intact on sample bottles?	Yes ___	No ___	Not Present ✓
Chain of custody present?	Yes ___	No ✓	
Chain of custody signed when relinquished and received?	Yes ✓	No ___	
Chain of custody agrees with sample labels?	Yes ✓	No ___	
Samples in proper container/bottle?	Yes ✓	No ___	
Sample containers intact?	Yes ✓	No ___	
Sufficient sample volume for indicated test?	Yes ✓	No ___	
All samples received within holding time?	Yes ✓	No ___	
Container/Temp Blank temperature in compliance?	Temp 6.5 °C Yes ✓	No ___	
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes ___	No ___
Water - pH acceptable upon receipt? ___	Adjusted? ___	Checked by ___ chemist for VOAs	

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ **Date contacted:** _____ **Person contacted:** _____

Contacted by: _____ **Regarding:** _____

Comments: COC FAXED TO LAB - NO ORIGINAL RECEIVED

Corrective Action: _____

05087/130TZL

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

ADD ON/CHANGE ORDER

New Submission No: 9705087

Order No: 33572

JBM #: 9705087 REP: GCLEV2
CLIENT: ENVIRON
DATE: 05/14/97
REF #:33572/9704470

Name of Caller: JOHN SCHROETER

Call Date: 5/7/97 Time:

Add on Due Date: 5/14/97 Date Sampled

Comments: * HOLD TIME EXPIRE 5/9/97 *

Original Submission Info

Client Name: ENVIRON

Project Mgr: JOHN SCHROETER

Project Name: PEM

Project No: 03-5991A

PO#:

Date Received: 4/28/97

Submission No: 9704470

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPH) (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/625, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				NUMBER OF CONTAINERS
					ANALYSIS REPORT																			
1-A,B,C,D	4/28/97		S				X		X		X					TCLP, Ni, Zn									4

ENVIRON

33572

9705087

May 7, 1997

Mr. Gary Cook
Chromalab, Inc.
1220 Quarry Lane
Pleasanton, CA 94566-4756

RE: Additional Analyses on Soil Sample
Pacific Electric Motors (PEM), Oakland CA

Dear Gary:

As discussed earlier today, please analyze the soil sample from the above-referenced project that was identified as Spl# 129216, Client Spl ID 1-A,B,C,D (which contained 140 mg/kg of motor oil) for the following parameters:

- TPH-Diesel (Method 8015M);
- Other LUFT Metals - cadmium, chromium, nickel and zinc only (Method 6010);
- Purgeable Halocarbons (Method 8010); and
- Semi-Volatile Organics (Method 8270).

We understand that these analyses will be performed on a 5-day turnaround time basis. Please call if you have any questions.

Sincerely,

John H. Schroeter, P.E.
Manager

cc. G. Norton
R. Perry

A division of APTI Environmental Science Group, Inc.
Marketplace Tower • 5820 Shellmound Street • Suite 700 • Emeryville, California 94608 • USA • Tel: (510) 655-7400 • Fax: (510) 655-9517