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97 DEC 11 AM 4:31
December 5, 1997

Ms. Susan Hugo
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Waste Oil Tank Removal and
Gasoline Dispenser/Pipeline Removal
Soil Sampling Report**
Shell Service Station
3420 San Pablo Avenue
Oakland, California
WIC #204-5508-5306
Cambria Project #240-0554-3

Dear Ms. Hugo:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this report presenting the results of the June 26, 1997 waste oil tank removal and soil sampling at the site referenced above. The sampling was conducted following the removal of one 550-gallon waste oil tank, two gasoline dispensers, and associated product piping. During removal activities, site renovations were anticipated to proceed rapidly. Work at the site was postponed due to unforeseen delays. Cambria originally anticipated presenting a report documenting renovation activities when work at the site was completed. Because work at the site will continue well into 1998, this report documents initial site renovation activities completed during summer 1997. Presented below are the site conditions, sampling activities, and analytic results.

SITE CONDITIONS

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
SUITE B
OAKLAND,
CA 94608
PH. (510) 420-0700
FAX. (510) 420-9170

Site Status: The site is a Shell service station located at the southeast corner of the intersection of 35th Street and San Pablo Avenue in Oakland, California. The station was undergoing renovations at the time of sampling and has not yet reopened. Armer-Norman & Associates of Walnut Creek, California (Armer-Norman) removed one 550-gallon underground waste oil tank, two gasoline dispensers and associated piping (Figure 1). The gasoline underground storage tanks were not uncovered during these activities.

Soil Lithology: The site is underlain by silty clay, sandy clay, and gravelly sand of low to high estimated permeability to the total depth explored of 31.5 feet.

Ground Water: Ground water beneath the site has ranged from 4 to 13 ft depth and generally flows westward.

EXCAVATION AND SAMPLING ACTIVITIES

The activities performed as part of this tank removal and dispenser soil sampling project included:

- Removing, transporting, and disposing of one waste oil tank and associated piping, gasoline piping, and dispensers;
- Collecting soil samples from the waste oil tank pit excavation and beneath the removed gasoline piping and dispensers;
- Characterizing and profiling stockpiled soil for disposal; and
- Preparing this report.

Tank Removal and Inspection: On June 26, 1997, Armer-Norman removed one 550-gallon double-walled fiberglass waste oil tank, two gasoline dispensers, and associated gasoline product piping. Ms. Susan Hugo of the Alameda County Department of Environmental Health (ACDEH), Mr. Leroy Griffin of the Oakland Fire Department (OFD), Mr. Bill Armer of Armer-Norman, and Mr. Brian Busch and Ms. Christina Empedocles of Cambria observed the tank removal operations and inspected the tank upon removal. Before removal, the tanks and piping were triple rinsed by Crosby and Overton of Oakland, California (Crosby), and the rinsate was transported to the Shell refinery in Martinez, California for recovery. Following triple rinsing, the lower explosive limit (LEL) was measured at 1.0% in the tank. The tank was in sound condition and no cracks, holes, or other signs of structural failure were observed.

Sample Analyses: Sequoia Analytical of Redwood City, California analyzed soil samples collected from the waste oil tank pit for the following compounds in accordance with the *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites*, and as requested by Ms. Hugo of ACDEH:

- Total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015;
- Total petroleum hydrocarbons as diesel (TPHd) by modified EPA Method 8015;
- Total petroleum hydrocarbons as motor oil (TPHmo) by modified EPA Method 8015;
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl-tert-butyl-ether (MTBE) by EPA Method 8020;
- Halogenated volatile organic compounds (VOCs) by EPA Method 8010; and
- Cadmium, Chromium, Lead, Nickel, and Zinc by EPA Method 6010.

Soil samples collected from beneath the former gasoline dispenser and product piping locations were analyzed for TPHg, TPHd, BTEX, MTBE and total lead.

Waste Oil Tank Excavation Sampling: Cambria collected two soil samples from the sidewalls of the tank pit excavation by driving a brass tube into soil collected in a backhoe bucket. Water was present in the tank excavation at 7 ft depth. With the permission of Susan Hugo of the ACDEH, no water samples were collected due to the proximity of monitoring well MW-3 to the tank pit. Sample locations are shown on Figure 1 and analytic results are summarized on Tables 1 and 3.

Dispenser and Piping Excavation Soil Sampling: Cambria collected a total of ten soil samples from beneath the former dispensers and gasoline product piping. Soil samples were collected every 20 ft from beneath the gasoline product piping. Samples were collected in brass tubes using a drive hammer sampler. Sample locations are shown on Figure 1 and analytic results are summarized on Tables 1 and 3.

ANALYTIC RESULTS

Concentrations of TPHg of up to 120 milligrams per kilogram (mg/kg), 0.13 mg/kg benzene, and 2,000 mg/kg lead were detected in soil samples collected from beneath the former product piping and dispenser locations. Soil samples collected from the waste oil tank excavation sidewalls were below laboratory detection limits for TPHg, TPHmo, BTEX, MTBE, and VOCs.

DISPOSAL/RECOVERY ACTIVITIES

On June 26, 1997, Crosby transported the 550-gallon waste oil tank under manifest #93335180 to Erickson, Inc. of Richmond, California for destruction. Approximately 40 cubic yards of soil was produced from the tank and product piping removal activities. Soil from removal activities was separated into two stockpiles, one from tank removal activities Cambria collected composite samples from the soil stockpiles and submitted the samples to Sequoia Analytical for the following analyses:

- Total Recoverable Petroleum Hydrocarbons (TRPH) by EPA Method 418.1;
- TPHd by modified EPA Method 8015;
- TPHg by modified EPA Method 8015;
- BTEX by EPA Method 8020;
- Polychlorinated Biphenyls by EPA Method 8080;
- pH by EPA Method 9045;
- Reactive Cyanide by SW-846, Chapter 7, Section 7.3;
- Reactive Sulfide by EPA Method 9030;
- Organic Lead by LUFT;

Ms. Susan Hugo
December 5, 1997

CAMBRIA

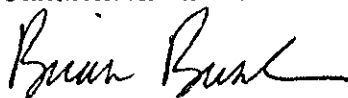
- Toxicity Characteristic Leaching Potential (TCLP) for Metals by EPA Method 6010/7470;
- TCLP for Semivolatiles by EPA Method 8270;
- TCLP for Volatile Organic Compounds by EPA Method 8240;
- TTLC for Inorganic Persistent and Bioaccumulative Toxic Substances using Waste Extraction Test, Method 6010, mercury by EPA Method 7470; and
- STLC for Inorganic Persistent and Bioaccumulative Toxic Substances using Waste Extraction Test, Method 6010/7470.

Analytic results for composite samples collected from the soil stockpile are summarized in Tables 1, 2, 4, and 5. Based on the elevated total lead and soluble zinc and/or lead concentrations detected, the soil stockpiles were transported to the Laidlaw Environmental Facility in Buttonwillow, California by Manley and Sons Trucking of Sacramento, California under hazardous manifests #92669952, #92669953, and #92669954.

CLOSING

We appreciate the opportunity to work with you on this project. Please call if you have any questions or comments.

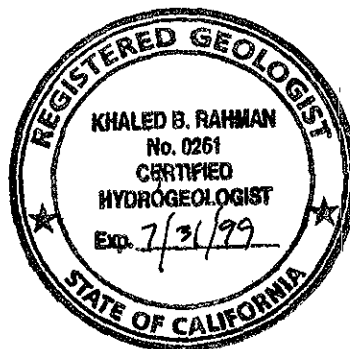
Sincerely,
Cambria Environmental Technology, Inc.



Brian Busch
Environmental Scientist



Khaled B. Rahman, R.G., C.H.G.
Senior Geologist



Attachments: A - Standard Piping and Dispenser Removal Sampling Procedures
B - Laboratory Analytic Reports for Soil

cc: Ray Newsome, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553
A.E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553

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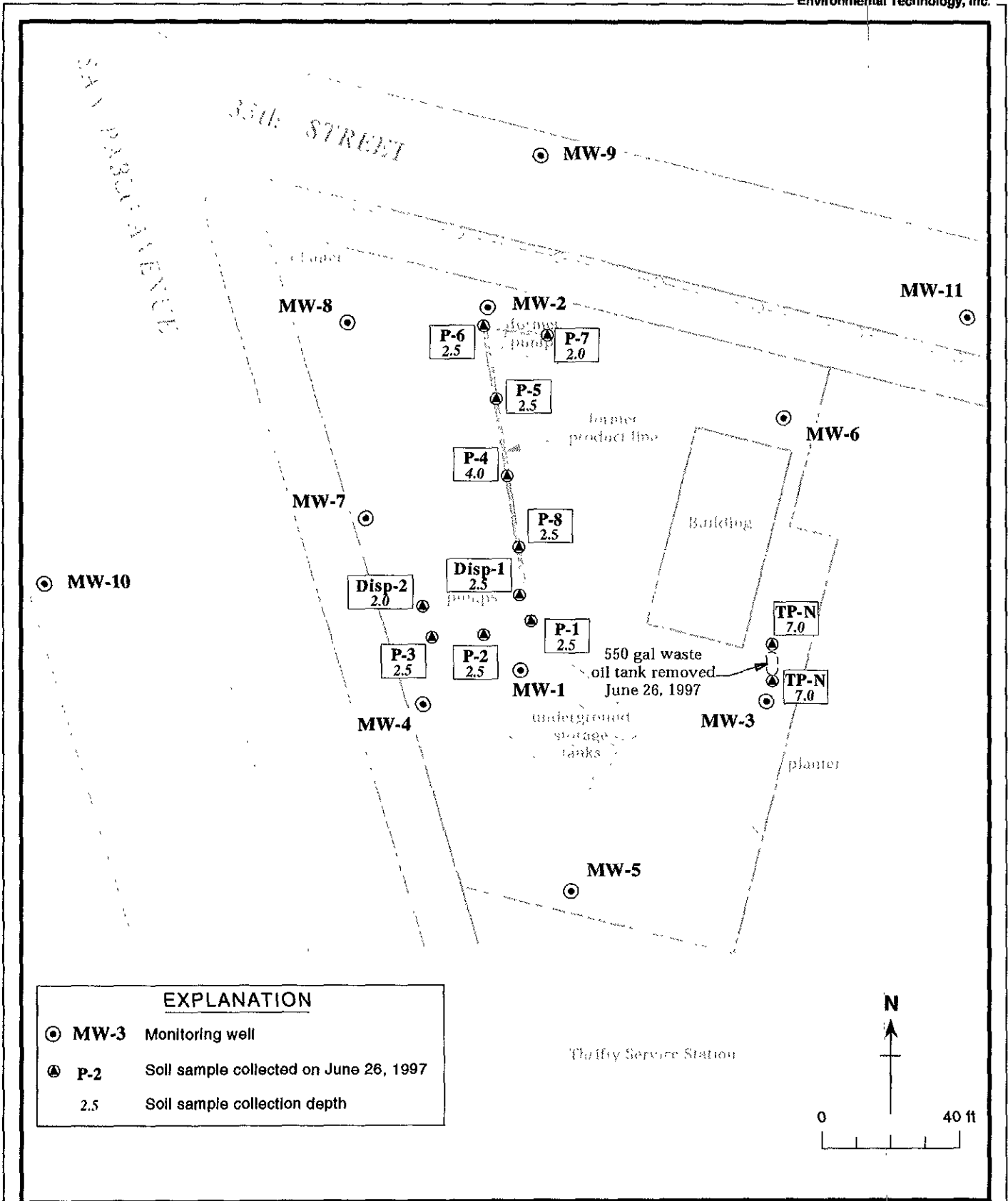


Figure 1. Soil Sampling Locations - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California

**Table 1. Soil Analytic Data - Petroleum Hydrocarbons with BTEX and MTBE - Shell Service Station WIC# 204-5508-5306,
3240 San Pablo Avenue, Oakland, California**

| Sample ID | Sample Location | Date Sampled | TPPH as Gas (mg/kg) | MTBE (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl Benzene (mg/kg) | Xylenes (mg/kg) | TEPH as Diesel (mg/kg) | Notes |
|-------------------|--------------------|--------------|---------------------|--------------|-----------------|-----------------|-----------------------|-----------------|------------------------|---------|
| Disp-1-2.5 | Dispensers | 6/26/97 | 8.4 | 1.6 | 0.054 | 0.046 | 0.0094 | 0.21 | --- | |
| Disp-2-2.0 | Dispensers | 6/26/97 | 51 | 7.9 | 0.075 | 1.6 | 0.38 | 1.6 | --- | |
| TP-N-7 | Waste Oil Tank Pit | 6/26/97 | <1.0 | <0.025 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | --- | a,b |
| TP-S-7 | Waste Oil Tank Pit | 6/26/97 | <1.0 | <0.025 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | --- | a,b |
| P-1-2.5 | Product Lines | 6/26/97 | 39 | 0.82 | 0.13 | 0.051 | 0.012 | 0.032 | --- | |
| P-2-2.5 | Product Lines | 6/26/97 | 17 | 0.33 | 0.035 | 0.079 | 0.063 | 0.11 | --- | |
| P-3-2.5 | Product Lines | 6/26/97 | 16 | 0.092 | 0.028 | 0.059 | 0.019 | 0.026 | --- | |
| P-4-4.0 | Product Lines | 6/26/97 | 19 | <0.050 | 0.041 | 0.053 | <0.010 | 0.078 | --- | |
| P-5-4.0 | Product Lines | 6/26/97 | 3.1 | 0.028 | 0.016 | 0.0054 | <0.0050 | 0.018 | --- | |
| P-6-2.5 | Product Lines | 6/26/97 | <1.0 | <0.025 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | --- | |
| P-7-2.0 | Product Lines | 6/26/97 | 4.5 | <0.025 | 0.040 | 0.0097 | 0.0095 | 0.053 | --- | |
| P-8-2.5 | Product Lines | 6/26/97 | 120 | <0.62 | <0.12 | 0.43 | 0.33 | 0.42 | --- | |
| SP-(1,2,3,4) Comp | Tank Stock Pile | 6/26/97 | --- | --- | <0.0050 | <0.0050 | <0.0050 | <0.0050 | --- | c,d,e,f |
| SP-5 | Piping Stock Pile | 6/26/97 | 5.6 | --- | 0.046 | 0.012 | 0.025 | 0.088 | 250 | |
| SP-6 | Piping Stock Pile | 6/26/97 | 1.2 | --- | 0.028 | 0.012 | 0.015 | 0.046 | 290 | |
| SP-7 | Piping Stock Pile | 6/26/97 | 5.5 | --- | <0.0050 | 0.011 | 0.011 | 0.053 | 340 | |
| SP-8 | Piping Stock Pile | 6/26/97 | 3.5 | --- | 0.087 | 0.11 | 0.037 | 0.025 | 140 | |

**Table 1. Soil Analytic Data - Petroleum Hydrocarbons with BTEX and MTBE - Shell Service Station WIC# 204-5508-5306,
3240 San Pablo Avenue, Oakland, California**

| Sample ID | Sample Location | Date Sampled | TPPH as Gas (mg/kg) | MTBE (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl Benzene (mg/kg) | Xylenes (mg/kg) | TEPH as Diesel (mg/kg) | Notes |
|----------------------|-----------------|--------------|--|--------------|-----------------|-----------------|-----------------------|-----------------|------------------------|-------|
| Abbreviations | | | <p>TPPH as Gas = Total Purgeable Petroleum Hydrocarbon as Gasoline by Modified EPA Method 8015 TEPH as Diesel = Total Extractable Petroleum Hydrocarbons as Diesel by Modified EPA Method 8015 Benzene, Toluene, Ethyl Benzene, and Xylenes by EPA Method 8020 MTBE = Methyl tert-Butyl Ether by EPA Method 8020 TCLP = Toxicity Characteristic Leaching Procedure mg/kg = milligrams per kilogram <n = Below detection limit of n mg/kg --- = Not Analyzed</p> | | | | | | | |
| Notes | | | <p>a = All Halogenated Volatile Organics EPA Method 8010 were below detection limits b = Fuel Fingerprint : Motor Oil by Modified EPA Method 8015 was below detection limit c = All Polychlorinated Biphenyls by EPA Method 8080 were below detection limits d = TCLP Metal Barium detected at 0.80 mg/L by EPA Method 6010/7470, all other analytes tested below detection limits e = All TCLP Semivolatiles by EPA Method 8270 were below detection limits f = All TCLP Volatiles by EPA Method 8240 were below detection limits</p> | | | | | | | |

Table 2. Soil Analytic Data - TRPH, Cyanide: Reactive, Sulfide: Reactive, pH, and Organic Lead - Shell Service Station WIC# 204-5508-5306, 3240 San Pablo Avenue, Oakland, California

| Sample ID | Sample Location | Date Sampled | TRPH (mg/kg) | Cyanide: Reactive (mg/kg) | Sulfide: Reactive (mg/kg) | pH | Organic Lead (mg/kg) |
|-------------------|-------------------|--------------|--------------|---------------------------|---------------------------|-----|----------------------|
| SP-1 | Tank Stock Pile | 6/26/97 | <15 | --- | --- | --- | --- |
| SP-2 | Tank Stock Pile | 6/26/97 | <15 | --- | --- | --- | --- |
| SP-3 | Tank Stock Pile | 6/26/97 | <15 | --- | --- | --- | --- |
| SP-4 | Tank Stock Pile | 6/26/97 | <15 | --- | --- | --- | --- |
| SP-(1,2,3,4) Comp | Tank Stock Pile | 6/26/97 | --- | <0.50 | <13 | 7.5 | --- |
| SP-(5,6,7,8) Comp | Piping Stock Pile | 6/26/97 | --- | --- | --- | --- | <5.0 |

Abbreviations and Notes:

TRPH = Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1

Cyanide: Reactive by EPA Method SW-846, Chapter 7, Section 7.3

Sulfide: Reactive by EPA Method 9030

Organic Lead by California LUFT Method

mg/kg = milligrams per kilogram

<n = Below detection limit of n mg/kg

--- = Not Analyzed

Table 3. Soil Analytic Data - Total Metals - Shell Service Station WIC# 204-5508-5306, 3240 San Pablo Avenue, Oakland, California

| Sample ID | Sample Location | Date Sampled | Cadmium (mg/kg) | Chromium (mg/kg) | Lead (mg/kg) | Nickel (mg/kg) | Zinc (mg/kg) |
|------------|--------------------|--------------|-----------------|------------------|--------------|----------------|--------------|
| Disp-1-2.5 | Dispensers | 6/26/97 | --- | --- | 5.8 | --- | --- |
| Disp-2-2.0 | Dispensers | 6/26/97 | --- | --- | 9.6 | --- | --- |
| TP-N-7 | Waste Oil Tank Pit | 6/26/97 | <0.5 | 18 | <5.0 | 14 | 16 |
| TP-S-7 | Waste Oil Tank Pit | 6/26/97 | <0.5 | 38 | 6.4 | 34 | 33 |
| P-1-2.5 | Product Lines | 6/26/97 | --- | --- | 7.4 | --- | --- |
| P-2-2.5 | Product Lines | 6/26/97 | --- | --- | 7.4 | --- | --- |
| P-3-2.5 | Product Lines | 6/26/97 | --- | --- | 6.9 | --- | --- |
| P-4-4.0 | Product Lines | 6/26/97 | --- | --- | 7.4 | --- | --- |
| P-5-4.0 | Product Lines | 6/26/97 | --- | --- | 7.4 | --- | --- |
| P-6-2.5 | Product Lines | 6/26/97 | --- | --- | 33 | --- | --- |
| P-7-2.0 | Product Lines | 6/26/97 | --- | --- | 2,000 | --- | --- |
| P-8-2.5 | Product Lines | 6/26/97 | --- | --- | 8.2 | --- | --- |

Abbreviations and Notes:

Total Metals by EPA Method 6010

mg/kg = milligrams per kilogram

<n = Below detection limit of n mg/kg

--- = Not Analyzed

Table 4. Soil Analytic Data - Inorganic Persistent and Bioaccumulative Toxic Substances: Total Concentrations - Shell Service Station
WIC# 204-5508-5306, 3240 San Pablo Avenue, Oakland, California

| Sample ID | Sample Location | Date Sampled | Arsenic (mg/kg) | Barium (mg/kg) | Cadmium (mg/kg) | Chromium (mg/kg) | Cobalt (mg/kg) | Copper (mg/kg) | Lead (mg/kg) | Mercury (mg/kg) | Nickel (mg/kg) | Thallium (mg/kg) | Vanadium (mg/kg) | Zinc (mg/kg) |
|-------------------|-------------------|--------------|-----------------|----------------|-----------------|------------------|----------------|----------------|--------------|-----------------|----------------|------------------|------------------|--------------|
| SP-(1,2,3,4) Comp | Tank Stock Pile | 6/26/97 | 8.1 | 83 | <0.50 | 29 | 4.4 | 15 | 6.6 | 0.035 | 22 | 7.9 | 26 | 34 |
| SP-(5,6,7,8) Comp | Piping Stock Pile | 6/26/97 | 9.8 | 320 | 2.9 | 36 | 8.4 | 110 | 490 | 0.24 | 38 | 12 | 34 | 740 |

Abbreviations and Notes:

All other analytes in Title 22 (Antimony, Beryllium, Molybdenum, Selenium, and Silver) tested below detection limits

mg/kg = milligrams per kilogram

<n = Below detection limit of n mg/kg

--- = Not Analyzed

Table 5. Soil Analytic Data - Inorganic Persistent and Bioaccumulative Toxic Substances: Soluble Concentrations - Shell Service Station WIC# 204-5508-5306, 3240 San Pablo Avenue, Oakland, California

| Sample ID | Sample Location | Date Sampled | Barium (mg/L) | Cadmium (mg/L) | Chromium (mg/L) | Cobalt (mg/L) | Copper (mg/L) | Lead (mg/L) | Nickel (mg/L) | Vanadium (mg/L) | Zinc (mg/L) |
|-------------------|-------------------|--------------|---------------|----------------|-----------------|---------------|---------------|-------------|---------------|-----------------|-------------|
| SP-(1,2,3,4) Comp | Tank Stock Pile | 6/26/97 | 7.4 | <0.020 | 0.074 | 0.33 | 0.34 | <0.20 | 0.58 | 0.30 | 0.83 |
| SP-(5,6,7,8) Comp | Piping Stock Pile | 6/26/97 | 12 | 0.077 | 0.28 | 0.47 | 0.24 | 40 | 1.2 | 0.88 | 53 |

Abbreviations and Notes:

All other analytes in Title 22 (Antimony, Arsenic, Beryllium, Mercury, Molybdenum, Selenium, Silver, and Thallium) were below detection limits

mg/L = milligrams per liter

<n = Below detection limit of n mg/L

--- = Not Analyzed

Samples extracted using Waste Extraction Test

ATTACHMENT A

Standard Piping and Dispenser
Removal Sampling Procedures

STANDARD PIPING AND DISPENSER REMOVAL SAMPLING PROCEDURES

Cambria Environmental Technology, Inc. (Cambria) has developed standard operating procedures for collecting soil samples during petroleum dispenser and piping removal. These procedures ensure that the samples are collected, handled, and documented in compliance with California Administration Code Title 23: Waters; Chapter 3: Water Resources Control Board; Subchapter 16: Underground Storage Tank Regulations (Title 23). Cambria's sampling procedures are based on guidelines contained in the California State Regional Water Quality Control Board Tri-Regional Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites dated August 10, 1990.

Piping and Dispenser Removal Sampling

The objective of sample collection during routine dispenser and piping removals is to determine whether hydrocarbons or other stored chemicals have leaked to the subsurface. We collect one soil sample from the native soil beneath each dispenser unit, at each piping elbow, and at every 20 ft of product piping, as applicable.

The soil samples are collected in steam cleaned brass or steel tubes from either a driven split-spoon type sampler or the bucket of a backhoe. When a backhoe is used, approximately three inches of soil are scraped from the surface and the tube is driven into the exposed soil.

Upon removal from the split-spoon sampler or the backhoe, the samples are trimmed flush, capped with Teflon sheets and plastic end caps, labeled, logged and refrigerated for delivery under chain of custody to a State certified analytic laboratory.

ATTACHMENT B

Laboratory Analytic Reports for Soil



Sequoia Analytical

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Sacramento, CA 95834

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FAX (510) 988-9673
FAX (916) 921-0100

Cambria
1144 65th St. Suite C
Oakland, CA 94608
Attention: Paul Waite

Project: Shell 204-5508-5306

Enclosed are the results from samples received at Sequoia Analytical on June 27, 1997.
The requested analyses are listed below:

| <u>SAMPLE #</u> | <u>SAMPLE DESCRIPTION</u> | <u>DATE COLLECTED</u> | <u>TEST METHOD</u> |
|-----------------|---------------------------|-----------------------|----------------------------|
| 9706E86 -01 | SOLID, Disp-1-2.5 | 06/26/97 | Lead |
| 9706E86 -01 | SOLID, Disp-1-2.5 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -02 | SOLID, Disp-2.0 | 06/26/97 | Lead |
| 9706E86 -02 | SOLID, Disp-2.0 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -03 | SOLID, TP-N-7 | 06/26/97 | 8010 Halogenated Volatill |
| 9706E86 -03 | SOLID, TP-N-7 | 06/26/97 | Cadmium |
| 9706E86 -03 | SOLID, TP-N-7 | 06/26/97 | Chromium |
| 9706E86 -03 | SOLID, TP-N-7 | 06/26/97 | Nickel |
| 9706E86 -03 | SOLID, TP-N-7 | 06/26/97 | Lead |
| 9706E86 -03 | SOLID, TP-N-7 | 06/26/97 | Zinc |
| 9706E86 -03 | SOLID, TP-N-7 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -03 | SOLID, TP-N-7 | 06/26/97 | TPHMOS Fuel Fingerprint-Mo |
| 9706E86 -04 | SOLID, TP-S-7 | 06/26/97 | 8010 Halogenated Volatill |
| 9706E86 -04 | SOLID, TP-S-7 | 06/26/97 | Cadmium |
| 9706E86 -04 | SOLID, TP-S-7 | 06/26/97 | Chromium |
| 9706E86 -04 | SOLID, TP-S-7 | 06/26/97 | Nickel |
| 9706E86 -04 | SOLID, TP-S-7 | 06/26/97 | Lead |
| 9706E86 -04 | SOLID, TP-S-7 | 06/26/97 | Zinc |
| 9706E86 -04 | SOLID, TP-S-7 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -04 | SOLID, TP-S-7 | 06/26/97 | TPHMOS Fuel Fingerprint-Mo |
| 9706E86 -05 | SOLID, P-1-2.5 | 06/26/97 | Lead |

SEQUOIA ANALYTICAL





Sequoia Analytical

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(916) 921-9600

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

| <u>SAMPLE #</u> | <u>SAMPLE DESCRIPTION</u> | <u>DATE COLLECTED</u> | <u>TEST METHOD</u> |
|-----------------|---------------------------|-----------------------|----------------------------|
| 9706E86 -05 | SOLID, P-1-2.5 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -06 | SOLID, P-2-2.5 | 06/26/97 | Lead |
| 9706E86 -06 | SOLID, P-2-2.5 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -07 | SOLID, P-3-2.5 | 06/26/97 | Lead |
| 9706E86 -07 | SOLID, P-3-2.5 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -08 | SOLID, P-4-4.0 | 06/26/97 | Lead |
| 9706E86 -08 | SOLID, P-4-4.0 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -09 | SOLID, P-5-4.0 | 06/26/97 | Lead |
| 9706E86 -09 | SOLID, P-5-4.0 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -10 | SOLID, P-6-2.5 | 06/26/97 | Lead |
| 9706E86 -10 | SOLID, P-6-2.5 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -11 | SOLID, P-7-2.0 | 06/26/97 | Lead |
| 9706E86 -11 | SOLID, P-7-2.0 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -12 | SOLID, P-8-2.5 | 06/26/97 | Lead |
| 9706E86 -12 | SOLID, P-8-2.5 | 06/26/97 | TPGBMS Purgeable TPH/BTEX |
| 9706E86 -13 | SOLID, SP-4 | 06/26/97 | TRPH (EPA 418.1M) |
| 9706E86 -14 | SOLID, SP-2 | 06/26/97 | TRPH (EPA 418.1M) |
| 9706E86 -15 | SOLID, SP-3 | 06/26/97 | TRPH (EPA 418.1M) |
| 9706E86 -16 | SOLID, SP-1 | 06/26/97 | TRPH (EPA 418.1M) |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | Bioassay |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | BTEX_S Distinction |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | Cyanide: Reactive |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | ISTLCS Title 22: Metals, S |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | ITTLCS Title 22: Metals, T |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | PCB_S Polychlorinated Biph |

SEQUOIA ANALYTICAL





**Sequoia
Analytical**

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FAX (916) 921-0100

| <u>SAMPLE #</u> | <u>SAMPLE DESCRIPTION</u> | <u>DATE COLLECTED</u> | <u>TEST METHOD</u> |
|-----------------|---------------------------|-----------------------|----------------------------|
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | pH |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | Sulfide: Reactive |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | TCLPMS Metals - Solid |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | TCLPSS SemiVolatile |
| 9706E86 -17 | SOLID, SP-(1,2,3,4) Comp | 06/26/97 | TCLPVS Volatiles |
| 9706E86 -18 | SOLID, SP-5 | 06/26/97 | TPHD_S Extractable TPH |
| 9706E86 -18 | SOLID, SP-5 | 06/26/97 | TPHGBS Purgeable TPH/BTEX |
| 9706E86 -19 | SOLID, SP-6 | 06/26/97 | TPHD_S Extractable TPH |
| 9706E86 -19 | SOLID, SP-6 | 06/26/97 | TPHGBS Purgeable TPH/BTEX |
| 9706E86 -20 | SOLID, SP-7 | 06/26/97 | TPHD_S Extractable TPH |
| 9706E86 -20 | SOLID, SP-7 | 06/26/97 | TPHGBS Purgeable TPH/BTEX |
| 9706E86 -21 | SOLID, SP-8 | 06/26/97 | TPHD_S Extractable TPH |
| 9706E86 -21 | SOLID, SP-8 | 06/26/97 | TPHGBS Purgeable TPH/BTEX |
| 9706E86 -22 | SOLID, SP-(5,6,7,8) Comp | 06/26/97 | Bioassay |
| 9706E86 -22 | SOLID, SP-(5,6,7,8) Comp | 06/26/97 | ISTLCS Title 22: Metals, S |
| 9706E86 -22 | SOLID, SP-(5,6,7,8) Comp | 06/26/97 | ITTLCS Title 22: Metals, T |
| 9706E86 -22 | SOLID, SP-(5,6,7,8) Comp | 06/26/97 | Organic Lead |

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Lab Proj. ID: 9706E86 | Sampled: 06/26/97 Received: 06/27/97 Analyzed: see below Reported: 07/07/97 |
| Attention: Paul Waite | | |

LABORATORY ANALYSIS

| Analyte | Units | Date Analyzed | Detection Limit | Sample Results |
|---|-------|---------------|-----------------|----------------|
| Lab No: 9706E86-01 Sample Desc: SOLID,Disp-1-2.5 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 5.8 |
| Lab No: 9706E86-02 Sample Desc: SOLID,Disp-2.0 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 9.6 |
| Lab No: 9706E86-03 Sample Desc: SOLID,TP-N-7 | | | | |
| Cadmium | mg/Kg | 07/01/97 | 0.50 | N.D. |
| Chromium | mg/Kg | 07/01/97 | 0.50 | 18 |
| Lead | mg/Kg | 07/01/97 | 5.0 | N.D. |
| Nickel | mg/Kg | 07/01/97 | 2.5 | 14 |
| Zinc | mg/Kg | 07/01/97 | 0.50 | 16 |
| Lab No: 9706E86-04 Sample Desc: SOLID,TP-S-7 | | | | |
| Cadmium | mg/Kg | 07/01/97 | 0.50 | N.D. |
| Chromium | mg/Kg | 07/01/97 | 0.50 | 38 |
| Lead | mg/Kg | 07/01/97 | 5.0 | 6.4 |
| Nickel | mg/Kg | 07/01/97 | 2.5 | 34 |
| Zinc | mg/Kg | 07/01/97 | 0.50 | 33 |
| Lab No: 9706E86-05 Sample Desc: SOLID,P-1-2.5 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 7.4 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager






| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Lab Proj. ID: 9706E86 | Sampled: 06/26/97 Received: 06/27/97 Analyzed: see below Reported: 07/07/97 |
| Attention: Paul Waite | | |

LABORATORY ANALYSIS

| Analyte | Units | Date Analyzed | Detection Limit | Sample Results |
|---|-------|---------------|-----------------|----------------|
| Lab No: 9706E86-06 Sample Desc : SOLID,P-2-2.5 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 7.4 |
| Lab No: 9706E86-07 Sample Desc : SOLID,P-3-2.5 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 6.9 |
| Lab No: 9706E86-08 Sample Desc : SOLID,P-4-4.0 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 7.4 |
| Lab No: 9706E86-09 Sample Desc : SOLID,P-5-4.0 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 7.4 |
| Lab No: 9706E86-10 Sample Desc : SOLID,P-6-2.5 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 33 |
| Lab No: 9706E86-11 Sample Desc : SOLID,P-7-2.0 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 2000 |
| Lab No: 9706E86-12 Sample Desc : SOLID,P-8-2.5 | | | | |
| Lead | mg/Kg | 07/01/97 | 5.0 | 8.2 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|--------------------------------------|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 | Sampled: 06/26/97 Received: 06/27/97 Analyzed: see below |
| Attention: Paul Waite | Lab Proj. ID: 9706E86 | Reported: 07/07/97 |

LABORATORY ANALYSIS

| Analyte | Units | Date Analyzed | Detection Limit | Sample Results |
|---|----------|---------------|-----------------|----------------|
| Lab No: 9706E86-13 Sample Desc: SOLID,SP-4 | | | | |
| TRPH (EPA 418.1M) | mg/Kg | 07/01/97 | 15 | N.D. |
| Lab No: 9706E86-14 Sample Desc: SOLID,SP-2 | | | | |
| TRPH (EPA 418.1M) | mg/Kg | 07/01/97 | 15 | N.D. |
| Lab No: 9706E86-15 Sample Desc: SOLID,SP-3 | | | | |
| TRPH (EPA 418.1M) | mg/Kg | 07/01/97 | 15 | N.D. |
| Lab No: 9706E86-16 Sample Desc: SOLID,SP-1 | | | | |
| TRPH (EPA 418.1M) | mg/Kg | 07/01/97 | 15 | N.D. |
| Lab No: 9706E86-17 Sample Desc: SOLID,SP-(1,2,3,4) Comp | | | | |
| Cyanide: Reactive | mg/Kg | 07/01/97 | 0.50 | N.D. |
| pH | pH Units | 06/30/97 | N/A | 7.5 |
| Sulfide: Reactive | mg/Kg | 07/01/97 | 13 | N.D. |
| Lab No: 9706E86-22 Sample Desc: SOLID,SP-(5,6,7,8) Comp | | | | |
| Organic Lead | mg/Kg | 07/02/97 | 5.0 | N.D. |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|-----------------------|--------------------------------------|---------------------|
| Cambria | Client Proj. ID: Shell 204-5508-5306 | Sampled: 06/26/97 |
| 1144 65th St. Suite C | Sample Descript: Disp-1-2.5 | Received: 06/27/97 |
| Oakland, CA 94608 | Matrix: SOLID | Extracted: 06/28/97 |
| Attention: Paul Waite | Analysis Method: 8015Mod/8020 | Analyzed: 06/30/97 |
| | Lab Number: 9706E86-01 | Reported: 07/07/97 |


QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | 8.4 |
| Methyl t-Butyl Ether | 0.025 | 1.6 |
| Benzene | 0.0050 | 0.054 |
| Toluene | 0.0050 | 0.046 |
| Ethyl Benzene | 0.0050 | 0.0094 |
| Xylenes (Total) | 0.0050 | 0.21 |
| Chromatogram Pattern: | | C6-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 130 | 114 |
| 4-Bromofluorobenzene | 60 140 | 100 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: Disp-2.0 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-02 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|---|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 10 | 51 |
| Methyl t-Butyl Ether | 0.25 | 7.9 |
| Benzene | 0.050 | 0.075 |
| Toluene | 0.050 | 1.6 |
| Ethyl Benzene | 0.050 | 0.38 |
| Xylenes (Total) | 0.050 | 1.6 |
| Chromatogram Pattern: | | C6-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 | 130 |
| 4-Bromofluorobenzene | 60 | 140 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: TP-N-7 Matrix: SOLID Analysis Method: EPA 8010 Lab Number: 9706E86-03 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/30/97 Analyzed: 07/01/97 Reported: 07/07/97 |
|---|---|--|


QC Batch Number: GC0630978010EXA
Instrument ID: GCHP09

Halogenated Volatile Organics (EPA 8010)

| Analyte | Detection Limit ug/Kg | Sample Results ug/Kg |
|---------------------------|--------------------------|-------------------------|
| Bromodichloromethane | 25 | N.D. |
| Bromoform | 25 | N.D. |
| Bromomethane | 50 | N.D. |
| Carbon Tetrachloride | 25 | N.D. |
| Chlorobenzene | 25 | N.D. |
| Chloroethane | 50 | N.D. |
| 2-Chloroethylvinyl ether | 50 | N.D. |
| Chloroform | 25 | N.D. |
| Chloromethane | 50 | N.D. |
| Dibromochloromethane | 25 | N.D. |
| 1,2-Dichlorobenzene | 25 | N.D. |
| 1,3-Dichlorobenzene | 25 | N.D. |
| 1,4-Dichlorobenzene | 25 | N.D. |
| 1,1-Dichloroethane | 25 | N.D. |
| 1,2-Dichloroethane | 25 | N.D. |
| 1,1-Dichloroethene | 25 | N.D. |
| cis-1,2-Dichloroethene | 25 | N.D. |
| trans-1,2-Dichloroethene | 25 | N.D. |
| 1,2-Dichloropropane | 25 | N.D. |
| cis-1,3-Dichloropropene | 25 | N.D. |
| trans-1,3-Dichloropropene | 25 | N.D. |
| Methylene chloride | 250 | N.D. |
| 1,1,2,2-Tetrachloroethane | 25 | N.D. |
| Tetrachloroethene | 25 | N.D. |
| 1,1,1-Trichloroethane | 25 | N.D. |
| 1,1,2-Trichloroethane | 25 | N.D. |
| Trichloroethene | 25 | N.D. |
| Trichlorofluoromethane | 25 | N.D. |
| Vinyl chloride | 50 | N.D. |
| Surrogates | Control Limits % | % Recovery |
| 1-Chloro-2-fluorobenzene | 60 130 | 101 |
| 4-Bromofluorobenzene | 60 140 | 85 |

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

SEQUOIA ANALYTICAL - ELAP #1210


Kevin Follett
Project Manager





| | | |
|-----------------------|--------------------------------------|---------------------|
| Cambria | Client Proj. ID: Shell 204-5508-5306 | Sampled: 06/26/97 |
| 1144 65th St. Suite C | Sample Descript: TP-N-7 | Received: 06/27/97 |
| Oakland, CA 94608 | Matrix: SOLID | Extracted: 06/28/97 |
| Attention: Paul Waite | Analysis Method: 8015Mod/8020 | Analyzed: 06/30/97 |
| | Lab Number: 9706E86-03 | Reported: 07/07/97 |


QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | N.D. |
| Methyl t-Butyl Ether | 0.025 | N.D. |
| Benzene | 0.0050 | N.D. |
| Toluene | 0.0050 | N.D. |
| Ethyl Benzene | 0.0050 | N.D. |
| Xylenes (Total) | 0.0050 | N.D. |
| Chromatogram Pattern: | | |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 130 | 94 |
| 4-Bromofluorobenzene | 60 140 | 75 |

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

SEQUOIA ANALYTICAL - ELAP #1210



 Kevin Follett
 Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: TP-N-7 Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9706E86-03 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/30/97 Analyzed: 07/01/97 Reported: 07/07/97 |
|---|---|--|

QC Batch Number: GC0627970HBPEXC
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|--|--|-------------------------|
| Extractable HC as Motor Oil Chromatogram Pattern: | 10 | N.D. |
| Surrogates n-Pentacosane (C25) | Control Limits % 50 150 | % Recovery 82 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: TP-S-7 Matrix: SOLID Analysis Method: EPA 8010 Lab Number: 9706E86-04 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/30/97 Analyzed: 07/01/97 Reported: 07/07/97 |
| QC Batch Number: GC0630978010EXA Instrument ID: GCHP09 | | |

Halogenated Volatile Organics (EPA 8010)

| Analyte | Detection Limit ug/Kg | Sample Results ug/Kg |
|---------------------------|-----------------------------|-------------------------|
| Bromodichloromethane | 25 | N.D. |
| Bromoform | 25 | N.D. |
| Bromomethane | 50 | N.D. |
| Carbon Tetrachloride | 25 | N.D. |
| Chlorobenzene | 25 | N.D. |
| Chloroethane | 50 | N.D. |
| 2-Chloroethylvinyl ether | 50 | N.D. |
| Chloroform | 25 | N.D. |
| Chloromethane | 50 | N.D. |
| Dibromochloromethane | 25 | N.D. |
| 1,2-Dichlorobenzene | 25 | N.D. |
| 1,3-Dichlorobenzene | 25 | N.D. |
| 1,4-Dichlorobenzene | 25 | N.D. |
| 1,1-Dichloroethane | 25 | N.D. |
| 1,2-Dichloroethane | 25 | N.D. |
| 1,1-Dichloroethene | 25 | N.D. |
| cis-1,2-Dichloroethene | 25 | N.D. |
| trans-1,2-Dichloroethene | 25 | N.D. |
| 1,2-Dichloropropane | 25 | N.D. |
| cis-1,3-Dichloropropene | 25 | N.D. |
| trans-1,3-Dichloropropene | 25 | N.D. |
| Methylene chloride | 250 | N.D. |
| 1,1,2,2-Tetrachloroethane | 25 | N.D. |
| Tetrachloroethene | 25 | N.D. |
| 1,1,1-Trichloroethane | 25 | N.D. |
| 1,1,2-Trichloroethane | 25 | N.D. |
| Trichloroethene | 25 | N.D. |
| Trichlorofluoromethane | 25 | N.D. |
| Vinyl chloride | 50 | N.D. |
| Surrogates | Control Limits % | % Recovery |
| 1-Chloro-2-fluorobenzene | 60 130 | 101 |
| 4-Bromofluorobenzene | 60 140 | 84 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: TP-S-7 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-04 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|---|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | N.D. |
| Methyl t-Butyl Ether | 0.025 | N.D. |
| Benzene | 0.0050 | N.D. |
| Toluene | 0.0050 | N.D. |
| Ethyl Benzene | 0.0050 | N.D. |
| Xylenes (Total) | 0.0050 | N.D. |
| Chromatogram Pattern: | | |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 130 | 89 |
| 4-Bromofluorobenzene | 60 140 | 72 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|--|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 Attention: Paul Waite | Client Proj. ID: Shell 204-5508-5306 Sample Descript: TP-S-7 Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9706E86-04 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/30/97 Analyzed: 07/01/97 Reported: 07/07/97 |
|--|---|--|


QC Batch Number: GC0627970HBPEXC
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|--|--|-------------------------|
| Extractable HC as Motor Oil Chromatogram Pattern: | 10 | N.D. |
| Surrogates n-Pentacosane (C25) | Control Limits % 50 150 | % Recovery 77 |

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

SEQUOIA ANALYTICAL - ELAP #1210



 Kevin Follett
 Project Manager





| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: P-1-2.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-05 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|--|--|


QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 2.5 | 39 |
| Methyl t-Butyl Ether | 0.062 | 0.82 |
| Benzene | 0.012 | 0.13 |
| Toluene | 0.012 | 0.051 |
| Ethyl Benzene | 0.012 | N.D. |
| Xylenes (Total) | 0.012 | 0.032 |
| Chromatogram Pattern: | | C6-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 130 | 97 |
| 4-Bromofluorobenzene | 60 140 | 128 |

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

SEQUOIA ANALYTICAL - ELAP #1210



 Kevin Follett
 Project Manager





| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: P-2-2.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-06 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|--|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 2.5 | 17 |
| Methyl t-Butyl Ether | 0.062 | 0.33 |
| Benzene | 0.012 | 0.035 |
| Toluene | 0.012 | 0.079 |
| Ethyl Benzene | 0.012 | 0.063 |
| Xylenes (Total) | 0.012 | 0.11 |
| Chromatogram Pattern: | | C6-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 | 130 |
| 4-Bromofluorobenzene | 60 | 140 |
| | | 80 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





Cambria Client Proj. ID: Shell 204-5508-5306 Sampled: 06/26/97
1144 65th St. Suite C Sample Descript: P-3-2.5 Received: 06/27/97
Oakland, CA 94608 Matrix: SOLID Extracted: 06/28/97
Attention: Paul Waite Analysis Method: 8015Mod/8020 Analyzed: 06/30/97
Lab Number: 9706E86-07 Reported: 07/07/97

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Table with columns: Analyte, Detection Limit mg/Kg, Sample Results mg/Kg. Rows include TPHH as Gas, Methyl t-Butyl Ether, Benzene, Toluene, Ethyl Benzene, Xylenes (Total), Chromatogram Pattern, Surrogates (Trifluorotoluene, 4-Bromofluorobenzene), Control Limits %, and % Recovery.

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

SEQUOIA ANALYTICAL - ELAP #1210

Handwritten signature of Kevin Follett
Kevin Follett
Project Manager





| | | |
|--|--|--|
| Cambrina 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: P-4-4.0 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-08 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|--|--|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 2.0 | 19 |
| Methyl t-Butyl Ether | 0.050 | N.D. |
| Benzene | 0.010 | 0.041 |
| Toluene | 0.010 | 0.053 |
| Ethyl Benzene | 0.010 | N.D. |
| Xylenes (Total) | 0.010 | 0.078 |
| Chromatogram Pattern: | | C6-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 | 130 |
| 4-Bromofluorobenzene | 60 | 140 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: P-5-4.0 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-09 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|--|--|


QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | 3.1 |
| Methyl t-Butyl Ether | 0.025 | 0.028 |
| Benzene | 0.0050 | 0.016 |
| Toluene | 0.0050 | 0.0054 |
| Ethyl Benzene | 0.0050 | N.D. |
| Xylenes (Total) | 0.0050 | 0.018 |
| Chromatogram Pattern: | | C6-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 | 130 |
| 4-Bromofluorobenzene | 60 | 140 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|--|--|
| Cambrla 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: P-6-2.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-10 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|--|--|

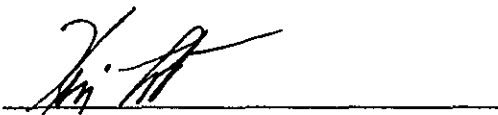
QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | N.D. |
| Methyl t-Butyl Ether | 0.025 | N.D. |
| Benzene | 0.0050 | N.D. |
| Toluene | 0.0050 | N.D. |
| Ethyl Benzene | 0.0050 | N.D. |
| Xylenes (Total) | 0.0050 | N.D. |
| Chromatogram Pattern: | | |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 | 130 |
| 4-Bromofluorobenzene | 60 | 140 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: P-7-2.0 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-11 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|--|--|


QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | 4.5 |
| Methyl t-Butyl Ether | 0.025 | N.D. |
| Benzene | 0.0050 | 0.040 |
| Toluene | 0.0050 | 0.0097 |
| Ethyl Benzene | 0.0050 | 0.0095 |
| Xylenes (Total) | 0.0050 | 0.053 |
| Chromatogram Pattern: | | C6-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 130 | 87 |
| 4-Bromofluorobenzene | 60 140 | 94 |

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

SEQUOIA ANALYTICAL - ELAP #1210



 Kevin Follett
 Project Manager





| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: P-8-2.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-12 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|--|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|--|--------------------------|-------------------------|
| TPPH as Gas | 25 | 120 |
| Methyl t-Butyl Ether | 0.62 | N.D. |
| Benzene | 0.12 | N.D. |
| Toluene | 0.12 | 0.43 |
| Ethyl Benzene | 0.12 | 0.33 |
| Xylenes (Total) | 0.12 | 0.42 |
| Chromatogram Pattern: Weathered Gas | | C6-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 | 130 |
| 4-Bromofluorobenzene | 60 | 140 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-(1,2,3,4) Comp Matrix: SOLID Analysis Method: EPA 8020 Lab Number: 9706E86-17 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 07/01/97 Reported: 07/07/97 |
|---|--|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP07

BTEX Distinction

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|----------------------|--------------------------|-------------------------|
| Benzene | 0.0050 | N.D. |
| Toluene | 0.0050 | N.D. |
| Ethyl benzene | 0.0050 | N.D. |
| Xylenes (Total) | 0.0050 | N.D. |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 | 130 |
| 4-Bromofluorobenzene | 60 | 140 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





Cambria
1144 65th St. Suite C
Oakland, CA 94608

Client Proj. ID: Shell 204-5508-5306
Sample Descript: SP-(1,2,3,4) Comp
Matrix: SOLID
Analysis Method: Title 22
Lab Number: 9706E86-17

Sampled: 06/26/97
Received: 06/27/97
Analyzed: 07/03/97
Reported: 07/07/97

QC Batch Number: ME0702976010MDA

Inorganic Persistent and Bioaccumulative Toxic Substances : STLC

| Analyte | Max. Limit mg/L | Detection Limit mg/L | Sample Results mg/L |
|---------------------|--------------------|-------------------------|------------------------|
| Antimony, Sb | 15 | 0.20 | N.D. |
| Arsenic, As | 5.0 | 0.20 | N.D. |
| Barium, Ba | 100 | 0.20 | 7.4 |
| Beryllium, Be | 0.75 | 0.020 | N.D. |
| Cadmium, Cd | 1.0 | 0.020 | N.D. |
| Chromium, Cr | 560 | 0.020 | 0.074 |
| Cobalt, Co | 80 | 0.100 | 0.33 |
| Copper, Cu | 25 | 0.020 | 0.34 |
| Lead, Pb | 5.0 | 0.20 | N.D. |
| Mercury, Hg | 0.2 | 0.0010 | N.D. |
| Molybdenum, Mo | 350 | 0.100 | N.D. |
| Nickel, Ni | 20 | 0.100 | 0.58 |
| Selenium, Se | 1.0 | 0.20 | N.D. |
| Silver, Ag | 5.0 | 0.020 | N.D. |
| Thallium, Tl | 7.0 | 0.20 | N.D. |
| Vanadium, V | 24 | 0.100 | 0.30 |
| Zinc, Zn | 250 | 0.020 | 0.83 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





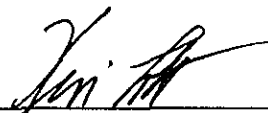
| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-(1,2,3,4) Comp Matrix: SOLID Analysis Method: Title 22 Lab Number: 9706E86-17 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/30/97 Analyzed: 07/01/97 Reported: 07/07/97 |
|---|--|--|

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

| Analyte | Max. Limit mg/Kg | Detection Limit mg/Kg | Sample Results mg/Kg |
|----------------|---------------------|--------------------------|-------------------------|
| Antimony, Sb | 500 | 5.0 | N.D. |
| Arsenic, As | 500 | 5.0 | 8.1 |
| Barium, Ba | 10000 | 5.0 | 83 |
| Beryllium, Be | 75 | 0.50 | N.D. |
| Cadmium, Cd | 100 | 0.50 | N.D. |
| Chromium, Cr | 2500 | 0.50 | 29 |
| Cobalt, Co | 8000 | 2.5 | 4.4 |
| Copper, Cu | 2500 | 0.50 | 15 |
| Lead, Pb | 1000 | 5.0 | 6.6 |
| Mercury, Hg | 20 | 0.020 | 0.035 |
| Molybdenum, Mo | 3500 | 2.5 | N.D. |
| Nickel, Ni | 2000 | 2.5 | 22 |
| Selenium, Se | 100 | 5.0 | N.D. |
| Silver, Ag | 500 | 0.50 | N.D. |
| Thallium, Tl | 700 | 5.0 | 7.9 |
| Vanadium, V | 2400 | 2.5 | 26 |
| Zinc, Zn | 5000 | 0.50 | 34 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|--|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 Attention: Paul Waite | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-(1,2,3,4) Comp Matrix: SOLID Analysis Method: EPA 8080 Lab Number: 9706E86-17 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 07/01/97 Analyzed: 07/02/97 Reported: 07/07/97 |
|--|--|--|

QC Batch Number: GC0701970PCBEXB
Instrument ID: GCHP12A

Polychlorinated Biphenyls (EPA 8080)

| Analyte | Detection Limit ug/Kg | Sample Results ug/Kg |
|----------------------|-----------------------------|-------------------------|
| PCB-1016 | 20 | N.D. |
| PCB-1221 | 80 | N.D. |
| PCB-1232 | 20 | N.D. |
| PCB-1242 | 20 | N.D. |
| PCB-1248 | 20 | N.D. |
| PCB-1254 | 20 | N.D. |
| PCB-1260 | 20 | N.D. |
| Surrogates | Control Limits % | % Recovery |
| Dibutylchloroendate | 30 150 | 59 |
| Tetrachloro-m-xylene | 30 150 | 31 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|--|--|---|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 Attention: Paul Waite | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-(1,2,3,4) Comp Matrix: SOLID Analysis Method: EPA6010/7470 Lab Number: 9706E86-17 | Sampled: 06/26/97 Received: 06/27/97 Analyzed: 07/02/97 Reported: 07/07/97 |
|--|--|---|


QC Batch Number: ME0702976010MDA

TCLP Metals

| Analyte | Max. Limit mg/L | Detection Limit mg/L | Sample Results mg/L |
|--------------|--------------------|-------------------------|------------------------|
| Arsenic, As | 5.0 | 0.10 | N.D. |
| Barium, Ba | 100 | 0.10 | 0.80 |
| Cadmium, Cd | 1.0 | 0.010 | N.D. |
| Chromium, Cr | 5.0 | 0.010 | N.D. |
| Lead, Pb | 5.0 | 0.10 | N.D. |
| Mercury, Hg | 0.2 | 0.00020 | N.D. |
| Selenium, Se | 1.0 | 0.10 | N.D. |
| Silver, Ag | 5.0 | 0.010 | N.D. |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-(1,2,3,4) Comp Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9706E86-17 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 07/01/97 Analyzed: 07/01/97 Reported: 07/07/97 |
|---|--|--|

QC Batch Number: MS0701978270EXA
Instrument ID: F4

TCLP Semivolatiles (EPA 8270)

| Analyte | Max. Limit mg/L | Detection Limit mg/L | Sample Results mg/L |
|--------------------------|--------------------|-------------------------|------------------------|
| Total Cresol | 200 | 0.0080 | N.D. |
| 1,4-Dichlorobenzene | 7.5 | 0.0080 | N.D. |
| 2,4-Dinitrotoluene | 0.13 | 0.0080 | N.D. |
| Hexachlorobenzene | 0.13 | 0.0080 | N.D. |
| Hexachloro-1,3-butadiene | 0.5 | 0.0080 | N.D. |
| Hexachloroethane | 3.0 | 0.0080 | N.D. |
| Nitrobenzene | 2.0 | 0.0080 | N.D. |
| Pentachlorophenol | 100 | 0.040 | N.D. |
| Pyridine | 5.0 | 0.040 | N.D. |
| 2,4,5-Trichlorophenol | 400 | 0.040 | N.D. |
| 2,4,6-Trichlorophenol | 2.0 | 0.0080 | N.D. |
| Surrogates | | Control Limits % | % Recovery |
| 2-Fluorophenol | | 21 110 | 57 |
| Phenol-d6 | | 10 110 | 52 |
| Nitrobenzene-d5 | | 35 114 | 61 |
| 2-Fluorobiphenyl | | 43 116 | 68 |
| 2,4,6-Tribromophenol | | 10 123 | 86 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





Cambria
1144 65th St. Suite C
Oakland, CA 94608

Client Proj. ID: Shell 204-5508-5306
Sample Descript: SP-(1,2,3,4) Comp
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9706E86-17

Sampled: 06/26/97
Received: 06/27/97
Extracted: 06/30/97
Analyzed: 07/01/97
Reported: 07/07/97


QC Batch Number: MS0701978240F3A
Instrument ID: F3

TCLP Volatiles (EPA 8240)

| Analyte | Max. Limit mg/L | Detection Limit mg/L | Sample Results mg/L |
|-----------------------|--------------------|-------------------------|------------------------|
| Benzene | 0.5 | 0.020 | N.D. |
| Carbon tetrachloride | 0.5 | 0.020 | N.D. |
| Chlorobenzene | 100 | 0.020 | N.D. |
| Chloroform | 6.0 | 0.020 | N.D. |
| 1,2-Dichloroethane | 0.5 | 0.020 | N.D. |
| 1,1-Dichloroethylene | 0.7 | 0.020 | N.D. |
| Methyl ethyl ketone | 200 | 0.10 | N.D. |
| Tetrachloroethylene | 0.7 | 0.020 | N.D. |
| Trichloroethylene | 0.5 | 0.020 | N.D. |
| Vinyl chloride | 0.2 | 0.020 | N.D. |
| Surrogates | | Control Limits % | % Recovery |
| 1,2-Dichloroethane-d4 | | 76 | 114 |
| Toluene-d8 | | 88 | 110 |
| 4-Bromofluorobenzene | | 86 | 115 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





Cambria
1144 65th St. Suite C
Oakland, CA 94608

Client Proj. ID: Shell 204-5508-5306
Sample Descript: SP-5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9706E86-18

Sampled: 06/26/97
Received: 06/27/97
Extracted: 06/30/97
Analyzed: 07/01/97
Reported: 07/07/97

QC Batch Number: GC0627970HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|--|---|-------------------------|
| TEPH as Diesel Chromatogram Pattern: Unidentified HC | 10 | 250 C9-C24 |
| Surrogates n-Pentacosane (C25) | Control Limits % 50 150 | % Recovery 834 Q |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|-----------------------|--------------------------------------|---------------------|
| Cambria | Client Proj. ID: Shell 204-5508-5306 | Sampled: 06/26/97 |
| 1144 65th St. Suite C | Sample Descript: SP-5 | Received: 06/27/97 |
| Oakland, CA 94608 | Matrix: SOLID | Extracted: 06/28/97 |
| Attention: Paul Waite | Analysis Method: 8015Mod/8020 | Analyzed: 06/30/97 |
| | Lab Number: 9706E86-18 | Reported: 07/07/97 |

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP22


Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | 5.6 |
| Benzene | 0.0050 | 0.046 |
| Toluene | 0.0050 | 0.012 |
| Ethyl Benzene | 0.0050 | 0.025 |
| Xylenes (Total) | 0.0050 | 0.088 |
| Chromatogram Pattern: | | Gas |

| Surrogates | Control Limits % | % Recovery |
|----------------------|------------------|------------|
| Trifluorotoluene | 70 130 | 115 |
| 4-Bromofluorobenzene | 60 140 | 83 |

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

SEQUOIA ANALYTICAL - ELAP #1210



 Kevin Follett
 Project Manager





Cambria
1144 65th St. Suite C
Oakland, CA 94608

Client Proj. ID: Shell 204-5508-5306
Sample Descript: SP-6
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9706E86-19

Sampled: 06/26/97
Received: 06/27/97
Extracted: 06/30/97
Analyzed: 07/01/97
Reported: 07/07/97

QC Batch Number: GC0627970HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|--|-----------------------------|-------------------------|
| TEPH as Diesel Chromatogram Pattern: Unidentified HC | 10 | 290 |
| | | C9-C24 |
| Surrogates | Control Limits % | % Recovery |
| n-Pentacosane (C25) | 50 150 | 817 Q |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-6 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-19 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|---|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP22


Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | 1.2 |
| Benzene | 0.0050 | 0.028 |
| Toluene | 0.0050 | 0.012 |
| Ethyl Benzene | 0.0050 | 0.015 |
| Xylenes (Total) | 0.0050 | 0.046 |
| Chromatogram Pattern: | | Gas |

| Surrogates | Control Limits % | % Recovery |
|----------------------|------------------|------------|
| Trifluorotoluene | 70 130 | 100 |
| 4-Bromofluorobenzene | 60 140 | 71 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-7 Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9706E86-20 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/30/97 Analyzed: 07/03/97 Reported: 07/07/97 |
|---|---|--|

QC Batch Number: GC0627970HBPEXC
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|--|-------------------------------|-----------------------------|
| TEPH as Diesel Chromatogram Pattern: Unidentified HC | 20 | 340 C9-C24 |
| Surrogates n-Pentacosane (C25) | Control Limits % 50 | % Recovery 1357 Q |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-7 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-20 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|---|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|--|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | 5.5 |
| Benzene | 0.0050 | N.D. |
| Toluene | 0.0050 | 0.011 |
| Ethyl Benzene | 0.0050 | 0.011 |
| Xylenes (Total) | 0.0050 | 0.053 |
| Chromatogram Pattern: Weathered Gas | | C7-C12 |
| Surrogates | Control Limits % | % Recovery |
| Trifluorotoluene | 70 130 | 93 |
| 4-Bromofluorobenzene | 60 140 | 72 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-8 Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9706E86-21 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/30/97 Analyzed: 07/03/97 Reported: 07/07/97 |
|---|---|--|

QC Batch Number: GC0627970HBPEXC
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|--|-----------------------------|-------------------------|
| TEPH as Diesel Chromatogram Pattern: Unidentified HC | 20 | 140 |
| | | C9-C24 |
| Surrogates | Control Limits % | % Recovery |
| n-Pentacosane (C25) | 50 150 | 436 Q |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|---|---|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-8 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9706E86-21 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/28/97 Analyzed: 06/30/97 Reported: 07/07/97 |
|---|---|--|

QC Batch Number: GC062897BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit mg/Kg | Sample Results mg/Kg |
|-----------------------|--------------------------|-------------------------|
| TPPH as Gas | 1.0 | 3.5 |
| Benzene | 0.0050 | 0.087 |
| Toluene | 0.0050 | 0.11 |
| Ethyl Benzene | 0.0050 | 0.037 |
| Xylenes (Total) | 0.0050 | 0.025 |
| Chromatogram Pattern: | | Gas |

| Surrogates | Control Limits % | % Recovery |
|----------------------|------------------|------------|
| Trifluorotoluene | 70 130 | 136 Q |
| 4-Bromofluorobenzene | 60 140 | 68 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





| | | |
|---|--|---|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-(5,6,7,8) Comp Matrix: SOLID Analysis Method: Title 22 Lab Number: 9706E86-22 | Sampled: 06/26/97 Received: 06/27/97 Analyzed: 07/03/97 Reported: 07/07/97 |
|---|--|---|

QC Batch Number: ME0702976010MDA

Inorganic Persistent and Bioaccumulative Toxic Substances : STLC

| Analyte | Max. Limit mg/L | Detection Limit mg/L | Sample Results mg/L |
|----------------|--------------------|-------------------------|------------------------|
| Antimony, Sb | 15 | 0.20 | N.D. |
| Arsenic, As | 5.0 | 0.20 | N.D. |
| Barium, Ba | 100 | 0.20 | 12 |
| Beryllium, Be | 0.75 | 0.020 | N.D. |
| Cadmium, Cd | 1.0 | 0.020 | 0.077 |
| Chromium, Cr | 560 | 0.020 | 0.28 |
| Cobalt, Co | 80 | 0.10 | 0.47 |
| Copper, Cu | 25 | 0.020 | 0.24 |
| Lead, Pb | 5.0 | 0.20 | 40 |
| Mercury, Hg | 0.2 | 0.0010 | N.D. |
| Molybdenum, Mo | 350 | 0.10 | N.D. |
| Nickel, Ni | 20 | 0.10 | 1.2 |
| Selenium, Se | 1.0 | 0.20 | N.D. |
| Silver, Ag | 5.0 | 0.020 | N.D. |
| Thallium, Tl | 7.0 | 0.20 | N.D. |
| Vanadium, V | 24 | 0.100 | 0.88 |
| Zinc, Zn | 250 | 0.020 | 53 |

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

SEQUOIA ANALYTICAL - ELAP #1210



Kevin Follett
Project Manager





| | | |
|---|--|--|
| Cambria 1144 65th St. Suite C Oakland, CA 94608 | Client Proj. ID: Shell 204-5508-5306 Sample Descript: SP-(5,6,7,8) Comp Matrix: SOLID Analysis Method: Title 22 Lab Number: 9706E86-22 | Sampled: 06/26/97 Received: 06/27/97 Extracted: 06/30/97 Analyzed: 07/01/97 Reported: 07/07/97 |
| Attention: Paul Walte | | |

Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC

| Analyte | Max. Limit mg/Kg | Detection Limit mg/Kg | Sample Results mg/Kg |
|----------------|---------------------|--------------------------|-------------------------|
| Antimony, Sb | 500 | 5.0 | N.D. |
| Arsenic, As | 500 | 5.0 | 9.8 |
| Barium, Ba | 10000 | 5.0 | 320 |
| Beryllium, Be | 75 | 0.50 | N.D. |
| Cadmium, Cd | 100 | 0.50 | 2.9 |
| Chromium, Cr | 2500 | 0.50 | 36 |
| Cobalt, Co | 8000 | 2.5 | 8.4 |
| Copper, Cu | 2500 | 0.50 | 110 |
| Lead, Pb | 1000 | 5.0 | 490 |
| Mercury, Hg | 20 | 0.020 | 0.24 |
| Molybdenum, Mo | 3500 | 2.5 | N.D. |
| Nickel, Ni | 2000 | 2.5 | 38 |
| Selenium, Se | 100 | 5.0 | N.D. |
| Silver, Ag | 500 | 0.50 | N.D. |
| Thallium, Tl | 700 | 5.0 | 12 |
| Vanadium, V | 2400 | 2.5 | 34 |
| Zinc, Zn | 5000 | 0.50 | 740 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager





Cambria Environmental Tech.
1144 65th St., Ste. C
Oakland, CA 94608
Attention: Paul Waite

Client Project ID: Shell 204-5508-5306
Matrix: Solid

Work Order #: 9706E86 -03, 04, 18-21

Reported: Jul 9, 1997

QUALITY CONTROL DATA REPORT

Analyte: Diesel
QC Batch#: GC0627970HBPEXC
Analy. Method: EPA 8015M
Prep. Method: EPA 3550

Analyst: B. Sullivan
MS/MSD #: 9706D3505
Sample Conc.: 1.7
Prepared Date: 6/27/97
Analyzed Date: 7/1/97
Instrument I.D.#: GCHP4
Conc. Spiked: 25 mg/Kg

Result: 20
MS % Recovery: 73

Dup. Result: 19
MSD % Recov.: 69

RPD: 5.1
RPD Limit: 0-50

LCS #: BLK063097
Prepared Date: 6/30/97
Analyzed Date: 7/1/97
Instrument I.D.#: GCHP4
Conc. Spiked: 25 mg/Kg

LCS Result: 20
LCS % Recov.: 80

MS/MSD 50-150
LCS 60-140
Control Limits

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

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager

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

9706E86.CCC <1>





Cambria Environmental Tech. Client Project ID: Shell 204-5508-5306
 1144 65th St., Ste. C Matrix: Solid
 Oakland, CA 94608 Work Order #: 9706E86-01-12, 17-21 Reported: Jul 9, 1997
 Attention: Paul Waite

QUALITY CONTROL DATA REPORT

| Analyte: | Benzene | Toluene | Ethyl Benzene | Xylenes | Gas |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| QC Batch#: | GC062897BTEXEXA | GC062897BTEXEXA | GC062897BTEXEXA | GC062897BTEXEXA | GC062897BTEXEXA |
| Analy. Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8015M |
| Prep. Method: | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 |
| Analyst: | A. Porter | A. Porter | A. Porter | A. Porter | A. Porter |
| MS/MSD #: | 9706C8901 | 9706C8901 | 9706C8901 | 9706C8901 | 9706C8901 |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 6/28/97 | 6/28/97 | 6/28/97 | 6/28/97 | 6/28/97 |
| Analyzed Date: | 6/30/97 | 6/30/97 | 6/30/97 | 6/30/97 | 6/30/97 |
| Instrument I.D.#: | GCHP7 | GCHP7 | GCHP7 | GCHP7 | GCHP7 |
| Conc. Spiked: | 0.20 mg/Kg | 0.20 mg/Kg | 0.20 mg/Kg | 0.60 mg/Kg | 1.2 mg/Kg |
| Result: | 0.14 | 0.17 | 0.18 | 0.56 | 1.1 |
| MS % Recovery: | 70 | 85 | 90 | 93 | 92 |
| Dup. Result: | 0.14 | 0.17 | 0.18 | 0.55 | 1.1 |
| MSD % Recov.: | 70 | 85 | 90 | 92 | 92 |
| RPD: | 0.0 | 0.0 | 0.0 | 1.8 | 0.0 |
| RPD Limit: | 0-25 | 0-25 | 0-25 | 0-25 | 0-25 |

| LCS #: | BLK062897 | BLK062897 | BLK062897 | BLK062897 | BLK062897 |
|--------------------------|------------|------------|------------|------------|-----------|
| Prepared Date: | 6/28/97 | 6/28/97 | 6/28/97 | 6/28/97 | 6/28/97 |
| Analyzed Date: | 6/30/97 | 6/30/97 | 6/30/97 | 6/30/97 | 6/30/97 |
| Instrument I.D.#: | GCHP7 | GCHP7 | GCHP7 | GCHP7 | GCHP7 |
| Conc. Spiked: | 0.20 mg/Kg | 0.20 mg/Kg | 0.20 mg/Kg | 0.60 mg/Kg | 1.2 mg/Kg |
| LCS Result: | 0.16 | 0.19 | 0.21 | 0.63 | 1.3 |
| LCS % Recov.: | 80 | 95 | 105 | 105 | 108 |

| | | | | | |
|-----------------------|--------|--------|--------|--------|--------|
| MS/MSD | 60-140 | 60-140 | 60-140 | 60-140 | 60-140 |
| LCS | 70-130 | 70-130 | 70-130 | 70-130 | 70-130 |
| Control Limits | | | | | |

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

SEQUOIA ANALYTICAL

Kevin Follett
 Kevin Follett
 Project Manager





Cambria Environmental Tech.
1144 65th St., Ste. C
Oakland, CA 94608
Attention: Paul Waite

Client Project ID: Shell 204-5508-5306
Matrix: Solid

Work Order #: 9706E86-17

Reported: Jul 9, 1997

QUALITY CONTROL DATA REPORT

Analyte: PCB 1260
QC Batch#: GC0701970PCBEXB
Analy. Method: EPA 8080
Prep. Method: EPA 3550

Analyst: M. Mistry
MS/MSD #: BLK070197
Sample Conc.: N.D.
Prepared Date: 7/1/97
Analyzed Date: 7/2/97
Instrument I.D.#: GCHP12
Conc. Spiked: 83 µg/Kg

Result: 94
MS % Recovery: 113

Dup. Result: 100
MSD % Recov.: 120

RPD: 6.0
RPD Limit: 0-50

LCS #:

Prepared Date:
Analyzed Date:
Instrument I.D.#:
Conc. Spiked:

LCS Result:
LCS % Recov.:

MS/MSD
LCS 40-140
Control Limits

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager

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

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

9706E86.CCC <3>





| | | |
|---|--|------------------------------|
| Cambria Environmental Tech. 1144 65th St., Ste. C Oakland, CA 94608 Attention: Paul Waite | Client Project ID: Shell 204-5508-5306 Matrix: Solid Work Order #: 9706E86-03, 04 | Reported: Jul 9, 1997 |
|---|--|------------------------------|

QUALITY CONTROL DATA REPORT

| Analyte: | 1,1-Dichloro- ethene | Trichloro- ethene | Chloro- Benzene |
|-----------------------|-------------------------|----------------------|--------------------|
| QC Batch#: | GC0630978010EXA | GC0630978010EXA | GC0630978010EXA |
| Analy. Method: | EPA 8010 | EPA 8010 | EPA 8010 |
| Prep. Method: | EPA 5030 | EPA 5030 | EPA 5030 |

| | | | |
|--------------------------|------------|------------|------------|
| Analyst: | E. Cunanan | E. Cunanan | E. Cunanan |
| MS/MSD #: | 9706C9407 | 9706C9407 | 9706C9407 |
| Sample Conc.: | N.D. | 180 | N.D. |
| Prepared Date: | 6/30/97 | 6/30/97 | 6/30/97 |
| Analyzed Date: | 6/30/97 | 6/30/97 | 6/30/97 |
| Instrument I.D.#: | GCHP9 | GCHP9 | GCHP9 |
| Conc. Spiked: | 50 µg/Kg | 50 µg/Kg | 50 µg/Kg |

| | | | |
|-----------------------|-----|-----|-----|
| Result: | 55 | 270 | 50 |
| MS % Recovery: | 110 | 180 | 100 |

| | | | |
|----------------------|-----|-----|----|
| Dup. Result: | 56 | 240 | 49 |
| MSD % Recov.: | 112 | 120 | 98 |

| | | | |
|-------------------|------|------|------|
| RPD: | 1.8 | 12 | 2.0 |
| RPD Limit: | 0-25 | 0-25 | 0-25 |

| | | | |
|--------------------------|-----------|-----------|-----------|
| LCS #: | BLK063097 | BLK063097 | BLK063097 |
| Prepared Date: | 6/30/97 | 6/30/97 | 6/30/97 |
| Analyzed Date: | 6/30/97 | 6/30/97 | 6/30/97 |
| Instrument I.D.#: | GCHP9 | GCHP9 | GCHP9 |
| Conc. Spiked: | 50 µg/Kg | 50 µg/Kg | 50 µg/Kg |
| LCS Result: | 56 | 62 | 50 |
| LCS % Recov.: | 112 | 124 | 100 |

| | | | |
|-----------------------|--------|--------|--------|
| MS/MSD | 60-140 | 60-140 | 60-140 |
| LCS | 65-135 | 70-130 | 70-130 |
| Control Limits | | | |

SEQUOIA ANALYTICAL


Kevin Follett
Project Manager

Please Note:

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

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





Cambria Environmental Tech. Client Project ID: Shell 204-5508-5306
 1144 65th St., Ste. C Matrix: Liquid
 Oakland, CA 94608 Work Order #: 9706E86-17 Reported: Jul 9, 1997
 Attention: Paul Waite

QUALITY CONTROL DATA REPORT - TCLP

| Analyte: | 1,1-Dichloroethene | Trichloroethene | Benzene | Toluene | Chloro-benzene |
|----------------|--------------------|-----------------|-----------------|-----------------|-----------------|
| QC Batch#: | MS0701978240F3A | MS0701978240F3A | MS0701978240F3A | MS0701978240F3A | MS0701978240F3A |
| Analy. Method: | EPA 8240 | EPA 8240 | EPA 8240 | EPA 8240 | EPA 8240 |
| Prep. Method: | N.A. | N.A. | N.A. | N.A. | N.A. |

| | | | | | |
|-------------------|-------------|-------------|-------------|-------------|-------------|
| Analyst: | M. Williams | M. Williams | M. Williams | M. Williams | M. Williams |
| MS/MSD #: | 9706E8617 | 9706E8617 | 9706E8617 | 9706E8617 | 9706E8617 |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 6/30/97 | 6/30/97 | 6/30/97 | 6/30/97 | 6/30/97 |
| Analyzed Date: | 7/1/97 | 7/1/97 | 7/1/97 | 7/1/97 | 7/1/97 |
| Instrument I.D.#: | F3 | F3 | F3 | F3 | F3 |
| Conc. Spiked: | 500 µg/L | 500 µg/L | 500 µg/L | 500 µg/L | 500 µg/L |
| Result: | 450 | 470 | 450 | 470 | 460 |
| MS % Recovery: | 90 | 94 | 90 | 94 | 92 |
| Dup. Result: | 450 | 470 | 460 | 470 | 460 |
| MSD % Recov.: | 90 | 94 | 92 | 94 | 92 |
| RPD: | 0.0 | 0.0 | 2.2 | 0.0 | 0.0 |
| RPD Limit: | 0-25 | 0-25 | 0-25 | 0-25 | 0-25 |

| LCS #: | VB070197 | VB070197 | VB070197 | VB070197 | VB070197 |
|-------------------|----------|----------|----------|----------|----------|
| Prepared Date: | - | - | - | - | 6/30/97 |
| Analyzed Date: | 7/1/97 | 7/1/97 | 7/1/97 | 7/1/97 | 7/1/97 |
| Instrument I.D.#: | F3 | F3 | F3 | F3 | F3 |
| Conc. Spiked: | 50 µg/L | 50 µg/L | 50 µg/L | 50 µg/L | 50 µg/L |
| LCS Result: | 46 | 49 | 47 | 49 | 47 |
| LCS % Recov.: | 92 | 98 | 94 | 98 | 94 |

| | | | | | |
|----------------|--------|--------|--------|--------|--------|
| MS/MSD | 60-140 | 60-140 | 60-140 | 60-140 | 60-140 |
| LCS | 65-135 | 70-130 | 70-130 | 70-130 | 70-130 |
| Control Limits | | | | | |

SEQUOIA ANALYTICAL

Kevin Follett
 Project Manager

Please Note:
 The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.
 ** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference





Cambria Environmental Tech.
1144 65th St., Ste. C
Oakland, CA 94608
Attention: Paul Waite

Client Project ID: Shell 204-5508-5306
Matrix: Solid

Work Order #: 9706E86-17

Reported: Jul 9, 1997

QUALITY CONTROL DATA REPORT

Analyte: pH

QC Batch: IN063097904500A

Analy. Method: EPA 9045

Prep Method: N.A.

Analyst: J. Saadeh

**Duplicate
Sample #:** 9706E8617

Prepared Date: 6/30/97
Analyzed Date: 6/30/97
Instrument I.D.#: MANUAL

**Sample
Concentration:** 7.5

**Dup. Sample
Concentration:** 7.5

RPD: 0.0
RPD Limit: 0-20

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager

** RPD=Relative % Difference

9706E86.CCC <6>





Cambria Environmental Tech. Client Project ID: Shell 204-5508-5306
1144 65th St., Ste. C Matrix: Solid
Oakland, CA 94608
Attention: Paul Waite Work Order #: 9706E86-13-16 Reported: Jul 9, 1997

QUALITY CONTROL DATA REPORT

Analyte: Total Petroleum Hydrocarbons
QC Batch#: IN0701974181FTA
Analy. Method: EPA 418.1
Prep. Method: N.A.

Analyst: C. Hirotsu
MS/MSD #: 9706A2203
Sample Conc.: 1100
Prepared Date: 7/1/97
Analyzed Date: 7/1/97
Instrument I.D.#: FTIR1
Conc. Spiked: 5200/10000 mg/Kg

Result: 1100*
MS % Recovery: 0.0

Dup. Result: 2100*
MSD % Recov.: 0.0

RPD: 62*
RPD Limit: 0-30

LCS #: LCS070197

Prepared Date: 7/1/97
Analyzed Date: 7/1/97
Instrument I.D.#: FTIR1
Conc. Spiked: 210 mg/Kg

LCS Result: 240
LCS % Recov.: 114

MS/MSD 60-140
LCS 70-130
Control Limits

* Matrix diluted out

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager

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

9706E86.CCC <7>





| | | |
|---|--|------------------------------|
| Cambria Environmental Tech. 1144 65th St., Ste. C Oakland, CA 94608 Attention: Paul Waite | Client Project ID: Shell 204-5508-5306 Matrix: Solid Work Order #: 9706E86-17 | Reported: Jul 9, 1997 |
|---|--|------------------------------|

QUALITY CONTROL DATA REPORT

| | |
|-----------------------------------|------------------|
| Analyte: Reactive Cyanide | Reactive Sulfide |
| QC Batch#: IN070197084600A | IN070197084600A |
| Analy. Method: SW-846 | SW-846 |
| Prep. Method: N.A. | N.A. |

| | | |
|--------------------------|-----------|-----------|
| Analyst: | K. Sims | K. Sims |
| MS/MSD #: | 9706F4201 | 9706F4201 |
| Sample Conc.: | N.D. | N.D. |
| Prepared Date: | 7/1/97 | 7/1/97 |
| Analyzed Date: | 7/1/97 | 7/1/97 |
| Instrument I.D.#: | MANUAL | MANUAL |
| Conc. Spiked: | 50 mg/Kg | 25 mg/Kg |
| Result: | 1.3 | 11 |
| MS % Recovery: | 26 | 44 |
| Dup. Result: | 0.95 | 11 |
| MSD % Recov.: | 19 | 44 |
| RPD: | 31 | 0.0 |
| RPD Limit: | 0-50 | 0-30 |

| | | |
|--------------------------|------------|-----------|
| LCS #: | LCS061197 | LCS060997 |
| Prepared Date: | 6/11/97 | 6/9/97 |
| Analyzed Date: | 7/1/97 | 7/1/97 |
| Instrument I.D.#: | MANUAL | MANUAL |
| Conc. Spiked: | 0.20 mg/Kg | 25 mg/Kg |
| LCS Result: | 0.046 | 25 |
| LCS % Recov.: | 23 | 100 |

| | | |
|-----------------------|--------|--------|
| MS/MSD | 6.0-40 | 60-140 |
| LCS | 6.0-40 | 70-130 |
| Control Limits | | |

* Matrix diluted out

SEQUOIA ANALYTICAL

[Signature]
Kevin Follett
Project Manager

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





Cambria Environmental Tech. Client Project ID: Shell 204-5508-5306
 1144 65th St., Ste. C Matrix: Solid
 Oakland, CA 94608 Work Order #: 9706E86-01-12, 17, 22 Reported: Jul 9, 1997
 Attention: Paul Waite

QUALITY CONTROL DATA REPORT

| Analyte: | Beryllium | Cadmium | Chromium | Nickel |
|----------------|-----------------|-----------------|-----------------|-----------------|
| QC Batch#: | ME0630976010MDE | ME0630976010MDE | ME0630976010MDE | ME0630976010MDE |
| Analy. Method: | EPA 6010 | EPA 6010 | EPA 6010 | EPA 6010 |
| Prep. Method: | EPA 3050 | EPA 3050 | EPA 3050 | EPA 3050 |

| | | | | |
|-------------------|-----------|-----------|-----------|-----------|
| Analyst: | R. Butler | R. Butler | R. Butler | R. Butler |
| MS/MSD #: | 9706E8601 | 9706E8601 | 9706E8601 | 9706E8601 |
| Sample Conc.: | 0.59 | N.D. | 32 | 31 |
| Prepared Date: | 6/30/97 | 6/30/97 | 6/30/97 | 6/30/97 |
| Analyzed Date: | 7/1/97 | 7/1/97 | 7/1/97 | 7/1/97 |
| Instrument I.D.#: | MTJA2 | MTJA2 | MTJA2 | MTJA2 |
| Conc. Spiked: | 100 mg/Kg | 100 mg/Kg | 100 mg/Kg | 100 mg/Kg |
| Result: | 45 | 47 | 82 | 82 |
| MS % Recovery: | 88 | 94 | 100 | 100 |
| Dup. Result: | 44 | 46 | 89 | 85 |
| MSD % Recov.: | 87 | 92 | 110 | 110 |
| RPD: | 2.2 | 2.2 | 8.2 | 3.6 |
| RPD Limit: | 0-20 | 0-20 | 0-20 | 0-20 |

| | | | | |
|-------------------|-----------|-----------|-----------|-----------|
| LCS #: | BLK063097 | BLK063097 | BLK063097 | BLK063097 |
| Prepared Date: | 6/30/97 | 6/30/97 | 6/30/97 | 6/30/97 |
| Analyzed Date: | 7/1/97 | 7/1/97 | 7/1/97 | 7/1/97 |
| Instrument I.D.#: | MTJA2 | MTJA2 | MTJA2 | MTJA2 |
| Conc. Spiked: | 100 mg/Kg | 100 mg/Kg | 100 mg/Kg | 100 mg/Kg |
| LCS Result: | 48 | 51 | 49 | 50 |
| LCS % Recov.: | 96 | 100 | 98 | 100 |

| | | | | |
|----------------|--------|--------|--------|--------|
| MS/MSD | 80-120 | 80-120 | 80-120 | 80-120 |
| LCS | 80-120 | 80-120 | 80-120 | 80-120 |
| Control Limits | | | | |

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SEQUOIA ANALYTICAL

Kevin Follett
 Kevin Follett
 Project Manager

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

9706E86.CCC <9>





| | | |
|---|--|------------------------------|
| Cambria Environmental Tech. 1144 65th St., Ste. C Oakland, CA 94608 Attention: Paul Waite | Client Project ID: Shell 204-5508-5306 Matrix: Solid Work Order #: 9706E86-17, 22 | Reported: Jul 9, 1997 |
|---|--|------------------------------|

QUALITY CONTROL DATA REPORT

| | | |
|-----------------------|-----------------|-----------------|
| Analyte: | Organic Lead | Mercury |
| QC Batch#: | ME0702977000MDA | ME0701977471M4A |
| Analy. Method: | LUFT | EPA 7471 |
| Prep. Method: | LUFT | EPA 7471 |

| | | |
|--------------------------|-----------|------------|
| Analyst: | J. Jencks | W. Thant |
| MS/MSD #: | 9706E8622 | 9706B0401 |
| Sample Conc.: | N.D. | N.D. |
| Prepared Date: | 7/1/97 | 7/1/97 |
| Analyzed Date: | 7/2/97 | 7/1/97 |
| Instrument I.D.#: | MV2 | MPE4 |
| Conc. Spiked: | 8.0 mg/Kg | 0.40 mg/Kg |
| Result: | 7.2 | 0.33 |
| MS % Recovery: | 90 | 83 |
| Dup. Result: | 3.4 | 0.33 |
| MSD % Recov.: | 43 | 83 |
| RPD: | 72 | 0.0 |
| RPD Limit: | 0-20 | 0-20 |

| | | |
|--------------------------|-----------|------------|
| LCS #: | BLK070197 | BLK070197 |
| Prepared Date: | 7/1/97 | 7/1/97 |
| Analyzed Date: | 7/2/97 | 7/1/97 |
| Instrument I.D.#: | MV2 | MPE4 |
| Conc. Spiked: | 8.0 mg/Kg | 0.40 mg/Kg |
| LCS Result: | 6.2 | 0.33 |
| LCS % Recov.: | 78 | 83 |

| | | | |
|-----------------------|--------|--------|--------|
| MS/MSD | 75-125 | 75-125 | 75-125 |
| LCS | 80-120 | 80-120 | 80-120 |
| Control Limits | | | |

SEQUOIA ANALYTICAL


Kevin Follett
Project Manager

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

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

9706E86.CCC <10>





Cambria Environmental Tech. Client Project ID: Shell 204-5508-5306
1144 65th St., Ste. C Matrix: Liquid
Oakland, CA 94608
Attention: Paul Waite Work Order #: 9706E86-17, 22 Reported: Jul 9, 1997

QUALITY CONTROL DATA REPORT - STLC

Analyte: Mercury
QC Batch#: ME0703977470M4A
Analy. Method: EPA 7470
Prep. Method: EPA 7470

Analyst: W. Thant
MS/MSD #: 970705601
Sample Conc.: N.D.
Prepared Date: 7/3/97
Analyzed Date: 7/7/97
Instrument I.D.#: MPE4
Conc. Spiked: 0.0040 mg/L

Result: 0.0037
MS % Recovery: 93

Dup. Result: 0.0037
MSD % Recov.: 93

RPD: 0.0
RPD Limit: 0-20



LCS #: BLK070397

Prepared Date: 7/3/97
Analyzed Date: 7/7/97
Instrument I.D.#: MPE4
Conc. Spiked: 0.020 mg/L

LCS Result: 0.019
LCS % Recov.: 95

MS/MSD 75-125
LCS 80-120
Control Limits

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager

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





Cambria Environmental Tech. Client Project ID: Shell 204-5508-5306
 1144 65th St., Ste. C Matrix: Liquid
 Oakland, CA 94608
 Attention: Paul Waite Work Order #: 9706E86-22 Reported: Jul 9, 1997

QUALITY CONTROL DATA REPORT - STLC

| Analyte: | Beryllium | Cadmium | Chromium | Nickel |
|----------------|-----------------|-----------------|-----------------|-----------------|
| QC Batch#: | ME0702976010MDA | ME0702976010MDA | ME0702976010MDA | ME0702976010MDA |
| Analy. Method: | EPA 6010 | EPA 6010 | EPA 6010 | EPA 6010 |
| Prep. Method: | EPA 3010 | EPA 3010 | EPA 3010 | EPA 3010 |

| | | | | |
|-------------------|-----------|-----------|-----------|-----------|
| Analyst: | R. Butler | R. Butler | R. Butler | R. Butler |
| MS/MSD #: | 9706F6501 | 9706F6501 | 9706F6501 | 9706F6501 |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 7/2/97 | 7/2/97 | 7/2/97 | 7/2/97 |
| Analyzed Date: | 7/2/97 | 7/2/97 | 7/2/97 | 7/2/97 |
| Instrument I.D.#: | MTJA2 | MTJA2 | MTJA2 | MTJA2 |
| Conc. Spiked: | 1.0 mg/L | 1.0 mg/L | 1.0 mg/L | 1.0 mg/L |
| Result: | 0.94 | 0.92 | 0.93 | 0.93 |
| MS % Recovery: | 94 | 92 | 93 | 93 |
| Dup. Result: | 0.98 | 0.96 | 0.97 | 0.96 |
| MSD % Recov.: | 98 | 96 | 97 | 96 |
| RPD: | 4.2 | 4.3 | 4.2 | 3.2 |
| RPD Limit: | 0-20 | 0-20 | 0-20 | 0-20 |

| LCS #: | BLK070297 | BLK070297 | BLK070297 | BLK070297 |
|-------------------|-----------|-----------|-----------|-----------|
| Prepared Date: | 7/2/97 | 7/2/97 | 7/2/97 | 7/2/97 |
| Analyzed Date: | 7/2/97 | 7/2/97 | 7/2/97 | 7/2/97 |
| Instrument I.D.#: | MTJA2 | MTJA2 | MTJA2 | MTJA2 |
| Conc. Spiked: | 1.0 mg/L | 1.0 mg/L | 1.0 mg/L | 1.0 mg/L |
| LCS Result: | 0.92 | 0.91 | 0.91 | 0.92 |
| LCS % Recov.: | 92 | 91 | 91 | 92 |

| | | | | |
|----------------|--------|--------|--------|--------|
| MS/MSD | 80-120 | 80-120 | 80-120 | 80-120 |
| LCS | 80-120 | 80-120 | 80-120 | 80-120 |
| Control Limits | | | | |

SEQUOIA ANALYTICAL

Kevin Follett
 Kevin Follett
 Project Manager

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

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

9706E86.CCC <12>





SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 6/26/97
Page 1 of 3

Site Address: 3420 San Pablo Avenue, Oakland

WIC#: 204-5508-5306

Shell Engineer: Ray Newsome
Phone No.: (510) 675-6128
Fax #: 675-6130

Consultant Name & Address: Cambria Environmental
1144 65th St, Ste C
Oakland, CA 94608

Consultant Contact: PAUL WAITE
Phone No.: (510) 420-3305
Fax #: 420-9170

Comments:

Sampled by: Brian Busch, Christina Empedocles

Printed Name: *[Signature]*

Analysis Required

LAB: SEQUOIA

| | | | | | | | | | | | |
|-------------------------|----------------------------|---------------------|------------------------------|-----------------|---|-----------------------------|---|---|----------------|------------------|---------------|
| TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8240) | Total Lead only | Combination TPH 8015 & BTEX 8020 + MTBE | Chlorinated Solvents (B010) | OIL AND GREASE (TPH as Meth.Oil) GC/FID | Total lead, chromium, cadmium, zinc, Nickel | Container Size | Preparation Used | Composite Y/N |
| | | | | X | X | | | | 2.6 max | Ø | no |
| | | | | X | X | | | | | Ø | |
| | | | | | X | X | X | X | | Ø | |
| | | | | | X | X | X | X | | Ø | |
| | | | | X | X | | | | | Ø | |
| | | | | X | X | | | | | Ø | |
| | | | | X | X | | | | | Ø | |
| | | | | X | X | | | | | Ø | |

| CHECK ONE (1) BOX ONLY | CI/DI | TURN AROUND TIME |
|--|-------|---|
| G.W. Monitoring <input type="checkbox"/> | 4461 | 24 hours <input type="checkbox"/> |
| Site Investigation <input type="checkbox"/> | 4441 | 48 hours <input type="checkbox"/> |
| Soil Classify/Disposal <input checked="" type="checkbox"/> | 4442 | 15 days <input type="checkbox"/> (Normal) |
| Water Classify/Disposal <input type="checkbox"/> | 4443 | Other <input checked="" type="checkbox"/> 5day |
| Soil/Air Rem. or Sys. O & M <input type="checkbox"/> | 4452 | |
| Water Rem. or Sys. O & M <input type="checkbox"/> | 4453 | |
| Other <input checked="" type="checkbox"/> | | NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT. |

UST AGENCY: 9700E86

| Sample ID | Date | Sludge | Soil | Water | Air | No. of conds. | TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8240) | Total Lead only | Combination TPH 8015 & BTEX 8020 + MTBE | Chlorinated Solvents (B010) | OIL AND GREASE (TPH as Meth.Oil) GC/FID | Total lead, chromium, cadmium, zinc, Nickel | Container Size | Preparation Used | Composite Y/N | MATERIAL DESCRIPTION | SAMPLE CONDITION/ COMMENTS | |
|--------------------|---------|--------|------|-------|-----|---------------|-------------------------|----------------------------|---------------------|------------------------------|-----------------|---|-----------------------------|---|---|----------------|------------------|---------------|----------------------|----------------------------|-----------------------------|
| 1. DISP - 1 - 2.5' | 6/26/97 | | X | | | 1 | | | | | X | X | | | | | | Ø | no | Soil | please check for |
| 2. DISP - 2.0' | 6/26/97 | | X | | | 1 | | | | | X | X | | | | | | Ø | | | diesel-range hydrocarbons |
| 3. TP - N - 7' | 6/26/97 | | X | | | 1 | | | | | | X | X | X | X | | | Ø | | | when analyzing for TPHg. |
| 4. TP - S - 7' | 6/26/97 | | X | | | 1 | | | | | | X | X | X | X | | | Ø | | | Please call Paul Waite @ |
| 5. P - 1 - 2.5' | 6/26/97 | | X | | | 1 | | | | | X | X | | | | | | Ø | | | Cambria if any diesel range |
| 6. P - 2 - 2.5' | 6/26/97 | | X | | | 1 | | | | | X | X | | | | | | Ø | | | HC's are identified |
| 7. P - 3 - 2.5' | 6/26/97 | | X | | | 1 | | | | | X | X | | | | | | Ø | | | |
| 8. P - 4 - 4.0' | 6/26/97 | | X | | | 1 | | | | | X | X | | | | | | Ø | | | |

| | | | | | |
|---|---------------------------|---------------|--|-----------------------------|---------------|
| Relinquished By (signature): <i>[Signature]</i> | Printed Name: BRIAN BUSCH | Date: 6/27/97 | Received (signature): <i>[Signature]</i> | Printed Name: James Hewlett | Date: 6/27/97 |
| Relinquished By (signature): <i>[Signature]</i> | Printed Name: Hewlett | Date: 6/27 | Received (signature): <i>[Signature]</i> | Printed Name: | Date: 1235 |
| Relinquished By (signature): <i>[Signature]</i> | Printed Name: | Date: 1910 | Received (signature): <i>[Signature]</i> | Printed Name: M. Sakas | Date: 6-27-97 |
| | | | | | Time: 1410 |

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 6/26/97

Page 2 of 3

Site Address: 3420 San Pablo Ave, Oakland

WIC#: 204-5508-5306

Shell Engineer:

Ray Newsome

Phone No.: (510)

675-6128

Fax #: 675-6130

Consultant Name & Address:

1144 65th St., Suite C
 Cambria Environmental Oakland, CA 94608

Consultant Contact:

PAUL WAITE

Phone No.: (510)

420-3305

Fax #: 420-9170

Comments:

Sampled by:

Brian Busch, Christina Empedocles

Printed Name:

Brian Busch

Analysis Required

LAB: SEQUOIA

| CHECK ONE (1) BOX ONLY | CT/DI | TURN AROUND TIME |
|--|-------|---|
| G.W. Monitoring <input type="checkbox"/> | 4461 | 24 hours <input type="checkbox"/> |
| Site Investigation <input type="checkbox"/> | 4441 | 48 hours <input type="checkbox"/> |
| Soil Classify/Disposal <input type="checkbox"/> | 4442 | 15 days <input type="checkbox"/> (Normal) |
| Water Classify/Disposal <input type="checkbox"/> | 4443 | Other <input checked="" type="checkbox"/> 5 day |
| Soil/Air Rem. or Sys. O & M <input type="checkbox"/> | 4452 | |
| Water Rem. or Sys. O & M <input type="checkbox"/> | 4453 | NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT. |
| Other <input checked="" type="checkbox"/> | | 9706E80 |

UST AGENCY: _____

| TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8240) | Test for Disposal | Combination TPH 8015 & BTEX 8020 + MTBE | Total Lead | Test for Disposal | Container Size | Preparation Used | Composite Y/N |
|-------------------------|----------------------------|---------------------|------------------------------|-------------------|---|------------|-------------------|----------------|------------------|---------------|
| | | | | | X | X | | 246 | | NO |
| | | | | X | X | X | | | | |
| | | | | X | X | X | | | | Yes |
| | | | | X | X | X | | | | |
| | | | | X | X | X | | | | |
| | | | | X | X | X | | | | |

| Sample ID | Date | Sludge | Soil | Water | Air | No. of conts. |
|------------|---------|--------|------|-------|-----|---------------|
| 9 P-5-4.0 | 6/26/97 | | X | | | 1 |
| 10 P-6-2.5 | 4/26/97 | | X | | | 1 |
| 11 P-7-2.0 | 6/26/97 | | X | | | 1 |
| 12 P-8-2.5 | 6/26/97 | | X | | | 1 |
| 13 SP-1 | | | X | | | 1 |
| 14 SP-2 | | | X | | | 1 |
| 15 SP-3 | | | X | | | 1 |
| 16 SP-4 | | | X | | | 1 |

| MATERIAL DESCRIPTION | SAMPLE CONDITION/ COMMENTS |
|----------------------|---|
| SOIL | Please check for diesel-range HCs when analyzing for TPHg. Please call Paul Waite @ Cambria if any diesel range HCs are identified. |
| | Composite 4:1 and analyze per Shell's guidelines for soil contam. with motor oil (attached.) |

| | | |
|--|------------------------------|-----------------------------|
| Relinquished By (signature): <i>Brian Busch</i> | Printed Name: BRIAN BUSCH | Date: 6/27/97 Time: 1235 |
| Relinquished By (signature): <i>James Hewlett</i> | Printed Name: Hewlett | Date: 6/27 Time: 1960 |
| Relinquished By (signature): | Printed Name: | Date: Time: |

| | | |
|---|--------------------------------|-----------------------------|
| Received (signature): <i>James Hewlett</i> | Printed Name: James Hewlett | Date: 6/27/97 Time: 1235 |
| Received (signature): | Printed Name: | Date: Time: |
| Received (signature): <i>M. Smith</i> | Printed Name: M. Smith | Date: 6-27-97 Time: 1310 |

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 6/26/97

Page 3 of 3

Site Address: 3420 San Pablo Ave, Oakland

Analysis Required

LAB: SEQUOIA

WIC#: 204-5508-5306

Shell Engineer: Ray Newsome Phone No.: (510) 675-6128
Fax #: 675-6130

Consultant Name & Address: 1144 65th St., Suite C
Cambria Environmental Oakland, CA 94608

Consultant Contact: Paul Waite Phone No.: 510 420-3305
Fax #: 420-9176

Comments:

Sampled by: BRIAN BUSCH

Printed Name:

| CHECK ONE (1) BOX ONLY | CT/DI | TURN AROUND TIME |
|--|-------|--|
| G.W. Monitoring <input type="checkbox"/> | 4461 | 24 hours <input type="checkbox"/> |
| Site Investigation <input type="checkbox"/> | 4441 | 48 hours <input type="checkbox"/> |
| Soil Classify/Disposal <input checked="" type="checkbox"/> | 4442 | 16 days <input type="checkbox"/> (Normal) |
| Water Classify/Disposal <input type="checkbox"/> | 4443 | Other <input checked="" type="checkbox"/> <u>Delay</u> |
| Soil/Air Rem. or Sys. O & M <input type="checkbox"/> | 4452 | |
| Water Rem. or Sys. O & M <input type="checkbox"/> | 4453 | |
| Other <input type="checkbox"/> | | |

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

9706E86

JUST AGENCY: _____

| Sample ID | Date | Sludge | Soil | Water | Air | No. of conts. | TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8240) | Test for Disposal | Combination TPH 8015 & BTEX 8020 | Test for Disposal | Asbestos | Container Size | Preparation Used | Composite Y/N | MATERIAL DESCRIPTION | SAMPLE CONDITION/ COMMENTS |
|--------------------------------|---------|--------|------|-------|-----|---------------|-------------------------|----------------------------|---------------------|------------------------------|-------------------|----------------------------------|------------------------------|----------|-----------------|------------------|---------------|----------------------|--|
| 3, 18 19 20 4 SP-5 | 6/26/97 | | X | | | 1 | | | | | X | X | X | no | 246 10/20/95 | X | Yes | Soil | Composite 4:1 and analyze per shells guidelines for Soil contaminated with gas/diesel (attached) |
| SP-6 | ↓ | | X | | | 1 | | | | X | | | | | | | | | |
| SP-7 | ↓ | | X | | | 1 | | | | X | | | | | | | | | |
| SP-8 | ↓ | | X | | | 1 | | | | X | | | | | | | | | |

| | | | | | |
|---|----------------------------------|---|--|------------------------------------|---|
| Relinquished By (signature): <u>Brian Busch</u> | Printed Name: <u>BRIAN BUSCH</u> | Date: <u>6/27/97</u> Time: <u>1235</u> | Received (signature): <u>James Hewlett</u> | Printed Name: <u>James Hewlett</u> | Date: <u>6/27</u> Time: <u>1230</u> |
| Relinquished By (signature): <u>James Hewlett</u> | Printed Name: <u>Hewlett</u> | Date: <u>6/27</u> Time: <u>1415</u> | Received (signature): _____ | Printed Name: _____ | Date: _____ Time: _____ |
| Relinquished By (signature): _____ | Printed Name: _____ | Date: _____ Time: _____ | Received (signature): <u>M.S.</u> | Printed Name: <u>M. S. Scales</u> | Date: <u>6/29/97</u> Time: <u>1410</u> |

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

9706E86

ISSUED DATE: 02/17/95
CANCELS ISSUE: 11/01/92
ISSUED BY: RLG

**MATERIAL: CALIFORNIA UNDERGROUND STORAGE TANK (UST)
SOIL CONTAMINATED WITH GASOLINE/DIESEL**

MINIMUM REQUIRED TESTING

TPH = TOTAL PETROLEUM HYDROCARBONS, DHS GC-FID MOD 8015
GASOLINE OR DIESEL AS REQUIRED.

BTXE = EPA 8020

CAM METALS = TTLC ALL:

STLC ON ALL TTLC METALS 10 X STLC MAXIMUM:

TTLC LEAD => 13 MG/KG REQUIRES ORGANIC ANALYSIS

EP TOX METALS FOR STLC METALS AT OR ABOVE
STLC REGULATORY LEVEL.

AQUATIC BIOASSAY (FISH TOX) IS ONLY TO BE RUN ON SAMPLES WITH
GREATER THAN 5000 PPM TPH. COMPOSITE A MAXIMUM OF 4 SAMPLES.

AQUATIC BIOASSAY (FISH TOX) = PART 800 OF "STANDARD METHODS FOR
THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)"

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)

- 8015/8020 TO BE BILLED AS "COMBO" WITHOUT EXCEPTION
- TPH REQUIRED FOR ALL SAMPLES.
- ALL OTHER TESTS REQUIRED TO BE RUN ON COMPOSITE(S). MAXIMUM
4 SAMPLES PER COMPOSITE.
- STLC REQUIRED FOR METALS WITH TTLC VALUE 10 X STLC MAXIMUM.
- ORGANIC ANALYSIS REQUIRED FOR TTLC LEAD OF 13 MG/KG OR GREATER
WOULD REQUIRE ORGANIC ANALYSIS).
- LABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL
REPORTS.
- MAIL OR FAX ALL ANALYSIS TO PERSON REQUESTING ANALYSIS. DO NOT
FAX OR MAIL ANALYSES TO RON GEMEINHARDT OR THE WASTE DISPOSAL
COORDINATOR UNLESS SPECIFICALLY REQUESTED.
- QUESTIONS REGARDING ANALYSIS, CONTACT RON GEMEINHARDT AT
(713) 241-3577.

9706E86

ISSUED DATE: 02/17/95
CANCELS ISSUE: 11/01/92
ISSUED BY: RLG

MATERIAL: CALIFORNIA SOIL CONTAMINATED WITH WASTE OIL

MINIMUM REQUIRED TESTING

TPH = TOTAL PETROLEUM HYDROCARBONS, 418.1

BTXE = EPA 8020

CAM METALS = TTLC ALL:

STLC ON ALL TTLC METALS 10 X STLC MAXIMUM:

TTLC LEAD => 13 MG/KG REQUIRES ORGANIC ANALYSIS

TCLP EXTRACTION = EPA 1311 AND

VOC ON EXTRACT = EPA 8240

SVOC ON EXTRACT = EPA 8270

METALS ON EXTRACT = EPA 6010, (USE 7470 FOR Hg)

NOTE: IF PESTICIDES = EPA 8080 (ON EXTRACT)

IF HERBICIDES = EPA 8150 (ON EXTRACT)

PCBs = EPA METHOD 8080 (NOT ON EXTRACT)

HYDROGEN SULPHIDE = SW-846 (7.3.4.2) (REACTIVITY)

HYDROGEN CYANIDE = SW-846 (7.3.3.2) (REACTIVITY)

pH (CORROSIVITY)

AQUATIC BIOASSAY (FISH TOX) = PART 800 OF "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)"

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)

- TPH REQUIRED ON ALL SAMPLES
- ALL OTHER TESTS REQUIRED TO BE RUN ON COMPOSITE(S). MAXIMUM 4 SAMPLES PER COMPOSITE.
- STLC REQUIRED FOR METALS WITH TTLC VALUE 10 X STLC MAXIMUM.
- ORGANIC ANALYSIS REQUIRED FOR TTLC LEAD OF 13 MG/KG OR GREATER.
- LABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL REPORTS.
- MAIL OR FAX ALL ANALYSIS TO PERSON REQUESTING ANALYSIS. DO NOT FAX OR MAIL ANALYSES TO RON GEMEINHARDT OR THE WASTE DISPOSAL COORDINATOR UNLESS SPECIFICALLY REQUESTED.
- QUESTIONS REGARDING ANALYSIS, CONTACT RON GEMEINHARDT AT (713) 241-3577.

PROCEDURE ORIGINAL DATE: 07/10/90

PROCEDURE REVISED DATE: 03/20/96



Sequoia
Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 364-9600
(510) 988-9600
(916) 921-9600

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

Cambria
1144 65th St. Suite C
Oakland, CA 94608
Attention: Paul Waite

Client Proj. ID: Shell 204-5508-5306
Lab Proj. ID: 9706E86

Received: 06/27/97
Reported: 07/07/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 57 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager

