CAMBRIA

April 28, 2003

Mr. Keith Matthews
Hazardous Materials Inspector
Office of Emergency Services
Oakland Fire Department
1605 Martin Luther King Jr. Way
Oakland, California 94612



Re: **Tank Closure and Soil Excavation Report**
Former Shell-branded Service Station
4255 MacArthur Boulevard
Oakland, California
Incident #98995758
Cambria Project #245-0524-007

Dear Mr. Matthews:

Cambria Environmental Technology, Inc. (Cambria) is submitting this *Tank Closure and Soil Excavation Report* on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell). Under the direction of City of Oakland Fire Department (COFD), Cambria conducted soil and groundwater sampling in conjunction with the removal of three 10,000-gallon gasoline underground storage tanks (USTs), four fuel dispensers and associated product piping. Presented below are a summary of the site conditions, sampling activities, over-excavation activities, and analytical results.

## SITE CONDITIONS

***Site Location:*** The site is a former Shell service station located at the intersection of MacArthur Boulevard and High Street in a mixed commercial and residential area of Oakland, California (Figure 1). An active Unocal service station and a former Chevron service station are located east of the site. A trailer park and California Department of Transportation (Caltrans) on-ramp to Interstate 580 are located immediately southwest of the site. Topography slopes toward the west, with approximately 5 feet elevation difference between the Shell service station and the trailer park property, and an additional 5 feet elevation difference between the trailer park property and the Caltrans property.

***Groundwater Monitoring:*** Quarterly groundwater monitoring has been conducted at the site since November 1993. The depth to water onsite has ranged from 4.24 feet to 17.09 feet below grade (fbg) and typically flows to the west-southwest. In the first quarter of 2003, the depth to water on site ranged from 4.35 to 11.62 fbg.

**Cambria Environmental Technology, Inc.**

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## TANK, DISPENSER AND PIPING REMOVAL ACTIVITIES

***Personnel Present:*** Jason Gerke, Senior Staff Scientist, Cambria (January 27, 30, and 31, 2003 and February 4, 2003).
Keith Matthews, Hazardous Materials Inspector, OCFD (January 27 and 30, 2003).
Eric Pender, Construction Foreman, L.A. Perks Plumbing and Heating, Inc. (L.A. Perks) of Sparks, Nevada

***UST Excavation and Dispenser/Piping Trench Sampling Dates:*** On January 27, 2003, L.A. Perks removed the USTs, and Cambria collected soil samples adjacent to the USTs and one grab groundwater sample from the base of the tank pit. Soil sampling beneath the removed dispensers and piping occurred on January 30, 2003. Over-excavation in the vicinity of the dispensers and piping trenches and confirmation sampling occurred on January 30, 31 and February 4, 2003.

***Tanks Removed:*** L.A. Perks removed three 10,000-gallon gasoline USTs on January 27, 2003. Two tank backfill wells (TB-1 and TB-2) were removed after the tanks were removed. Ecology Control Industries, Inc. (ECI) of Richmond, California triple rinsed and inerted the tanks with dry ice prior to removal.

***UST Disposal:*** ECI transported the USTs with proper manifests to their facility in Richmond, California for proper destruction.

***Tank Removal Observations:*** On January 22, 2003, upon removal of the concrete pad above the USTs, L.A. Perks observed water in the tank pit above the top of the USTs at approximately 4 fbg. ONYX Industrial Services (ONYX) of Benicia, California removed approximately 4,602 gallons of water from the tank pit. Cambria observed groundwater in the tank pit at approximately 11 fbg during sampling activities on January 27, 2002. Groundwater did not rise past this level prior to the backfilling of the tank pit on February 5, 2003. On January 30, 2003, Cambria observed groundwater at approximately 8 fbg in monitoring well MW-1 and at approximately 14 fbg in monitoring well MW-3 (Figure 2).

After the tanks were removed, Cambria observed a crack on the sides of two of the USTs. Each crack was approximately 6 inches long. According to Eric Pender of L.A. Perks, one UST crack was created when a portion of the tank pit sidewall collapsed prior to UST removal, and the other UST crack was created when a pipe fell on the tank during removal. According to L.A. Perks, neither USTs contained any gasoline when the cracks were created. No holes, cracks, or failures were observed in the third removed UST.

***Tank Pit and Dispenser Sampling:*** On January 27, 2003 Cambria collected six soil samples (TP-1 through TP-6) from the gasoline UST excavation side walls, just above the water table at 10 to 10.5 fbg and one grab groundwater sample. On January 30, 2003, Cambria collected seven soil samples (D-1 through D-4 and P-1 through P-3) within native soil located 1 to 2 feet beneath four removed dispensers and associated piping. All samples were collected under the direction of Mr. Keith Matthews of the OCFS.

Soil and grab groundwater sample results are summarized on Tables 1 and 2, respectively. Soil sample locations are depicted on Figure 2. Cambria's Standard Tank Removal Sampling Procedures are presented as Attachment A and our Standard Piping and Dispenser Removal Sampling Procedures are presented as Attachment B.

***Over-Excavation:*** Based on analytical results from soil samples obtained from the UST excavation side walls, Shell requested L.A. Perks to over-excavate hydrocarbon impacted soil where physically possible. Over-excavation limits were defined by field photo-ionization detector (PID) readings, observable staining, and space limitations due to the small size of the site. All over-excavated soil was unsaturated.

*Tank Pit Over-Excavation:* The tank pit excavation was approximately 40 feet by 40 feet in area with a depth of approximately 11 feet. Cambria collected soil samples TP-1 through TP-6 from the tank pit excavation side walls. L.A. Perks was able to over-excavate only the northeast corner of the tank pit due to the close proximity of the property boundary to the south and west walls, and equipment and soil stockpile storage to the north and east of the tank pit. L.A. Perks completed the over-excavation north and east of the tank pit in conjunction with the northern dispenser/ piping trench over-excavation.

*Dispenser/ Piping Trench Over-Excavation:*

*Southern Dispensers and Piping (D-1, D-2 and P-1):* L.A. Perks over-excavated an area approximately 5 feet wide, 30 feet long and 5.5 to 6.5 fbg beneath the southern-most dispensers and piping. Cambria observed brown clayey to sandy silt in this area. Cambria collected dispenser and piping soil samples D-1, D-2 and P-1 at the base of the excavation.

*Northern Dispensers and Piping (D-3, D-4, P-2 and P-3):* L.A. perks over-excavated an area ranging 8 to 10 feet wide, 35 feet long, and 8 to 11 feet deep beneath the northern dispensers and piping. The general lithology in this area consisted of a light-green clayey silt to approximately 3 fbg. Beneath this layer was a dark greenish-gray clayey silt extending to approximately 7 fbg. Beneath this layer was a brown (with gray mottling) sandy silt extending to approximately 8 to 10 fbg. Beneath that layer, clayey silt to silty clay was encountered to the total excavated depth of

11 fbg. The soil turned from damp to moist at 11 fbg. Cambria observed water seeping out of an approximate 4-inch gravel lens in the eastern sidewall at approximately 10 fbg. Cambria collected soil sample E-6 above this gravel lens at 6 fbg and soil sample E-12 beneath this gravel lens at 12 fbg. Cambria also obtained soil samples D-3-8, D-4-8 and P-2-8 at 8 fbg beneath the respective dispenser and piping sample location, and samples D-4-12 and P-2-12 where the excavation extended to 11 fbg. Sidewall samples D-4-N6 and P-2-N6 were collected on the north wall of the excavation at 6 fbg.

*Former Dispenser D-5:* During the removal of one canopy column, L.A. Perks observed steel piping and stained soil in the vicinity of a former dispenser (D-5) (Figure 2). This dispenser was removed in November 1995 as described in Weiss Associate's 1996 *Dispenser Replacement Sampling Report.* At the request of Shell, L.A. Perks removed the remaining piping and Cambria collected soil sample D-5-6 in the vicinity of the former dispenser. Based on field screening and laboratory results, L.A. Perks over-excavated an area of ranging from 14 to 18 feet wide, 25 feet long and 10 to 14 feet deep beneath D-5. The majority of the material removed from this area consisted of a dark gray silty sand with a strong hydrocarbon odor and PID readings of approximately 500 to greater than 1000 parts per million by volume. The soil turned from damp to moist at 12 fbg. Cambria observed water seeping out of the wall from an approximate 1-foot diameter sand pocket at 9 fbg in the northeast corner of the excavation. Cambria obtained sidewall samples D-5-S10, D-5-W10 and D-5-E10 from the south, west and east walls, respectively. No north wall sample was necessary since the soil was over-excavated between dispenser D-5 and dispenser D-3.

***Oxygen Release Compound (ORC) Addition:*** As requested by Shell, L.A. Perks mixed a total of 720 pounds of ORC with the first foot of clean backfill placed at the base of the excavation.

***Water/Sewer Line Removal Observation:*** During removal of the site sewer/water line leading into High Street on February 10, 2003, L.A. Perks notified Cambria of water seepage into the excavated area at approximately 2.5 fbg.

***Excavation Backfilling:*** L.A. Perks backfilled the tank pit with 1.5-inch drain rock to 4 fbg. The remainder of the tank pit and the over-excavation were backfilled and compacted with Class II road base material.

***Sample Chemical Analyses:*** State-certified laboratories Kiff Analytical of Davis, California (Kiff) and Calscience Environmental Laboratories, Inc. of Garden Grove, California (Calscience) analyzed the soil and groundwater samples. As requested by Mr. Keith Matthews of OCFD, the grab groundwater sample obtained from the tank pit and all soil samples obtained from the tank pit and directly beneath the dispensers and piping on January 27 and 30, 2003 were analyzed for

total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tert-butyl ether (MTBE) by EPA Method 8260B and total lead. Soil samples obtained during the over-excavation were analyzed for TPHg, BTEX and MTBE.

To characterize stockpiled soil for disposal, Cambria collected four brass tubes of soil for every 250 cubic yards of stockpiled soil, which were then composited by the analytical laboratory. Five composite samples were collected for approximately 900 cubic yards of soil and analyzed for:

- TPHg by modified EPA Method 8260;
- BTEX and MTBE by EPA Method 8260; and
- Total threshold limit concentration cadmium, chromium, lead, nickel and zinc.

Laboratory analytical results for soil and groundwater are summarized in Tables 1 and 2, respectively. Laboratory analytical reports and chain of custody records are presented as Attachment C.

***Waste Handling:*** State-certified laboratories Kiff and Calscience analyzed the soil and groundwater samples.

Manley and Sons Trucking, Inc. of Sacramento, California transported approximately 900 cubic yards of stockpiled soil generated from the UST and dispenser/ pipeline trench excavations to Forward Landfill in Manteca, California for disposal on January 29, February 4, 10 and 11, 2003. A copy of the soil disposal confirmation is included as Attachment D.

ONYX transported approximately 4,602 gallons of groundwater, purged from the tank pit to facilitate the tank removal, to the Martinez Refinery in Martinez, California on January 22, 2003. The bill of lading copy is included as Attachment E.

## ANALYTICAL RESULTS

***Gasoline UST Excavation Soil:*** Six soil samples were collected from the gasoline UST excavation side walls. All six samples had analytes detected above the reporting limit (Table 1). The highest detected concentrations of 380 parts per million (ppm) TPHg and 1.7 ppm benzene were detected in the southeast corner of the tank pit in sample TP-5. MTBE was detected in two soil samples (TP-5 and TP-6) at 1.2 ppm. Benzene was detected in two other samples from the tank pit at 0.31 ppm in sample TP-1 and 0.048 ppm in sample TP-3.

***Dispensers/Piping Trench Soil:*** Analytes were detected in the seven initial soil samples obtained beneath the dispensers and piping at approximately 3 to 4 fbg. Highest concentrations of 420 ppm

TPHg and 1.5 ppm benzene were detected in soil sample P-2. No MTBE was detected in any samples obtained beneath the former dispensers or piping at 3 to 4 fbg. As discussed above, each of these sample points was excavated.

***Confirmation Over-Excavation Sampling Results:***

*Southern Dispensers and Piping (D-1, D-2 and P-1):* The highest concentration of 87 ppm TPHg was detected in sample D-1-6.5 at the base of the excavation in this area. The highest concentrations of 0.6 ppm MTBE and 0.22 ppm benzene were detected in sample D-2-5.5 at the base of the excavation in this area.

*Northern Dispensers and Piping (D-3, D-4, P-2 and P-3):* In the base of the excavation, the highest concentrations of 420 ppm TPHg and 0.46 ppm benzene were detected in sample P-3-8. In the north wall of the excavation, the highest concentrations of 42 ppm TPHg and 0.12 ppm benzene were detected in sample P-2-N6. In the east wall of this excavation, highest concentrations detected were 21 ppm TPHg at 12 fbg (E-12) and 0.030 ppm benzene at 6 fbg (E-6). No MTBE was detected in the base or walls of the excavation in this area. No south wall sample was obtained due to the proximity of D-5 samples. No west wall sample was obtained since the area located adjacent to the wall is represented by results from sample P-3.

*Former Dispenser D-5*: No analytes were detected in the base of the excavation at 14 fbg in sample D-5-14. The highest concentrations of 160 ppm TPHg and 0.40 ppm benzene were detected in the west sidewall in sample D-5-W10. MTBE was detected in the south sidewall in sample D-5-S10 at 0.9 ppm.

***Grab Groundwater Analytical Results***: Analytical results of tank pit grab groundwater sample TP-1-Water reported the presence of 11,000 parts per billion (ppb) TPHg, 5,200 ppb MTBE, and 410 ppb benzene. Groundwater analytical results are summarized in Table 2, and the laboratory report is included as Attachment B.

## CONCLUSIONS AND RECOMMENDATIONS

Over 900 cubic yards of soil and 4,600 gallons of groundwater were removed from the site during the recent tank, dispenser and piping removal activities. In addition, 720 pounds of ORC were added to the open excavation to enhance biological degradation of hydrocarbons. Given the low concentrations of chemicals detected in soil remaining in place at the site, Cambria does not recommend further soil remediation at the site.

Based on the analytical results for groundwater sampled from the tank pit, Cambria recommends installing one additional groundwater monitoring well in the southern corner of the former tank pit (Figure 2). In addition to monitoring chemical concentrations in groundwater, Cambria will also be able to include this well in periodic mobile groundwater extraction events.

No USTs, piping, dispensers or surface features remain at the former Shell-branded service station at 4255 MacArthur Boulevard in Oakland.

Based on Cambria's observation of groundwater in monitoring wells, in the excavated UST pit, and of water seepage in the side walls of various excavations, Cambria believes that groundwater conditions may be affected by shallow seepage, perhaps due to nearby utilities and/or the former stream channel of Courtland Creek.

## CLOSING

Please call Melody Munz at (510) 420-3324 if you have any questions or comments.

Sincerely,

**Cambria Environmental Technology, Inc.**

Melody Munz
Project Engineer

Matthew W. Derby, P.E.
Senior Project Engineer

REGISTERED PROFESSIONAL ENGINEER
MATTHEW W. DERBY
No. C055475
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STATE OF CALIFORNIA

Figures: 1 - Vicinity/Area Well Survey Map
2 - Soil Sample Location Map

Tables: 1 - Soil Analytical Results
2 - Groundwater Analytical Results

Attachments: A - Standard Tank Removal Sampling Procedures
B - Standard Piping and Dispenser Removal Sampling Procedures
C - Laboratory Analytical Data
D - Soil Disposal Confirmation
E - Bill of Lading

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869
Barney Chan, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577
Eric Pender, L.A. Perks, 525 Spice Island Drive, Sparks, NV 89431
Perry Pineda, 1926 Contra Costa Blvd #166, Pleasant Hill, CA 94523
Roland C. Malone, Jr., PO Box 2744, Castro Valley, CA 94546

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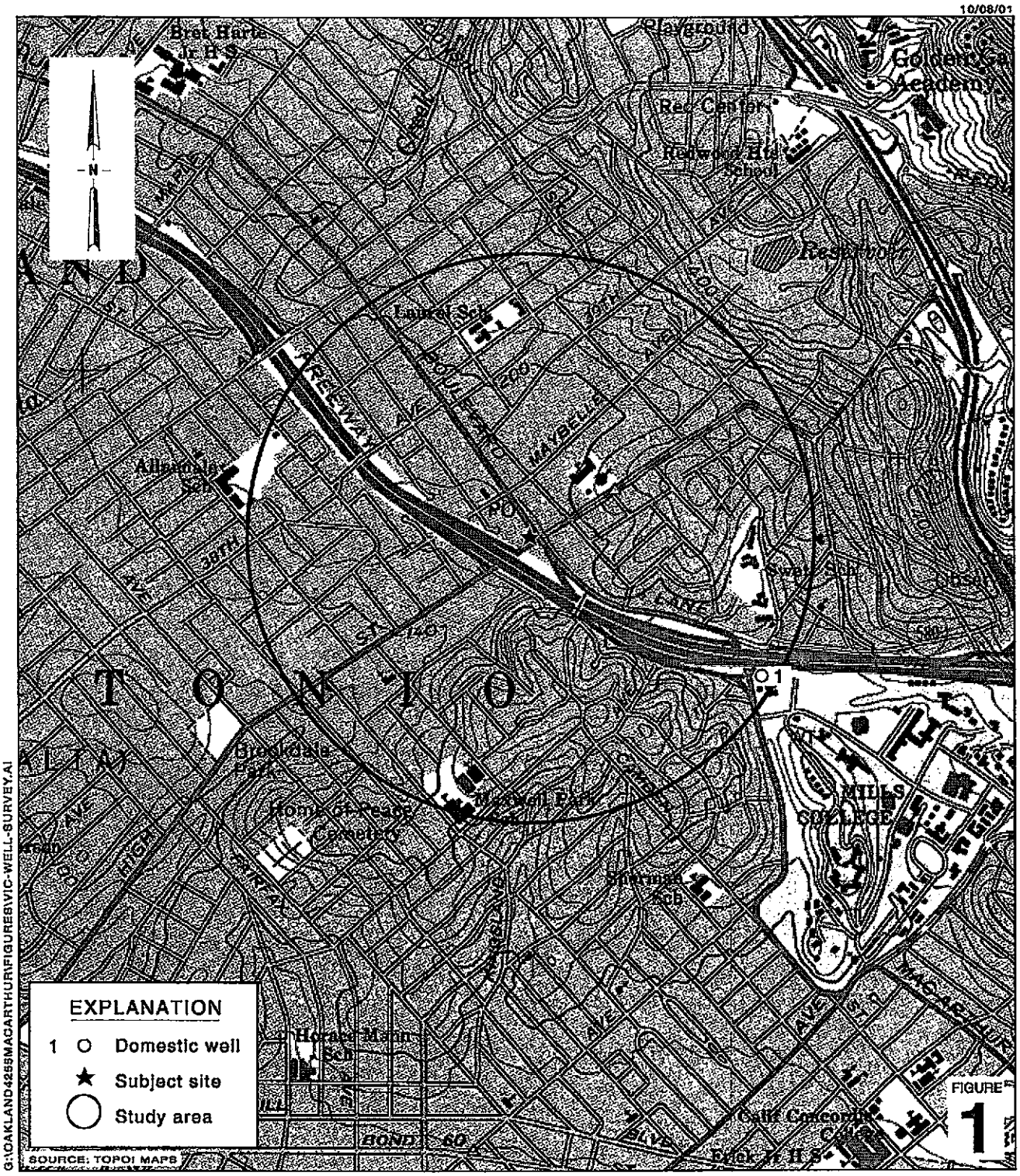


**Shell-branded Service Station**
4255 MacArthur Boulevard
Oakland, California
Incident #98995758

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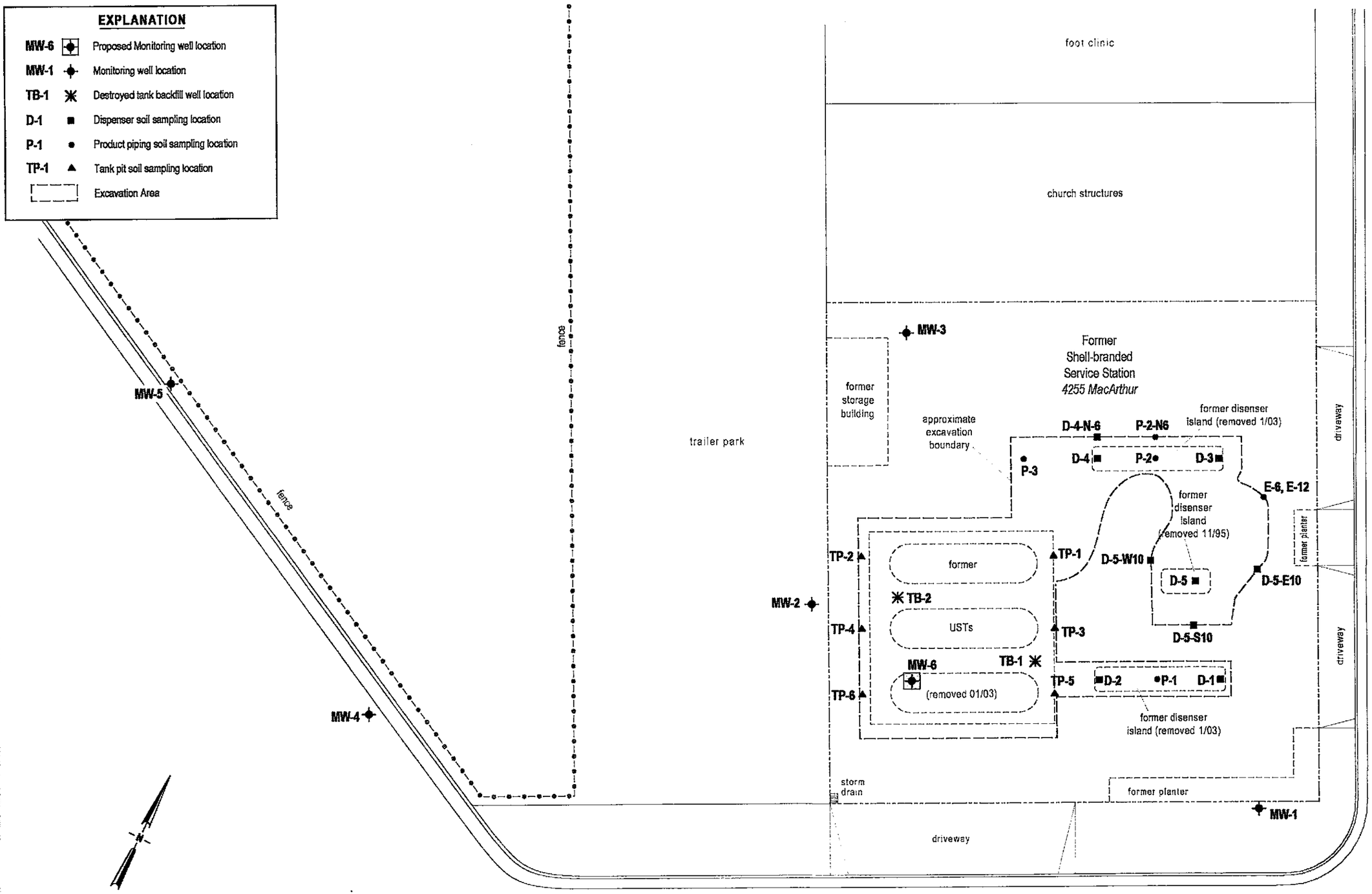
**Vicinity / Area Well Survey Map**
(1/2 Mile Radius)

04/21/03

# Soil Sample Location Map

**EXPLANATION**

- MW-6 — Proposed Monitoring well location
- MW-1 — Monitoring well location
- TB-1 — Destroyed tank backfill well location
- D-1 — Dispenser soil sampling location
- P-1 — Product piping soil sampling location
- TP-1 — Tank pit soil sampling location
- Excavation Area

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**Shell-branded Service Station**
4255 MacArthur Boulevard
Oakland, California
Incident #98995758

FIGURE
**2**

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**Table 1. Soil Analytical Results** - Shell-branded Service Station - 4255 MacArthur, Oakland, California. Incident # 98995758

| Sample ID | Sample Date | Depth (fbg) | TPHg | MTBE | Benzene | Toluene (ppm) | Ethyl-benzene | Total Xylenes | Total Lead |
|---|---|---|---|---|---|---|---|---|---|
| TP-1 | 1/27/2003 | 10.5 | **91** | <0.5 | **0.31** | **0.074** | **1.3** | **5.9** | **3.35** |
| TP-2 | 1/27/2003 | 10.0 | **2.0** | <0.5 | <0.005 | <0.005 | <0.005 | <0.005 | <0.500 |
| TP-3 | 1/27/2003 | 11.0 | <1.0 | <0.5 | **0.048** | <0.005 | **0.010** | **0.0089** | **1.13** |
| TP-4 | 1/27/2003 | 10.0 | **1.6** | <0.5 | <0.005 | <0.005 | <0.005 | **0.0086** | **1.58** |
| TP-5 | 1/27/2003 | 10.0 | **380** | **1.2** | **1.7** | **0.45** | **3.7** | **15** | **0.836** |
| TP-6 | 1/27/2003 | 10.0 | **2.1** | **1.2** | <0.005 | <0.005 | <0.005 | <0.005 | <0.500 |
| D-1 | 1/30/2003 | 3.0 | **260** | **0.64** | <0.005 | **3.9** | **5.0** | **1.2** | **5.55** |
| D-1-6.5 | 1/31/2003 | 6.5 | **87** | <0.5 | **0.11** | <0.025 | **0.58** | **0.51** | NA |
| D-2 | 1/30/2003 | 4.0 | <1.0 | <0.5 | **0.0080** | <0.005 | **0.0052** | **0.0081** | **4.95** |
| D-2-5.5 | 1/31/2003 | 5.5 | **3.7** | **0.6** | **0.22** | <0.005 | **0.064** | **0.073** | NA |
| D-3 | 1/30/2003 | 3.0 | **130** | <0.5 | <0.025 | **0.030** | **1.2** | **8.8** | **5.45** |
| D-3-8 | 1/31/2003 | 8.0 | **53** | <0.5 | **0.27** | <0.025 | **0.13** | **0.38** | NA |
| D-4 | 1/30/2003 | 3.0 | **51** | <0.5 | **0.11** | <0.025 | **0.59** | **0.12** | **4.24** |
| D-4-8 | 1/31/2003 | 8.0 | **1,100** | <0.5 | **2.2** | <0.050 | **10** | **9.9** | NA |
| D-4-12 | 2/4/2003 | 12.0 | **2.9** | <0.5 | **0.19** | <0.005 | **0.036** | **0.17** | NA |
| D-4-N6 | 2/4/2003 | 6.0 | **5.5** | <0.5 | **0.024** | **0.10** | **0.025** | **0.11** | NA |
| D-5-6.0 | 1/31/2003 | 6.0 | **2,200** | <0.5 | **2.0** | **6.5** | **28** | **110** | NA |
| D-5-14 | 2/4/2003 | 14.0 | <1.0 | <0.5 | <0.005 | <0.005 | <0.005 | <0.005 | NA |
| D-5-S10 | 2/4/2003 | 10.0 | <1.0 | **0.9** | <0.005 | <0.005 | <0.005 | <0.005 | NA |
| D-5-W10 | 2/4/2003 | 10.0 | **160** | <0.5 | **0.40** | <0.025 | **0.035** | <0.050 | NA |
| D-5-E10 | 2/4/2003 | 10.0 | **35** | <0.5 | **0.035** | <0.005 | **0.051** | **0.017** | NA |
| P-1 | 1/30/2003 | 3.0 | **130** | <0.5 | **0.058** | <0.025 | **1.5** | **1.4** | **11.3** |
| P-1-5.5 | 1/31/2003 | 5.5 | <1.0 | <0.5 | <0.005 | <0.005 | <0.005 | <0.005 | NA |
| P-2 | 1/30/2003 | 3.0 | **420** | <0.5 | **1.5** | **0.36** | **8.6** | **21** | **4.96** |

**Table 1. Soil Analytical Results** - Shell-branded Service Station - 4255 MacArthur, Oakland, California. Incident # 98995758

| Sample ID | Sample Date | Depth (fbg) | TPHg | MTBE | Benzene | Toluene | Ethyl-benzene | Total Xylenes | Total Lead |
|---|---|---|---|---|---|---|---|---|---|
| | | | ← | | | (ppm) | | | → |
| P-2-8 | 1/31/2003 | 8.0 | **910** | <0.5 | **1.2** | <0.050 | **16** | **32** | NA |
| P-2-12 | 2/4/2003 | 12.0 | <1.0 | <0.5 | <0.005 | <0.005 | <0.005 | <0.005 | NA |
| P-2-N6 | 2/4/2003 | 6.0 | **42** | <0.5 | **0.12** | **0.063** | **0.45** | **3.6** | NA |
| P-3 | 1/30/2003 | 3.0 | <1.0 | <0.5 | **0.0079** | <0.005 | **0.0084** | **0.0050** | **3.15** |
| P-3-8 | 1/31/2003 | 8.0 | **420** | <0.5 | **0.46** | <0.050 | **5.2** | **13** | NA |
| E-6 | 2/4/2003 | 6.0 | **1.9** | <0.5 | **0.030** | **0.076** | **0.069** | **0.33** | NA |
| E-12 | 2/4/2003 | 12.0 | **21** | <0.5 | <0.005 | <0.005 | **0.062** | **0.42** | NA |

**Notes and Abbreviations:**

ppm = parts per million

fbg = feet below grade

<X = Below laboratory detection limit of X

TPHg = Total petroleum hydrocarbons as gasoline, analyzed by EPA Method 8260B

BTEX = Benzene, ethylbenzene, toluene, xylenes, analyzed by EPA Method 8260B

MTBE = Methyl tertiary butyl ether, analyzed by by EPA Method 8260B

Total Lead by EPA Method 6010B

NA = Not Analyzed

**Table 2. Groundwater Analytical Results** - Shell-branded Service Station - 4255 MacArthur, Oakland, California. Incident # 98995758.

| Sample ID | Sample Date | TPHg | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Lead |
|---|---|---|---|---|---|---|---|---|
| | | ← | | | (ppb) | | | → |
| TP-1-Water | 1/28/2003 | **11,000** | **410** | **1,900** | **230** | **2,000** | **5,200** | **15** |

**Notes and Abbreviations:**

ppb = parts per billion

TPHg = Total petroleum hydrocarbons as gasoline, analyzed by EPA Method 8260B.

BTEX = Benzene, toluene, ethylbenzene, xylenes, analyzed by EPA Method 8260B.

MTBE = Methyl tertiary butyl ether, analyzed by EPA Method 8260B.

<X = Below laboratory detection limit of X

# ATTACHMENT A

Standard Tank Removal Sampling Procedures

## STANDARD TANK REMOVAL SAMPLING PROCEDURES

This document describes Cambria Environmental Technology's standard operating procedures for collecting soil and ground water samples during underground storage tank 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.

### Tank Removal Sampling

The objective of sample collection during routine underground storage tank removals is to determine whether hydrocarbons or other stored chemicals have leaked to the subsurface. If no ground water is encountered within the tank excavation, Cambria will sample native soil 1 to 2 ft beneath the removed tank. Additional soil samples may also be collected at locations of obvious spillage to determine maximum concentrations in the surrounding soils. For underground storage tanks with a capacity of less than 1,000 gallons, one soil sample is collected beneath the fill end of the tank. For tanks with a capacity of between 1,000 and 10,000 gallons, one soil sample is collected beneath each end of the tank. For tanks larger than 10,000 gallons, 3 or more soil samples are collected beneath the removed tank. We also collect one soil sample for every 20 ft of product piping.

In cases where ground water is encountered within underground storage tank excavations, Cambria will collect confirmatory soil samples from the excavation sidewalls just above the soil/ground water interface and a representative ground water sample from the excavation. The excavation is typically purged and allowed to recover prior to collecting the water sample. For tanks with capacities of 10,000 gallons or less, one soil sample is collected from the wall at each end of the tank excavation. For tanks with capacities greater than 10,000 gallons, or tank clusters, at least four soil samples are collected from the excavation walls next to the tank ends. Piping samples are collected in native soil 1 to 2 ft beneath the removed piping. One sample is typically collected for every 20 linear ft of piping unless regulatory agencies approve of different sampling requirements.

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.

The ground water sample is collected using steam cleaned Teflon or PVC bailers, decanted into a volatile organic analysis (VOA) bottle or other appropriate clean sample container, refrigerated and transported under chain of custody to a State certified analytic laboratory.

# ATTACHMENT B

Standard Piping and Dispenser Removal Sampling Procedures

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## 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.

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**ATTACHMENT C**

Laboratory Analytical Data

KIFF ANALYTICAL LLC

Report Number : 31116
Date : 01/28/2003

Melody Munz
Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, CA 94608

Subject : 1 Water Sample and 6 Soil Samples
Project Name : 4255 MacArthur - Oakland
Project Number : 245-0524
P.O. Number : 98995758

Dear Ms. Munz,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 31116
Date : 01/28/2003

Subject : 1 Water Sample and 6 Soil Samples
Project Name : 4255 MacArthur - Oakland
Project Number : 245-0524
P.O. Number : 98995758

# Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples TP-4, TP-2, TP-5, TP-1, TP-3, TP-6 for the analytes Tert-Butanol, Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Approved By: Joel Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31116
Date : 01/28/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **TP-1-Water** Matrix : Water Lab Number : 31116-01
Sample Date :01/27/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **410** | 10 | ug/L | EPA 8260B | 01/28/2003 |
| **Toluene** | **1900** | 10 | ug/L | EPA 8260B | 01/28/2003 |
| **Ethylbenzene** | **230** | 10 | ug/L | EPA 8260B | 01/28/2003 |
| **Total Xylenes** | **2000** | 10 | ug/L | EPA 8260B | 01/28/2003 |
| **Methyl-t-butyl ether (MTBE)** | **5200** | 100 | ug/L | EPA 8260B | 01/28/2003 |
| **TPH as Gasoline** | **11000** | 1000 | ug/L | EPA 8260B | 01/28/2003 |
| Toluene - d8 (Surr) | 99.9 | | % Recovery | EPA 8260B | 01/28/2003 |
| 4-Bromofluorobenzene (Surr) | 111 | | % Recovery | EPA 8260B | 01/28/2003 |

Sample : **TP-1** Matrix : Soil Lab Number : 31116-02
Sample Date :01/27/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.31** | 0.025 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Toluene** | **0.074** | 0.025 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Ethylbenzene** | **1.3** | 0.025 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Total Xylenes** | **5.9** | 0.050 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 01/28/2003 |
| **TPH as Gasoline** | **91** | 5.0 | mg/Kg | EPA 8260B | 01/28/2003 |
| Toluene - d8 (Surr) | 102 | | % Recovery | EPA 8260B | 01/28/2003 |
| 4-Bromofluorobenzene (Surr) | 112 | | % Recovery | EPA 8260B | 01/28/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31116
Date : 01/28/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **TP-3** Matrix : Soil Lab Number : 31116-03
Sample Date :01/27/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.048** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Ethylbenzene** | **0.010** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Total Xylenes** | **0.0089** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 01/28/2003 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 01/28/2003 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 01/28/2003 |
| 4-Bromofluorobenzene (Surr) | 99.3 | | % Recovery | EPA 8260B | 01/28/2003 |

Sample : **TP-5** Matrix : Soil Lab Number : 31116-04
Sample Date :01/27/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **1.7** | 0.025 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Toluene** | **0.45** | 0.025 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Ethylbenzene** | **3.7** | 0.025 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Total Xylenes** | **15** | 0.050 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Methyl-t-butyl ether (MTBE)** | **1.2** | 0.5 | mg/Kg | EPA 8260B | 01/28/2003 |
| **TPH as Gasoline** | **380** | 50 | mg/Kg | EPA 8260B | 01/28/2003 |
| Toluene - d8 (Surr) | 99.5 | | % Recovery | EPA 8260B | 01/28/2003 |
| 4-Bromofluorobenzene (Surr) | 110 | | % Recovery | EPA 8260B | 01/28/2003 |

Joel Kiff

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31116
Date : 01/28/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **TP-6** Matrix : Soil Lab Number : 31116-05
Sample Date :01/27/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Methyl-t-butyl ether (MTBE)** | **1.2** | 0.5 | mg/Kg | EPA 8260B | 01/28/2003 |
| **TPH as Gasoline** | **2.1** | 1.0 | mg/Kg | EPA 8260B | 01/28/2003 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 01/28/2003 |
| 4-Bromofluorobenzene (Surr) | 99.0 | | % Recovery | EPA 8260B | 01/28/2003 |

Sample : **TP-4** Matrix : Soil Lab Number : 31116-06
Sample Date :01/27/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/27/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/27/2003 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/27/2003 |
| **Total Xylenes** | **0.0086** | 0.005 | mg/Kg | EPA 8260B | 01/27/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 01/27/2003 |
| **TPH as Gasoline** | **1.6** | 1.0 | mg/Kg | EPA 8260B | 01/27/2003 |
| Toluene - d8 (Surr) | 97.2 | | % Recovery | EPA 8260B | 01/27/2003 |
| 4-Bromofluorobenzene (Surr) | 101 | | % Recovery | EPA 8260B | 01/27/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31116
Date : 01/28/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **TP-2** Matrix : Soil Lab Number : 31116-07
Sample Date :01/27/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 01/28/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 01/28/2003 |
| **TPH as Gasoline** | **2.0** | 1.0 | mg/Kg | EPA 8260B | 01/28/2003 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 01/28/2003 |
| 4-Bromofluorobenzene (Surr) | 110 | | % Recovery | EPA 8260B | 01/28/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31116

Date : 01/28/2003

**QC Report : Method Blank Data**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/27/2003 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/27/2003 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/27/2003 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/27/2003 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 01/27/2003 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 01/27/2003 |
| Toluene - d8 (Surr) | 95.9 | | % | EPA 8260B | 01/27/2003 |
| 4-Bromofluorobenzene (Surr) | 103 | | % | EPA 8260B | 01/27/2003 |
| Benzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 01/27/2003 |
| Toluene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 01/27/2003 |
| Ethylbenzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 01/27/2003 |
| Total Xylenes | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 01/27/2003 |
| Methyl-t-butyl ether (MTBE) | < 0.5 | 0.5 | mg/Kg | EPA 8260B | 01/27/2003 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 01/27/2003 |
| Toluene - d8 (Surr) | 95.7 | | % | EPA 8260B | 01/27/2003 |
| 4-Bromofluorobenzene (Surr) | 101 | | % | EPA 8260B | 01/27/2003 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31116

Date : 01/28/2003

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 31086-01 | <0.50 | 39.9 | 39.7 | 37.0 | 41.1 | ug/L | EPA 8260B | 1/27/03 | 92.6 | 104 | 11.1 | 70-130 | 25 |
| Toluene | 31086-01 | <0.50 | 39.9 | 39.7 | 34.8 | 38.9 | ug/L | EPA 8260B | 1/27/03 | 87.2 | 98.0 | 11.6 | 70-130 | 25 |
| Tert-Butanol | 31086-01 | <5.0 | 200 | 198 | 197 | 196 | ug/L | EPA 8260B | 1/27/03 | 98.7 | 98.8 | 0.132 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 31086-01 | <0.50 | 39.9 | 39.7 | 34.5 | 35.7 | ug/L | EPA 8260B | 1/27/03 | 86.5 | 89.9 | 3.88 | 70-130 | 25 |
| Benzene | 31116-06 | <0.0050 | 0.0990 | 0.0976 | 0.0892 | 0.0881 | mg/Kg | EPA 8260B | 1/28/03 | 90.2 | 90.4 | 0.222 | 70-130 | 25 |
| Toluene | 31116-06 | <0.0050 | 0.0990 | 0.0976 | 0.0901 | 0.0890 | mg/Kg | EPA 8260B | 1/28/03 | 91.0 | 91.2 | 0.165 | 70-130 | 25 |
| Tert-Butanol | 31116-06 | 5.5 | 0.495 | 0.488 | 4.67 | 3.91 | mg/Kg | EPA 8260B | 1/28/03 | 0.00 | 0.00 | 0.00 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 31116-06 | 0.41 | 0.0990 | 0.0976 | 0.360 | 0.302 | mg/Kg | EPA 8260B | 1/28/03 | 0.00 | 0.00 | 0.00 | 70-130 | 25 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31116

Date : 01/28/2003

**QC Report : Laboratory Control Sample (LCS)**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Benzene | 40.0 | ug/L | EPA 8260B | 1/27/03 | 105 | 70-130 |
| Toluene | 40.0 | ug/L | EPA 8260B | 1/27/03 | 98.7 | 70-130 |
| Tert-Butanol | 200 | ug/L | EPA 8260B | 1/27/03 | 94.6 | 70-130 |
| Methyl-t-Butyl Ether | 40.0 | ug/L | EPA 8260B | 1/27/03 | 93.7 | 70-130 |
| | | | | | | |
| Benzene | 0.0385 | mg/Kg | EPA 8260B | 1/27/03 | 103 | 70-130 |
| Toluene | 0.0385 | mg/Kg | EPA 8260B | 1/27/03 | 95.1 | 70-130 |
| Tert-Butanol | 0.193 | mg/Kg | EPA 8260B | 1/27/03 | 92.3 | 70-130 |
| Methyl-t-Butyl Ether | 0.0385 | mg/Kg | EPA 8260B | 1/27/03 | 84.1 | 70-130 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Calscience
Environmental
Laboratories, Inc.

January 28, 2003

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.: 03-01-1379**
**Client Reference: 4255 MacArthur - Oakland**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/28/2003 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Michael J. Crisostomo
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

# ANALYTICAL REPORT

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 01/28/03
Work Order No: 03-01-1379
Preparation: Total Digestion
Method: EPA 6010B

Project: 4255 MacArthur - Oakland



| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| TP-1 | 03-01-1379-2 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 5.35 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| TP-3 | 03-01-1379-3 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 1.13 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| TP-5 | 03-01-1379-4 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 0.636 | 0.500 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| TP-6 | 03-01-1379-5 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | ND | 0.500 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| TP-4 | 03-01-1379-6 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 1.58 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| TP-2 | 03-01-1379-7 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | ND | 0.500 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| Method Blank | 097-01-002-4,002 | N/A | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | ND | 0.500 | 1 | | mg/kg |

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# ANALYTICAL REPORT

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 01/28/03
Work Order No: 03-01-1379
Preparation: Total Digestion
Method: EPA 6010B

Project: 4255 MacArthur - Oakland



| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| TP-1-Water | 03-01-1379-1 | 01/27/03 | Aqueous | 01/28/03 | 01/28/03 | 030128L02 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 0.0105 | 0.0100 | 1 | | mg/L |

| Method Blank | 097-01-003-2,788 | N/A | Aqueous | 01/28/03 | 01/28/03 | 030128L02 |
|---|---|---|---|---|---|---|

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | ND | 0.0100 | 1 | | mg/L |

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Project: 4255 MacArthur - Oakland

Date Received: 01/28/03
Work Order No: 03-01-1379
Preparation: Total Digestion
Method: EPA 6010B

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| 03-01-1370-3 | Solid | ICP 3300 | 01/28/03 | 01/28/03 | 030128S01 |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Lead | 95 | 94 | 75-125 | 1 | 0-20 | |

Calscience Environmental Laboratories, Inc.

# Quality Control - Laboratory Control Sample

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Project: 4255 MacArthur - Oakland

Date Received: 01/28/03
Work Order No: 03-01-1379
Preparation: Total Digestion
Method: EPA 6010B

| Quality Control Sample ID | Matrix | Instrument | Date Analyzed | Lab File ID | LCS Batch Number |
|---|---|---|---|---|---|
| 097-01-002-4,092 | Solid | ICP 3300 | 01/28/03 | 030128-1-01 | 030128L01 |

| Parameter | Conc Added | Conc Recovered | %Rec | %Rec CL | Qualifiers |
|---|---|---|---|---|---|
| Lead | 50.0 | 49.6 | 99 | 80-120 | |

Calscience Environmental Laboratories, Inc.

## Quality Control - Laboratory Control Sample

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Project: 4255 MacArthur - Oakland

Date Received: 01/28/03
Work Order No: 03-01-1379
Preparation: Total Digestion
Method: EPA 6010B

| Quality Control Sample ID | Matrix | Instrument | Date Analyzed | Lab File ID | LCS Batch Number |
|---|---|---|---|---|---|
| 097-01-003-2,788 | Aqueous | ICP 3300 | 01/28/03 | 030128-I-02 | 030128L02 |

| Parameter | Conc Added | Conc Recovered | %Rec | %Rec CL | Qualifiers |
|---|---|---|---|---|---|
| Lead | 1.00 | 0.985 | 99 | 80-120 | |

Calscience Environmental Laboratories, Inc.

# GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 03-01-1379

| Qualifier | Definition |
|---|---|
| ND | Not detected at indicated reporting limit. |

KIFF ANALYTICAL LLC
2795 Second Street, Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 1379 Page 1 of 1

# Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Joel Kiff

EDF Report? _X_ Yes __No

Company/Address: Kiff Analytical, LLC

Recommended but not mandatory to complete this section:

Sampling Company Log Code: CETO

Global ID: T0600101261

Phone No.: FAX No.:

EDF Deliverable to (Email Address): inbox@kiffanalytical.com

Project Number: 245-0524 P.O. No.: 31116

E-mail address: inbox@kiffanalytical.com

Project Name: 4255 MacArtur - Oakland

Project Address:

Analysis Request

Date Due: Janary 28, 2003

For Lab Use Only

| Sample Designation | Sampling Date | Sampling Time | Container: Glass Jar | Container: Poly | Container: Amber | Container: Sleeve | Container: VOA | Preservative: HCl | Preservative: HNO3 | Preservative: ICE | Preservative: NONE | Matrix: WATER | Matrix: SOIL | TOTAL LEAD | HOLD * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP-1-Water | 1/27/03 | 10:40 | | | | | 3 | 3 | | X | | X | | | X |
| TP-1 | 1/27/03 | 10:55 | 1 | | | | | | | X | | | X | X | |
| TP-3 | 1/27/03 | 11:05 | 1 | | | | | | | X | | | X | X | |
| TP-5 | 1/27/03 | 11:18 | 1 | | | | | | | X | | | X | X | |
| TP-6 | 1/27/03 | 11:30 | 1 | | | | | | | X | | | X | X | |
| TP-4 | 1/27/03 | 11:38 | 1 | | | | | | | X | | | X | X | |
| TP-2 | 1/27/03 | 11:50 | 1 | | | | | | | X | | | X | X | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| | Date | Time | |
|---|---|---|---|
| Relinquished by: [signature] Kiff Analytical | 1/27/03 | 1915 | Received by: |
| Relinquished by: | | | Received by: |
| Relinquished by: | Date 01/28/03 | Time 830 | Received by Laboratory: [signature] |

Remarks: * KIFF WILL CONTACT CSE ABOUT WATER SAMPLE.

Incident No. 98995758, SAP # 135701

Bill to:

KIFF ANALYTICAL LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

REVISED

Lab No. _____ Page 1 of 1

# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF to): Joel Kiff | EDF Report? _X_ Yes __No |
| Company/Address: Kiff Analytical, LLC | Recommended but not mandatory to complete this section: |
| Phone No.: | FAX No.: |
| Sampling Company Log Code: CETO | |
| Global ID: T0600101261 | |
| Project Number: 245-0524 | P.O. No.: 31116 |
| EDF Deliverable to (Email Address): inbox@kiffanalytical.com | |
| Project Name: 4255 MacArtur - Oakland | E-mail address: inbox@kiffanalytical.com |
| Project Address: | |

| Sample Designation | Sampling Date | Sampling Time | Container: Glass Jar | Container: Poly | Container: Amber | Container: Sleeve | Container: VOA | Preservative: HCl | Preservative: HNO3 | Preservative: ICE | Preservative: NONE | Matrix: WATER | Matrix: SOIL | Analysis Request: TOTAL LEAD | Date Due: January 28, 2003 | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TP-1-Water | 1/27/2003 | 10:40 | | | | | 3 | 3 | | X | | X | | X | X | |
| TP-1 | 1/27/2003 | 10:55 | 1 | | | | | | | X | | | X | X | X | |
| TP-3 | 1/27/2003 | 11:05 | 1 | | | | | | | X | | | X | X | X | |
| TP-5 | 1/27/2003 | 11:18 | 1 | | | | | | | X | | | X | X | X | |
| TP-6 | 1/27/2003 | 11:30 | 1 | | | | | | | X | | | X | X | X | |
| TP-4 | 1/27/2003 | 11:38 | 1 | | | | | | | X | | | X | X | X | |
| TP-2 | 1/27/2003 | 11:50 | 1 | | | | | | | X | | | X | X | X | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Relinquished by: | Date | Time | Received by: | Remarks: PLEASE RUN WATER SAMPLE ALSO! |
| Relinquished by: | Date | Time | Received by: | Incident No. 98995758, SAP # 135701 |
| Relinquished by: | Date | Time | Received by Laboratory: | Bill to: |

# Kiff Analytical, LLC

## FACSIMILE COVER LETTER

DATE: Jan 28, 2003

TO: Steve Nowak

COMPANY: Cal Science Environmental

FAX NO: 714-894-7501

FROM: Michelle

Total number of pages to follow: 1 Original to Follow? Yes (No)

Comments:

Please run the water sample for total lead analysis, along with soils.

Thank you,

Michelle

Analytical Services

2795 Second Street, Suite 300
Davis, California 95616
Phone 530.297.4800 Fax 530.297.4808

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

# SHELL Chain Of Custody Record

Shell Project Manager to be invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

31116

INCIDENT NUMBER (S&E ONLY): 98995757058

SAP or CRMT NUMBER (TS/CRMT): 135701

DATE: 1/27/03

PAGE: 1 of 1

| SAMPLING COMPANY: | LOG CODE: | SITE ADDRESS (Street and City): | GLOBAL ID NO.: |
|---|---|---|---|
| Cambria Environmental Technology | CETO | 4255 MacArthur - Oakland | T0600101261 |

| ADDRESS: | EDF DELIVERABLE TO (Responsible Party or Designee): | PHONE NO.: | E-MAIL: | CONSULTANT PROJECT NO.: |
|---|---|---|---|---|
| 1144-65TH Street, Oakland, CA 94608 | edfshelloakland@cambria-env.com | | | 245-0524 |

| PROJECT CONTACT (Hardcopy or PDF Report to): | TELEPHONE: | FAX: | E-MAIL: | SAMPLER NAME(S) (Print): |
|---|---|---|---|---|
| Melody Munz | 510-420-3324 | 510-420-9170 | mmunz@cambria-env.com | Jason K. Gerke |

TURNAROUND TIME (BUSINESS DAYS): ☐ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☒ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

CC REPORT TO: jgerke@cambria-env.com

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT. | TPH - Gas, Purgeable | BTEX | MTBE (8021B - 5ppb RL) | MTBE (8260B - 0.5ppb RL) | Oxygenates (5) by (8260B) | Ethanol (8260B) | Methanol | EDB & 1,2-DCA (8260B) | EPA 5035 Extraction for Volatiles | VOCs Halogenated/Aromatic (8021B) | TRPH (418.1) | Vapor VOCs BTEX / MTBE (TO-15) | Vapor VOCs Full List (TO-15) | Vapor TPH (ASTM 3416m) | Vapor Fixed Gases (ASTM D1946) | Test for Disposal ( 4B- ) | TPH Lead | TPH - Diesel, Extractable (8015m) | | MTBE (8260B) Confirmation, See Note | FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes / TEMPERATURE ON RECEIPT C° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TP-1-water | 1/27/03 | 1040 | water | 5 | X | X | | X | | | | | | | | | | | | | X | | | | -01 |
| | TP-1 | | 1055 | Soil | 1 | X | X | | X | | | | | | | | | | | | | X | | | | -02 |
| | TP-3 | | 1105 | Soil | 1 | X | X | | X | | | | | | | | | | | | | X | | | | -03 |
| | TP-5 | | 1118 | Soil | 1 | X | X | | X | | | | | | | | | | | | | X | | | | -04 |
| | TP-6 | | 1130 | Soil | 1 | X | X | | X | | | | | | | | | | | | | X | | | | -05 |
| | TP-4 | | 1138 | Soil | 1 | X | X | | X | | | | | | | | | | | | | X | | | | -06 |
| | TP-2 | ↓ | 1150 | Soil | 1 | X | X | | X | | | | | | | | | | | | | X | | | | -07 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| Jason Gerke | | | |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| | | | |
| Relinquished by: (Signature) | Received by: (Signature) John Cuttle / Kiff Analytical | Date: 012703 | Time: 1334 |

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client

10/16/00 Revision

Q&Q Graphics (714) 895-9702

Dispenser/ Piping Area Analytical Results

KIFF ANALYTICAL LLC

Report Number : 31230
Date : 2/3/03

Melody Munz
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, CA

Subject : 7 Soil Samples
Project Name : 4255 MacArthur - Oakland
Project Number : 245-0524
P.O. Number : 98995758

Dear Ms. Munz,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 31230
Date : 2/3/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **D-2** Matrix : Soil Lab Number : 31230-01
Sample Date :1/30/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.0080** | 0.005 | mg/Kg | EPA 8260B | 2/2/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/2/03 |
| **Ethylbenzene** | **0.0052** | 0.005 | mg/Kg | EPA 8260B | 2/2/03 |
| **Total Xylenes** | **0.0081** | 0.005 | mg/Kg | EPA 8260B | 2/2/03 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/03 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 2/2/03 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/2/03 |
| 4-Bromofluorobenzene (Surr) | 99.6 | | % Recovery | EPA 8260B | 2/2/03 |

Sample : **D-1** Matrix : Soil Lab Number : 31230-02
Sample Date :1/30/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.64** | 0.050 | mg/Kg | EPA 8260B | 2/1/03 |
| **Toluene** | **< 0.050** | 0.050 | mg/Kg | EPA 8260B | 2/1/03 |
| **Ethylbenzene** | **3.9** | 0.050 | mg/Kg | EPA 8260B | 2/1/03 |
| **Total Xylenes** | **5.0** | 0.10 | mg/Kg | EPA 8260B | 2/1/03 |
| **Methyl-t-butyl ether (MTBE)** | **1.2** | 0.5 | mg/Kg | EPA 8260B | 2/1/03 |
| **TPH as Gasoline** | **260** | 5.0 | mg/Kg | EPA 8260B | 2/1/03 |
| Toluene - d8 (Surr) | 105 | | % Recovery | EPA 8260B | 2/1/03 |
| 4-Bromofluorobenzene (Surr) | 102 | | % Recovery | EPA 8260B | 2/1/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31230
Date : 2/3/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **P-1** Matrix : Soil Lab Number : 31230-03
Sample Date :1/30/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.058** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Ethylbenzene** | **1.5** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Total Xylenes** | **1.4** | 0.050 | mg/Kg | EPA 8260B | 2/2/03 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/03 |
| **TPH as Gasoline** | **130** | 5.0 | mg/Kg | EPA 8260B | 2/2/03 |
| Toluene - d8 (Surr) | 107 | | % Recovery | EPA 8260B | 2/2/03 |
| 4-Bromofluorobenzene (Surr) | 116 | | % Recovery | EPA 8260B | 2/2/03 |

Sample : **D-3** Matrix : Soil Lab Number : 31230-04
Sample Date :1/30/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Toluene** | **0.030** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Ethylbenzene** | **1.2** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Total Xylenes** | **8.8** | 0.050 | mg/Kg | EPA 8260B | 2/2/03 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/03 |
| **TPH as Gasoline** | **130** | 5.0 | mg/Kg | EPA 8260B | 2/2/03 |
| Toluene - d8 (Surr) | 104 | | % Recovery | EPA 8260B | 2/2/03 |
| 4-Bromofluorobenzene (Surr) | 113 | | % Recovery | EPA 8260B | 2/2/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31230
Date : 2/3/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **D-4** Matrix : Soil Lab Number : 31230-05
Sample Date :1/30/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.11** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Ethylbenzene** | **0.59** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Total Xylenes** | **0.12** | 0.025 | mg/Kg | EPA 8260B | 2/2/03 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/03 |
| **TPH as Gasoline** | **51** | 5.0 | mg/Kg | EPA 8260B | 2/2/03 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 2/2/03 |
| 4-Bromofluorobenzene (Surr) | 100 | | % Recovery | EPA 8260B | 2/2/03 |

Sample : **P-2** Matrix : Soil Lab Number : 31230-06
Sample Date :1/30/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **1.5** | 0.050 | mg/Kg | EPA 8260B | 2/2/03 |
| **Toluene** | **0.36** | 0.050 | mg/Kg | EPA 8260B | 2/2/03 |
| **Ethylbenzene** | **8.6** | 0.050 | mg/Kg | EPA 8260B | 2/2/03 |
| **Total Xylenes** | **21** | 0.050 | mg/Kg | EPA 8260B | 2/2/03 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/03 |
| **TPH as Gasoline** | **420** | 5.0 | mg/Kg | EPA 8260B | 2/2/03 |
| Toluene - d8 (Surr) | 105 | | % Recovery | EPA 8260B | 2/2/03 |
| 4-Bromofluorobenzene (Surr) | 103 | | % Recovery | EPA 8260B | 2/2/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31230
Date : 2/3/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **P-3** Matrix : Soil Lab Number : 31230-07
Sample Date :1/30/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.0079** | 0.005 | mg/Kg | EPA 8260B | 2/2/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/2/03 |
| **Ethylbenzene** | **0.0084** | 0.005 | mg/Kg | EPA 8260B | 2/2/03 |
| **Total Xylenes** | **0.0050** | 0.005 | mg/Kg | EPA 8260B | 2/2/03 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/03 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 2/2/03 |
| Toluene - d8 (Surr) | 106 | | % Recovery | EPA 8260B | 2/2/03 |
| 4-Bromofluorobenzene (Surr) | 116 | | % Recovery | EPA 8260B | 2/2/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31230

Date : 2/3/03

**QC Report : Method Blank Data**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/1/03 |
| Toluene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/1/03 |
| Ethylbenzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/1/03 |
| Total Xylenes | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/1/03 |
| Methyl-t-butyl ether (MTBE) | < 0.5 | 0.5 | mg/Kg | EPA 8260B | 2/1/03 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 2/1/03 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 2/1/03 |
| 4-Bromofluorobenzene (Surr) | 90.5 | | % | EPA 8260B | 2/1/03 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31230

Date : 2/3/03

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 31192-01 | <0.0050 | 0.0398 | 0.0395 | 0.0386 | 0.0368 | mg/Kg | EPA 8260B | 2/1/03 | 97.0 | 93.1 | 4.08 | 70-130 | 25 |
| Toluene | 31192-01 | <0.0050 | 0.0398 | 0.0395 | 0.0352 | 0.0341 | mg/Kg | EPA 8260B | 2/1/03 | 88.6 | 86.3 | 2.63 | 70-130 | 25 |
| Tert-Butanol | 31192-01 | <0.0050 | 0.199 | 0.198 | 0.175 | 0.169 | mg/Kg | EPA 8260B | 2/1/03 | 87.9 | 85.3 | 3.00 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 31192-01 | <0.0050 | 0.0398 | 0.0395 | 0.0334 | 0.0328 | mg/Kg | EPA 8260B | 2/1/03 | 84.2 | 83.0 | 1.44 | 70-130 | 25 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31230

**QC Report : Laboratory Control Sample (LCS)**

Date : 2/3/03

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Benzene | 0.0390 | mg/Kg | EPA 8260B | 2/1/03 | 99.4 | 70-130 |
| Toluene | 0.0390 | mg/Kg | EPA 8260B | 2/1/03 | 92.8 | 70-130 |
| Tert-Butanol | 0.195 | mg/Kg | EPA 8260B | 2/1/03 | 91.3 | 70-130 |
| Methyl-t-Butyl Ether | 0.0390 | mg/Kg | EPA 8260B | 2/1/03 | 88.4 | 70-130 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Calscience
Environmental
Laboratories, Inc.

February 07, 2003

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.:** **03-02-0073**
**Client Reference:** **4255 MacArthur - Oakland**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/4/2003 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Michael J. Crisostomo
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

# ANALYTICAL REPORT

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/04/03
Work Order No: 03-02-0073
Preparation: Total Digestion
Method: EPA 6010B

Project: 4255 MacArthur - Oakland



| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| D-2 | 03-02-0073-1 | 01/30/03 | Solid | 02/04/03 | 02/05/03 | 030204L07 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 4.95 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| D-1 | 03-02-0073-2 | 01/30/03 | Solid | 02/04/03 | 02/05/03 | 030204L07 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 5.55 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| P-1 | 03-02-0073-3 | 01/30/03 | Solid | 02/04/03 | 02/05/03 | 030204L07 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 11.3 | 0.5 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| D-3 | 03-02-0073-4 | 01/30/03 | Solid | 02/04/03 | 02/05/03 | 030204L07 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 5.45 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| D-4 | 03-02-0073-5 | 01/30/03 | Solid | 02/04/03 | 02/05/03 | 030204L07 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 4.24 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| P-2 | 03-02-0073-6 | 01/30/03 | Solid | 02/04/03 | 02/05/03 | 030204L07 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 4.96 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| P-3 | 03-02-0073-7 | 01/30/03 | Solid | 02/04/03 | 02/05/03 | 030204L07 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 3.15 | 0.50 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| Method Blank | 097-01-002-4,029 | N/A | Solid | 02/04/03 | 02/04/03 | 030204L07 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | ND | 0.500 | 1 | | mg/kg |

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

## Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/04/03
Work Order No: 03-02-0073
Preparation: Total Digestion
Method: EPA 6010B

Project: 4255 MacArthur - Oakland

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| 03-02-0064-1 | Solid | ICP 3300 | 02/04/03 | 02/05/03 | 030204S07 |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Lead | 99 | 100 | 75-125 | 1 | 0-20 | |

Calscience Environmental Laboratories, Inc.

## Quality Control - Laboratory Control Sample

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Project: 4255 MacArthur - Oakland

Date Received: 02/04/03
Work Order No: 03-02-0073
Preparation: Total Digestion
Method: EPA 6010B

| Quality Control Sample ID | Matrix | Instrument | Date Analyzed | Lab File ID | LCS Batch Number |
|---|---|---|---|---|---|
| 097-01-002-4,029 | Solid | ICP 3300 | 02/04/03 | 030204-I-07 | 030204L07 |

| Parameter | Conc Added | Conc Recovered | %Rec | %Rec CL | Qualifiers |
|---|---|---|---|---|---|
| Lead | 50.0 | 48.3 | 97 | 80-120 | |

Calscience Environmental Laboratories, Inc.

# GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 03-02-0073

| Qualifier | Definition |
|---|---|
| ND | Not detected at indicated reporting limit. |

Calscience Environmental Laboratories, Inc.

**WORK ORDER #: 03-02-0973**

**Cooler 1 of 1**

# SAMPLE RECEIPT FORM

**CLIENT:** Tetra Tech **DATE:** 2/4/03

## TEMPERATURE – SAMPLES RECEIVED BY:

**CALSCIENCE COURIER:**

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

**LABORATORY (Other than Calscience Courier):**

3 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: JH

## CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact): _____ Not Applicable (N/A): _____

Initial: JH

## SAMPLE CONDITION:

| | Yes | No | N/A |
|---|---|---|---|
| Chain-Of-Custody document(s) received with samples | ✓ | | |
| Sample container label(s) consistent with custody papers | ✓ | | |
| Sample container(s) intact and good condition | ✓ | | |
| Correct containers for analyses requested | ✓ | | |
| Proper preservation noted on sample label(s) | | | ✓ ✓ |
| VOA vial(s) free of headspace. | | | |
| Tedlar bag(s) free of condensation | | | ✓ |

Initial: JH

## COMMENTS:

**KIFF ANALYTICAL LLC**

2795 Second Street, Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 0073 Page 1 of 1

# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF to): Joel Kiff | EDF Report? X Yes __No |
| Company/Address: Kiff Analytical, LLC | Recommended but not mandatory to complete this section: |
| Phone No.: | FAX No.: |
| Project Number: 245-0524 | P.O. No.: 31230 |
| Project Name: 4255 MacArthur - Oakland | |
| Project Address: | |
| Sampling Company Log Code: CETO | |
| Global ID: T0600101261 | |
| EDF Deliverable to (Email Address): inbox@kiffanalytical.com | |
| E-mail address: inbox@kiffanalytical.com | |

| Sample Designation | Sampling Date | Sampling Time | Container: Glass Jar | Container: Poly | Container: Amber | Container: Sleeve | Preservative: HCl | Preservative: HNO3 | Preservative: ICE | Preservative: NONE | Matrix: WATER | Matrix: SOIL | Analysis Request: LEAD | Date Due: February 14, 2003 | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D-2 | 1/30/2003 | 1600 | 1 | | | | | | X | | | X | X | X | |
| D-1 | 1/30/2003 | 1605 | 1 | | | | | | X | | | X | X | X | |
| P-1 | 1/30/2003 | 1610 | 1 | | | | | | X | | | X | X | X | |
| D-3 | 1/30/2003 | 1615 | 1 | | | | | | X | | | X | X | X | |
| D-4 | 1/30/2003 | 1618 | 1 | | | | | | X | | | X | X | X | |
| P-2 | 1/30/2003 | 1623 | 1 | | | | | | X | | | X | X | X | |
| P-3 | 1/30/2003 | 1627 | 1 | | | | | | X | | | X | X | X | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| | Date | Time | | |
|---|---|---|---|---|
| Relinquished by: Osama Abdala | 020303 | 1835 | Received by: | Remarks: INCIDENT# 98995758 SAP# 135701 |
| Relinquished by: | Date | Time | Received by: | |
| Relinquished by: | Date 2/4/03 | Time 0900 | Received by Laboratory: | Bill to: |

TOTAL P.07

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

# SHELL Chain Of Custody Record

Shell Project Manager to be Invoiced:

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ GMT HOUSTON

Karen Petryna

31230

INCIDENT NUMBER (S&E ONLY): 98995708

SAP/ORDER NUMBER (S&E ONLY): 135701

DATE: 1/30/03

PAGE: 1 of 1

| SAMPLING COMPANY: | LOG CODE: | SITE ADDRESS (Street and City): | GLOBAL ID NO.: |
|---|---|---|---|
| Cambria Environmental Technology | CETO | 4255 MacArthur - Oakland | T0600101261 |

| ADDRESS: | EDF DELIVERABLE TO (Responsible Party or Designee): | PHONE NO.: | E-MAIL: | CONSULTANT PROJECT NO.: |
|---|---|---|---|---|
| 1144-65TH Street, Oakland, CA 94608 | edfshelloakland@cambria-env.com | | | 245-0524 |

| PROJECT CONTACT (Hardcopy or PDF Report to): | TELEPHONE: | FAX: | E-MAIL: |
|---|---|---|---|
| Melody Munz | 510-420-3324 | 510-420-9170 | mmunz@cambria-env.com |

SAMPLER NAME(S) (Print): Jason K. Gerke

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS):
☒ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☑ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

Lead is not a rush, Standard TAT

CC REPORT TO: jgerke@cambria-env.com

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT. | TPH - Gas, Purgeable | BTEX | MTBE (8021B - 5ppb RL) | MTBE (8260B - 0.5ppb RL) | Oxygenates (5) by (8260B) | Ethanol (8260B) | Methanol | EDB & 1,2-DCA (8260B) | EPA 5035 Extraction for Volatiles | VOCs Halogenated/Aromatic (8021B) | TRPH (418.1) | Vapor VOCs BTEX / MTBE (TO-15) | Vapor VOCs Full List (TO-15) | Vapor TPH (ASTM 3416m) | Vapor Fixed Gases (ASTM D1946) | Test for Disposal ( 48- ) | Lead | TPH - Diesel, Extractable (8015m) | | MTBE (8260B) Confirmation, See Note | TEMPERATURE ON RECEIPT C° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D-2 | 01/30/03 | 1600 | Soil | 1 | X | X | | X | | | | | | | | | | | | | X | | | | -01 |
| | D-1 | | 1605 | | | X | X | | X | | | | | | | | | | | | | X | | | | -02 |
| | P-1 | | 1610 | | | X | X | | X | | | | | | | | | | | | | X | | | | -03 |
| | D-3 | | 1615 | | | X | X | | X | | | | | | | | | | | | | X | | | | -04 |
| | ~~B~~ D-4 | | 1618 | | | X | X | | X | | | | | | | | | | | | | X | | | | -05 |
| | P-2 | | 1623 | | | X | X | | X | | | | | | | | | | | | | X | | | | -06 |
| | P-3 | | 1627 | | | X | X | | X | | | | | | | | | | | | | X | | | | -07 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

FIELD NOTES:
Container/Preservative or PID Readings or Laboratory Notes

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| [signature] | | 1/30/03 | 1730 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| | | | |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| | John Cuttal Kiff Analytical | 013103 | 12-09 |

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

Q&Q Graphic (714) 898-9702

KIFF ANALYTICAL LLC

Report Number : 31232
Date : 2/3/2003

Melody Munz
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, CA

Subject : 8 Soil Samples
Project Name : 4255 MacArthur - Oakland
Project Number : 245-0524
P.O. Number : 98995758

Dear Ms. Munz,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 31232
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **P-2-8** Matrix : Soil Lab Number : 31232-01
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **1.2** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Toluene** | **< 0.050** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Ethylbenzene** | **16** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Total Xylenes** | **32** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/1/2003 |
| **TPH as Gasoline** | **910** | 20 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 105 | | % Recovery | EPA 8260B | 2/1/2003 |
| 4-Bromofluorobenzene (Surr) | 102 | | % Recovery | EPA 8260B | 2/1/2003 |

Sample : **D-4-8** Matrix : Soil Lab Number : 31232-02
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **2.2** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Toluene** | **< 0.050** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Ethylbenzene** | **10** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Total Xylenes** | **9.9** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/1/2003 |
| **TPH as Gasoline** | **1100** | 20 | mg/Kg | EPA 8260B | 2/3/2003 |
| Toluene - d8 (Surr) | 104 | | % Recovery | EPA 8260B | 2/1/2003 |
| 4-Bromofluorobenzene (Surr) | 98.8 | | % Recovery | EPA 8260B | 2/1/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31232
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **P-3-8** Matrix : Soil Lab Number : 31232-03
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.46** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Toluene** | **< 0.050** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Ethylbenzene** | **5.2** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Total Xylenes** | **13** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/1/2003 |
| **TPH as Gasoline** | **420** | 5.0 | mg/Kg | EPA 8260B | 2/1/2003 |
| Toluene - d8 (Surr) | 106 | | % Recovery | EPA 8260B | 2/1/2003 |
| 4-Bromofluorobenzene (Surr) | 103 | | % Recovery | EPA 8260B | 2/1/2003 |

Sample : **D-3-8** Matrix : Soil Lab Number : 31232-04
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.27** | 0.025 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Ethylbenzene** | **0.13** | 0.025 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Total Xylenes** | **0.38** | 0.025 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/1/2003 |
| **TPH as Gasoline** | **53** | 5.0 | mg/Kg | EPA 8260B | 2/1/2003 |
| Toluene - d8 (Surr) | 105 | | % Recovery | EPA 8260B | 2/1/2003 |
| 4-Bromofluorobenzene (Surr) | 101 | | % Recovery | EPA 8260B | 2/1/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31232
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **D-2-5.5** Matrix : Soil Lab Number : 31232-05
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.22** | 0.005 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **0.064** | 0.005 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **0.073** | 0.005 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Methyl-t-butyl ether (MTBE)** | **0.6** | 0.5 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **3.7** | 1.0 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 106 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 116 | | % Recovery | EPA 8260B | 2/2/2003 |

Sample : **P-1-5.5** Matrix : Soil Lab Number : 31232-06
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 107 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 117 | | % Recovery | EPA 8260B | 2/2/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31232
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **D-1-6.5** Matrix : Soil Lab Number : 31232-07
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.11** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **0.58** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **0.51** | 0.050 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **87** | 5.0 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 106 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 114 | | % Recovery | EPA 8260B | 2/2/2003 |

Sample : **D-5-6.0** Matrix : Soil Lab Number : 31232-08
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **2.0** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Toluene** | **6.5** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Ethylbenzene** | **28** | 0.050 | mg/Kg | EPA 8260B | 2/1/2003 |
| **Total Xylenes** | **110** | 0.50 | mg/Kg | EPA 8260B | 2/3/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/3/2003 |
| **TPH as Gasoline** | **2200** | 50 | mg/Kg | EPA 8260B | 2/3/2003 |
| Toluene - d8 (Surr) | 98.0 | | % Recovery | EPA 8260B | 2/1/2003 |
| 4-Bromofluorobenzene (Surr) | 98.7 | | % Recovery | EPA 8260B | 2/1/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31232

Date : 2/3/2003

**QC Report : Method Blank Data**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/1/2003 |
| Toluene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/1/2003 |
| Ethylbenzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/1/2003 |
| Total Xylenes | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/1/2003 |
| Methyl-t-butyl ether (MTBE) | < 0.5 | 0.5 | mg/Kg | EPA 8260B | 2/1/2003 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 2/1/2003 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 2/1/2003 |
| 4-Bromofluorobenzene (Surr) | 90.5 | | % | EPA 8260B | 2/1/2003 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31232

Date : 2/3/2003

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 31192-01 | <0.0050 | 0.0398 | 0.0395 | 0.0386 | 0.0368 | mg/Kg | EPA 8260B | 2/1/03 | 97.0 | 93.1 | 4.08 | 70-130 | 25 |
| Toluene | 31192-01 | <0.0050 | 0.0398 | 0.0395 | 0.0352 | 0.0341 | mg/Kg | EPA 8260B | 2/1/03 | 88.6 | 86.3 | 2.63 | 70-130 | 25 |
| Tert-Butanol | 31192-01 | <0.0050 | 0.199 | 0.198 | 0.175 | 0.169 | mg/Kg | EPA 8260B | 2/1/03 | 87.9 | 85.3 | 3.00 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 31192-01 | <0.0050 | 0.0398 | 0.0395 | 0.0334 | 0.0328 | mg/Kg | EPA 8260B | 2/1/03 | 84.2 | 83.0 | 1.44 | 70-130 | 25 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31232

**QC Report : Laboratory Control Sample (LCS)**

Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Benzene | 0.0390 | mg/Kg | EPA 8260B | 2/1/03 | 99.4 | 70-130 |
| Toluene | 0.0390 | mg/Kg | EPA 8260B | 2/1/03 | 92.8 | 70-130 |
| Tert-Butanol | 0.195 | mg/Kg | EPA 8260B | 2/1/03 | 91.3 | 70-130 |
| Methyl-t-Butyl Ether | 0.0390 | mg/Kg | EPA 8260B | 2/1/03 | 88.4 | 70-130 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

# SHELL Chain Of Custody Record

**Shell Project Manager to be invoiced:**

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ GMT HOUSTON

Karen Petryna

31232

INCIDENT NUMBER (SAP ONLY): 98995758

SAP/WORK ORDER NUMBER (SAP ONLY): 13570 1

DATE: 1/31/03

PAGE: 1 of 1

| SAMPLING COMPANY: | LOG CODE: | SITE ADDRESS (Street and City): | GLOBAL ID NO.: |
|---|---|---|---|
| Cambria Environmental Technology | CETO | 4255 MacArthur - Oakland | T0600101261 |

| ADDRESS: | EDF DELIVERABLE TO (Responsible Party or Designee): | PHONE NO.: | E-MAIL: | CONSULTANT PROJECT NO.: |
|---|---|---|---|---|
| 1144-65TH Street, Oakland, CA 94608 | edfshelloakland@cambria-env.com | | | 245-0524 |

| PROJECT CONTACT (Hardcopy or PDF Report to): | TELEPHONE: | FAX: | E-MAIL: | SAMPLER NAME(S) (Print): |
|---|---|---|---|---|
| Melody Munz | 510-420-3324 | 510-420-9170 | mmunz@cambria-env.com | Jason K. Gerke |

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS):

☑ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

**SPECIAL INSTRUCTIONS OR NOTES:** CHECK BOX IF EDD IS NOT NEEDED ☐

Request 24 hour TAT on D-5-60

CC REPORT TO: jgerke@cambria-env.com

**REQUESTED ANALYSIS**

| Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT. | TPH - Gas, Purgeable | BTEX | MTBE (8021B - 5ppb RL) | MTBE (8260B - 0.5ppb RL) | Oxygenates (5) by (8260B) | Ethanol (8260B) | Methanol | EDB & 1,2-DCA (8260B) | EPA 5035 Extraction for Volatiles | VOCs Halogenated/Aromatic (8021B) | TRPH (418.1) | Vapor VOCs BTEX / MTBE (TO-15) | Vapor VOCs Full List (TO-15) | Vapor TPH (ASTM 3416m) | Vapor Fixed Gases (ASTM D1946) | Test for Disposal ( 4B- ) | | TPH - Diesel, Extractable (8015m) | | MTBE (8260B) Confirmation, See Note | TEMPERATURE ON RECEIPT C° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P-2-8 | 1/31/03 | 1005 | Soil | 1 | X | X | | X | | | | | | | | | | | | | | | | | -01 |
| D-4-8 | | 1010 | | | X | X | | X | | | | | | | | | | | | | | | | | -02 |
| P-3-8 | | 1014 | | | X | X | | X | | | | | | | | | | | | | | | | | -03 |
| D-3-8 | | 1018 | | | X | X | | X | | | | | | | | | | | | | | | | | -04 |
| D-2-5.5 | | 1028 | | | X | X | | X | | | | | | | | | | | | | | | | | -05 |
| P-1-5.5 | | 1035 | | | X | X | | X | | | | | | | | | | | | | | | | | -06 |
| D-1-6.5 | | 1040 | | | X | X | | X | | | | | | | | | | | | | | | | | -07 |
| D-5-6.0 | 1/31/03 | 1045 | Soil | 1 | X | X | | X | | | | | | | | | | | | | | | | | -08 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

**FIELD NOTES:**

Container/Preservative or PID Readings or Laboratory Notes

| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| Jason Gerke | | 1/31/03 | 1200 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| | | | |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| | John Cuttle/Kiff Analytical | 013103 | 1208 |

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

C&C Graphic (714) 899-9702

KIFF ANALYTICAL LLC

Report Number : 31328
Date : 2/13/2003

Melody Munz
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, CA

Subject : 10 Soil Samples
Project Name : 4255 MacArthur - Oakland
Project Number : 245-0524
P.O. Number : 98995758

Dear Ms. Munz,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 31328
Date : 2/13/2003

Subject : 10 Soil Samples
Project Name : 4255 MacArthur - Oakland
Project Number : 245-0524
P.O. Number : 98995758

# Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples D-5-14, D-5-S10, D-4-N6, P-2-12, D-4-12, D-5-E10, E-12, D-5-W10, E-6, P-2-N6 for the analytes Benzene, Toluene, Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Approved By: Joel Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31328
Date : 2/13/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **D-5-14** Matrix : Soil Lab Number : 31328-01
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/10/2003 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 2/10/2003 |
| Toluene - d8 (Surr) | 99.1 | | % Recovery | EPA 8260B | 2/10/2003 |
| 4-Bromofluorobenzene (Surr) | 105 | | % Recovery | EPA 8260B | 2/10/2003 |

Sample : **D-5-S10** Matrix : Soil Lab Number : 31328-02
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Methyl-t-butyl ether (MTBE)** | **0.9** | 0.5 | mg/Kg | EPA 8260B | 2/10/2003 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 2/10/2003 |
| Toluene - d8 (Surr) | 98.2 | | % Recovery | EPA 8260B | 2/10/2003 |
| 4-Bromofluorobenzene (Surr) | 99.6 | | % Recovery | EPA 8260B | 2/10/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31328
Date : 2/13/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **D-5-W10** Matrix : Soil Lab Number : 31328-03
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.40** | 0.025 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Ethylbenzene** | **0.035** | 0.025 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Total Xylenes** | **< 0.050** | 0.050 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/13/2003 |
| **TPH as Gasoline** | **160** | 5.0 | mg/Kg | EPA 8260B | 2/13/2003 |
| Toluene - d8 (Surr) | 99.1 | | % Recovery | EPA 8260B | 2/13/2003 |
| 4-Bromofluorobenzene (Surr) | 112 | | % Recovery | EPA 8260B | 2/13/2003 |

Sample : **D-5-E10** Matrix : Soil Lab Number : 31328-04
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.035** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Ethylbenzene** | **0.051** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Total Xylenes** | **0.017** | 0.010 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/12/2003 |
| **TPH as Gasoline** | **35** | 1.0 | mg/Kg | EPA 8260B | 2/12/2003 |
| Toluene - d8 (Surr) | 104 | | % Recovery | EPA 8260B | 2/12/2003 |
| 4-Bromofluorobenzene (Surr) | 111 | | % Recovery | EPA 8260B | 2/12/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31328
Date : 2/13/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **D-4-N6** Matrix : Soil Lab Number : 31328-05
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.024** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Toluene** | **0.10** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Ethylbenzene** | **0.025** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Total Xylenes** | **0.11** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/10/2003 |
| **TPH as Gasoline** | **5.5** | 1.0 | mg/Kg | EPA 8260B | 2/10/2003 |
| Toluene - d8 (Surr) | 103 | | % Recovery | EPA 8260B | 2/10/2003 |
| 4-Bromofluorobenzene (Surr) | 102 | | % Recovery | EPA 8260B | 2/10/2003 |

Sample : **D-4-12** Matrix : Soil Lab Number : 31328-06
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.19** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Ethylbenzene** | **0.036** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Total Xylenes** | **0.17** | 0.010 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/12/2003 |
| **TPH as Gasoline** | **2.9** | 1.0 | mg/Kg | EPA 8260B | 2/12/2003 |
| Toluene - d8 (Surr) | 104 | | % Recovery | EPA 8260B | 2/12/2003 |
| 4-Bromofluorobenzene (Surr) | 117 | | % Recovery | EPA 8260B | 2/12/2003 |

Joel Kiff

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31328
Date : 2/13/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **P-2-N6** Matrix : Soil Lab Number : 31328-07
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.12** | 0.025 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Toluene** | **0.063** | 0.025 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Ethylbenzene** | **0.45** | 0.025 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Total Xylenes** | **3.6** | 0.025 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/13/2003 |
| **TPH as Gasoline** | **42** | 5.0 | mg/Kg | EPA 8260B | 2/13/2003 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/13/2003 |
| 4-Bromofluorobenzene (Surr) | 103 | | % Recovery | EPA 8260B | 2/13/2003 |

Sample : **P-2-12** Matrix : Soil Lab Number : 31328-08
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/10/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/10/2003 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 2/10/2003 |
| Toluene - d8 (Surr) | 97.9 | | % Recovery | EPA 8260B | 2/10/2003 |
| 4-Bromofluorobenzene (Surr) | 104 | | % Recovery | EPA 8260B | 2/10/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31328
Date : 2/13/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **E-6** Matrix : Soil Lab Number : 31328-09
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.030** | 0.005 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Toluene** | **0.076** | 0.005 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Ethylbenzene** | **0.069** | 0.005 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Total Xylenes** | **0.33** | 0.005 | mg/Kg | EPA 8260B | 2/13/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/13/2003 |
| **TPH as Gasoline** | **1.9** | 1.0 | mg/Kg | EPA 8260B | 2/13/2003 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 2/13/2003 |
| 4-Bromofluorobenzene (Surr) | 105 | | % Recovery | EPA 8260B | 2/13/2003 |

Sample : **E-12** Matrix : Soil Lab Number : 31328-10
Sample Date :2/4/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Ethylbenzene** | **0.062** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Total Xylenes** | **0.42** | 0.005 | mg/Kg | EPA 8260B | 2/12/2003 |
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/12/2003 |
| **TPH as Gasoline** | **21** | 1.0 | mg/Kg | EPA 8260B | 2/12/2003 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/12/2003 |
| 4-Bromofluorobenzene (Surr) | 102 | | % Recovery | EPA 8260B | 2/12/2003 |

Joel Kiff

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31328

Date : 2/13/2003

**QC Report : Method Blank Data**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/11/2003 |
| Toluene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/11/2003 |
| Ethylbenzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/11/2003 |
| Total Xylenes | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 2/11/2003 |
| Methyl-t-butyl ether (MTBE) | < 0.5 | 0.5 | mg/Kg | EPA 8260B | 2/11/2003 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 2/11/2003 |
| Toluene - d8 (Surr) | 101 | | % | EPA 8260B | 2/11/2003 |
| 4-Bromofluorobenzene (Surr) | 101 | | % | EPA 8260B | 2/11/2003 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31328

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Date : 2/13/2003

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 31326-13 | 0.087 | 0.0397 | 0.0398 | 0.0844 | 0.0719 | mg/Kg | EPA 8260B | 2/11/03 | 0.00 | 0.00 | 0.00 | 70-130 | 25 |
| Toluene | 31326-13 | 0.28 | 0.0397 | 0.0398 | 0.225 | 0.180 | mg/Kg | EPA 8260B | 2/11/03 | 0.00 | 0.00 | 0.00 | 70-130 | 25 |
| Tert-Butanol | 31326-13 | 0.015 | 0.198 | 0.199 | 0.155 | 0.157 | mg/Kg | EPA 8260B | 2/11/03 | 70.5 | 71.1 | 0.841 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 31326-13 | 0.33 | 0.0397 | 0.0398 | 0.307 | 0.248 | mg/Kg | EPA 8260B | 2/11/03 | 0.00 | 0.00 | 0.00 | 70-130 | 25 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31328

Date : 2/13/2003

**QC Report : Laboratory Control Sample (LCS)**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Benzene | 0.0393 | mg/Kg | EPA 8260B | 2/11/03 | 88.7 | 70-130 |
| Toluene | 0.0393 | mg/Kg | EPA 8260B | 2/11/03 | 90.2 | 70-130 |
| Tert-Butanol | 0.196 | mg/Kg | EPA 8260B | 2/11/03 | 90.7 | 70-130 |
| Methyl-t-Butyl Ether | 0.0393 | mg/Kg | EPA 8260B | 2/11/03 | 91.3 | 70-130 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL

# SHELL Chain Of Custody Record

720 Olive Drive, Suite D
Davis, CA 95616
(530) 297-4800 (530) 297-4803 fax

**Shell Project Manager to be Invoiced:**
☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON
Karen Petryna
31328

INCIDENT NUMBER (S&E ONLY): 98995757 58
SAP or CRMT NUMBER (TS/CRMT): 1 3 5 7 0 1
DATE: 2/4/03
PAGE: 1 of 1

| | |
|---|---|
| SAMPLING COMPANY: Cambria Environmental Technology | LOG CODE: CETO |
| SITE ADDRESS (Street and City): 4255 MacArthur - Oakland | GLOBAL ID NO.: T0600101261 |
| ADDRESS: 1144-65TH Street, Oakland, CA 94608 | EDF DELIVERABLE TO (Responsible Party or Designee): edfshelloakland@cambria-env.com; PHONE NO.: ; E-MAIL: ; CONSULTANT PROJECT NO.: 245-0524 |
| PROJECT CONTACT (Hardcopy or PDF Report to): Melody Munz | SAMPLER NAME(S) (Print): Jason K. Gerke |
| TELEPHONE: 510-420-3324; FAX: 510-420-9170; E-MAIL: mmunz@cambria-env.com | LAB USE ONLY |

TURNAROUND TIME (BUSINESS DAYS): ☒ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

CC REPORT TO: jgerke@cambria-env.com

REQUESTED ANALYSIS

| LAB USE ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT. | TPH - Gas, Purgeable | BTEX | MTBE (8021B - 5ppb RL) | MTBE (8260B - 0.5ppb RL) | Oxygenates (5) by (8260B) | Ethanol (8260B) | Methanol | EDB & 1,2-DCA (8260B) | EPA 5035 Extraction for Volatiles | VOCs Halogenated/Aromatic (8021B) | TRPH (418.1) | Vapor VOCs BTEX / MTBE (TO-15) | Vapor VOCs Full List (TO-15) | Vapor TPH (ASTM 3416m) | Vapor Fixed Gases (ASTM D1946) | Test for Disposal ( 48– ) | | TPH - Diesel, Extractable (8015m) | | MTBE (8260B) Confirmation, See Note | TEMPERATURE ON RECEIPT C° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D-5-14 | 2/4/03 | 1000 | Soil | 1 | X | X | | X | | | | | | | | | | | | | | | | | -01 |
| | D-5-S10 | | 1005 | | | X | X | | X | | | | | | | | | | | | | | | | | -02 |
| | D-5-W10 | | 1015 | | | X | X | | X | | | | | | | | | | | | | | | | | -03 |
| | D-5-E10 | | 1020 | | | X | X | | X | | | | | | | | | | | | | | | | | -04 |
| | D-4-N6 | | 1335 | | | X | X | | X | | | | | | | | | | | | | | | | | -05 |
| | D-4-12 | | 1340 | | | X | X | | X | | | | | | | | | | | | | | | | | -06 |
| | P-2-N6 | | 1355 | | | X | X | | X | | | | | | | | | | | | | | | | | -07 |
| | P-2-12 | | 1359 | | | X | X | | X | | | | | | | | | | | | | | | | | -08 |
| | E-6 | | 1425 | | | X | X | | X | | | | | | | | | | | | | | | | | -09 |
| | E-12 | | 1435 | | | X | X | | X | | | | | | | | | | | | | | | | | -10 |

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

| | | | |
|---|---|---|---|
| Relinquished by: (Signature) Jason Gerke | Received by: (Signature) | Date: 2/4/03 | Time: 1600 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) John Cuttle / Kiff Analytical | Date: 020503 | Time: 1128 |

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client

10/15/00 Revision

Q&Q Graphic (714) 888-9702

Soil Stockpile Analytical Results

KIFF ANALYTICAL LLC

Report Number : 31118
Date : 1/28/03

Melody Munz
Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, CA 94608

Subject : 15 Soil Samples
Project Name : 4255 MacArthur - Oakland
Project Number : 245-0524
P.O. Number : 98995758

Dear Ms. Munz,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 31118
Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-1A** Matrix : Soil Lab Number : 31118-01
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 102 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 101 | | % Recovery | EPA 8260B | 1/28/03 |

Sample : **SP-1B** Matrix : Soil Lab Number : 31118-02
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **0.060** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **0.30** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **1.5** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **99** | 5.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 103 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 99.1 | | % Recovery | EPA 8260B | 1/28/03 |

Joel Kiff

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31118
Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-1C** Matrix : Soil Lab Number : 31118-03
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/27/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/27/03 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/27/03 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/27/03 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 1/27/03 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 1/27/03 |
| 4-Bromofluorobenzene (Surr) | 99.7 | | % Recovery | EPA 8260B | 1/27/03 |

Sample : **SP-1D** Matrix : Soil Lab Number : 31118-04
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **0.011** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **0.15** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **8.4** | 5.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 97.4 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 101 | | % Recovery | EPA 8260B | 1/28/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31118
Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-1** Matrix : Soil Lab Number : 31118-05
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 1/28/03 |

Sample : **SP-2A** Matrix : Soil Lab Number : 31118-06
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.085** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **0.063** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **0.81** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **3.6** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **190** | 5.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 100 | | % Recovery | EPA 8260B | 1/28/03 |

Sample : **SP-2B** Matrix : Soil Lab Number : 31118-07
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **0.28** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **0.72** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **110** | 5.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 102 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 99.8 | | % Recovery | EPA 8260B | 1/28/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31118
Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-2C** Matrix : Soil Lab Number : 31118-08
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.0065** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **0.21** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **0.17** | 0.010 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **8.9** | 1.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 102 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 112 | | % Recovery | EPA 8260B | 1/28/03 |

Sample : **SP-2D** Matrix : Soil Lab Number : 31118-09
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **0.033** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **0.22** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **7.4** | 1.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 110 | | % Recovery | EPA 8260B | 1/28/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31118
Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-2** Matrix : Soil Lab Number : 31118-10
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 104 | | % Recovery | EPA 8260B | 1/28/03 |

Sample : **SP-3A** Matrix : Soil Lab Number : 31118-11
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **0.19** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **0.98** | 0.025 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **90** | 5.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 104 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 98.6 | | % Recovery | EPA 8260B | 1/28/03 |

Sample : **SP-3B** Matrix : Soil Lab Number : 31118-12
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 102 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 99.6 | | % Recovery | EPA 8260B | 1/28/03 |

Joel Kiff

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31118
Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-3C** Matrix : Soil Lab Number : 31118-13
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **< 1.0** | 1.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 103 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 102 | | % Recovery | EPA 8260B | 1/28/03 |

Sample : **SP-3D** Matrix : Soil Lab Number : 31118-14
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Ethylbenzene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **Total Xylenes** | **0.0096** | 0.005 | mg/Kg | EPA 8260B | 1/28/03 |
| **TPH as Gasoline** | **3.7** | 1.0 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 102 | | % Recovery | EPA 8260B | 1/28/03 |
| 4-Bromofluorobenzene (Surr) | 98.9 | | % Recovery | EPA 8260B | 1/28/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31118
Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-3** Matrix : Soil Lab Number : 31118-15
Sample Date :1/27/03

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 1/28/03 |
| Toluene - d8 (Surr) | 104 | | % Recovery | EPA 8260B | 1/28/03 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31118

Date : 1/28/03

**QC Report : Method Blank Data**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 1/27/03 |
| Toluene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 1/27/03 |
| Ethylbenzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 1/27/03 |
| Total Xylenes | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 1/27/03 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 1/27/03 |
| Methyl-t-butyl ether (MTBE) | < 0.5 | 0.5 | mg/Kg | EPA 8260B | 1/27/03 |
| Toluene - d8 (Surr) | 101 | | % | EPA 8260B | 1/27/03 |
| 4-Bromofluorobenzene (Surr) | 100 | | % | EPA 8260B | 1/27/03 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31118

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 31118-03 | <0.0050 | 0.100 | 0.0922 | 0.0863 | 0.0791 | mg/Kg | EPA 8260B | 1/27/03 | 86.3 | 85.9 | 0.523 | 70-130 | 25 |
| Toluene | 31118-03 | <0.0050 | 0.100 | 0.0922 | 0.0839 | 0.0783 | mg/Kg | EPA 8260B | 1/27/03 | 83.9 | 85.0 | 1.27 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 31118-03 | <0.0050 | 0.100 | 0.0922 | 0.0984 | 0.0884 | mg/Kg | EPA 8260B | 1/27/03 | 98.4 | 95.9 | 2.60 | 70-130 | 25 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31118

**QC Report : Laboratory Control Sample (LCS)**

Date : 1/28/03

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Benzene | 0.0400 | mg/Kg | EPA 8260B | 1/27/03 | 86.6 | 70-130 |
| Toluene | 0.0400 | mg/Kg | EPA 8260B | 1/27/03 | 89.5 | 70-130 |
| Methyl-t-Butyl Ether | 0.0400 | mg/Kg | EPA 8260B | 1/27/03 | 90.0 | 70-130 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Calscience
Environmental
Laboratories, Inc.

January 28, 2003

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.:** **03-01-1380**
**Client Reference:** **4255 MacArthur - Oakland**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/28/2003 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Michael J. Crisostomo
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

# ANALYTICAL REPORT

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 01/28/03
Work Order No: 03-01-1380
Preparation: Total Digestion
Method: EPA 6010B

Project: 4255 MacArthur - Oakland



| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| SP-1 | 03-01-1380-1 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units | Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | ND | 0.500 | 1 | | mg/kg | Nickel | 40.7 | 0.2 | 1 | | mg/kg |
| Chromium (Total) | 18.9 | 0.2 | 1 | | mg/kg | Zinc | 63.3 | 1.0 | 1 | | mg/kg |
| Lead | 7.09 | 0.50 | 1 | | mg/kg | | | | | | |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| SP-2 | 03-01-1380-2 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units | Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | ND | 0.500 | 1 | | mg/kg | Nickel | 52.2 | 0.2 | 1 | | mg/kg |
| Chromium (Total) | 32.4 | 0.2 | 1 | | mg/kg | Zinc | 55.2 | 1.0 | 1 | | mg/kg |
| Lead | 5.86 | 0.50 | 1 | | mg/kg | | | | | | |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| SP-3 | 03-01-1380-3 | 01/27/03 | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units | Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | ND | 0.500 | 1 | | mg/kg | Nickel | 38.9 | 0.2 | 1 | | mg/kg |
| Chromium (Total) | 25.8 | 0.2 | 1 | | mg/kg | Zinc | 40.4 | 1.0 | 1 | | mg/kg |
| Lead | 2.32 | 0.50 | 1 | | mg/kg | | | | | | |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| Method Blank | 097-01-002-4,002 | N/A | Solid | 01/28/03 | 01/28/03 | 030128L01 |

| Parameter | Result | RL | DF | Qual | Units | Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | ND | 0.500 | 1 | | mg/kg | Nickel | ND | 0.250 | 1 | | mg/kg |
| Chromium (Total) | ND | 0.250 | 1 | | mg/kg | Zinc | ND | 1.00 | 1 | | mg/kg |
| Lead | ND | 0.500 | 1 | | mg/kg | | | | | | |

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 01/28/03
Work Order No: 03-01-1380
Preparation: Total Digestion
Method: EPA 6010B

Project: 4255 MacArthur - Oakland

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| 03-01-1370-3 | Solid | ICP 3300 | 01/28/03 | 01/29/03 | 030128S01 |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Cadmium | 97 | 96 | 75-125 | 1 | 0-20 | |
| Chromium (Total) | 108 | 105 | 75-125 | 2 | 0-20 | |
| Lead | 95 | 94 | 75-125 | 1 | 0-20 | |
| Nickel | 103 | 100 | 75-125 | 2 | 0-20 | |
| Zinc | 64 | 65 | 75-125 | 1 | 0-20 | 3 |

Calscience Environmental Laboratories, Inc.

## Quality Control - Laboratory Control Sample

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 01/28/03
Work Order No: 03-01-1380
Preparation: Total Digestion
Method: EPA 6010B

Project: 4255 MacArthur - Oakland

| Quality Control Sample ID | Matrix | Instrument | Date Analyzed | Lab File ID | LCS Batch Number |
|---|---|---|---|---|---|
| 097-01-002-4,002 | Solid | ICP 3300 | 01/28/03 | 030128-I-01 | 030128L01 |

| Parameter | Conc Added | Conc Recovered | %Rec | %Rec CL | Qualifiers |
|---|---|---|---|---|---|
| Cadmium | 50.0 | 49.4 | 99 | 80-120 | |
| Chromium (Total) | 50.0 | 49.3 | 99 | 80-120 | |
| Lead | 50.0 | 49.6 | 99 | 80-120 | |
| Nickel | 50.0 | 51.6 | 103 | 80-120 | |
| Zinc | 50.0 | 51.0 | 102 | 80-120 | |

Calscience Environmental Laboratories, Inc.

# GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 03-01-1380

| Qualifier | Definition |
|---|---|
| 3 | Spike or Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification. |
| ND | Not detected at indicated reporting limit. |

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 03-01-17810

Cooler 1 of 1

# SAMPLE RECEIPT FORM

CLIENT: KIFF DATE: 01/28/03

## TEMPERATURE – SAMPLES RECEIVED BY:

**CALSCIENCE COURIER:**

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

**LABORATORY (Other than Calscience Courier):**

4 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: TL

## CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact): _____ Not Applicable (N/A): _____

Initial: _____

## SAMPLE CONDITION:

| | Yes | No | N/A |
|---|---|---|---|
| Chain-Of-Custody document(s) received with samples | ✓ | | |
| Sample container label(s) consistent with custody papers | ✓ | | |
| Sample container(s) intact and good condition | ✓ | | |
| Correct containers for analyses requested | ✓ | | |
| Proper preservation noted on sample label(s) | | | ✓ |
| VOA vial(s) free of headspace | | | ✓ |
| Tedlar bag(s) free of condensation | | | ✓ |

Initial: TL

## COMMENTS:

KIFF ANALYTICAL LLC
2795 Second Street, Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. 1380

Page 1 of 1

# Chain-of-Custody Record and Analysis Request

| | |
|---|---|
| Project Contact (Hardcopy or PDF to): Joel Kiff | EDF Report? _X_ Yes __ No |
| Company/Address: Kiff Analytical, LLC | Recommended but not mandatory to complete this section: Sampling Company Log Code: CETO |
| Phone No.: | FAX No.: | Global ID: T0600101261 |
| Project Number: 245-0524 | P.O. No.: 31118 | EDF Deliverable to (Email Address): inbox@kiffanalytical.com |
| Project Name: 4255 MacArthur - Oakland | E-mail address: inbox@kiffanalytical.com |
| Project Address: | |

Analysis Request — Date Due: January 28, 2003 — For Lab Use Only

| Sample Designation | Sampling Date | Sampling Time | Container: Glass Jar | Poly | Amber | Sleeve | Preservative: HCl | HNO3 | ICE | NONE | Matrix: WATER | SOIL | Luft 5 METALS=TTLC METALS | STLC ON ALL TTLC METALS 10 TIMES STLC MAXIMUM | TTLC LEAD>=13MG/KG REQUIRES ORGANIC LEAD ANALYSIS | | IF ANY TTLC TOTAL METAL IS> OR = TO 20 TIMES TCLP REGULATORY LEVELS, TCLP IS REQUIRED | | | Date Due: January 28, 2003 | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP-1 | 1/27/03 | 12:40 | 1 | | | | | | X | X | | X | X | X | X | | X | | | X | |
| SP-2 | 1/27/03 | 12:50 | 1 | | | | | | X | X | | X | X | X | X | | X | | | X | |
| SP-3 | 1/27/03 | 13:00 | 1 | | | | | | X | X | | X | X | X | X | | X | | | X | |
| | | | | | | | | | | | | | | | | | | | | | |
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| | | | |
|---|---|---|---|
| Relinquished by: Dw. Kiff Analytical | Date 01/27/03 | Time 1715 | Received by: |
| Relinquished by: | Date | Time | Received by: |
| Relinquished by: | Date 01/28/03 | Time 830 | Received by Laboratory: |

Remarks: Incident No. 98995758, SAP# 135701

Bill to:

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

# SHELL Chain Of Custody Record

Shell Project Manager to be Invoiced:

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ GMT HOUSTON

Karen Petryna

31118

INCIDENT NUMBER (SAP ONLY): 98995708

SAP or CRMT NUMBER (TS/CRMT): 13570 1

DATE: 1/27/03

PAGE: 1 of 1

| | |
|---|---|
| SAMPLING COMPANY: Cambria Environmental Technology | LOG CODE: CETO |
| ADDRESS: 1144-65TH Street, Oakland, CA 94608 | |
| PROJECT CONTACT (Hardcopy or PDF Report to): Melody Munz | |
| TELEPHONE: 510-420-3324 | FAX: 510-420-9170 |
| E-MAIL: mmunz@cambria-env.com | |
| SITE ADDRESS (Street and City): 4255 MacArthur - Oakland | GLOBAL ID NO.: T0600101261 |
| EDF DELIVERABLE TO (Responsible Party or Designee): edfshelloakland@cambria-env.com | PHONE NO.: |
| E-MAIL: | CONSULTANT PROJECT NO.: 245-0524 |
| SAMPLER NAME(S) (Print): Jason K. Gerke | LAB USE ONLY |

TURNAROUND TIME (BUSINESS DAYS): ☐ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☒ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

Name the composite sample SP-1, SP-2, SP-3.

CC REPORT TO: jgerke@cambria-env.com

REQUESTED ANALYSIS

| Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT. | TPH - Gas, Purgeable | BTEX | MTBE (8021B - 5ppb RL) | MTBE (8260B - 0.5ppb RL) | Oxygenates (5) by (8260B) | Ethanol (8260B) | Methanol | EDB & 1,2-DCA (8260B) | EPA 5035 Extraction for Volatiles | VOCs Halogenated/Aromatic (8021B) | TRPH (418.1) | Vapor VOCs BTEX / MTBE (TO-15) | Vapor VOCs Full List (TO-15) | Vapor TPH (ASTM 3416m) | Vapor Fixed Gases (ASTM D1946) | Test for Disposal (4B- SEE ATTACHED) | TPH - Diesel, Extractable (8015m) | MTBE (8260B) Confirmation, See Note | TEMPERATURE ON RECEIPT C° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP-1A, SP-1B, SP-1C, SP-1D | 01/27/03 | 1240 | Soil | 4 | | | | | | | | | | | | | | | | ✓ | | | -01, 02, 03, 04 ✓ 05 01 |
| SP-2A, SP-2B, SP-2C, SP-2D | 01/27/03 | 1250 | Soil | 4 | | | | | | | | | | | | | | | | ✓ | | | 06, 07, 08, 09 ✓ 10 02 |
| SP-3A, SP-3B, SP-3C, SP-3D | 1 | 1300 | Soil | 4 | | | | | | | | | | | | | | | | ✓ | | | 11, 12, 13, 14 ✓ 15 03 |

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

| | | |
|---|---|---|
| Relinquished by: (Signature) Jason Gerke | Received by: (Signature) | Date: / Time: |
| Relinquished by: (Signature) | Received by: (Signature) | Date: / Time: |
| Relinquished by: (Signature) | Received by: (Signature) John Cuttell Kiff Analytical | Date: 012703 Time: 1335 |

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

Q&Q Graphic (714) 898-9702

31118



**RESIDUAL MANAGEMENT PROCEDURE**

ISSUED DATE: 08/01/01
CANCELS ISSUE:
ISSUED BY: LRR

**RESIDUAL STREAM:** SOIL WITH UNLEADED GASOLINE
**VENDOR:** ALLIED-BFI
**LOCATION:** ALLIED WASTE - MANTECA
9999 SOUTH AUSTIN ROAD
MANTECA, CA 95336

CALIFORNIA - TRANSPORTATION AND RETAIL

BTEX - EPA 8021B/8260B (IF BENZENE IS > OR = TO 10 MG/KG THEN TCLP BENZENE IS REQUIRED)

5 CAM METALS = TTLC METALS
STLC ON ALL TTLC METALS 10 TIMES STLC MAXIMUM
TTLC LEAD=>13 MG/KG REQUIRES ORGANIC LEAD ANALYSIS
IF ANY TTLC TOTAL METAL IS > OR = TO 20 TIMES TCLP REGULATORY LEVELS, TCLP IS REQUIRED

TOTAL PETROLEUM HYDROCARBONS, METHOD 418.1 OR 8015 - GASOLINE

MTBE METHOD 8260B (GC/MS)

AQUATIC BIOASSAY (FISH TOX) IS ONLY TO BE RUN ON SAMPLES > OR = TO 5000 PPM TPH. AQUATIC BIOASSAY (FISH TOX) = PART 800 OF STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)
-ALTERNATE APPROVED TEST METHODS PER SW846 ARE ALSO ACCEPTABLE
-ALL REQUIRED TESTS ON COMPOSITE
-LABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL REPORTS
-MAIL OR FAX ALL ANALYSIS TO THE CENTRALIZED RESIDUAL MANAGEMENT TEAM

PROCEDURE ORIGINAL DATE: 08/01/01
PROCEDURE REVISED DATE: 08/01/01

KIFF ANALYTICAL LLC

Report Number : 31224
Date : 2/3/2003

Melody Munz
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, CA

Subject : 10 Soil Samples
Project Name : 4255 MacArthur - Oakland
Project Number : 245-0524
P.O. Number : 98995758

Dear Ms. Munz,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 31224
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-4A** Matrix : Soil Lab Number : 31224-01
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.043** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **0.49** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **1.4** | 0.050 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **48** | 5.0 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 107 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 115 | | % Recovery | EPA 8260B | 2/2/2003 |

Sample : **SP-4B** Matrix : Soil Lab Number : 31224-02
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.021** | 0.005 | mg/Kg | EPA 8260B | 2/3/2003 |
| **Toluene** | **< 0.005** | 0.005 | mg/Kg | EPA 8260B | 2/3/2003 |
| **Ethylbenzene** | **0.049** | 0.005 | mg/Kg | EPA 8260B | 2/3/2003 |
| **Total Xylenes** | **0.22** | 0.005 | mg/Kg | EPA 8260B | 2/3/2003 |
| **TPH as Gasoline** | **7.8** | 1.0 | mg/Kg | EPA 8260B | 2/3/2003 |
| Toluene - d8 (Surr) | 107 | | % Recovery | EPA 8260B | 2/3/2003 |
| 4-Bromofluorobenzene (Surr) | 103 | | % Recovery | EPA 8260B | 2/3/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31224
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-4C** Matrix : Soil Lab Number : 31224-03
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **< 0.050** | 0.050 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **< 0.050** | 0.050 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **0.84** | 0.050 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **1.7** | 0.050 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **210** | 5.0 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 101 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 99.3 | | % Recovery | EPA 8260B | 2/2/2003 |

Sample : **SP-4D** Matrix : Soil Lab Number : 31224-04
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **2.2** | 0.25 | mg/Kg | EPA 8260B | 1/31/2003 |
| **Toluene** | **1.3** | 0.25 | mg/Kg | EPA 8260B | 1/31/2003 |
| **Ethylbenzene** | **65** | 0.25 | mg/Kg | EPA 8260B | 1/31/2003 |
| **Total Xylenes** | **190** | 2.5 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **4600** | 200 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 1/31/2003 |
| 4-Bromofluorobenzene (Surr) | 96.4 | | % Recovery | EPA 8260B | 1/31/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31224
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-4** Matrix : Soil Lab Number : 31224-05
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 106 | | % Recovery | EPA 8260B | 2/2/2003 |

Sample : **SP-5A** Matrix : Soil Lab Number : 31224-06
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.055** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **< 0.025** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **1.3** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **5.5** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **120** | 5.0 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 100 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 99.1 | | % Recovery | EPA 8260B | 2/2/2003 |

Sample : **SP-5B** Matrix : Soil Lab Number : 31224-07
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.15** | 0.10 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **0.66** | 0.10 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **4.4** | 0.10 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **24** | 0.10 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **570** | 10 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 106 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 104 | | % Recovery | EPA 8260B | 2/2/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31224
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-5C** Matrix : Soil Lab Number : 31224-08
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.19** | 0.10 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **0.31** | 0.10 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **4.0** | 0.10 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **17** | 0.25 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **380** | 10 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 106 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 115 | | % Recovery | EPA 8260B | 2/2/2003 |

Sample : **SP-5D** Matrix : Soil Lab Number : 31224-09
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **0.11** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Toluene** | **0.028** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Ethylbenzene** | **0.50** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **Total Xylenes** | **1.9** | 0.025 | mg/Kg | EPA 8260B | 2/2/2003 |
| **TPH as Gasoline** | **110** | 5.0 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 109 | | % Recovery | EPA 8260B | 2/2/2003 |
| 4-Bromofluorobenzene (Surr) | 100 | | % Recovery | EPA 8260B | 2/2/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 31224
Date : 2/3/2003

Project Name : **4255 MacArthur - Oakland**
Project Number : **245-0524**

Sample : **SP-5** Matrix : Soil Lab Number : 31224-10
Sample Date :1/31/2003

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| **Methyl-t-butyl ether (MTBE)** | **< 0.5** | 0.5 | mg/Kg | EPA 8260B | 2/2/2003 |
| Toluene - d8 (Surr) | 107 | | % Recovery | EPA 8260B | 2/2/2003 |

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31224

Date : 2/3/2003

**QC Report : Method Blank Data**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 1/31/2003 |
| Toluene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 1/31/2003 |
| Ethylbenzene | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 1/31/2003 |
| Total Xylenes | < 0.005 | 0.005 | mg/Kg | EPA 8260B | 1/31/2003 |
| TPH as Gasoline | < 1.0 | 1.0 | mg/Kg | EPA 8260B | 1/31/2003 |
| Methyl-t-butyl ether (MTBE) | < 0.5 | 0.5 | mg/Kg | EPA 8260B | 1/31/2003 |
| Toluene - d8 (Surr) | 104 | | % | EPA 8260B | 1/31/2003 |
| 4-Bromofluorobenzene (Surr) | 99.6 | | % | EPA 8260B | 1/31/2003 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31224

Date : 2/3/2003

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 31238-03 | <0.0050 | 0.189 | 0.202 | 0.181 | 0.200 | mg/Kg | EPA 8260B | 1/31/03 | 95.9 | 98.9 | 3.05 | 70-130 | 25 |
| Toluene | 31238-03 | <0.0050 | 0.189 | 0.202 | 0.176 | 0.192 | mg/Kg | EPA 8260B | 1/31/03 | 93.0 | 95.3 | 2.36 | 70-130 | 25 |
| Methyl-t-Butyl Ether | 31238-03 | <0.0050 | 0.189 | 0.202 | 0.174 | 0.188 | mg/Kg | EPA 8260B | 1/31/03 | 92.1 | 92.8 | 0.811 | 70-130 | 25 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 31224

Date : 2/3/2003

**QC Report : Laboratory Control Sample (LCS)**

Project Name : **4255 MacArthur - Oakland**

Project Number : **245-0524**

| Parameter | Spike Level | Units | Analysis Method | Date Analyzed | LCS Percent Recov. | LCS Percent Recov. Limit |
|---|---|---|---|---|---|---|
| Benzene | 0.0392 | mg/Kg | EPA 8260B | 1/31/03 | 91.4 | 70-130 |
| Toluene | 0.0392 | mg/Kg | EPA 8260B | 1/31/03 | 87.2 | 70-130 |
| Methyl-t-Butyl Ether | 0.0392 | mg/Kg | EPA 8260B | 1/31/03 | 83.3 | 70-130 |

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Calscience
Environmental
Laboratories, Inc.

February 03, 2003

Joel Kiff
Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Subject: **Calscience Work Order No.:** **03-02-0006**
**Client Reference:** **4255 MacArthur - Oakland**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/1/2003 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Michael J. Crisostomo
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

# ANALYTICAL REPORT

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/01/03
Work Order No: 03-02-0006
Preparation: Total Digestion
Method: EPA 6010B

Project: 4255 MacArthur - Oakland



| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| SP-4 | 03-02-0006-1 | 01/31/03 | Solid | 02/01/03 | 02/03/03 | 030201L01 |

| Parameter | Result | RL | DF | Qual | Units | Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 2.97 | 0.50 | 1 | | mg/kg | Nickel | 45.7 | 0.2 | 1 | | mg/kg |
| Chromium (Total) | 27.9 | 0.2 | 1 | | mg/kg | Zinc | 208 | 1 | 1 | | mg/kg |
| Lead | 71.9 | 0.5 | 1 | | mg/kg | | | | | | |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| SP-5 | 03-02-0006-2 | 01/31/03 | Solid | 02/01/03 | 02/03/03 | 030201L01 |

| Parameter | Result | RL | DF | Qual | Units | Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | ND | 0.500 | 1 | | mg/kg | Nickel | 50.8 | 0.2 | 1 | | mg/kg |
| Chromium (Total) | 33.9 | 0.2 | 1 | | mg/kg | Zinc | 104 | 1 | 1 | | mg/kg |
| Lead | 26.3 | 0.5 | 1 | | mg/kg | | | | | | |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| Method Blank | 097-01-002-4,021 | N/A | Solid | 02/01/03 | 02/03/03 | 030201L01 |

| Parameter | Result | RL | DF | Qual | Units | Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | ND | 0.500 | 1 | | mg/kg | Nickel | ND | 0.250 | 1 | | mg/kg |
| Chromium (Total) | ND | 0.250 | 1 | | mg/kg | Zinc | ND | 1.00 | 1 | | mg/kg |
| Lead | ND | 0.500 | 1 | | mg/kg | | | | | | |

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# ANALYTICAL REPORT

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/01/03
Work Order No: 03-02-0006
Preparation: STLC
Method: EPA 6010B

Project: 4255 MacArthur - Oakland



| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| SP-4 | 03-02-0006-1 | 01/31/03 | Solid | 02/03/03 | 02/05/03 | 030205L03 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | 2.00 | 0.10 | 1 | | mg/L |

| Method Blank | 097-05-006-2,141 | N/A | Solid | 02/03/03 | 02/05/03 | 030205L03 |
|---|---|---|---|---|---|---|

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Lead | ND | 0.100 | 1 | | mg/L |

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

# ANALYTICAL REPORT

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/01/03
Work Order No: 03-02-0006
Preparation: CA-DHS LUFT
Method: DHS LUFT

Project: 4255 MacArthur - Oakland



| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| SP-4 | 03-02-0006-1 | 01/31/03 | Solid | 02/04/03 | 02/04/03 | 030204L06 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Organic Lead | ND | 1.00 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| SP-5 | 03-02-0006-2 | 01/31/03 | Solid | 02/04/03 | 02/04/03 | 030204L06 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Organic Lead | ND | 1.00 | 1 | | mg/kg |

| Client Sample Number | Lab Sample Number | Date Collected | Matrix | Date Prepared | Date Analyzed | QC Batch ID |
|---|---|---|---|---|---|---|
| Method Blank | 099-10-020-54 | N/A | Solid | 02/04/03 | 02/04/03 | 030204L06 |

| Parameter | Result | RL | DF | Qual | Units |
|---|---|---|---|---|---|
| Organic Lead | ND | 1.00 | 1 | | mg/kg |

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

## Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Project: 4255 MacArthur - Oakland

Date Received: 02/01/03
Work Order No: 03-02-0006
Preparation: Total Digestion
Method: EPA 6010B

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| 03-02-0001-1 | Solid | ICP 3300 | 02/01/03 | 02/03/03 | 030201S01 |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Cadmium | 101 | 96 | 75-125 | 6 | 0-20 | |
| Chromium (Total) | 104 | 97 | 75-125 | 6 | 0-20 | |
| Lead | 4X | 4X | 75-125 | 4X | 0-20 | 4,Q |
| Nickel | 110 | 103 | 75-125 | 5 | 0-20 | |
| Zinc | 105 | 100 | 75-125 | 4 | 0-20 | |

Calscience Environmental Laboratories, Inc.

# Quality Control - Laboratory Control Sample

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Project: 4255 MacArthur - Oakland

Date Received: 02/01/03
Work Order No: 03-02-0006
Preparation: Total Digestion
Method: EPA 6010B

| Quality Control Sample ID | Matrix | Instrument | Date Analyzed | Lab File ID | LCS Batch Number |
|---|---|---|---|---|---|
| 097-01-002-4,021 | Solid | ICP 3300 | 02/03/03 | 030201-I-01 | 030201L01 |

| Parameter | Conc Added | Conc Recovered | %Rec | %Rec CL | Qualifiers |
|---|---|---|---|---|---|
| Cadmium | 50.0 | 47.2 | 94 | 80-120 | |
| Chromium (Total) | 50.0 | 46.1 | 92 | 80-120 | |
| Lead | 50.0 | 47.1 | 94 | 80-120 | |
| Nickel | 50.0 | 48.7 | 97 | 80-120 | |
| Zinc | 50.0 | 48.2 | 96 | 80-120 | |

Calscience Environmental Laboratories, Inc.

# Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Project: 4255 MacArthur - Oakland

Date Received: 02/01/03
Work Order No: 03-02-0006
Preparation: STLC
Method: EPA 6010B

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| SP-4 | Solid | ICP 5300 | 02/03/03 | 02/05/03 | 030205S03 |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Lead | 95 | 92 | 75-125 | 3 | 0-20 | |

Calscience Environmental Laboratories, Inc.

## Quality Control - Laboratory Control Sample

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Project: 4255 MacArthur - Oakland

Date Received: 02/01/03
Work Order No: 03-02-0006
Preparation: STLC
Method: EPA 6010B

| Quality Control Sample ID | Matrix | Instrument | Date Analyzed | Lab File ID | LCS Batch Number |
|---|---|---|---|---|---|
| 097-05-006-2,141 | Solid | ICP 3300 | 02/05/03 | 030205-I-03 | 030205L03 |

| Parameter | Conc Added | Conc Recovered | %Rec | %Rec CL | Qualifiers |
|---|---|---|---|---|---|
| Lead | 10.0 | 9.27 | 93 | 80-120 | |

Calscience Environmental Laboratories, Inc.

## Quality Control - Spike/Spike Duplicate

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 02/01/03
Work Order No: 03-02-0006
Preparation: CA-DHS LUFT
Method: DHS LUFT

Project: 4255 MacArthur - Oakland

| Quality Control Sample ID | Matrix | Instrument | Date Prepared | Date Analyzed | MS/MSD Batch Number |
|---|---|---|---|---|---|
| SP-4 | Solid | FI_AA | 02/04/03 | 02/04/03 | 030204S06 |

| Parameter | MS %REC | MSD %REC | %REC CL | RPD | RPD CL | Qualifiers |
|---|---|---|---|---|---|---|
| Organic Lead | 90 | 90 | 50-130 | 0 | 0-20 | |

WORK ORDER #: 03-02-0006

Cooler 1 of 1

# SAMPLE RECEIPT FORM

CLIENT: Kiff DATE: 2/1/03

## TEMPERATURE – SAMPLES RECEIVED BY:

**CALSCIENCE COURIER:**

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

**LABORATORY (Other than Calscience Courier):**

_____ °C Temperature blank.
2 °C IR thermometer.
_____ Ambient temperature.

Initial: ____

## CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact): _____ Not Applicable (N/A): ✓

Initial: ____

## SAMPLE CONDITION:

| | Yes | No | N/A |
|---|---|---|---|
| Chain-Of-Custody document(s) received with samples | ✓ | | |
| Sample container label(s) consistent with custody papers | ✓ | | |
| Sample container(s) intact and good condition | ✓ | | |
| Correct containers for analyses requested | ✓ | | |
| Proper preservation noted on sample label(s) | | | ✓ |
| VOA vial(s) free of headspace | | | ✓ |
| Tedlar bag(s) free of condensation | | | ✓ |

Initial: ____

## COMMENTS:

02-0006

KIFF ANALYTICAL LLC
2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Cal Science Environmental
7440 Lincoln Way
Garden Grove, CA 92841
714-895-5494

Lab No. _____ Page 1 of 1

# Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Joel Kiff
Company/Address: Kiff Analytical, LLC
Phone No.: FAX No.:
Project Number: 245-0524
P.O. No.: 31224
Project Name: 4255 MacArthur - Oakland
Project Address:

EDF Report? _X_ Yes __No
Recommended but not mandatory to complete this section:
Sampling Company Log Code: CETO
Global ID: T0600101261
EDF Deliverable to (Email Address): inbox@kiffanalytical.com
E-mail address: inbox@kiffanalytical.com

| Sample Designation | Sampling Date | Sampling Time | Container: Glass Jar | Container: Poly | Container: Amber | Container: Sleeve | Container: | Preservative: HCl | Preservative: HNO3 | Preservative: ICE | Preservative: NONE | Preservative: | Matrix: WATER | Matrix: SOIL | Matrix: | Analysis Request: Luft 5 Metals | Analysis Request: STLC on all TTLC metals 10 times STLC maximum | Analysis Request: TTLC lead = > 13 mg/Kg requires organic lead analysis | Analysis Request: If any TTLC total lead is > or = to 20 times TCLP regulatory levels, TCLP is required | Analysis Request: | Analysis Request: | Analysis Request: | Date Due: February 3, 2003 | For Lab Use Only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP-4 | 1/31/2003 | 10:00 | 1 | | | | | | | X | | | | X | | X | X | X | X | | | | X | |
| SP-5 | 1/31/2003 | 9:50 | 1 | | | | | | | X | | | | X | | X | X | X | X | | | | X | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| Relinquished by: Kiff Analytical | Date | Time | Received by: | Remarks: Incident # 98995758 SAP # 135701 |
| Relinquished by: | Date | Time | Received by: | RUSH TAT |
| Relinquished by: | Date 2/4/03 | Time 1430 | Received by Laboratory: | Bill to: |

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

# SHELL Chain Of Custody Record

Shell Project Manager to be invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

31224

INCIDENT NUMBER (SCHM ONLY): 98995758

ARIBA PROJECT NUMBER (SCHM ONLY): 131701

DATE: 1/31/03

PAGE: 1 of 2

SAMPLING COMPANY: Cambria Environmental Technology

LOG CODE: CETO

SITE ADDRESS (Street and City): 4255 MacArthur - Oakland

GLOBAL ID NO.: T0600101261

ADDRESS: 1144-65TH Street, Oakland, CA 94608

EDF DELIVERABLE TO (Responsible Party or Designee): edfshelloakland@cambria-env.com

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: 245-0524

PROJECT CONTACT (Hardcopy or PDF Report to): Melody Munz

TELEPHONE: 510-420-3324

FAX: 510-420-9170

E-MAIL: mmunz@cambria-env.com

SAMPLER NAME(S) (Print): Jason K. Gerke

TURNAROUND TIME (BUSINESS DAYS): ☐ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☒ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

Advance composite samples SP-4 and SP-5

CC REPORT TO: jgerke@cambria-env.com

REQUESTED ANALYSIS

| LAB ONLY | Field Sample Identification | SAMPLING DATE | SAMPLING TIME | MATRIX | NO. OF CONT. | TPH - Gas, Purgeable | BTEX | MTBE (8021B - 5ppb RL) | MTBE (8260B - 0.5ppb RL) | Oxygenates (5) by (8260B) | Ethanol (8260B) | Methanol | EDB & 1,2-DCA (8260B) | EPA 5035 Extraction for Volatiles | VOCs Halogenated/Aromatic (8021B) | TRPH (418.1) | Vapor VOCs BTEX / MTBE (TO-15) | Vapor VOCs Full List (TO-15) | Vapor TPH (ASTM 3415m) | Vapor Fixed Gases (ASTM D1946) | Test for Disposal (4B-STLC Metals) | | TPH - Diesel, Extractable (8015m) | | MTBE (8260B) Confirmation, See Note |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SP-4A,B,C,D | 1/31/03 | 1010 | Soil | 4 | | | | | | | | | | | | | | | | 4 | | | | |
| | SP-5A,B,C,D | 1/31/03 | 950 | Soil | 4 | | | | | | | | | | | | | | | | 4 | | | | |

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

TEMPERATURE ON RECEIPT C°

01,02,03,04 05

06,07,08,09 10

| | Received by: (Signature) | Date: | Time: |
|---|---|---|---|
| Relinquished by: (Signature) Jason Gerke | | 1/31/03 | 1200 |
| Relinquished by: (Signature) | Received by: (Signature) | Date: | Time: |
| Relinquished by: (Signature) | Received by: (Signature) John Cuadra / Kiff Analytical | Date: 013103 | Time: 1208 |

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

Q&Q Graphics (714) 898-9702

**RESIDUAL MANAGEMENT PROCEDURE**

ISSUED DATE: 08/01/01
CANCELS ISSUE:
ISSUED BY: LRR

**RESIDUAL STREAM:** SOIL WITH UNLEADED GASOLINE
**VENDOR:** ALLIED-BFI
**LOCATION:** ALLIED WASTE - MANTECA
9999 SOUTH AUSTIN ROAD
MANTECA, CA 95336

CALIFORNIA - TRANSPORTATION AND RETAIL

BTEX - EPA 8021B/8260B (IF BENZENE IS > OR = TO 10 MG/KG THEN TCLP BENZENE IS REQUIRED)

5 CAM METALS = TTLC METALS
STLC ON ALL TTLC METALS 10 TIMES STLC MAXIMUM
TTLC LEAD=>13 MG/KG REQUIRES ORGANIC LEAD ANALYSIS
IF ANY TTLC TOTAL METAL IS > OR = TO 20 TIMES TCLP REGULATORY LEVELS, TCLP IS REQUIRED

TOTAL PETROLEUM HYDROCARBONS, METHOD 418.1 OR 8015 - GASOLINE

MTBE METHOD 8260B (GC/MS)

AQUATIC BIOASSAY (FISH TOX) IS ONLY TO BE RUN ON SAMPLES > OR = TO 5000 PPM TPH. AQUATIC BIOASSAY (FISH TOX) = PART 800 OF STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)
-ALTERNATE APPROVED TEST METHODS PER SW846 ARE ALSO ACCEPTABLE
-ALL REQUIRED TESTS ON COMPOSITE
-LABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL REPORTS
-MAIL OR FAX ALL ANALYSIS TO THE CENTRALIZED RESIDUAL MANAGEMENT TEAM

PROCEDURE ORIGINAL DATE: 08/01/01
PROCEDURE REVISED DATE: 08/01/01

# ATTACHMENT D

Soil Disposal Confirmation

MANLEY & SONS TRUCKING, INC.
ROCK
SAND
DEMO
FILL DIRT
TOP SOIL
CA009430
(916) 381-6864

Hazardous Waste Hauler (Registration #2843)

8896 Elder Creek Rd. • Sacramento, CA 95828 • FAX (916) 381-1573

# Disposal Confirmation

Request for Transportation Received: 01/27/03

## Consultant Information

| | |
|---|---|
| Company: | Cambria |
| Contact: | Jason Gerke |
| Phone: | 1-510-420-3320 |
| Fax: | 1-510-420-9170 |

## Site Information

| | |
|---|---|
| Station #: | |
| Street Address: | 4255 MacArthur Blvd |
| City, State, ZIP: | Oakland, Ca |
| Customer: | Shell |
| RIPR #: | 20453 |
| SAP # / Location: | 135701 |
| Incident #: | 98995758 |
| Location / WIC #: | N/A |
| Environmental Engineer: | Karen Petrina |
| Fax: | 1-559-645-5643 |
| Material Description: | Soil |
| Estimated Quantity: | 150 Yards |
| Service Requested Date: | Week of 01-29-03 |
| Disposal Facility: | Forward Landfill |
| Contact: | Joe Griffith |
| Phone: | 800-204-4242 |
| Approval #: | 2912 |
| Date of Disposal: | Jan. 29 Feb. 4, 10, 11, |
| Actual Tonnage | 1211.93 |
| Transporter: | Manley & Sons Trucking, Inc. |
| Contact: | Glenell Manley |
| Phone: | 916 381-6864 |
| Fax: | 916 381-1573 |
| Invoice: | 50421 |
| Date of Invoice: | |

Fax To: Consultant Cambria

**ATTACHMENT E**

Bill of Lading

ATTENTION SHIPPERS! FREIGHT CHARGES ARE PREPAID ON THIS BILL OF LADING UNLESS MARKED COLLECT.

# STRAIGHT BILL OF LADING

ORIGINAL — NOT NEGOTIABLE

Shipper No. GRW 0128

Carrier No. _____

Page 1 of 1 Onyx Industrial Services (Name of carrier) _____ (SCAC) Date 1-22-03

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO: Consignee **Shell Oil Products US MARTINEZ REFINERY**

Street **1801 MARINA VISTA**

City **MARTINEZ** State **CA** Zip Code **94553**

FROM: Shipper Shell Station

Street 4355 MacArthur Blvd

City Oakland State CA Zip Code

24 hr. Emergency Contact Tel. No. **CHEMTREC 800-424-9300**

Route

Vehicle Number 3716/2692

| No. of Units & Container Type | HM | BASIC DESCRIPTION Proper Shipping Name, Hazard Class, Identification Number (UN or NA), Packing Group, per 172.101, 172.202, 172.203 | TOTAL QUANTITY (Weight, Volume, Gallons, etc.) | WEIGHT (Subject to Correction) | RATE | CHARGES (For Carrier Use Only) |
|---|---|---|---|---|---|---|
| 1 | | NON-HAZARDOUS GROUNDWATER | | | | |
| | | Contains water with < 10% oil bearing materials and may include extracted groundwater from service station facilities that would be non-hazardous under federal and state waste classification criteria. | | | | |
| | | SOP US Martinez Refinery Receiving Gate to direct driver to the Effluent Treatment Plant Operator (x3202) for off loading directions. | | | | |
| | | SAP/INCIDENT #: 135701 | | | | |
| | | RIPR #: 20721 | | | | |

**PLACARDS TENDERED: YES ☐ NO ☐**

Note—(1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of Item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO: ADDRESS

**COD** Amt: $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES $

FREIGHT CHARGES: FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collected

RECEIVED, subject to the classifications and tariffs in effect on the date of issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER Shell Oil Products US

PER Eric Pender P for Shell Oil Products ON BEHALF OF SHELL / EQUILON

CARRIER Raymond Pauk

PER ONYX Industrial Services

DATE 1-22-03

RECEIVING SITE SIGNATURE / DATE:

1

Permanent post office address of shipper