

Atlantic Richfield Company

Chuck Carmel
Environmental Business Manager

PO Box 1257
San Ramon, CA 94583
Phone: (925) 275-3803
Fax: (925) 275-3815
E-Mail: charles.carmel@bp.com

RECEIVED

9:47 am, Nov 19, 2009

**Alameda County
Environmental Health**

17 November 2009

Re: Revised Soil & Ground-Water Investigation with Third Quarter 2009 Ground-Water Monitoring Report
Former Richfield Oil Company Service Station #472
6415 International Boulevard, Oakland, California
ACEH Case #RO0002982

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Submitted by,



Chuck Carmel
Environmental Business Manager

Attachment:

**REVISED
SOIL & GROUND-WATER INVESTIGATION WITH
THIRD QUARTER GROUND-WATER MONITORING
REPORT**

Former Richfield Oil Company Service Station #472
6415 International Boulevard, Oakland, California
ACEH Case No. RO0002982

Prepared for:

Mr. Chuck Carmel
Environmental Business Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by:



1324 Mangrove Ave., Suite 212
Chico, California 95926
(530) 566-1400
www.broadbentinc.com

17 November 2009

Project No. 09-88-601

17 November 2009

Project No. 09-88-601

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Chuck Carmel

Re: Revised Soil & Ground-Water Investigation with Third Quarter 2009 Ground-Water Monitoring Report, Former Richfield Oil Company Service Station #472, 6415 International Boulevard, Oakland, California; ACEH Case #RO0002982

Dear Mr. Carmel:

Broadbent & Associates, Inc. (BAI) is pleased to submit this *Revised Soil & Ground-Water Investigation and Third Quarter 2009 Ground-Water Monitoring Report* for Former Richfield Oil Company Service Station #472 located at 6415 International Boulevard, Oakland, California. This report presents a description of field activities conducted and results obtained from the advancement of three soil borings and subsequent installation of ground-water monitoring wells at the Site on 14 July 2009. This work was conducted in accordance with the *Work Plan for Soil & Ground-Water Investigation* (BAI, 30 March 2009) and the *Addendum Work Plan for Soil & Ground-Water Investigation* (BAI, 28 May 2009), as approved by Alameda County Environmental Health (ACEH) in their letter dated 11 June 2009. This report also presents results of the initial ground-water monitoring conducted at the Site during the Third Quarter of 2009.

Should you have questions or require additional information, please do not hesitate to contact me at (530) 566-1400.

Sincerely,
BROADBENT & ASSOCIATES, INC.



Thomas A. Venus, P.E.
Senior Engineer



Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)
Electronic copy uploaded to GeoTracker

**REVISED SOIL & GROUND-WATER INVESTIGATION WITH
THIRD QUARTER 2009 GROUND-WATER MONITORING REPORT**

Former Richfield Oil Company Service Station #472
6415 International Boulevard, Oakland, California
ACEH Case #RO0002982

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Drawing 1	Site Location Map, Station #472, 6415 International Boulevard, Oakland, California
Drawing 2	Site Map with Soil Boring/Monitoring Well Locations
Drawing 3	Ground-Water Elevation Contour and Analytical Summary Map, 25 August 2009
Table 1	Summary of Soil Sampling Analytical Data, Station #472, 6415 International Blvd., Oakland, California
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**REVISED SOIL & GROUND-WATER INVESTIGATION WITH
THIRD QUARTER 2009 GROUND-WATER MONITORING REPORT**

Former Richfield Oil Company Service Station #472
6415 International Boulevard, Oakland, California
ACEH Case #RO0002982

APPENDICES

- Appendix A Recent Regulatory Correspondence
- Appendix B Stratus Monitoring Well Installation Data Package (Includes Field Data Sheets, Boring Logs, Drilling Permit, Well Completion Reports, Site Plan, and Certified Laboratory Analytical Report with Chain-of-Custody Documentation)
- Appendix C GeoTracker Upload Confirmation Receipts
- Appendix D Stratus Ground-Water Sampling Data Package (Includes Field Data Sheets, Laboratory Analytical Report with Chain-of-Custody Documentation, and Field Procedures)

REVISED SOIL & GROUND-WATER INVESTIGATION WITH THIRD QUARTER 2009 GROUND-WATER MONITORING REPORT

Former Richfield Oil Company Station #472
6415 International Boulevard, Oakland, California
ACEH Case #RO0002982

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company, RM – a BP affiliated company, Broadbent & Associates, Inc. (BAI) has prepared this *Soil & Ground-Water Investigation with Third Quarter 2009 Ground-Water Monitoring Report* for additional soil and ground-water characterization at the Former Richfield Oil Company Station #472 (herein referred to as Station #472), located at 6415 International Boulevard, Oakland, California (Site). The on-site soil and ground-water investigation was completed to begin the assessment of the extent and/or significance of soil and ground-water contamination at the Site. Investigation activities were conducted in accordance with the *Work Plan for Soil & Ground-Water Investigation* (BAI, 30 March 2009) as amended by the *Addendum Work Plan for Soil & Ground-Water Investigation* (BAI, 28 May 2009) and approved by Alameda County Environmental Health (ACEH) in their response letter dated 11 June 2009. Copies of recent regulatory correspondence are provided in Appendix A. This report includes discussions on the Site Background, Site Geology and Hydrogeology, Monitoring Well Installation, Results of the Investigation, Ground-Water Monitoring Activities, Conclusions and Recommendations.

2.0 SITE BACKGROUND

Most recently, the Site is a former liquor store located on the south corner of the intersection of International Boulevard (formerly East 14th Street) and 64th Avenue in Oakland, California (Drawing 1). The Site is located in a mixed residential and commercial area. Site improvements consist of a single-story concrete-block building, several perimeter and interior metal fences and predominantly covered with asphalt and concrete. Two large metals storage/shipping containers are presently located onsite on the south side of the building. The Site is located on an approximately 0.27 acre parcel of property recognized by Alameda County as Assessors Parcel Number 41-4050-21. The Site is located in Section 16, Township 2 South, Range 3 West, relative to the Mount Diablo Baseline and Meridian of Northern California. The Site can be located on the Oakland East, California 7½-minute topographic quadrangle map of the United States Geological Survey (USGS). A Site Location Map is presented as Drawing 1.

In 1947, Richfield Oil Company purchased the property for the construction of a service station with completion taking place in 1949. The service station was operated by various Richfield Oil Company dealers from 1949 to 1970. In 1966 two 4,000 gallon and one 6,000 gallon replacement underground storage tanks (USTs) were installed on the property. Richfield Oil Company sold the property in 1971 to the Natrass Corporation.

In May 2007, AAI Environmental Corporation (AAI) conducted a Phase I Environmental Site Assessment (ESA) on the property. Work included review of environmental and regulatory databases and site reconnaissance prior to selling the property. AAI reported that one or two USTs were previously removed from the northeast corner of the property prior to 1976, but no soil sampling data or removal report were found to confirm the information given. Sampling and reporting information was likely not required at that time. The AAI site reconnaissance

reportedly did not identify any potential concerns. However, AAI recommended a limited Phase II Environmental Site Assessment on the property to assess the former presence of the USTs and/or legacy environmental contamination (AAI, 5/9/2007).

In April 2008, GEOCON conducted a Limited Phase II Environmental Site investigation on the Site. Work included the advancement of six soil borings (SB-1 through SB-6) down to 31 feet below ground surface (ft bgs) at the locations shown on Drawing 2. Soil samples were collected from each boring and ground-water samples were collected from borings SB-1, SB-2, SB-3 and SB-5. Soil boring SB-1 was drilled on the backside of the property to assess the potential for off-site contaminant migration. Borings SB-2, SB-3, SB-5 and SB-6 were advanced in the area suspected of containing the former USTs. SB-4 was advanced to assess a former pump island. Soil samples from borings SB-1 through SB-6 contained Total Petroleum Hydrocarbons in the Gasoline Range (TPH-G) at concentrations up to 95 milligrams per kilogram (mg/kg) (SB-6 at 14 ft bgs), Total Petroleum Hydrocarbons in the Diesel Range (TPH-D) at concentrations up to 20 mg/kg (SB-2 at 20 ft bgs), and Total Petroleum Hydrocarbons in the Motor Oil Range (TPH-MO) at concentrations up to 51 mg/kg (SB-2 at 20 ft bgs). Grab ground-water samples from borings SB-1, SB-2, SB-3 and SB-5 contained TPH-G at concentrations up to 8.1 milligrams per liter (mg/L) (SB-3), TPH-D at concentrations up to 7.2 mg/L (SB-3), and TPH-MO at concentrations up to 0.18 mg/L (SB-5). No concentrations of Benzene, Toluene, Ethylbenzene, or Xylenes (BTEX) were detected above the laboratory reporting limits in the soil or ground-water samples collected (GEOCON, 5/7/2008).

In a letter dated 29 January 2009, ACEH requested completion of an Unauthorized Release Report (URR), and soil and ground-water investigation work plan. A URR was submitted to ACEH on 20 February 2009. A *Work Plan for Soil and Ground-Water Investigation* was submitted to ACEH on 30 March 2009. In a letter dated 16 April 2009, ACEH requested an addendum work plan. An *Addendum Work Plan for Soil and Ground-Water Investigation* was submitted to ACEH on 28 May 2009. In a letter dated 11 June 2009, ACEH approved the *Addendum Work Plan for Soil and Ground-Water Investigation*. The implementation of this work plan is discussed in Section 4.0.

3.0 SITE GEOLOGY AND HYDROGEOLOGY

According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report* (California Regional Water Quality Control Board – San Francisco Bay Region/SFRWQCB, June 1999), the Site is located within the Oakland Sub-Area of the East Bay Plain of the San Francisco Basin. The Oakland Sub-Area contains a sequence of alluvial fans. The alluvial fill thickness ranges from 300 to 700 feet deep. There are no well-defined aquitards such as estuarine muds. The largest and deepest wells in this sub-area historically pumped one to two million gallons per day at depths greater than 200 feet. Overall, sustainable yields are low due in part to low recharge potential. The Merrit sand in West Oakland was an important part of the early water supply for the City of Oakland. It is shallow (up to 60 feet), but before the turn of the last century, septic systems contaminated the water supply wells.

Throughout most of the Alameda County portion of the East Bay Plain, from Hayward north to Albany, water level contours show that the general direction of ground-water flow is from east to west or from the Hayward Fault to the San Francisco Bay. Ground-water flow direction generally correlates to topography. Flow direction and velocity are also influenced by buried stream channels that typically are oriented in an east to west direction. The nearest natural drainage is Lion Creek, located approximately 0.43 miles southwest of the Site. Lion Creek flows generally northeast to southwest near the Site vicinity. The San Leandro Bay is located approximately 1.1 miles west of the Site.

According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report*, the City of Oakland does not have “any plans to develop local ground-water resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity.” However, the RWQCB’s Basin Plan denotes existing beneficial uses of municipal and domestic supply (MUN), industrial process supply (PROC), industrial service supply (IND), and agricultural supply (AGR) for the East Bay Plain ground-water basin (SFRWQCB, 6/1999).

The Site elevation is approximately 25 feet above mean sea level. According to soil boring logs from the Phase II investigation, soils encountered at the Site consisted primarily of sandy and silty clay from near ground surface to the total depth of 31 ft bgs at boring SB-6. Clayey gravel was encountered in borings SB-1 through SB-3 and SB-6 at depths ranging from six to twelve ft bgs, and in boring SB-1 and SB-2 at depths of 14 to 15 ft bgs. Some gravely sand was also observed in boring SB-3 from 12 to 16 ft bgs, in boring SB-4 from five to eight ft bgs, SB-5 from 14 to 16 ft bgs, and boring SB-6 from 7.5 to nine ft bgs. In soil boring SB-5, 10 feet of fill was observed. Due to the presence of the fill, SB-5 is within the assumed location of a former UST(s), since removed. Ground water was initially encountered during Phase II drilling activities at approximately 21 ft bgs and rose to stabilize at approximately 9 ft bgs within the borings. No historical ground-water gradient or flow direction data was available for the Site prior to the installation of monitoring wells.

4.0 MONITORING WELL INSTALLATION

This on-site investigation was completed to assess the extent and/or significance of soil and ground-water contamination at the Site. On 14 July 2009, Stratus oversaw RSI Drilling, Inc. of Woodland California (RSI) advance three hollow-stem auger soil borings (identified as MW-1, MW-2, and MW-3) on the Site. Soil boring MW-1 (completed as well MW-1) was located approximately five feet southwest of the sidewalk on International Boulevard and centered in the concrete area in front of the building. Assuming a ground-water flow direction towards the southwest, boring MW-1 is upgradient and located northeast of SB-4 and the former fuel dispenser island. Soil boring MW-2 (completed as well MW-2) was located approximately 10 feet in from the sidewalk on 64th Avenue and from the back of the property, west of SB-5 and the assumed location of the former USTs. Soil boring MW-3 (completed as well MW-3) was located in the south corner of the property approximately 10 feet in from the back of the property and former store. The soil boring/monitoring well locations from this investigation are shown in Drawing 2.

4.1 Preliminary Field Activities

Prior to initiating field activities, Stratus obtained the necessary well drilling permits from the Alameda County Public Works Agency (See Appendix B), prepared a site health and safety plan specific to the work scope; and cleared the Site for subsurface utilities. The utility clearance included notifying Underground Service Alert of the work a minimum of 48 hours prior to initiating the field investigation, and additionally securing the services of Cruz Brothers, a private utility locating company to confirm the absence of underground utilities at the boring locations. A sketch of the underground utilities located at the Site is provided within the field data package in Appendix B. It should be noted that instruments sensed a large metal object buried in the northern portion of the Site, northeast of the former boring SB-6. The proposed boring locations did not require relocation due to conflicts with underground utilities or obstructions. Boreholes were physically cleared by RSI and Stratus to 6.5 ft bgs using an air knife rig on 14 July 2009.

4.2 Soil Boring Advancement and Soil Sampling

On 14 July 2009, Stratus field personnel observed RSI advance three soil borings (MW-1, MW-2, and MW-3) to total depths of 17 ft bgs using a Geoprobe 6620 DT drill rig equipped with 10-inch diameter hollow-stem augers. Physical soil samples were collected at specific depths for laboratory analysis as recommended in the work plan, based on field observations, and the recommendations from ACEH. Soil boring logs are provided within Appendix B.

Soil boring MW-1 was advanced to a total depth of 17 ft bgs. Soil samples were collected from boring MW-1 at 6.5, 8.0, 9.5, 11, 12.5 and 14.5 ft bgs. Clayey sand with silt and gravel was observed from approximately zero to 7.5 ft bgs. Clayey silt with sand and gravel was encountered from approximately 7.5 to 12 ft bgs. Clayey sand was observed from approximately 12 to 12.5 ft bgs and 13.5 to 14.5 ft bgs. Clayey silt was encountered from approximately 12.5 to 13.5 ft bgs and 14.5 to 17 ft bgs, the total depth explored. No obvious visual contamination was reported. Following the completion of soil boring advancement and collection of samples, well installation activities began for well MW-1.

Soil boring MW-2 was advanced to a total depth of 17 ft bgs. Soil samples were collected from boring MW-2 at 6.5, 8.0, 9.5, 11, 12.5, 14.5 and 17 ft bgs. Clayey sand with silt and gravel was observed from approximately zero to eight ft bgs, 9.5 to 11.5 ft bgs, 12.5 to 13 ft bgs, and 14 to 14.5 ft bgs. Clayey silt was encountered from approximately eight to 9.5 ft bgs, 11.5 to 12.5 ft bgs, 13 to 14 ft bgs, and 14.5 to 17 ft bgs, the total depth explored. No obvious visual contamination was reported. Following completion of soil boring advancement and collection of samples, well installation activities began for well MW-2.

Soil boring MW-3 was advanced to a total depth of 17 ft bgs. Soil samples were collected from boring MW-3 at 6.5, 8.0, 9.5, 11, 12.5, 14.5, and 17 ft bgs. No obvious visual contamination was reported. Silty clay with sand was observed from approximately zero to eight ft bgs. Silty clay with sand and gravel was encountered from approximately eight to nine ft bgs. Clayey sand with silt and gravel was observed from approximately nine to 10 ft bgs and 15 to 16.5 ft bgs. Clayey silt was encountered from approximately 10 to 15 ft bgs and 16.5 to 17 ft bgs, the total depth

explored. Following completion of soil boring advancement and collection of samples, well installation activities began for well MW-3.

4.3 Monitoring Well Construction

Monitoring wells MW-1, MW-2, and MW-3 were constructed using flush-threaded, four-inch diameter Schedule 40 PVC pipe. The factory-slotted 0.010-inch screen interval extends from seven ft bgs to 17 ft bgs in each well. The filter pack surrounding the screen intervals consists of No.2/12 silica sand from five ft bgs to 17 ft bgs in wells MW-1, MW-2, and MW-3. Each well was sealed with bentonite from three ft bgs to five ft bgs, and with Portland cement grout from three ft bgs to just below ground surface. Each wellhead was secured with a locking well cap, and protected by a traffic-rated well vault set flush with the local ground surface. Additional details of well construction are provided in the field notes, lithologic boring logs and well construction logs provided in Appendix B. Well construction information was uploaded to the GeoTracker AB2886 database. Copies of GeoTracker upload confirmation receipts are provided within Appendix C.

4.4 Well Development and Surveying

Monitor wells MW-1, MW-2 and MW-3 were developed on 4 August 2009. Well development activities for each well consisted of surging and bailing the well until relatively silt-free water was removed. Each well was purged using a bailer. Each well ran dry after approximately 14 gallons of water were removed. After allowing each well to recharge, an additional seven gallons of water were purged from each well. The total amount of water purged from each well, approximately 21 gallons, was less than the targeted goal of 10 wetted casing volumes.

The Site was surveyed, incorporating new wells MW-1, MW-2, and MW-3, by Wood Rodgers of Sacramento, California on 3 August 2009. Latitude and longitude position coordinates were surveyed to the North American Datum of 1983 (NAD83). The ground surfaces and monitoring well top of casing elevations were surveyed to the North American Vertical Datum of 1988 (NAVD88). The survey map and printouts of the survey data from Wood Rodgers are provided within Appendix B. The well survey information was uploaded to the GeoTracker AB2886 database. Copies of the GeoTracker upload confirmation receipts (GEO_MAP, GEO_XY, and GEO_Z files) are provided within Appendix C.

4.5 Investigation-Derived Residuals Management

Residual solids and liquids generated during the Site investigation activities were stored temporarily onsite in Department of Transportation-approved 55-gallon drums pending analytical results and profiling. Following characterization and profiling, Belshire Environmental Services was scheduled to transport the investigation-derived residuals to an Atlantic Richfield Company-approved facility for treatment or disposal.

4.6 Results of Investigation

Soil samples were shipped to Calscience Environmental Laboratories, Inc. (Garden Grove), a California State-certified laboratory, under chain-of-custody protocol. Samples were analyzed for Gasoline Range Organics (GRO, hydrocarbon chain lengths C6-12), Diesel Range Organics (DRO, C10-C28) and Motor Oil Range Organics (ORO, C17-C44) by EPA Method 8015B and BTEX by EPA Method 8260. Oxygenates were not included in the soil analysis schedule due to the age of the former release. No significant irregularities were reported during laboratory analysis of the soil boring samples.

The tested analytes were not detected above their respective reporting limits in the 20 soil samples collected for laboratory analysis with the exception of one sample containing GRO, which was detected at a concentration of 0.87 mg/kg in boring MW-1 at 14.5 ft bgs. Soil laboratory analytical results are summarized in Table 1. A copy of the laboratory analytical report with chain-of-custody documentation is provided in Appendix B. Laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation pages are provided in Appendix C.

5.0 THIRD QUARTER 2009 GROUND-WATER MONITORING

5.1 Station #472 Summary Information

Facility: #472	Address:	6415 International Boulevard, Oakland, California
Environmental Business Manager:		Mr. Chuck Carmel
Consulting Co./Contact Person:		Broadbent & Associates, Inc.(BAI)/Mr. Tom Venus, PE (530) 566-1400
Consultant Project No.:		09-88-601
Primary Agency/Regulatory ID No.:		Alameda County Environmental Health (ACEH) ACEH Case #RO0002982
Facility Permits/Permitting Agency:		NA

5.2 Work Performed Third Quarter 2009

- Prepared and submitted *Second Quarter 2009 Status Report* (BAI, 7/7/2009).
- Installed three ground-water monitoring wells. Work performed on 14 July 2009 by Stratus Environmental, Inc. (Stratus).
- Conducted ground-water monitoring/sampling for Third Quarter 2009. Work performed on 25 August 2009 by Stratus.

5.3 Work Proposed for Fourth Quarter 2009

- Prepared and submitted *Soil & Ground-Water Investigation and Third Quarter 2009 Ground-Water Monitoring Report* (contained herein).
- Conduct ground-water monitoring/sampling for Fourth Quarter 2009.

5.4 Quarterly Results Summary

Current phase of project:	Ground-water monitoring/sampling
Frequency of ground-water monitoring:	Quarterly = MW-1, MW-2, and MW-3
Frequency of ground-water sampling:	Quarterly = MW-1, MW-2, and MW-3
Is free product (FP) present on-site:	No
Current remediation techniques:	NA
Depth to ground water (below TOC):	9.29 ft (MW-1) to 11.07 ft (MW-3)
General ground-water flow direction:	Southwest
Approximate hydraulic gradient:	0.01 ft/ft

5.5 Discussion

Third Quarter 2009 ground-water monitoring and sampling was conducted at Station #472 on 25 August 2009 by Stratus. Water levels were gauged in each of the three wells at the Site. No irregularities were noted during water level gauging. Depth-to-water measurements ranged from 9.29 ft at MW-1 to 11.07 ft at MW-3. Resulting ground-water surface elevations ranged from 14.88 ft above datum in well MW-1 to 13.66 ft in well MW-3. Initial water level elevations are summarized in Table 2. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the southwest at approximately 0.01 ft/ft. Ground-water monitoring field data sheets are provided within Appendix D. Measured depths to ground water and respective ground-water elevations are summarized in Table 2. Current and historic ground-water flow directions and gradients are provided in Table 4. A Site Location Map is presented as Drawing 1. Potentiometric ground-water elevation contours are presented in Drawing 3.

Consistent with the current ground-water sampling schedule, water samples were collected from wells MW-1, MW-2, and MW-3 on 25 August 2009. No irregularities were reported during sampling. Samples were submitted under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove, California), for analysis of Gasoline Range Organics (GRO, petroleum hydrocarbon chain lengths C6-C12), Diesel Range Organics (DRO, C10-C28), and Oil Range Organics (ORO, C6-C12) by EPA Method 8015B; for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and Methyl Tert-Butyl Ether (MTBE), Ethyl Tert-Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether (DIPE), Tert-Butyl Alcohol (TBA), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), and Ethanol by EPA Method 8260B. The laboratory noted that during the DRO analysis of sample MW-1 an unknown hydrocarbon(s) was encountered based on the diesel reference standard. No other significant irregularities were encountered during laboratory analysis of the samples. Ground-water sampling field data sheets and the laboratory analytical report, including chain-of-custody documentation, are provided in Appendix D.

Gasoline Range Organics (GRO) were detected above the laboratory reporting limit in two of the three wells sampled at concentrations of 530 micrograms per liter ($\mu\text{g/L}$) in well MW-1 and 63 $\mu\text{g/L}$ in well MW-3. Toluene was detected above the laboratory reporting limit in well MW-3 at a concentration of 1.2 $\mu\text{g/L}$. MTBE was detected above the laboratory reporting limit in well

MW-1 at a concentration of 0.54 µg/L. DRO was detected above the laboratory reporting limit in well MW-1 at 85 µg/L and at 190 µg/L in well MW-1 but with the previously mentioned note by the laboratory that the MW-1 chromatogram did not resemble that of the reference diesel standard. The remaining analytes were not detected above their laboratory reporting limits in the three wells sampled this quarter. Initial ground-water monitoring laboratory analytical results are summarized in Table 2 and Table 3. The Third Quarter 2009 GRO, Benzene, and MTBE concentrations from samples collected on 25 August are also presented in Drawing 3. Ground-water monitoring data (GEO_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation receipts are provided in Appendix C.

6.0 CONCLUSIONS

On behalf of the Atlantic Richfield Company, RM – a BP affiliated company, BAI prepared this *Revised Soil & Ground-Water Investigation with Third Quarter 2009 Ground-Water Monitoring Report* for Station #472, located at 6415 International Boulevard, Oakland, California. Investigation activities were conducted in accordance with the *Work Plan for Soil & Ground-Water Investigation* (BAI, 30 March 2009) and the *Addendum Work Plan for Soil & Ground-Water Investigation* (BAI, 28 May 2009), as approved by ACEH in their response letter dated 11 June 2009. Based on the information obtained during the soil and ground-water investigation, BAI concludes the following:

- No petroleum hydrocarbons were detected in the 20 soil samples collected during monitoring well installation activities with the exception of one sample containing GRO, which was detected at a concentration of 0.87 mg/kg in boring MW-1 at 14.5 ft bgs.
- It should be remembered from the layout plan that although MW-1 is from near the former pump island, it is also on the assumed upgradient side of the Site.
- The detected concentration of 0.87 mg/kg in boring MW-1 at 14.5 ft bgs is well below the Environmental Screening Level of 83 mg/kg established by the SFRWQCB for shallow residential soils where ground water is considered a current or potential drinking water source.

It is somewhat premature to make conclusions based on one round of ground-water monitoring and sampling at Station #472. That stated, ground-water elevations, flow direction, and hydraulic gradient were generally consistent with expectations. An unexpected observation was that the highest concentrations of contaminants were reported in the sample collected from well MW-1, which the documented flow direction puts on the upgradient side of the Site. No petroleum hydrocarbon contaminants were detected in the sample from well MW-2, which is in close proximity to the assumed former underground storage tank pit.

7.0 RECOMMENDATIONS

Based on the information obtained and presented in this soil and ground-water investigation and ground-water monitoring report, BAI makes the following recommendation:

- One year of quarterly monitoring and sampling should be performed to seek trends in the ground-water elevations, flow directions, horizontal gradients, and contaminant concentrations.

A ground-water monitoring report will be submitted for the next sampling event scheduled for the Fourth Quarter of 2009.

8.0 CLOSURE

This document has been prepared for the exclusive use of Atlantic Richfield Company. The findings presented in this report are based upon the observations of Stratus field personnel, points of investigation and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Services were performed in accordance with the generally accepted standard of practice at the time this report was written. No warranty, expressed or implied, is intended. It is possible that variations in the soil or ground-water conditions could exist beyond the points explored in this investigation. Also, changes in site conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage or other factors.

9.0 REFERENCES

AAI, 9 May 2007. *Phase I Environmental Site Assessment Report, Former Gasoline Station Pluckey's Liquors, 6415 International Boulevard, Oakland, California.*
Prepared for Mr. Marcelo Bermudez, Freeman.

ACEH, 29 January 2009. *Fuel Leak Case No. RO 0002982 and GeoTracker Global ID T1000000417, ARCO #472/Pluckey's Liquor, 6415 International Boulevard, Oakland, CA 94621.* Letter from Mr. Paresh Khatri (ACEH) to Mr. Paul Supple (Atlantic Richfield Company) requesting unauthorized release form and soil and water investigation work plan.

ACEH, 16 April 2009. *Fuel Leak Case No. RO 0002982 and GeoTracker Global ID T1000000417, ARCO #472/Pluckey's Liquor, 6415 International Boulevard, Oakland, CA 94621.* Letter from Mr. Paresh Khatri (ACEH) to Mr. Paul Supple (Atlantic Richfield Company) requesting addendum work plan.

ACEH, 11 June 2009. *Fuel Leak Case No. RO 0002982 and GeoTracker Global ID T1000000417, ARCO #472/Pluckey's Liquor, 6415 International Boulevard, Oakland, CA 94621.* Letter from Mr. Paresh Khatri (ACEH) to Mr. Paul Supple (Atlantic Richfield Company) approving work plan.

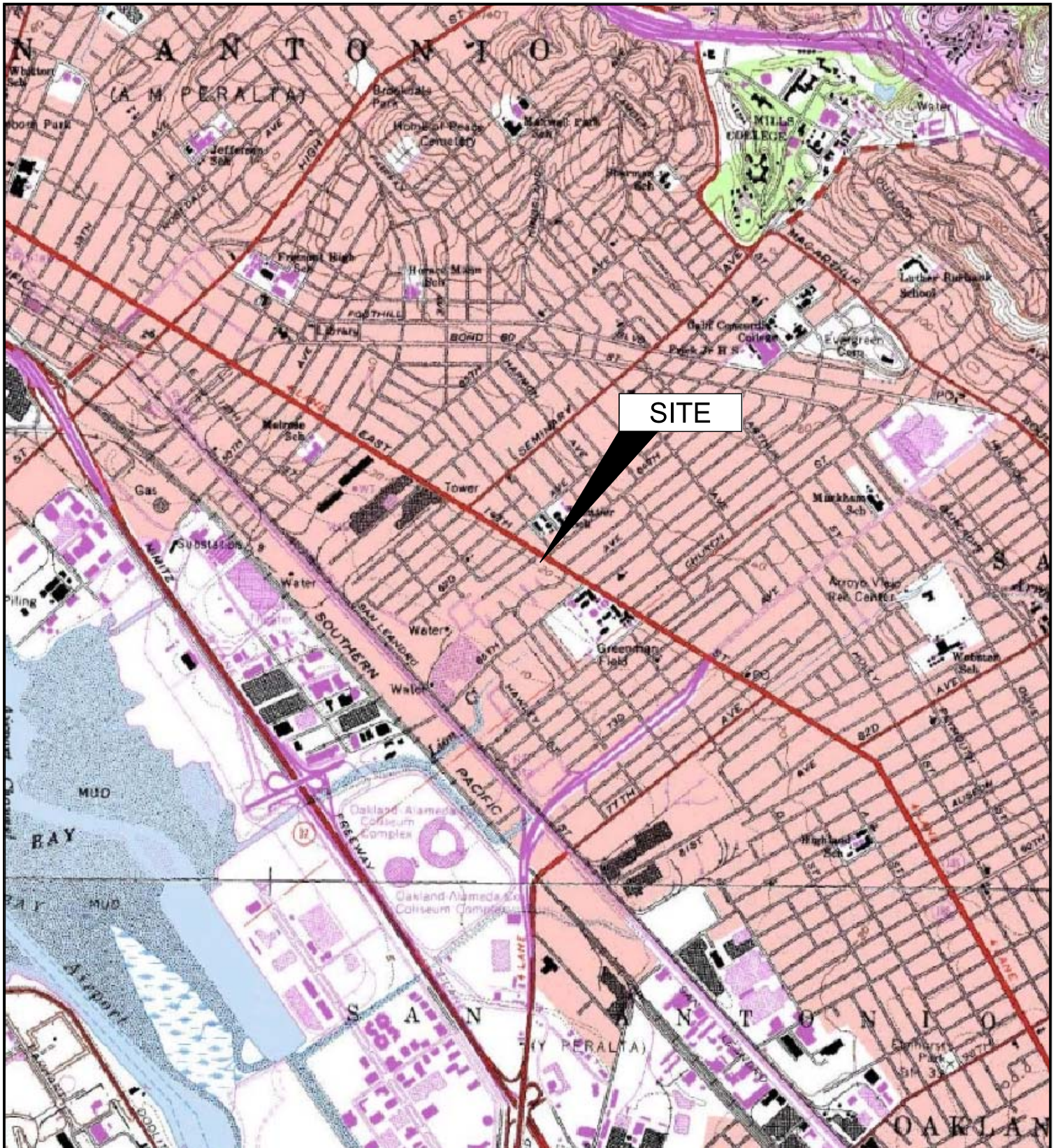
Broadbent & Associates, Inc., 20 February 2009. *Underground Storage Tank Unauthorized Release (Leak)/ Contamination Site Report, Atlantic Richfield Company Station No. 472, 6415 International Boulevard, Oakland, CA, ACEH Case No. RO0002982.*

Broadbent & Associates, Inc., 30 March 2009. *Work Plan for Soil & Ground-Water Investigation, Atlantic Richfield Company Station No. 472, 6415 International Boulevard, Oakland, CA, ACEH Case No. RO0002982.*

Broadbent & Associates, Inc., 28 May 2009. *Addendum Work Plan for Soil & Ground-Water Investigation, Atlantic Richfield Company Station No. 472, 6415 International Boulevard, Oakland, CA, ACEH Case No. RO0002982.*

California Regional Water Quality Control Board, San Francisco Bay Region, Groundwater Committee, June 1999. *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda County and Contra Costa Counties, CA.*

GEOCON, 7 May 2008. *Limited Soil and Grab Groundwater Sampling Report, Plucky's Liquors/ Former Gasoline Station, 6415 International Boulevard, Oakland, California.* Prepared for Ms. Holly Moore, DGC Associates.



SITE

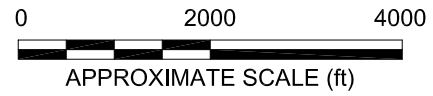
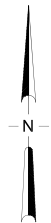
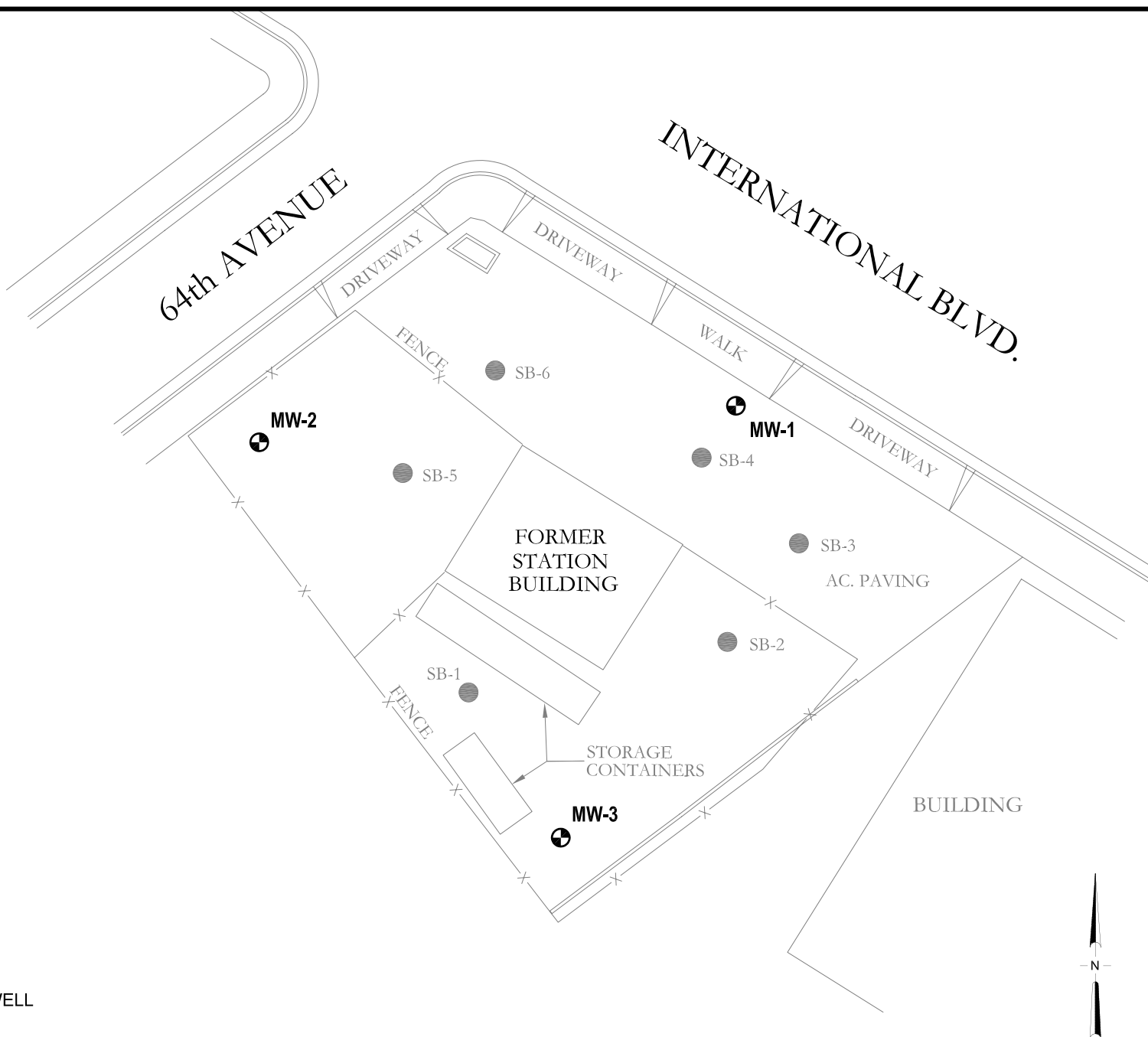
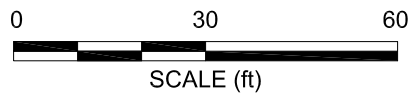
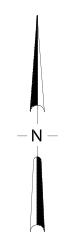


IMAGE SOURCE: USGS



LEGEND

-  MONITORING WELL
-  SOIL BORING



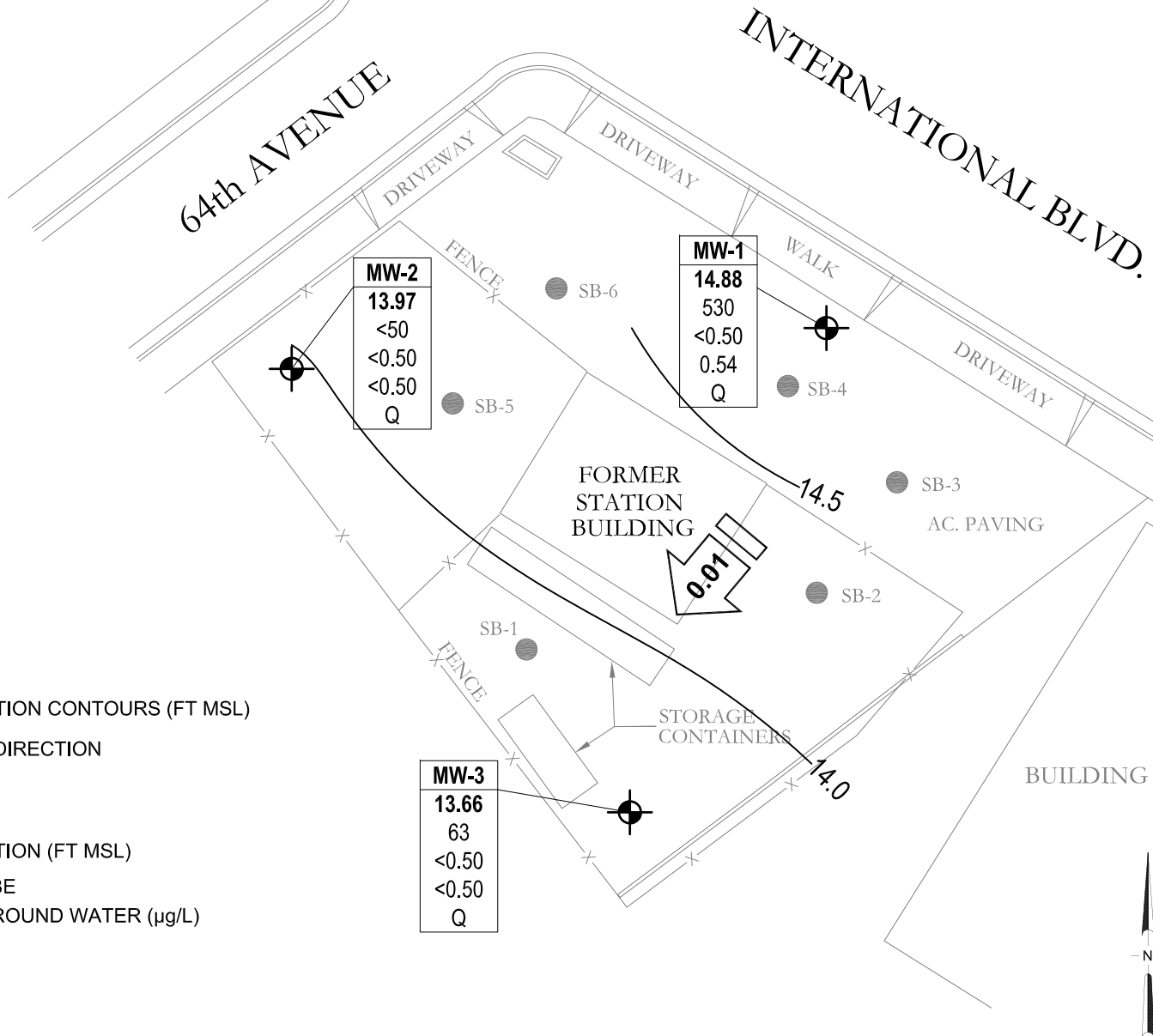
BROADBENT & ASSOCIATES, INC.
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
 1324 Mangrove Ave. Suite 212, Chico, California
 Project No.: 09-88-601 Date: 8/27/09

Former Station #472
 6415 International Boulevard
 Oakland, California





Site Map with Soil Boring/
 Monitoring Well Locations

Drawing

2



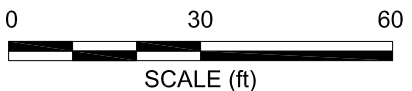
LEGEND

-  MONITORING WELL
 -  SOIL BORING
 -  14.0 GROUND-WATER ELEVATION CONTOURS (FT MSL)
 -  0.01 GROUND-WATER FLOW DIRECTION AND GRADIENT (FT/FT)
- | | |
|-------------|---------------------------------------|
| Well | WELL DESIGNATION |
| ELEV | GROUND-WATER ELEVATION (FT MSL) |
| GRO | GRO, BENZENE AND MTBE |
| Benzene | CONCENTRATIONS IN GROUND WATER (µg/L) |
| MTBE | |
| Q/SA/A | SAMPLING FREQUENCY |
- Q SAMPLED QUARTERLY

MW-2
 13.97
 <50
 <0.50
 <0.50
 Q

MW-1
 14.88
 530
 <0.50
 0.54
 Q

MW-3
 13.66
 63
 <0.50
 <0.50
 Q



BROADBENT & ASSOCIATES, INC.
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
 1324 Mangrove Ave. Suite 212, Chico, California
 Project No.: 09-88-601 Date: 10/2/09

Former Station #472
 6415 International Boulevard
 Oakland, California

Ground-Water Elevation Contour
 and Analytical Summary Map
 25 August 2009

Drawing
3

Table 1. Summary of Soil Sampling Analytical Data
 Station #472, 6415 International Boulevard, Oakland, CA

Sample ID	Sample Depth (ft)	Date Sampled	DRO/TPHd	ORO/TPHo	GRO/TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Concentrations in (mg/kg)						
MW-1 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 14.5'	14.5	7/14/2009	ND <5.0	ND <25	0.87	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 14.5'	14.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 17'	17.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 14.5'	14.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 17'	17.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010

ND = Not Detected above the laboratory detection limit

DRO/TPHd = Diesel Range Organics/Total Petroleum Hydrocarbons in the diesel range (C10-C28)

ORO/TPHo = Oil Range Organics/Total Petroleum Hydrocarbons in the oil range (C17-C44)

GRO/TPHg = Gasoline Range Organics/Total Petroleum Hydrocarbons in the gasoline range (C6-C12)

mg/kg = milligrams per kilogram

Table 2. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses
Station #472, 6415 International Boulevard, Oakland, CA

Well and Sample Date	P/NP	Footnote	TOC Elevation (feet)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/TPHd (µg/L)	TOG (µg/L)
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE					
MW-1																	
8/25/2009	P	LX (DRO)	24.17	9.29	--	14.88	530	<0.50	<0.50	<0.50	<0.50	0.54	--	CEL	7.21	190	--
MW-2																	
8/25/2009	P		23.62	9.65	--	13.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	CEL	7.30	<50	--
MW-3																	
8/25/2009	P		24.73	11.07	--	13.66	63	<0.50	1.2	<0.50	<0.50	<0.50	--	CEL	7.09	85	--

ABBREVIATIONS & SYMBOLS:

--/-- = Not analyzed/applicable/measured/available

< = Not detected at or above specified laboratory reporting limit

DO = Dissolved oxygen

DRO = Diesel range organics

DTW = Depth to water in ft bgs

ft bgs = feet below ground surface

GRO = Gasoline range organics, range C4-C12

GWE = Groundwater elevation measured in ft

HVOC = Halogenated volatile organic compounds

mg/L = Milligrams per liter

MTBE = Methyl tert-butyl ether

NP = Well not purged prior to sampling

P = Well purged prior to sampling

TOC = Top of casing measured in ft

TOG = Total oil and grease

TPH-d = Total petroleum hydrocarbons as diesel

TPH-g = Total petroleum hydrocarbons as gasoline

µg/L = Micrograms per liter

CEL = CalScience Environmental Laboratories, Inc.

FOOTNOTES:

LX = Quantitation of unknown hydrocarbon(s) in sample based on diesel.

**Table 3. Summary of Fuel Additives Analytical Data
Station #472, 6415 International Boulevard, Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
8/25/2009	<300	<10	0.54	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-2									
8/25/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-3									
8/25/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

ABBREVIATIONS & SYMBOLS:

-- = Not analyzed/applicable/measured/available

< = Not detected at or above specified laboratory reporting limit

1,2-DCA = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

EDB = 1,2-Dibromoethane

ETBE = Ethyl tert-butyl ether

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether

TBA = tert-Butyl alcohol

µg/L = Micrograms per Liter

NOTES:

All volatile organic compounds were analyzed using EPA Method 8260B.

**Table 4. Historical Ground-Water Flow Direction and Gradient
Station #472, 6415 International Boulevard, Oakland, CA**

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
8/25/2009	Southwest	0.01

APPENDIX A

RECENT REGULATORY CORRESPONDENCE

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



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

January 29, 2009

Tracey Campbell
307 W. Fairview Blvd
Inglewood, CA 90302

James J. Weiss
6 Lagoon Vista
Tiburon, CA 94920

Jaleeza Hazzard
1722 Virginia Road
Los Angeles, CA 90012

Fabian A. Labat, Jr.
William C. Dixon
Address Unknown

Paul Supple
Atlantic Richfield Company
(A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583

Pluckey, Inc.
Address Unknown

Subject: Fuel Leak Case No. RO0002982 and GeoTracker Global ID T10000000417, ACRO # /
Pluckey's Liquors, 6415 International Boulevard, Oakland, CA 94621

Dear Responsible Parties:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Limited Soil and Grab Groundwater Sampling Report," dated May 7, 2008, which was prepared by Geocon Consultants for the subject site. The report documents a Phase II subsurface investigation conducted to determine soil and groundwater quality at the subject site due to its previous use as a gasoline station that utilized underground storage tanks. Geocon advanced six soil borings and collected soil and groundwater samples. Total petroleum hydrocarbons (TPH) as gasoline (g), diesel (d), and motor oil (mo) were detected in soil samples at maximum concentrations of 95 milligrams per kilogram (mg/kg), 20 mg/kg, 51 mg/kg, respectively, indicating that the soil has been impacted with petroleum hydrocarbons. "Grab" groundwater sample analytical results detected TPH-g, TPH-d, TPH-mo at maximum concentrations of 8,100 µg/L, 7,200 µg/L, and 180 µg/L, respectively, indicating that the groundwater has also been impacted with petroleum hydrocarbons. Please complete and submit an Underground Storage Tank Unauthorized Release Form (available online at http://www.swrcb.ca.gov/ust/forms/docs/unauth_release.pdf) within 30 days from the date of this letter. A Notice of Responsibility will be mailed to you within 15 days from the date of this letter.

Based on the analytical results, a subsurface investigation is required to determine the vertical and lateral extent of soil and groundwater contamination. It is recommended that a series of borings are installed prior to the installation of permanent groundwater monitoring points.

ACEH requests that you address the above-mentioned concerns and send us the technical work plan requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Paresh Khatri), according to the following schedule:

- **March 2, 2009** – Unauthorized Release Form
- **March 30, 2009** – Soil and Water Investigation Work Plan

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering

evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

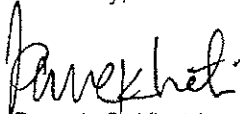
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,



Paresh C. Khatri
Hazardous Materials Specialist



Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions
List of Environmental Consultants

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA
94612-2032
Donna Drogos, ACEH
Paresh Khatri, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

- 1) Obtain User Name and Password:
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to dehloptoxic@acgov.org
or
 - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
 - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape and Firefox browsers will not open the FTP site.
 - b) Click on File, then on Login As.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload)

List of Environmental Consultants

A+ Environmental Solutions
6898 Soquel Avenue
Santa Cruz, CA 95062
(831) 475-9200

ACC Environmental Consultants
7977 Capwell Dr., Suite 100
Oakland, CA 94621
510-638-8400

Alisto Engineering Group
3732 Mt. Diablo Blvd., Ste. 270
Lafayette, CA 94549
925-962-6970

Antrim Engineering & Construction
1635 Chestnut Street
Livermore, CA 94550
925-426-2444

Applied Remediation Co.
P.O. Box 612421
San Jose, CA 95161
402-453-0188

Aquifer Sciences, Inc.
3680-A Mt. Diablo Blvd
Lafayette, CA 94549
925-283-9098

ATC Associates Inc.
6602 Owens Dr., Ste. 100
Pleasanton, CA 94588
925-460-5300

Atlas Engineering Services Inc
P.O. Box 1260
Santa Cruz, CA 95061
650-363-2445

Berlogar Geotechnical Associates
5587 Sunol Blvd.
Pleasanton, CA 94566
925-484-0220

Blaine Tech Services
1680 Rogers Ave
San Jose, CA 95112
408-573-0555

Blue Rock Environmental
1169 Chess Drive
Foster City, CA 94404
650-301-4946

Blymer Engineers Inc.
1829 Clement Ave
Alameda, CA 94501
510-521-3773

Brown & Caldwell
P. O. Box 8045
Walnut Creek, CA 94596
925-937-9010

Broadbent & Associates, Inc.
1324 Mangrove Drive
Chico, CA 95926
530-566-1400

BSK
1181 Quarry Ln
Pleasanton, CA 94566
925-462-4000

Chow Engineering, Inc.
7700 Edgewater Dr., Ste 729
Oakland, CA 94621
510-636-8500

Clayton Environmental Consultants
6920 Koll Ctr. Pkwy., Ste. 216
Pleasanton, CA 94566
925-426-2600

Clearwater Group
229 Tewksbury Ave.
Pt. Richmond, CA 94801
510-307-9943

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
510-420-0700

Converse Consultants
222 East Huntington Dr, Suite 211
Monrovia, CA 94016
626-930-1200

Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954
707-766-2000

Environmental Science Associates
225 Bush St., Suite 1700
San Francisco, CA 94104
415-896-5900

List of Environmental Consultants

Eras Environmental, Inc.
1533 "B" Street
Hayward, CA 94541
510-247-9885

Erler & Kalinowski Inc.
1870 Ogden Drive
Burlingame, CA 94010
650-292-9100

ES Geotechnology
446 South Hillview Drive
Milpitas, CA 95035-546
510-353-0320

Etic Engineering
2285 Morello Avenue
Pleasant Hill, CA 94523
925-602-4710

Fletcher Consultants, Inc.
4858 Harbord Drive
Oakland, CA 94618
510-599-1799

Frey Environmental, Inc.
3040 Prather Lane, Ste. C
Santa Cruz, CA 95065
831-464-1634

Fugro West, Inc.
1000 Broadway, Ste. 200
Oakland, CA 94607
510-268-0737

Geocon
2356 Research Drive
Livermore, CA 94550
925-371-5900

Geological Technics, Inc.
1101 7th Street
Modesto, CA 95354
209-522-4119

Geomatrix
2101 Webster St., 12th Floor
Oakland, CA 94612
510-633-4100

Geosystem Consultants
18218 McDermotte, Ste. G
Irvine, CA 92614
949-553-8757

Golder Associates
2580 Wyandotte St., Ste. G
Mountain View, CA 94043
650-386-3828

Green Environmental
195 Glenn Way, Suite 250
San Carlos, CA 94070
650-508-8018

Hoexter Consulting Inc.
734 Torreya Court
Palo Alto, CA 94303
650-494-2505

Holguin, Fahan & Associates, Inc.
5627 Stoneridge Drive., Ste. 320
Pleasanton, CA 94303
800-672-0219

Hydroanalysis, Inc.
11100 San Pablo Ave., Ste. 200-A
El Cerrito, CA 94530
510-620-0891

Hygienetics Environmental
44448 Martingale Court
Fremont, CA 94539
510-366-8054

Jonas & Associates
2815 Mitchell Dr, Suite 209
Walnut Creek, CA 94598
925-933-5360

Kennedy/Jenks Consultants
2191 East Bayshore Rd, Suite 200
Palo Alto, CA 94303
650-852-2800

Kodiak Consulting, LLC
660 4th Street., Ste. 288
San Francisco, CA 94107
415-269-9515

Krazan & Associates, Inc.
545 Parrott Street
San Jose, CA 95112
408-271-2200

Law Engineering
7677 Oakport Street, Ste. 105
Oakland, CA 94621
510-553-7067

List of Environmental Consultants

LFK
1900 Powell St, 12th Floor
Emeryville, CA 94608-1827
510-652-4500

Montgomery Watson Harza
44 Montgomery Street., Ste. 1400
San Francisco, CA 94104-470
415-430-1800

Ninyo & Moore
1956 Webster Street., Ste 400
Oakland, CA 94612
510-633-5640

North State Environmental
815 Dubuque Avenue
South San Francisco, CA 94080
650-588-2838

Piers Environmental Services, Inc.
1330 S. Bascom Ave., Ste. F
San Jose, CA 95128
408-559-1224

Professional Service Industries (PSI)
4703 Tidewater Ave., Ste. B
Oakland, CA 94601
510-434-9200
510-434-7676 Fax

Questa Engineering Corp
1220 Brickyard Cove Rd, Suite 206
Point Richmond, CA 94807-0356
510-236-6114

R & M Environmental & Infrastructure Engineers
7996 Capwell Drive
Oakland, CA 94621
510-553-2144

Remediation Risk Management (RRM)
2560 Soquel Avenue., Ste. 202
Santa Cruz, CA 95062
831-475-8141

RGA Environmental
1466 66th Street
Emeryville, CA 94608
510-547-7771

SCA Environmental
165 10th Street, Ste. 100
San Francisco, CA 94103
415-703-8500

Secor International Inc.
2301 Leghorn Street
Mountain View, CA 94043
650-691-0131

Sequoia Environmental
7230 Lockwood Street
Oakland, CA 94621
510-430-9261

SLR international Corp.
800 S. Claremont St., Ste. 108
San Mateo, CA 94402
650-227-0210

Studemeister & Associates
675 Sharon Park Dr., Ste. 212
Menlo Park, CA 94025
650-234-1030

Technology Engineering/Accutite
262 Michelle Court
S. San Francisco, CA 94080
650-952-5551

Tetrattech E.M. Inc.
135 Main Street, Ste. 1800
San Francisco, CA 94105
415-495-7110

Todd Engineers
2490 Mariner Square Loop, Ste. 215
Alameda, Ca 94510-108
510-747-6920

Toxichem Management Systems, Inc.
1461 Newport Avenue
San Jose, CA 95125
(408) 292-3266

TRC
405 Clyde Avenue
Mountain View, CA 94043
650-967-2365

List of Environmental Consultants

TRC/Alton Geoscience
1590 Solano Way, Ste. A
Concord, CA 94520
925-688-1200

Treadwell & Rollo
555 Montgomery St., Ste. 1300
San Francisco, CA 94111
415-955-9040

URS Corporation
221 Main Street, Ste. 600
San Francisco, CA 94105
415-896-5858

URS Corporation
13333 Broadway, Ste. 800
Oakland, CA 94612
510-893-3600

Vapor Extraction Technology
1060 Calle negocio, St. B
San Clemente, CA 92673
949-492-7611

W. L. Gore & Associates, Inc.
555 Paper Mill Road
Newark, DE 19711
302-738-4880

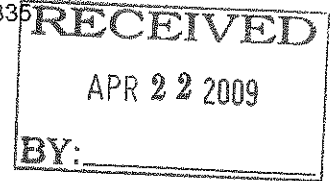
Weiss Associates
5801 Christie Ave., Ste. 600.
Emeryville, CA 94608
510-450-6000

WHF, Inc.
P.O. Box 427
Oakdale, CA 95361
209-848-4280



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

April 16, 2009



Tracey Campbell
307 W. Fairview Blvd
Inglewood, CA 90302

James J. Weiss
6 Lagoon Vista
Tiburon, CA 94920

Jaleeza Hazzard
1722 Virginia Road
Los Angeles, CA 90012

Fabian A. Labat, Jr.
William C. Dixon
Address Unknown

Paul Supple
Atlantic Richfield Company
(A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583

Pluckey, Inc.
Address Unknown

Subject: Fuel Leak Case No. RO0002982 and GeoTracker Global ID T10000000417, ACRO # /
Pluckey's Liquors, 6415 International Boulevard, Oakland, CA 94621

Dear Responsible Parties:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Work Plan for Soil & Ground-Water Investigation," dated March 30, 2009, which was prepared by Broadbent & Associates, Inc. (BAI) for the subject site. To delineate the extent of soil and groundwater contamination detected at the site during a recent Phase II Investigation, BAI proposes to install three groundwater monitoring wells, with screened intervals that extend from 7 feet to 22 feet below the ground surface (bgs). ACEH has concerns with the locations as well as the proposed construction of the wells. At this time, please address the following technical comments, and send us the work plan addendum requested below.

TECHNICAL COMMENTS

1. **Monitoring Well Construction & Hydrogeologic Setting** – According to BAI, "[t]he total depth and screen interval was proposed from looking at the depth of water and the well construction on the UNOCAL #3135 Station (T0600101488) downhill of the Site and Gritit Auto Repair & Service (T0600100667) uphill of the Site. Proposed monitoring wells MW-1, MW-2 and MW-3 will contain screened intervals from 7 feet bgs to 22 feet bgs, the total depth of each well." According to the boring logs for the site, there appears to be a gravelly clay unit that extends from approximately 7 to 12 feet bgs identified in a few of the boring logs. This unit is typically underlain by a less permeable (fine-grained) clay unit to approximately 21 feet bgs, underlain by a silty clay with interbedded clayey fine sand (more permeable). First encountered groundwater was noted at 21 feet bgs. ACEH is concerned that the long well screened intervals may be intersecting two water-bearing zones, which may not yield

groundwater sample analytical results that are representative of actual site conditions. Please justify that the proposed monitoring well construction is appropriate for site conditions or propose an alternate scope of work such as wells capable of multi-depth sampling intervals or additional borings for review in a work plan addendum due by the date specified below.

2. **Monitoring Well Locations** – BAI has proposed to install three groundwater monitoring wells at the site. BAI states that [a]ssuming a ground-water flow direction towards the southwest, this upgradient well MW-1 will be located northeast of SB-4 and the former fuel dispenser island. Well MW-2 is proposed to be located approximately 10 feet in from the sidewalk on 64th Avenue and from the back of the property, southwest of SB-5 and assumed location of the former USTs. Well MW-3 is proposed to be located in the south corner of the property approximately 20 feet in from the back of the property and former store.” In order to demonstrate plume stability, source area well(s) may be necessary. Please propose a scope of work to address the above-mentioned concerns and submit a work plan addendum due by the date specified below.
3. **Site Figures** – The site figure included in the above-mentioned work plan does not illustrate the location of former USTs. Also the figure does not adequately depict site features in relation to adjacent and neighboring properties. Please prepare extended site maps, which utilize aerial photographs as base maps for your site, and accurately depict the groundwater contaminant plume (concentrations of contaminants) and site features (i.e. former USTs, piping runs, dispenser islands, station building, etc.) in relation to the neighboring structures in all future submittals.

REQUEST FOR INFORMATION

ACEH's case file for the subject site contains the following electronic reports as listed on our website (<http://www.acgov.org/aceh/lop/ust.htm>). You are requested to submit copies of all other data and reports related to environmental investigations and USTs for this property (including tank installation and/or removal reports, etc.) by **May 18, 2009**.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Paresh Khatri), according to the following schedule:

- **June 1, 2009** – Soil and Water Investigation Work Plan Addendum

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

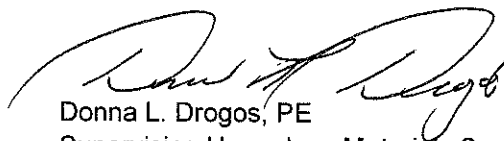
If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,



Paresh C. Khatri
Hazardous Materials Specialist



Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tom Venus, Broadbent & Associates, 1324 Mangrove Avenue, Suite 212, Chico, CA 95926
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA
94612-2032
Donna Drogos, ACEH
Paresh Khatri, ACEH
GeoTracker
File

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



BP 472

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

June 11, 2009

Tracey Campbell
307 W. Fairview Blvd
Inglewood, CA 90302

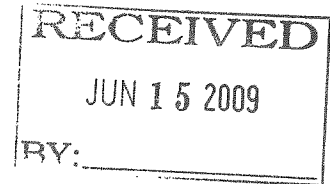
James J. Weiss
Address Unknown

Jaleeza Hazzard
1722 Virginia Road
Los Angeles, CA 90012

Fabian A. Labat, Jr.
William C. Dixon
Address Unknown

Paul Supple
Atlantic Richfield Company
(A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583

Pluckey, Inc.
Address Unknown



Subject: Fuel Leak Case No. RO0002982 and GeoTracker Global ID T10000000417, ACRO # /
Pluckey's Liquors, 6415 International Boulevard, Oakland, CA 94621

Dear Responsible Parties:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Addendum Work Plan for Soil & Ground-Water Investigation," dated May 28, 2009, which was prepared by Broadbent & Associates, Inc., for the subject site. In response to ACEH's concerns regarding the previously proposed monitoring well screens that would have extended from 7 to 22 feet below the ground surface (bgs), BAI has modified the proposed well screened intervals from 7 to 17 feet bgs. BAI has also included a revised site figure that now illustrates the former UST locations and will submit a more accurate figure in the subsurface investigation report.

ACEH generally concurs with the proposed scope of work and perform the proposed work and send us the technical reports described below. In the above-mentioned work plan, BAI did not appear to recommend a groundwater monitoring frequency for the proposed monitoring wells. Please include a proposed groundwater monitoring plan for review with the soil and groundwater investigation report due by the date specified below.

NOTIFICATION OF FIELDWORK ACTIVITIES

Please schedule and complete the fieldwork activities by the date specified below and provide ACEH with at least three (3) business days notification prior to conducting the fieldwork.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Paresh Khatri), according to the following schedule:

- **September 7, 2009** – Soil and Water Investigation Report
- **Due within 45 Days of Sampling** – Semi-annual Monitoring Report (3rd Quarter 2009)
- **Due within 45 Days of Sampling** – Semi-annual Monitoring Report (1st Quarter 2010)

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering

evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,



Paresh C. Khatri
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tom Venus, Broadbent & Associates, 1324 Mangrove Avenue, Suite 212, Chico, CA 95926
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA
94612-2032
Donna Drogos, ACEH
Paresh Khatri, ACEH
GeoTracker
File



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

October 22, 2009

Tracey Campbell
307 W. Fairview Blvd
Inglewood, CA 90302

James J. Weiss
Address Unknown

Jaleeza Hazzard
1722 Virginia Road
Los Angeles, CA 90012

Fabian A. Labat, Jr.
William C. Dixon
Address Unknown

Chuck Carmel
(Sent via E-mail to: charles.carmel@bp.com)
Atlantic Richfield Company
(A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583

Pluckey, Inc.
Address Unknown

Subject: Fuel Leak Case No. RO0002982 and GeoTracker Global ID T10000000417, ACRO # /
Pluckey's Liquors, 6415 International Boulevard, Oakland, CA 94621

Dear Responsible Parties:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Soil and Groundwater Investigation Report," dated September 4, 2009, which was prepared by Broadbent & Associates, Inc. (BAI) for the subject site. BAI states that out of 20 soil samples collected during monitoring well installation, only one sample contained petroleum hydrocarbons as gasoline at a concentration of 0.87 mg/kg. In the recommendations, BAI states that "[o]ne year of quarterly monitoring and sampling should be performed to seek trends in the ground-water flow direction, horizontal gradients, and contaminant concentrations."

ACEH generally concurs with the proposed scope of work and requests that you address the following technical comments, perform the proposed work, and send us the technical reports described below.

TECHNICAL COMMENTS

1. **Analytical Summary Tables** – As mentioned above, 20 soil samples were collected at the site with only one soil sample yielding a result of 0.87 mg/kg of gasoline range petroleum hydrocarbons. Since only one soil sample detected contamination, comprehending the data from the text was not onerous. However, an analytical summary table should still be included so that the data can be easily viewed and referenced. For results that were not detected above the laboratory detection limit, it should be denoted by ND for not detected with the

laboratory detection limit next to it (e.g. ND <0.005 mg/kg). Please submit a revised soil and groundwater investigation report due by the date specified below. In all subsequent reports for all British Petroleum/Atlantic Richfield Corporation cases, please include analytical summary tables for all media sampled.

2. **Groundwater Sampling** – Three groundwater monitoring wells were installed at the site to evaluate impact to groundwater. However, groundwater sample analytical results were not included in the above-mentioned report. BAI states that a separate groundwater monitoring report will be submitted during the third quarter 2009. However, without the groundwater data, the above-mentioned report appears incomplete since groundwater sample analytical result could not be evaluated and discussed in conjunction with the soil data. At this time, please prepare a revised soil and groundwater investigation report that includes soil and groundwater data and submit the report by the date specified below.
3. **Groundwater Contaminant Plume Monitoring** – BAI states that “[o]ne year of quarterly monitoring and sampling should be performed to seek trends in the ground-water flow direction, horizontal gradients, and contaminant concentrations.” ACEH does not object to quarterly monitoring of the newly installed monitoring wells for a period of one year. Please submit the reports according the schedule outlined below.

NOTIFICATION OF FIELDWORK ACTIVITIES

Please schedule and complete the fieldwork activities by the date specified below and provide ACEH with at least three (3) business days notification prior to conducting the fieldwork.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Paresh Khatri), according to the following schedule:

- **December 7, 2009** – Revised Soil and Water Investigation Report
- **October 5 or 30, 2009** – Quarterly Monitoring Report (3rd Quarter 2009)
- **January 5 or 30, 2010** – Quarterly Monitoring Report (4th Quarter 2009)
- **April 5 or 30, 2010** – Quarterly Monitoring Report (1st Quarter 2010)
- **July 5 or 30, 2010** – Quarterly Monitoring Report (2nd Quarter 2010)

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml).

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All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,

Paresh C. Khatri
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tom Venus, Broadbent & Associates, 1324 Mangrove Avenue, Suite 212, Chico, CA 95926
(Sent via E-mail to: tvenus@broadbentinc.com)
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA
94612-2032 (Sent via E-mail to: lgriffin@oaklandnet.com)
Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org)
Paresh Khatri, ACEH (Sent via E-mail to: paresh.khatri@acgov.org)
GeoTracker
File

APPENDIX B

STRATUS MONITORING WELL INSTALLATION DATA PACKAGE

**(Includes Field Data Sheets, Boring Logs, Drilling Permit, Well Completion Reports, Site Plan,
and Certified Laboratory Analytical Report with Chain-of-Custody Documentation)**



3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

August 21, 2009

Mr. Tom Venus
Broadbent & Associates, Inc.
1324 Mangrove Avenue
Chico, California 95926

Re: Monitoring Well Installation Data Package, Former ARCO Service Station No. 472, located at 6415 International Boulevard, Oakland, California (field activities performed between June 29 and August 4, 2009).

General Information

Data Submittal Prepared / Reviewed by: Collin Fischer and Scott Bittinger / Jay Johnson
Phone Number: (530) 676-2062 / (530) 676-6000

Date: June 29, 2009

On-Site Supplier Representative: Collin Fischer

Scope of Work Performed: Health and safety meeting with utility locating subcontractor (Cruz Brothers Locators). Locate all utilities onsite and sketch on site map per ground disturbance procedures. Clear 3 boring locations and mark site for Underground Service Alert (USA).

Variations from Work Scope: None noted

Date: July 9, 2009

On-Site Supplier Representative: Collin Fischer

Scope of Work Performed: Fill out health and safety forms. Check USA markings, update USA tracking sheet, and sketch utilities on site map per ground disturbance procedures.

Variations from Work Scope: None noted

Date: July 14, 2009

On-Site Supplier Representative: Collin Fischer

Scope of Work Performed: Health and safety meeting with air knife and drilling subcontractor (RSI Drilling). Clear 3 boring locations (MW-1, MW-2, and MW-3) to 6.5 feet below ground surface (bgs) with air knife. Install 3 monitoring wells (MW-1, MW-2, and MW-3) to 17 feet bgs and collect soil samples during advancement of the well borings.

Variations from Work Scope: None noted

August 21, 2009

Date: August 4, 2009

On-Site Supplier Representative: Collin Fischer

Scope of Work Performed: Fill out health and safety forms. Develop 3 monitoring wells (MW-1, MW-2 and MW-3).

Variations from Work Scope: None noted, although wells purged dry during development

This submittal presents data collected in association with the installation and development of three monitoring wells. The attachments include field data sheets, boring logs, DWR well completion reports, an Alameda County Public Works Department Drilling Permit, a surveyed site plan, an underground utility location sketch, certified analytical reports, and chain-of-custody documentation. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.


Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.



Scott G. Bittinger, P.G.
Project Geologist



Jay R. Johnson, P.G.
Project Manager



Attachments:

- Field Data Sheets
- Boring Logs
- DWR Well Completion Reports
- Drilling Permit
- Surveyed Site Plan
- Underground Utility Location Sketch
- Certified Analytical Reports
- Chain-of-Custody Documentation

cc: Chuck Carmel, BP/ARCO

ARCO 472 - Collins Fischer
CWE BROWNS

Geology
Survey
Clear

1345 → ONSITE, FILL OUT SAFETY PAPERWORK, SAFETY MEETING
SITEWALK, TRY TO GAIN ACCESS TO PROPERTY.

1350 → ACCESS TO PROPERTY MADE, LOCATION (MW-3) IS BEHIND
A LOCKED FENCE, WE WILL TRY TO GAIN ACCESS OVER FENCE,
TO GET FENCE UNLOCKED FOR DRILLING ACTIVITIES.

1430 → (MW-1) (MW-2) & (MW-3) LOCATION CLEARED, PROPERTY
MAINTENANCE WORKERS NUMBER FOUND SO WE WILL
BE ABLE TO ACCESS (MW-3) TO DRILL.

OFFSITE

Collin F.

STATUS ~~ENV.~~ INC.

Field Data Sheet

Site: ALCO 472 Date: 7/9/09

Personnel on site: COLLIN FISHER

Weather Conditions: SUNNY, CLOUD

Notes:

1045 -> ONSITE, Fill out SAFETY PAPERWORK.

1100 -> UPDATE USA TRACKING SHEET SPARK W/ NETDOR STORE OWNER ABOUT PROJECT. START ADDITIONAL UTILITIES ON MAP

1115 -> OFFSITE

Collin Fisher

STRATUS ENV. INC.

Field Data Sheet

Site: ALCO 472

Date: 7/14/09

Personnel on site: Collin Fischer, LSI Drilling

Weather Conditions: Sunny, Clear

Notes:

0715 → ON SITE, FILL OUT PAPERWORK, SAFETY MEETING, SET UP ON (MW-1) & BEGIN CONCRETE COILING.

0845 → DONE COILING, START CLEANING (MW-1) W/ AK.
 0945 → DONE W/ AK @ (MW-1), MOVE TO (MW-2) & START AK.
 1015 → DRILL BY ON SITE, SAFETY MEETING, START AK @ (MW-3) & DRILLING @ (MW-1).

1200 → AK DONE @ (MW-3), LSI HEALTH & SAFETY INSPECTOR ON SITE. AK CREW TAKE LUNCH. SETTING WELL (MW-1)

SCREEN 7-17
 SAND 5-17
 BENT 3-5
 GRANT 0-3

1300 → DRILL BY DONE. SETTING (MW-1), AK STARTS ON (MW-2) DRILLING. MOVE OUT OF WAY! DRILL RIGS NOTES TO (MW-3) & SET UP.

1415 → DRILL W/ SAMPLES START DRILLING.

1415 → AK DONE @ (MW-2), EMPTY TANK & CLEANUP, START SETTING WELL BOT @ (MW-1).

1440 → DRILL BY @ (MW-3) SET WELL (MW-3)

SCREEN 7-17
 SAND 5-17
 BENT 3-5
 GRANT 0-3

1545 → (MW-3) SET, MOVE RIG TO (MW-2), BEGIN SETTING.

1640 → (MW-1) GROUND & BOT SET, AK CREW MOVE TO (MW-3) TO GROUND & SET BOT. DRILL RIG @ (MW-2) SET WELL (MW-2)

SCREEN 7-17
 SAND 5-17
 BENT 3-5
 GRANT 0-3

1720 → (MW-3) GROUND & BOT SET, AK CREW STARTS CLEANUP & MOVE DECS.

1800 → SET (MW-2) BOT LABEL NUMS &

CLEANING, SECURE AREA.

1900 → OFF SITE

Collin Fischer

ST. THOMAS ENV. INC.

0900 →

1330
OFFSITE

4.5

Day 214
Day 21

Day 214
Day 21

0900
0925
0935
Day 214
0945
Day 220

Well ID MW-1					Well ID MW-2						
purge start time					purge start time						
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons		
time	1305	23.1	7.47	637	0	time	1045	22.1	7.21	542	0
time	1215	22.2	7.39	706	7	time	1050	21.4	7.49	456	7
time	1225	21.8	7.51	698	14	time	1055	21.2	7.45	430	14
time	1255	21.8	7.37	697	21	time	1145	21.2	7.47	427	21
purge stop time 1300					purge stop time 1150						
Well ID MW-3					Well ID						
purge start time 0923					purge start time						
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons		
time	0925	19.9	7.30	525	0	time				3	
time	0930	19.6	7.10	510	7	time					
time	0936	19.5	7.07	520	14	time					
time	0945	19.5	7.06	518	22	time					
purge stop time 0945					purge stop time						
Well ID					Well ID						
purge start time					purge start time						
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons		
time					time						
time					time						
time					time						
time					time						
purge stop time					purge stop time						

SOIL BORING LOG

Boring No. MW-1

Sheet: 1 of 1

Client	Former ARCO 472	Date	July 14, 2009
Address	6415 International Boulevard Oakland, CA	Drilling Co.	RSI Drilling rig type: Geoprobe 6620 DT
Project No.	E472	Driller	Norman
Logged By:	Collin Fischer	Method	Hollow Stem Auger Hole Diameter: 10 inches
Well Pack	sand: 5 ft. to 17 ft. bent.: 3 ft. to 5 ft. grout: 0 ft. to 3 ft.	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 7 ft. to 17 ft. Casing Diameter: 4 in. Screen Slot Size: 0.010-in. Depth to GW: ▽ first encountered static ▼

Sample		Blow Count	Sample		Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.					
						1			
						2			
						3			
						4	SC	Clayey sand with silt and gravel, SC, (0'-7.5'), grayish brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	
						5			
S	MW-1 6.5'	N/A	1055	100		6			0
						7			
S	MW-1 8'	N/A	1058	100		8			0
						9			
S	MW-1 9.5'	N/A	1100	100		10	ML	Clayey silt with sand and gravel, ML, (7.5'-12'), dark yellowish brown moist, low plasticity, 50% silt, 30% clay, 10% fine grained sand 10% medium gravel	0
						11			0
						12			
S	MW-1 12.5'	N/A	1105	100		13	SC	Clayey sand, SC, (12'-12.5'), grayish brown, moist 60% medium grained sand, 40% clay	0
						14	ML	Clayey silt, ML, (12.5'-13.5'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	
S	MW-1 14.5'	N/A	1107	100		15	SC	Clayey sand, SC, (13.5'-14.5'), dark grayish brown, moist 60% medium grained sand, 40% clay	21
						16			
						17	ML	Clayey silt, ML, (14.5'-17'), grayish brown, moist, medium plasticity 60% silt, 40% clay	
						18			
						19			
						20			

Comments:

STRATUS
ENVIRONMENTAL, INC.

SOIL BORING LOG

Boring No. MW-2

Sheet: 1 of 1

Client	Former ARCO 472	Date	July 14, 2009
Address	6415 International Boulevard Oakland, CA	Drilling Co.	RSI Drilling rig type: Geoprobe 6620 DT
Project No.	E472	Driller	Norman
Logged By:	Collin Fischer	Method	Hollow Stem Auger Hole Diameter: 10 inches
Well Pack	sand: 5 ft. to 17 ft. bent.: 3 ft. to 5 ft. grout: 0 ft. to 3 ft.	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 7 ft. to 17 ft. Casing Diameter: 4 in. Screen Slot Size: 0.010-in. Depth to GW: ▽ first encountered static ▼

Sample		Blow Count	Sample		Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.					
						1			
						2			
						3			
						4	SC	Clayey sand with silt and gravel, SC, (0'-8'), grayish brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	
						5			
S	MW-2 6.5'	N/A	1600	100		6			0
						7			
S	MW-2 8'	N/A	1602	100		8			0
						9	ML	Clayey silt, ML, (8'-9.5'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
S	MW-2 9.5'	N/A	1605	100		10			0
						11	SC	Clayey sand with silt and gravel, SC, (9.5'-11.5'), dark brown, wet 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	0
S	MW-2 11'	N/A	1607	100		12	ML	Clayey silt, ML, (11.5'-12.5'), yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
						13	SC	Clayey sand with silt and gravel, SC, (12.5'-13'), dark brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	0
S	MW-2 12.5'	N/A	1610	100		14	ML	Clayey silt, ML, (13'-14'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
						15	SC	Clayey sand with silt and gravel, SC, (14'-14.5'), yellowish brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	0
S	MW-2 14.5'	N/A	1612	100		16	ML	Clayey silt, ML, (14.5'-17'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
						17			0
S	MW-2 17'	N/A	1615	100		18			
						19			
						20			

Comments:

STRATUS
ENVIRONMENTAL, INC.

SOIL BORING LOG

Boring No. MW-3

Sheet: 1 of 1

Client	Former ARCO 472	Date	July 14, 2009
Address	6415 International Boulevard Oakland, CA	Drilling Co.	RSI Drilling rig type: Geoprobe 6620 DT
Project No.	E472	Driller	Norman
Logged By:	Collin Fischer	Method	Hollow Stem Auger Hole Diameter: 10 inches
Well Pack	sand: 5 ft. to 17 ft. bent.: 3 ft. to 5 ft. grout: 0 ft. to 3 ft.	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 7 ft. to 17 ft. Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
		Depth to GW:	▽ first encountered static ▼

Sample		Blow Count	Sample		Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.					
						1			
						2			
						3			
						4			
						5	CL	Silty clay with sand, CL, (0'-8'), dark brown, moist, medium plasticity 50% clay, 40% silt, 10% fine grained sand	
S	MW-3 6.5'	N/A	1405	100		6			0
						7			
S	MW-3 8'	N/A	1407	100		8			0
						9		Silty clay with sand and gravel, CL, (8'-9'), dark yellowish brown, moist low plasticity, 40% silt, 30% clay, 20% fine gravel, 10% fine grained sand	
S	MW-3 9.5'	N/A	1410	100		10	SC	Clayey sand with silt and gravel, SC, (9'-10'), dark grayish brown, moist 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	0
						11			0
S	MW-3 12.5'	N/A	1415	100		12	ML	Clayey silt, ML, (10'-15'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
						13			
S	MW-3 14.5'	N/A	1417	100		14			0
						15			
						16	SC	Clayey sand with silt and gravel, SC, (15'-16.5'), dark grayish brown, wet 40% medium grained sand, 25% clay, 20% silt, 15% medium gravel	
S	MW-3 17'	N/A	1420	100		17	ML	Clayey silt, ML, (16.5'-17'), dark yellowish brown, moist, medium plasticity 60% silt, 40% clay	0
						18			
						19			
						20			

Comments:

STRATUS
ENVIRONMENTAL, INC.

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

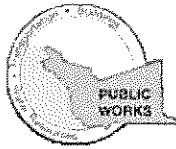
REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 07/01/2009 By jamesy

Permit Numbers: W2009-0620 to W2009-0622
Permits Valid from 07/14/2009 to 07/15/2009

Application Id: 1246474069869
Site Location: 6415 International Blvd, Oakland
Project Start Date: 07/14/2009
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

City of Project Site: Oakland

Completion Date: 07/15/2009

Applicant: Stratus Environmental - Scott Bittinger
3330 Cameron Park Dr, Suite 550, Cameron Park, CA 95682

Phone: 530-676-2062

Property Owner: Tracey Campbell & Jaleesa Hazzard
307 West Fairview Blvd, Inglewood, CA 90302

Phone: 310-677-8680

Client: ** same as Property Owner **

	Total Due:	\$1035.00
Receipt Number: WR2009-0244	Total Amount Paid:	\$1035.00
Payer Name : Stratus Eenvt, Inc	Paid By: CHECK	PAID IN FULL

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 3 Wells

Driller: RSI Drilling - Lic #: 802334 - Method: auger

Work Total: \$1035.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009-0620	07/01/2009	10/12/2009	MW-1	10.00 in.	4.00 in.	5.00 ft	20.00 ft
W2009-0621	07/01/2009	10/12/2009	MW-2	10.00 in.	4.00 in.	5.00 ft	20.00 ft
W2009-0622	07/01/2009	10/12/2009	MW-3	10.00 in.	4.00 in.	5.00 ft	20.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

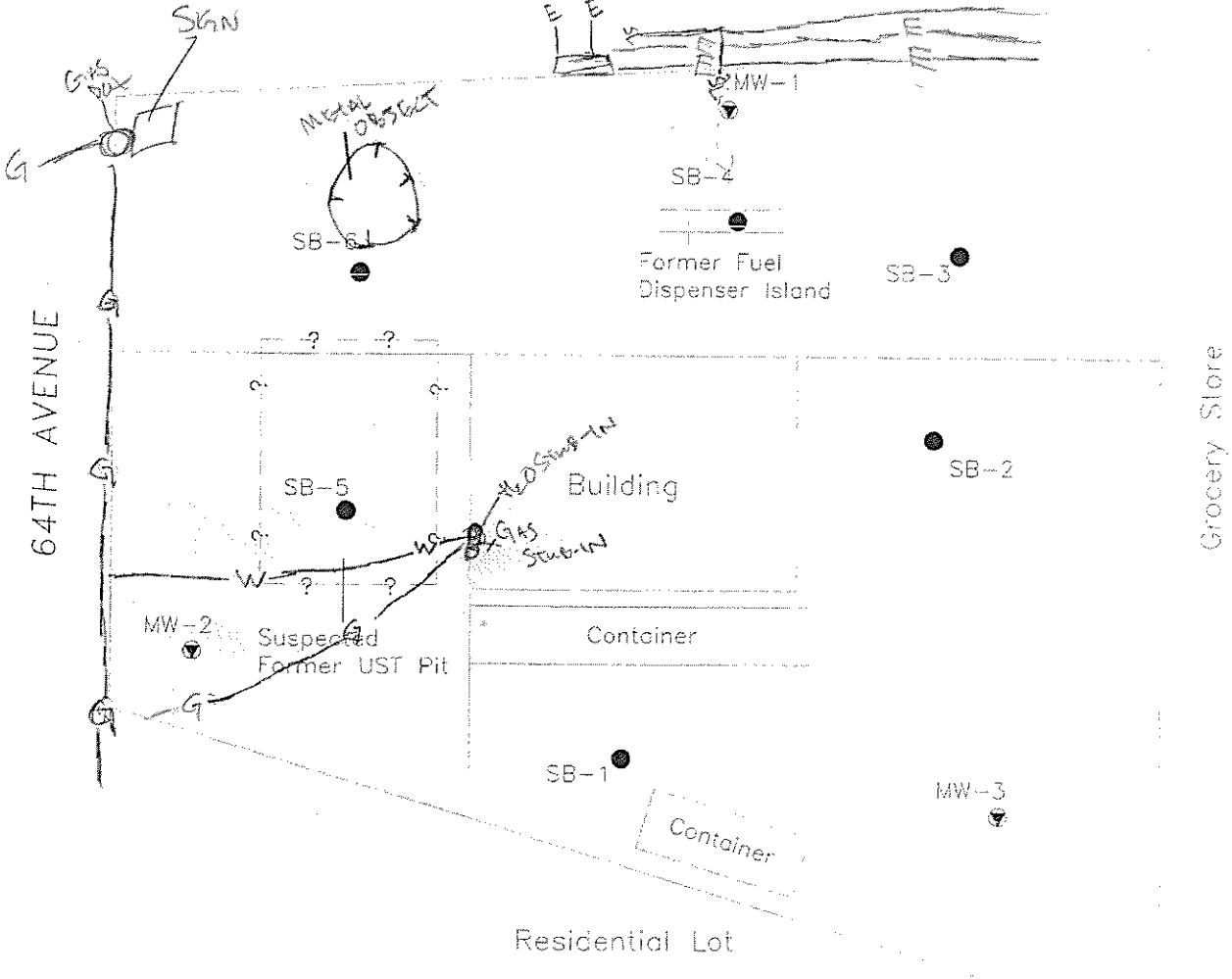
4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with

Alameda County Public Works Agency - Water Resources Well Permit



appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
 6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
 7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
 8. Minimum surface seal thickness is two inches of cement grout placed by tremie
 9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
 10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
-

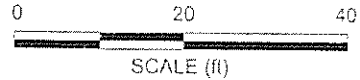
INTERNATIONAL BOULEVARD



LEGEND

-  Proposed Monitoring Well
-  Phase II Soil Boring

NOTES: SITE MAP ADAPTED FROM GEDCON FIGURES.
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.



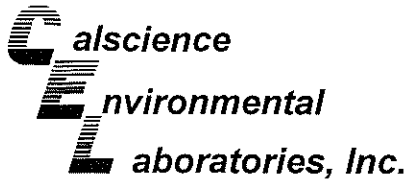
BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave, Suite 212, Chico, California
Project No.: 09-88-601 Date: 5/26/09

Former Service Station #472
6415 International Boulevard
Oakland, California

Amended Site Map with Proposed
Monitoring Well Locations

Drawing

2



09-07-1178

July 27, 2009

Jay Johnson
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Subject: **Calscience Work Order No.:** 09-07-1178
Client Reference: BP 472

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 7/15/2009 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 Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, 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.

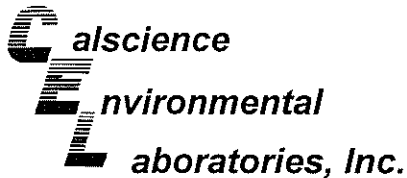
If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Villafania".

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

A handwritten signature in black ink, appearing to read "Richard Villafania".



Analytical Report



Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1178
Preparation: EPA 3050B
Method: EPA 6010B

Project: BP 472

Page 1 of 1

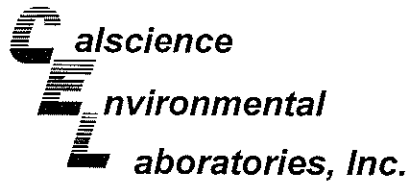
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SWC	09-07-1178-1-A	07/14/09 16:30	Solid	ICP 5300	07/17/09	07/17/09 18:46	090717L03

Parameter	Result	RL	DF	Qual	Units
Lead	29.1	0.500	1		mg/kg

Method Blank	097-01-002-12,519	N/A	Solid	ICP 5300	07/17/09	07/17/09 18:28	090717L03
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Parameter	Result	RL	DF	Qual	Units
Lead	ND	0.500	1		mg/kg

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



Analytical Report

net

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1178
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SWC	09-07-1178-1-A	07/14/09 16:30	Solid	GC 1	07/15/09	07/16/09 18:48	090715B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

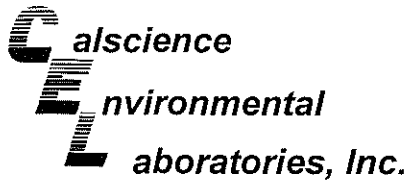
Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	86	42-126	

Method Blank	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
	099-12-697-135	N/A	Solid	GC 1	07/15/09	07/16/09 09:12	090715B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	42-126	

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



Analytical Report

net

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1178
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP 472

Page 1 of 1

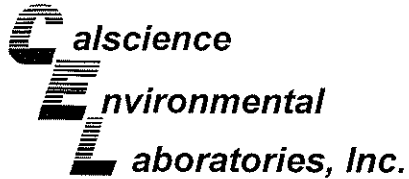
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SWC	09-07-1178-1-A	07/14/09 16:30	Solid	GC/MS Z	07/17/09	07/18/09 10:17	090717L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Toluene	ND	0.0010	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	105	75-141			1,2-Dichloroethane-d4	118	73-151		
Toluene-d8	95	87-111			1,4-Bromofluorobenzene	87	71-113		

Method Blank	099-12-709-184	N/A	Solid	GC/MS Z	07/17/09	07/18/09 01:56	090717L02
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
Toluene	ND	0.0010	1						
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
Dibromofluoromethane	104	75-141			1,2-Dichloroethane-d4	112	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	85	71-113		

mg Limit DF - Dilution Factor Qual - Qualifiers



Quality Control - Spike/Spike Duplicate

REF 1

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

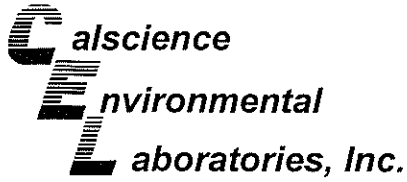
Date Received: 07/15/09
Work Order No: 09-07-1178
Preparation: EPA 3050B
Method: EPA 6010B

Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-1412-1	Solid	ICP 5300	07/17/09	07/17/09	090717S03

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	99	105	75-125	5	0-20	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - PDS / PDSD

net

Stratus Environmental, inc.
 3330 Cameron Park Drive, Suite 550
 Cameron Park, CA 95682-8861

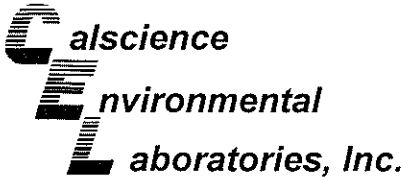
Date Received 07/15/09
 Work Order No: 09-07-1178
 Preparation: EPA 3050B
 Method: EPA 6010B

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
09-07-1412-1	Solid	ICP 5300	07/17/09	07/17/09	090717S03

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	104	97	75-125	6	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate

del

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

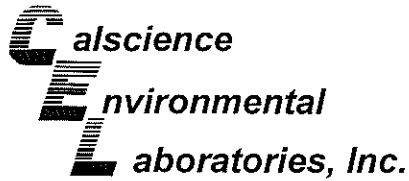
Date Received: 07/15/09
Work Order No: 09-07-1178
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-1179-3	Solid	GC 1	07/15/09	07/16/09	090715S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	90	88	42-126	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate

net

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

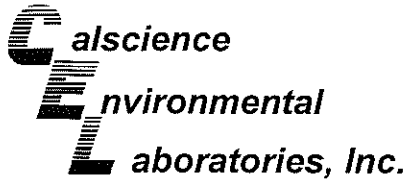
Date Received: 07/15/09
Work Order No: 09-07-1178
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-1084-1	Solid	GC/MS Z	07/17/09	07/18/09	090717S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	94	78-114	3	0-14	
Chloroform	94	101	80-120	8	0-20	
1,1-Dichloroethane	101	102	80-120	1	0-20	
1,2-Dichloroethane	95	92	80-120	3	0-20	
1,1-Dichloroethene	104	98	73-127	6	0-21	
Ethanol	69	85	45-135	21	0-29	
Tetrachloroethene	91	85	80-120	7	0-20	
Toluene	93	89	74-116	4	0-16	
Trichloroethene	90	90	74-122	1	0-17	
Methyl-t-Butyl Ether (MTBE)	91	92	69-123	1	0-18	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

net

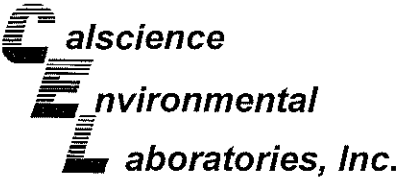
Stratus Environmental, inc.	Date Received:	N/A
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-1178
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-12,519	Solid	ICP 5300	07/17/09	07/17/09	090717L03

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Lead	105	108	80-120	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

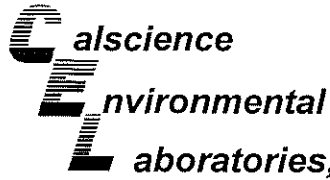
Date Received: N/A
Work Order No: 09-07-1178
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-135	Solid	GC 1	07/15/09	07/16/09	090715B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	96	96	70-118	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

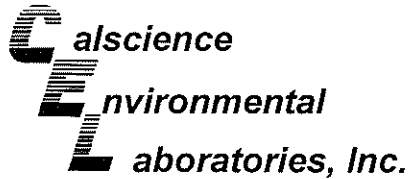
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: N/A
Work Order No: 09-07-1178
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-709-184	Solid	GC/MS Z	07/17/09	07/17/09	090717L02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	107	106	84-114	79-119	1	0-7	
Bromobenzene	108	105	80-120	73-127	3	0-20	
Bromochloromethane	117	116	80-120	73-127	1	0-20	
Bromodichloromethane	105	104	80-120	73-127	1	0-20	
Bromoform	111	108	80-120	73-127	2	0-20	
Bromomethane	95	79	80-120	73-127	18	0-20	
n-Butylbenzene	99	95	77-123	69-131	3	0-25	
sec-Butylbenzene	102	97	80-120	73-127	4	0-20	
tert-Butylbenzene	95	95	80-120	73-127	1	0-20	
Carbon Disulfide	109	106	80-120	73-127	3	0-20	
Carbon Tetrachloride	107	102	69-135	58-146	5	0-13	
Chlorobenzene	99	102	85-109	81-113	3	0-8	
Chloroethane	99	93	80-120	73-127	6	0-20	
Chloroform	104	101	80-120	73-127	2	0-20	
Chloromethane	103	95	80-120	73-127	8	0-20	
2-Chlorotoluene	100	103	80-120	73-127	3	0-20	
4-Chlorotoluene	99	97	80-120	73-127	2	0-20	
Dibromochloromethane	120	116	80-120	73-127	3	0-20	
1,2-Dibromo-3-Chloropropane	126	126	80-120	73-127	0	0-20	
1,2-Dibromoethane	115	115	80-120	73-127	1	0-20	
Dibromomethane	115	113	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	98	97	80-110	75-115	2	0-10	
1,3-Dichlorobenzene	95	95	80-120	73-127	0	0-20	
1,4-Dichlorobenzene	91	89	80-120	73-127	3	0-20	
Dichlorodifluoromethane	109	104	80-120	73-127	5	0-20	
1,1-Dichloroethane	109	112	80-120	73-127	2	0-20	
1,2-Dichloroethane	104	105	80-120	73-127	1	0-20	
1,1-Dichloroethene	108	104	83-125	76-132	4	0-10	
c-1,2-Dichloroethene	88	85	80-120	73-127	3	0-20	
t-1,2-Dichloroethene	103	101	80-120	73-127	2	0-20	
1,2-Dichloropropane	108	108	79-115	73-121	0	0-25	
1,3-Dichloropropane	113	109	80-120	73-127	3	0-20	
2,2-Dichloropropane	83	82	80-120	73-127	1	0-20	
1,1-Dichloropropene	102	100	80-120	73-127	1	0-20	
c-1,3-Dichloropropene	108	109	80-120	73-127	0	0-20	
t-1,3-Dichloropropene	120	119	80-120	73-127	1	0-20	
Ethylbenzene	105	104	80-120	73-127	1	0-20	
Isopropylbenzene	105	106	80-120	73-127	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: N/A
Work Order No: 09-07-1178
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-709-184	Solid	GC/MS Z	07/17/09	07/17/09	090717L02		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	105	100	80-120	73-127	4	0-20	
Methylene Chloride	103	100	80-120	73-127	3	0-20	
Naphthalene	99	98	80-120	73-127	1	0-20	
n-Propylbenzene	104	107	80-120	73-127	2	0-20	
Styrene	108	109	80-120	73-127	1	0-20	
Ethanol	97	114	50-134	36-148	16	0-23	
1,1,1,2-Tetrachloroethane	104	103	80-120	73-127	1	0-20	
1,1,2,2-Tetrachloroethane	95	97	80-120	73-127	2	0-20	
Tetrachloroethene	115	110	80-120	73-127	4	0-20	
Toluene	101	102	79-115	73-121	1	0-8	
1,2,3-Trichlorobenzene	90	92	80-120	73-127	2	0-20	
1,2,4-Trichlorobenzene	85	86	80-120	73-127	2	0-20	
1,1,1-Trichloroethane	106	102	80-120	73-127	4	0-20	
1,1,2-Trichloroethane	115	116	80-120	73-127	0	0-20	
Trichloroethene	105	104	87-111	83-115	1	0-7	
Trichlorofluoromethane	103	99	80-120	73-127	4	0-20	
1,2,3-Trichloropropane	130	120	80-120	73-127	8	0-20	
1,2,4-Trimethylbenzene	104	102	80-120	73-127	2	0-20	
1,3,5-Trimethylbenzene	105	106	80-120	73-127	1	0-20	
Vinyl Acetate	72	78	80-120	73-127	8	0-20	
Vinyl Chloride	99	95	72-126	63-135	4	0-10	
p/m-Xylene	104	107	80-120	73-127	3	0-20	
o-Xylene	101	104	80-120	73-127	3	0-20	
Methyl-t-Butyl Ether (MTBE)	107	105	75-129	66-138	2	0-13	
Tert-Butyl Alcohol (TBA)	97	104	66-126	56-136	7	0-24	
Diisopropyl Ether (DIPE)	106	103	77-125	69-133	3	0-13	
Ethyl-t-Butyl Ether (ETBE)	93	92	72-132	62-142	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	102	103	77-125	69-133	2	0-10	

Total number of LCS compounds : 66

Total number of ME compounds : 3

Total number of ME compounds allowed : 3

LCS ME CL validation result : Pass

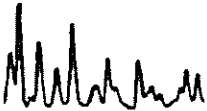
RPD - Relative Percent Difference , CL - Control Limit


 Work Order Number: 09-07-1178

<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.

<u>Qualifier</u>	<u>Definition</u>
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.



SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 07/15/09

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen)

Temperature 2.1 °C - 0.2°C (CF) = 1.9 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Metals Only PCBs Only Initial: JP

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Initial: JP

Sample _____ No (Not Intact) Not Present Initial: TN

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> COC not relinquished. <input type="checkbox"/> No date relinquished. <input type="checkbox"/> No time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct containers and volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve EnCores® TerraCores® _____

Water: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

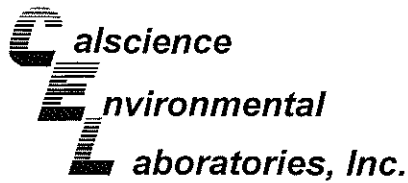
500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 500PB 500PBna

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Summa® _____ **Other:** _____ **Checked/Labeled by:** TN

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** W.S.C

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ Na: NaOH p: H₃PO₄ s: H₂SO₄ z_{na}: ZnAc₂+NaOH f: Field-filtered **Scanned by:** W.S.C



July 28, 2009

Jay Johnson
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Subject: **Calscience Work Order No.: 09-07-1179**
Client Reference: **BP 472**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 7/15/2009 and analyzed in accordance with the attached chain-of-custody.

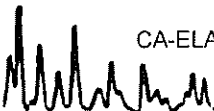
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows 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.

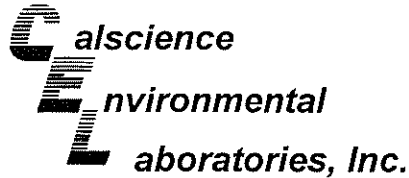
If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Villafania".

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager





Analytical Report

net c

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 6.5'	09-07-1179-1-A	07/14/09 10:55	Solid	GC 45	07/16/09	07/16/09 19:27	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	95	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 8'	09-07-1179-2-A	07/14/09 10:58	Solid	GC 45	07/16/09	07/17/09 10:37	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	86	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 9.5'	09-07-1179-3-A	07/14/09 11:00	Solid	GC 45	07/16/09	07/17/09 12:32	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg

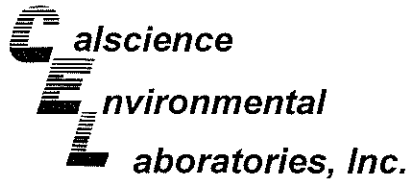
Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	86	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 11'	09-07-1179-4-A	07/14/09 11:02	Solid	GC 45	07/16/09	07/17/09 12:47	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	90	61-145	

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



Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 12.5'	09-07-1179-5-A	07/14/09 11:05	Solid	GC 45	07/16/09	07/17/09 13:03	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
Decachlorobiphenyl	85	61-145			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 14.5'	09-07-1179-6-A	07/14/09 11:07	Solid	GC 45	07/16/09	07/17/09 13:18	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
Decachlorobiphenyl	88	61-145			

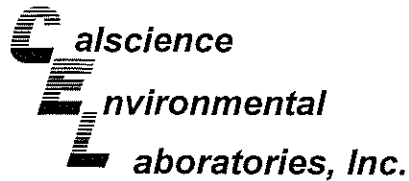
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 6.5'	09-07-1179-7-A	07/14/09 16:00	Solid	GC 45	07/16/09	07/17/09 13:34	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
Decachlorobiphenyl	86	61-145			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 8'	09-07-1179-8-A	07/14/09 16:02	Solid	GC 45	07/16/09	07/17/09 14:18	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
Decachlorobiphenyl	87	61-145			

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 9.5'	09-07-1179-9-A	07/14/09 16:05	Solid	GC 45	07/16/09	07/17/09 14:33	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	83	61-145			

MW-2 11'	09-07-1179-10-A	07/14/09 16:07	Solid	GC 45	07/16/09	07/17/09 14:48	090716B03
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	87	61-145			

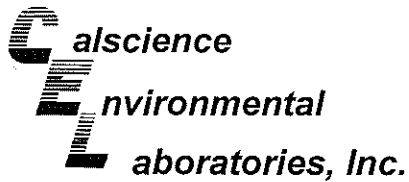
MW-2 12.5'	09-07-1179-11-A	07/14/09 16:10	Solid	GC 45	07/16/09	07/17/09 15:35	090716B03
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	86	61-145			

MW-2 14.5'	09-07-1179-12-A	07/14/09 16:12	Solid	GC 45	07/16/09	07/17/09 15:50	090716B03
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	88	61-145			

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



Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 17'	09-07-1179-13-A	07/14/09 16:15	Solid	GC 45	07/16/09	07/17/09 16:06	090716B03

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	90	61-145			

MW-3 6.5'	09-07-1179-14-A	07/14/09 14:05	Solid	GC 45	07/16/09	07/17/09 16:21	090716B03
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	83	61-145			

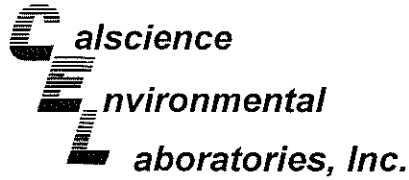
MW-3 8'	09-07-1179-15-A	07/14/09 14:07	Solid	GC 45	07/16/09	07/17/09 16:37	090716B03
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	87	61-145			

MW-3 9.5'	09-07-1179-16-A	07/14/09 14:10	Solid	GC 45	07/16/09	07/17/09 16:52	090716B03
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	88	61-145			

RL - Reporting Limit DF - Dilution Factor Qual - Qualifiers



Analytical Report



Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

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Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 11', 09-07-1179-17-A, 07/14/09 14:12, Solid, GC 45, 07/16/09, 07/17/09 17:08, 090716B03

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Diesel Range Organics (C10-C28) ND 5.0 1 mg/kg. Surrogates: REC (%) Control Limits Qual. Decachlorobiphenyl 86 61-145

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 12.5', 09-07-1179-18-A, 07/14/09 14:15, Solid, GC 45, 07/16/09, 07/17/09 17:23, 090716B03

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Diesel Range Organics (C10-C28) ND 5.0 1 mg/kg. Surrogates: REC (%) Control Limits Qual. Decachlorobiphenyl 88 61-145

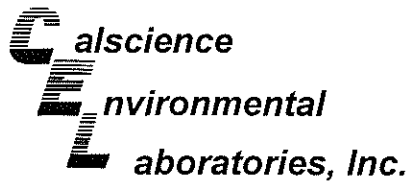
Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 14.5', 09-07-1179-19-A, 07/14/09 14:17, Solid, GC 45, 07/16/09, 07/17/09 17:39, 090716B03

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Diesel Range Organics (C10-C28) ND 5.0 1 mg/kg. Surrogates: REC (%) Control Limits Qual. Decachlorobiphenyl 88 61-145

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 17', 09-07-1179-20-A, 07/14/09 14:20, Solid, GC 45, 07/16/09, 07/17/09 17:55, 090716B03

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Diesel Range Organics (C10-C28) ND 5.0 1 mg/kg. Surrogates: REC (%) Control Limits Qual. Decachlorobiphenyl 88 61-145

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



Analytical Report

Stratus Environmental, inc.
 3330 Cameron Park Drive, Suite 550
 Cameron Park, CA 95682-8861

Date Received: 07/15/09
 Work Order No: 09-07-1179
 Preparation: EPA 3550B
 Method: EPA 8015B (M)

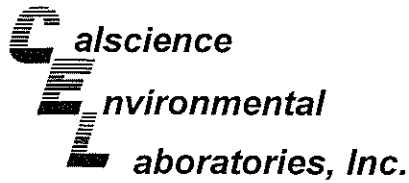
Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-701-20	N/A	Solid	GC 45	07/16/09	07/16/09 17:06	090716B03

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Diesel Range Organics (C10-C28)	ND	5.0	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	92	61-145			

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



Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 6.5'	09-07-1179-1-A	07/14/09 10:55	Solid	GC 45	07/16/09	07/16/09 19:27	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	95	61-145			

MW-1 8'	09-07-1179-2-A	07/14/09 10:58	Solid	GC 45	07/16/09	07/17/09 10:37	090716B04
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Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	86	61-145			

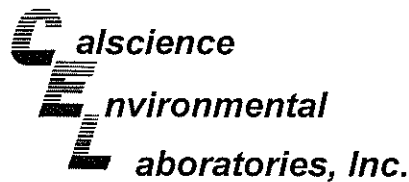
MW-1 9.5'	09-07-1179-3-A	07/14/09 11:00	Solid	GC 45	07/16/09	07/17/09 12:32	090716B04
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Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	86	61-145			

MW-1 11'	09-07-1179-4-A	07/14/09 11:02	Solid	GC 45	07/16/09	07/17/09 12:47	090716B04
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Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	90	61-145			

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 12.5'	09-07-1179-5-A	07/14/09 11:05	Solid	GC 45	07/16/09	07/17/09 13:03	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	85	61-145			

MW-1 14.5'	09-07-1179-6-A	07/14/09 11:07	Solid	GC 45	07/16/09	07/17/09 13:18	090716B04
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Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	88	61-145			

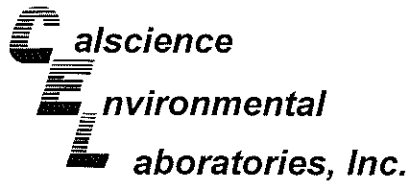
MW-2 6.5'	09-07-1179-7-A	07/14/09 16:00	Solid	GC 45	07/16/09	07/17/09 13:34	090716B04
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Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	86	61-145			

MW-2 8'	09-07-1179-8-A	07/14/09 16:02	Solid	GC 45	07/16/09	07/17/09 14:18	090716B04
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Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	87	61-145			

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



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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 9.5'	09-07-1179-9-A	07/14/09 16:05	Solid	GC 45	07/16/09	07/17/09 14:33	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	83	61-145			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 11'	09-07-1179-10-A	07/14/09 16:07	Solid	GC 45	07/16/09	07/17/09 14:48	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	87	61-145			

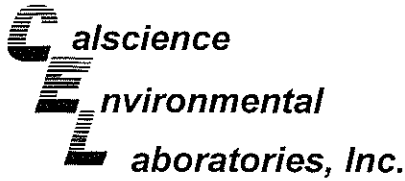
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 12.5'	09-07-1179-11-A	07/14/09 16:10	Solid	GC 45	07/16/09	07/17/09 15:35	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	86	61-145			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 14.5'	09-07-1179-12-A	07/14/09 16:12	Solid	GC 45	07/16/09	07/17/09 15:50	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	88	61-145			

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 17'	09-07-1179-13-A	07/14/09 16:15	Solid	GC 45	07/16/09	07/17/09 16:06	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	90	61-145			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 6.5'	09-07-1179-14-A	07/14/09 14:05	Solid	GC 45	07/16/09	07/17/09 16:21	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	83	61-145			

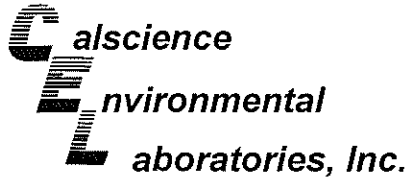
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 8'	09-07-1179-15-A	07/14/09 14:07	Solid	GC 45	07/16/09	07/17/09 16:37	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	87	61-145			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 9.5'	09-07-1179-16-A	07/14/09 14:10	Solid	GC 45	07/16/09	07/17/09 16:52	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	88	61-145			

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

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Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 11', 09-07-1179-17-A, 07/14/09 14:12, Solid, GC 45, 07/16/09, 07/17/09 17:08, 090716B04

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Rows: Motor Oil Range Organics (C17-C44) ND 25 1 mg/kg; Surrogates: REC (%) Control Limits Qual; Decachlorobiphenyl 86 61-145

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 12.5', 09-07-1179-18-A, 07/14/09 14:15, Solid, GC 45, 07/16/09, 07/17/09 17:23, 090716B04

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Rows: Motor Oil Range Organics (C17-C44) ND 25 1 mg/kg; Surrogates: REC (%) Control Limits Qual; Decachlorobiphenyl 88 61-145

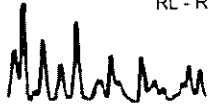
Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 14.5', 09-07-1179-19-A, 07/14/09 14:17, Solid, GC 45, 07/16/09, 07/17/09 17:39, 090716B04

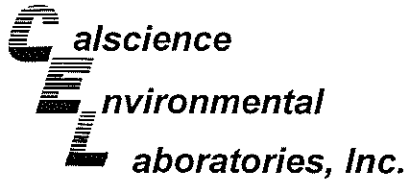
Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Rows: Motor Oil Range Organics (C17-C44) ND 25 1 mg/kg; Surrogates: REC (%) Control Limits Qual; Decachlorobiphenyl 88 61-145

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 17', 09-07-1179-20-A, 07/14/09 14:20, Solid, GC 45, 07/16/09, 07/17/09 17:55, 090716B04

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Rows: Motor Oil Range Organics (C17-C44) ND 25 1 mg/kg; Surrogates: REC (%) Control Limits Quali; Decachlorobiphenyl 88 61-145

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





Analytical Report

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Stratus Environmental, inc.
 3330 Cameron Park Drive, Suite 550
 Cameron Park, CA 95682-8861

Date Received: 07/15/09
 Work Order No: 09-07-1179
 Preparation: EPA 3550B
 Method: EPA 8015B (M)

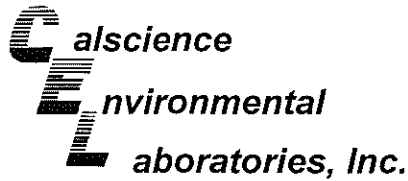
Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-755-9	N/A	Solid	GC 45	07/16/09	07/16/09 17:06	090716B04

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	25	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	92	61-145			

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

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Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-1 6.5', 09-07-1179-1-A, 07/14/09 10:55, Solid, GC 1, 07/15/09, 07/16/09 10:16, 090715B02

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, mg/kg. Row 2: Surrogates: REC (%), Control Limits, Qual. Row 3: 1,4-Bromofluorobenzene, 81, 42-126

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-1 8', 09-07-1179-2-A, 07/14/09 10:58, Solid, GC 1, 07/15/09, 07/16/09 10:48, 090715B02

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, mg/kg. Row 2: Surrogates: REC (%), Control Limits, Qual. Row 3: 1,4-Bromofluorobenzene, 80, 42-126

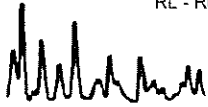
Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-1 9.5', 09-07-1179-3-A, 07/14/09 11:00, Solid, GC 1, 07/15/09, 07/16/09 11:20, 090715B02

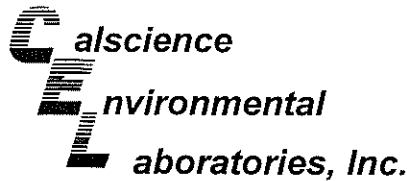
Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, mg/kg. Row 2: Surrogates: REC (%), Control Limits, Qual. Row 3: 1,4-Bromofluorobenzene, 81, 42-126

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-1 11', 09-07-1179-4-A, 07/14/09 11:02, Solid, GC 1, 07/15/09, 07/16/09 13:28, 090715B02

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, mg/kg. Row 2: Surrogates: REC (%), Control Limits, Qual. Row 3: 1,4-Bromofluorobenzene, 82, 42-126

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





Analytical Report

net c

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 12.5'	09-07-1179-5-A	07/14/09 11:05	Solid	GC 1	07/15/09	07/16/09 14:00	090715B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	77	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 14.5'	09-07-1179-6-A	07/14/09 11:07	Solid	GC 1	07/15/09	07/16/09 14:32	090715B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	0.87	0.50	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	85	42-126			

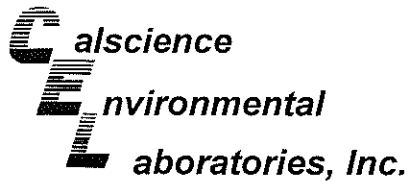
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 6.5'	09-07-1179-7-A	07/14/09 16:00	Solid	GC 1	07/15/09	07/16/09 15:04	090715B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	78	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 8'	09-07-1179-8-A	07/14/09 16:02	Solid	GC 1	07/15/09	07/16/09 15:37	090715B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	79	42-126			

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



Analytical Report

net c

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 9.5'	09-07-1179-9-A	07/14/09 16:05	Solid	GC 1	07/15/09	07/16/09 16:09	090715B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	81	42-126	

MW-2 11'	09-07-1179-10-A	07/14/09 16:07	Solid	GC 1	07/15/09	07/16/09 16:41	090715B02
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	42-126	

MW-2 12.5'	09-07-1179-11-A	07/14/09 16:10	Solid	GC 1	07/15/09	07/16/09 17:13	090715B02
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

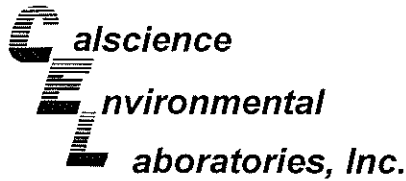
Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	78	42-126	

MW-2 14.5'	09-07-1179-12-A	07/14/09 16:12	Solid	GC 1	07/15/09	07/16/09 17:45	090715B02
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	86	42-126	

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



Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

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Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-2 17', 09-07-1179-13-A, 07/14/09 16:15, Solid, GC 1, 07/15/09, 07/16/09 03:20, 090715B01

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, , mg/kg. Row 2: Surrogates: REC (%) Control Limits Qual. Row 3: 1,4-Bromofluorobenzene, 85, 42-126, ,

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 6.5', 09-07-1179-14-A, 07/14/09 14:05, Solid, GC 1, 07/15/09, 07/16/09 03:52, 090715B01

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, , mg/kg. Row 2: Surrogates: REC (%) Control Limits Qual. Row 3: 1,4-Bromofluorobenzene, 84, 42-126, ,

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 8', 09-07-1179-15-A, 07/14/09 14:07, Solid, GC 1, 07/15/09, 07/16/09 04:24, 090715B01

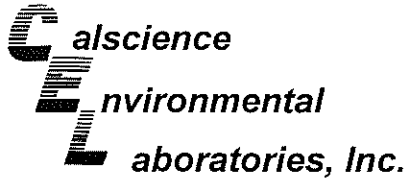
Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, , mg/kg. Row 2: Surrogates: REC (%) Control Limits Qual. Row 3: 1,4-Bromofluorobenzene, 84, 42-126, ,

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-3 9.5', 09-07-1179-16-A, 07/14/09 14:10, Solid, GC 1, 07/15/09, 07/16/09 04:56, 090715B01

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, , mg/kg. Row 2: Surrogates: REC (%) Control Limits Qual. Row 3: 1,4-Bromofluorobenzene, 85, 42-126, ,

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





Analytical Report

Stratus Environmental, inc.
 3330 Cameron Park Drive, Suite 550
 Cameron Park, CA 95682-8861

Date Received: 07/15/09
 Work Order No: 09-07-1179
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 11'	09-07-1179-17-A	07/14/09 14:12	Solid	GC 1	07/15/09	07/16/09 05:28	090715B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	83	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 12.5'	09-07-1179-18-A	07/14/09 14:15	Solid	GC 1	07/15/09	07/16/09 06:00	090715B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	86	42-126			

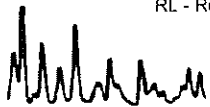
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 14.5'	09-07-1179-19-A	07/14/09 14:17	Solid	GC 1	07/15/09	07/16/09 06:32	090715B01

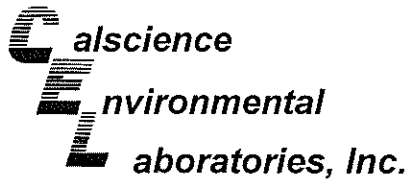
Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	83	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 17'	09-07-1179-20-A	07/14/09 14:20	Solid	GC 1	07/15/09	07/16/09 07:04	090715B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	86	42-126			

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





Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

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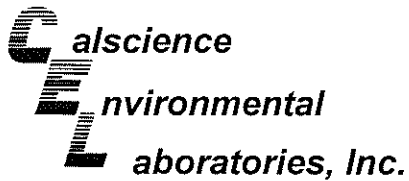
Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: Method Blank, 099-12-697-134, N/A, Solid, GC 1, 07/15/09, 07/15/09 16:42, 090715B01

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, mg/kg. Row 2: Surrogates: REC (%), Control Limits, Qual. Row 3: 1,4-Bromofluorobenzene, 81, 42-126

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: Method Blank, 099-12-697-135, N/A, Solid, GC 1, 07/15/09, 07/16/09 09:12, 090715B02

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Row 1: Gasoline Range Organics (C6-C12), ND, 0.50, 1, mg/kg. Row 2: Surrogates: REC (%), Control Limits, Qual. Row 3: 1,4-Bromofluorobenzene, 80, 42-126

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



Analytical Report

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10/15/09

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 6.5'	09-07-1179-1-A	07/14/09 10:55	Solid	GC/MS Z	07/16/09	07/16/09 20:36	090716L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	101	75-141			1,2-Dichloroethane-d4	113	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	86	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 8'	09-07-1179-2-A	07/14/09 10:58	Solid	GC/MS Z	07/16/09	07/16/09 21:05	090716L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	99	75-141			1,2-Dichloroethane-d4	115	73-151		
Toluene-d8	97	87-111			1,4-Bromofluorobenzene	88	71-113		

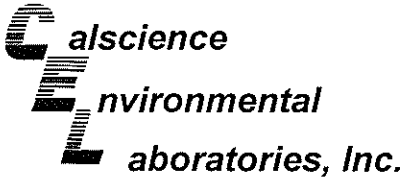
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 9.5'	09-07-1179-3-A	07/14/09 11:00	Solid	GC/MS Z	07/16/09	07/16/09 21:35	090716L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	97	75-141			1,2-Dichloroethane-d4	113	73-151		
Toluene-d8	97	87-111			1,4-Bromofluorobenzene	83	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1 11'	09-07-1179-4-A	07/14/09 11:02	Solid	GC/MS Z	07/16/09	07/16/09 22:04	090716L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	103	75-141			1,2-Dichloroethane-d4	118	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	88	71-113		

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP 472

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Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-1 12.5', 09-07-1179-5-A, 07/14/09 11:05, Solid, GC/MS Z, 07/16/09, 07/16/09 22:34, 090716L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Rows for Benzene, Ethylbenzene, Surrogates, Dibromofluoromethane, Toluene-d8, 1,2-Dichloroethane-d4, 1,4-Bromofluorobenzene.

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-1 14.5', 09-07-1179-6-A, 07/14/09 11:07, Solid, GC/MS Z, 07/16/09, 07/16/09 23:04, 090716L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Rows for Benzene, Ethylbenzene, Surrogates, Dibromofluoromethane, Toluene-d8, 1,2-Dichloroethane-d4, 1,4-Bromofluorobenzene.

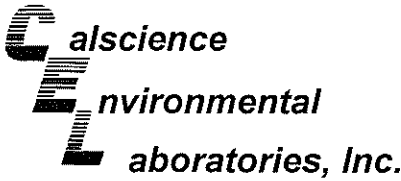
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Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Rows for Benzene, Ethylbenzene, Surrogates, Dibromofluoromethane, Toluene-d8, 1,2-Dichloroethane-d4, 1,4-Bromofluorobenzene.

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-2 8', 09-07-1179-8-A, 07/14/09 16:02, Solid, GC/MS Z, 07/16/09, 07/17/09 00:02, 090716L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Rows for Benzene, Ethylbenzene, Surrogates, Dibromofluoromethane, Toluene-d8, 1,2-Dichloroethane-d4, 1,4-Bromofluorobenzene.

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP 472

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Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-2 9.5', 09-07-1179-9-A, 07/14/09 16:05, Solid, GC/MS Z, 07/17/09, 07/17/09 16:05, 090717L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Rows include Benzene, Ethylbenzene, Surrogates, Dibromofluoromethane, Toluene-d8, 1,2-Dichloroethane-d4, 1,4-Bromofluorobenzene.

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-2 11', 09-07-1179-10-A, 07/14/09 16:07, Solid, GC/MS Z, 07/17/09, 07/17/09 16:35, 090717L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Rows include Benzene, Ethylbenzene, Surrogates, Dibromofluoromethane, Toluene-d8, 1,2-Dichloroethane-d4, 1,4-Bromofluorobenzene.

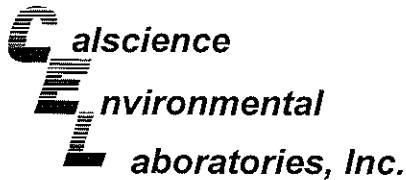
Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-2 12.5', 09-07-1179-11-A, 07/14/09 16:10, Solid, GC/MS Z, 07/17/09, 07/17/09 17:05, 090717L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Rows include Benzene, Ethylbenzene, Surrogates, Dibromofluoromethane, Toluene-d8, 1,2-Dichloroethane-d4, 1,4-Bromofluorobenzene.

Table with 9 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-2 14.5', 09-07-1179-12-A, 07/14/09 16:12, Solid, GC/MS Z, 07/17/09, 07/17/09 17:34, 090717L01

Table with 10 columns: Parameter, Result, RL, DF, Qual, Parameter, Result, RL, DF, Qual. Rows include Benzene, Ethylbenzene, Surrogates, Dibromofluoromethane, Toluene-d8, 1,2-Dichloroethane-d4, 1,4-Bromofluorobenzene.

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2 17'	09-07-1179-13-A	07/14/09 16:15	Solid	GC/MS Z	07/16/09	07/16/09 18:37	090716L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	102	75-141			1,2-Dichloroethane-d4	117	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	86	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 6.5'	09-07-1179-14-A	07/14/09 14:05	Solid	GC/MS Z	07/17/09	07/17/09 18:04	090717L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	102	75-141			1,2-Dichloroethane-d4	121	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	86	71-113		

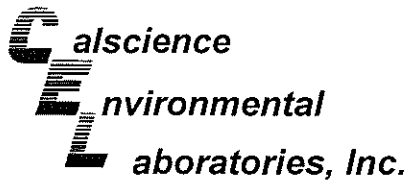
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 8'	09-07-1179-15-A	07/14/09 14:07	Solid	GC/MS Z	07/17/09	07/17/09 18:33	090717L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	95	75-141			1,2-Dichloroethane-d4	110	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	82	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 9.5'	09-07-1179-16-A	07/14/09 14:10	Solid	GC/MS Z	07/17/09	07/17/09 19:03	090717L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	101	75-141			1,2-Dichloroethane-d4	117	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	88	71-113		

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



Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP 472

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 11'	09-07-1179-17-A	07/14/09 14:12	Solid	GC/MS Z	07/17/09	07/17/09 19:33	090717L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>
		<u>Limits</u>					<u>Limits</u>		
Dibromofluoromethane	106	75-141			1,2-Dichloroethane-d4	121	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	84	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 12.5'	09-07-1179-18-A	07/14/09 14:15	Solid	GC/MS Z	07/17/09	07/17/09 13:37	090717L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>
		<u>Limits</u>					<u>Limits</u>		
Dibromofluoromethane	103	75-141			1,2-Dichloroethane-d4	114	73-151		
Toluene-d8	97	87-111			1,4-Bromofluorobenzene	85	71-113		

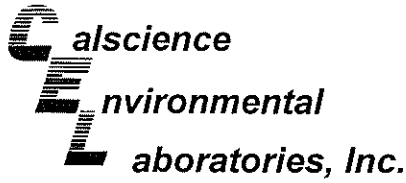
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 14.5'	09-07-1179-19-A	07/14/09 14:17	Solid	GC/MS Z	07/17/09	07/17/09 20:02	090717L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>
		<u>Limits</u>					<u>Limits</u>		
Dibromofluoromethane	102	75-141			1,2-Dichloroethane-d4	113	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	88	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3 17'	09-07-1179-20-A	07/14/09 14:20	Solid	GC/MS Z	07/17/09	07/17/09 20:32	090717L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>
		<u>Limits</u>					<u>Limits</u>		
Dibromofluoromethane	101	75-141			1,2-Dichloroethane-d4	120	73-151		
Toluene-d8	97	87-111			1,4-Bromofluorobenzene	87	71-113		

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



Analytical Report

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Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP 472

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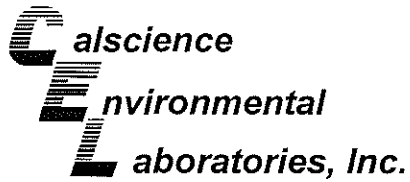
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Method Blank	099-12-709-180	N/A	Solid	GC/MS Z	07/16/09	07/16/09 18:08	090716L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	98	75-141			1,2-Dichloroethane-d4	105	73-151		
Toluene-d8	95	87-111			1,4-Bromofluorobenzene	84	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-709-182	N/A	Solid	GC/MS Z	07/17/09	07/17/09 13:07	090717L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Toluene	ND	0.0010	1	
Ethylbenzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	107	75-141			1,2-Dichloroethane-d4	117	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	89	71-113		

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



Quality Control - Spike/Spike Duplicate

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3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

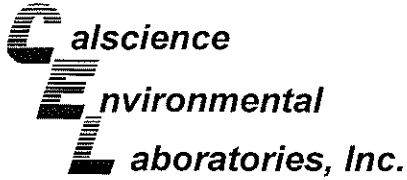
Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-2 11'	Solid	GC 45	07/16/09	07/16/09	090716S03

<u>Parameter</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Diesel Range Organics (C10-C28)	93	95	61-145	2	0-20	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - Spike/Spike Duplicate



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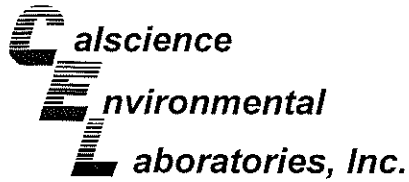
Date Received: 07/15/09
 Work Order No: 09-07-1179
 Preparation: EPA 3550B
 Method: EPA 8015B (M)

Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-2 11'	Solid	GC 45	07/16/09	07/16/09	090716S04

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Motor Oil Range Organics (C17-C44)	100	101	64-130	1	0-15	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - Spike/Spike Duplicate

09-07-1179

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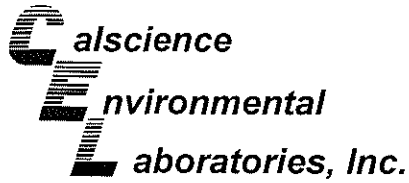
Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-07-1084-1	Solid	GC 1	07/15/09	07/15/09	090715S01

<u>Parameter</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Gasoline Range Organics (C6-C12)	94	95	42-126	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate

09-07-1179

Stratus Environmental, inc.
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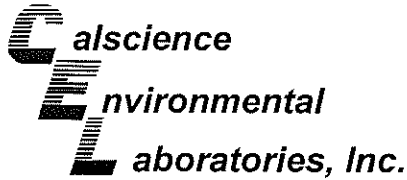
Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1 9.5'	Solid	GC 1	07/15/09	07/16/09	090715S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	90	88	42-126	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate

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Stratus Environmental, inc.
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Cameron Park, CA 95682-8861

Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B

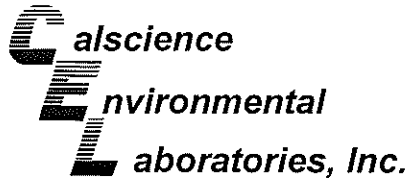
Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-2 17'	Solid	GC/MS Z	07/16/09	07/16/09	090716S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	87	78-114	9	0-14	
Chloroform	88	85	80-120	3	0-20	
1,1-Dichloroethane	92	90	80-120	2	0-20	
1,2-Dichloroethane	94	85	80-120	10	0-20	
1,1-Dichloroethene	90	87	73-127	4	0-21	
Ethanol	68	69	45-135	1	0-29	
Tetrachloroethene	76	73	80-120	4	0-20	
Toluene	89	86	74-116	4	0-16	
Trichloroethene	86	82	74-122	5	0-17	
Methyl-t-Butyl Ether (MTBE)	89	86	69-123	3	0-18	

RPD - Relative Percent Difference , CL - Control Limit

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Quality Control - Spike/Spike Duplicate

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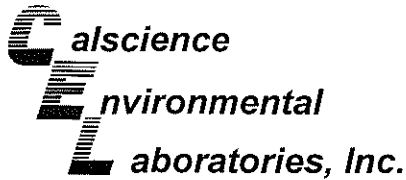
Date Received: 07/15/09
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-3 12.5'	Solid	GC/MS Z	07/17/09	07/17/09	090717S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	97	78-114	1	0-14	
Chloroform	95	95	80-120	0	0-20	
1,1-Dichloroethane	100	103	80-120	3	0-20	
1,2-Dichloroethane	97	100	80-120	3	0-20	
1,1-Dichloroethene	102	98	73-127	5	0-21	
Ethanol	79	93	45-135	16	0-29	
Tetrachloroethene	78	78	80-120	1	0-20	
Toluene	96	92	74-116	4	0-16	
Trichloroethene	89	90	74-122	2	0-17	
Methyl-t-Butyl Ether (MTBE)	99	103	69-123	4	0-18	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
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 Cameron Park, CA 95682-8861

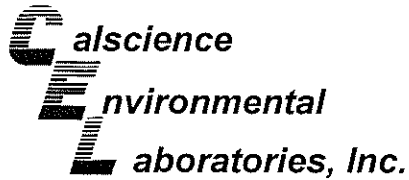
Date Received: N/A
 Work Order No: 09-07-1179
 Preparation: EPA 3550B
 Method: EPA 8015B (M)

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-701-20	Solid	GC 45	07/16/09	07/16/09	090716B03

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C28)	92	92	75-123	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

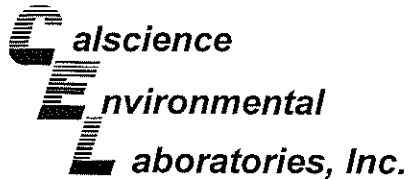
Date Received: N/A
Work Order No: 09-07-1179
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-755-9	Solid	GC 45	07/16/09	07/16/09	090716B04

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Motor Oil Range Organics (C17-C44)	110	111	75-123	1	0-12	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

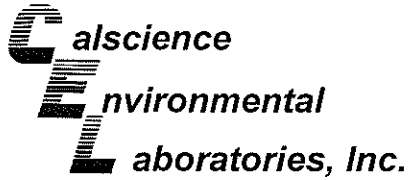
Date Received: N/A
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-134	Solid	GC 1	07/15/09	07/15/09	090715B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	91	97	70-118	7	0-20	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

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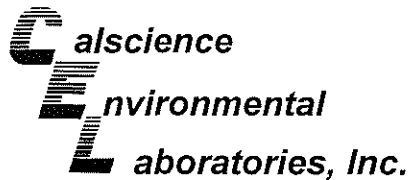
Date Received: N/A
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-135	Solid	GC 1	07/15/09	07/16/09	090715B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	96	96	70-118	0	0-20	

RPD - Relative Percent Difference . CL - Control Limit



Quality Control - LCS/LCS Duplicate

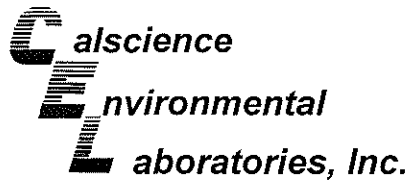
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: N/A
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-709-180	Solid	GC/MS Z	07/16/09	07/16/09	090716L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	101	107	84-114	79-119	6	0-7	
Bromobenzene	103	107	80-120	73-127	4	0-20	
Bromochloromethane	115	117	80-120	73-127	2	0-20	
Bromodichloromethane	97	101	80-120	73-127	4	0-20	
Bromoform	97	102	80-120	73-127	5	0-20	
Bromomethane	85	87	80-120	73-127	2	0-20	
n-Butylbenzene	108	110	77-123	69-131	2	0-25	
sec-Butylbenzene	104	107	80-120	73-127	3	0-20	
tert-Butylbenzene	106	108	80-120	73-127	2	0-20	
Carbon Disulfide	100	101	80-120	73-127	1	0-20	
Carbon Tetrachloride	100	102	69-135	58-146	3	0-13	
Chlorobenzene	96	102	85-109	81-113	6	0-8	
Chloroethane	97	93	80-120	73-127	4	0-20	
Chloroform	98	100	80-120	73-127	2	0-20	
Chloromethane	94	98	80-120	73-127	4	0-20	
2-Chlorotoluene	99	103	80-120	73-127	4	0-20	
4-Chlorotoluene	105	105	80-120	73-127	1	0-20	
Dibromochloromethane	107	114	80-120	73-127	6	0-20	
1,2-Dibromo-3-Chloropropane	111	119	80-120	73-127	7	0-20	
1,2-Dibromoethane	100	107	80-120	73-127	7	0-20	
Dibromomethane	101	112	80-120	73-127	11	0-20	
1,2-Dichlorobenzene	101	104	80-110	75-115	3	0-10	
1,3-Dichlorobenzene	101	101	80-120	73-127	0	0-20	
1,4-Dichlorobenzene	98	97	80-120	73-127	1	0-20	
Dichlorodifluoromethane	100	101	80-120	73-127	2	0-20	
1,1-Dichloroethane	107	87	80-120	73-127	21	0-20	
1,2-Dichloroethane	97	102	80-120	73-127	5	0-20	
1,1-Dichloroethene	102	102	83-125	76-132	0	0-10	
c-1,2-Dichloroethene	84	84	80-120	73-127	0	0-20	
t-1,2-Dichloroethene	97	96	80-120	73-127	1	0-20	
1,2-Dichloropropane	100	106	79-115	73-121	7	0-25	
1,3-Dichloropropane	101	107	80-120	73-127	6	0-20	
2,2-Dichloropropane	90	92	80-120	73-127	3	0-20	
1,1-Dichloropropene	99	102	80-120	73-127	3	0-20	
c-1,3-Dichloropropene	108	117	80-120	73-127	8	0-20	
t-1,3-Dichloropropene	115	126	80-120	73-127	9	0-20	
Ethylbenzene	100	107	80-120	73-127	6	0-20	
Isopropylbenzene	104	110	80-120	73-127	6	0-20	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: N/A
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-709-180	Solid	GC/MS Z	07/16/09	07/16/09	090716L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	108	110	80-120	73-127	2	0-20	
Methylene Chloride	95	99	80-120	73-127	4	0-20	
Naphthalene	95	100	80-120	73-127	5	0-20	
n-Propylbenzene	103	110	80-120	73-127	6	0-20	
Styrene	106	109	80-120	73-127	2	0-20	
Ethanol	107	96	50-134	36-148	11	0-23	
1,1,1,2-Tetrachloroethane	95	106	80-120	73-127	11	0-20	
1,1,2,2-Tetrachloroethane	89	96	80-120	73-127	8	0-20	
Tetrachloroethene	99	108	80-120	73-127	8	0-20	
Toluene	96	102	79-115	73-121	7	0-8	
1,2,3-Trichlorobenzene	98	98	80-120	73-127	0	0-20	
1,2,4-Trichlorobenzene	99	96	80-120	73-127	2	0-20	
1,1,1-Trichloroethane	99	102	80-120	73-127	3	0-20	
1,1,2-Trichloroethane	100	108	80-120	73-127	8	0-20	
Trichloroethene	96	102	87-111	83-115	7	0-7	
Trichlorofluoromethane	97	97	80-120	73-127	0	0-20	
1,2,3-Trichloropropane	109	118	80-120	73-127	8	0-20	
1,2,4-Trimethylbenzene	108	111	80-120	73-127	2	0-20	
1,3,5-Trimethylbenzene	104	110	80-120	73-127	6	0-20	
Vinyl Acetate	89	74	80-120	73-127	18	0-20	
Vinyl Chloride	95	95	72-126	63-135	0	0-10	
p/m-Xylene	104	109	80-120	73-127	5	0-20	
o-Xylene	100	107	80-120	73-127	6	0-20	
Methyl-t-Butyl Ether (MTBE)	97	100	75-129	66-138	3	0-13	
Tert-Butyl Alcohol (TBA)	101	100	66-126	56-136	1	0-24	
Diisopropyl Ether (DIPE)	101	78	77-125	69-133	26	0-13	
Ethyl-t-Butyl Ether (ETBE)	88	92	72-132	62-142	4	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	105	77-125	69-133	7	0-10	

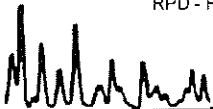
Total number of LCS compounds : 66

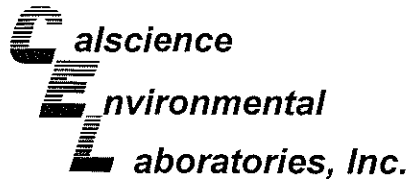
Total number of ME compounds : 2

Total number of ME compounds allowed : 3

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate

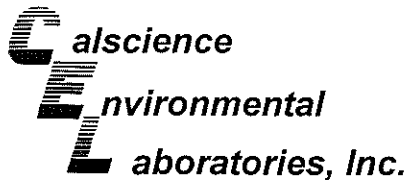
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: N/A
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-709-182	Solid	GC/MS Z	07/17/09	07/17/09	090717L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	106	108	84-114	79-119	2	0-7	
Bromobenzene	110	109	80-120	73-127	0	0-20	
Bromochloromethane	114	174	80-120	73-127	42	0-20	
Bromodichloromethane	104	105	80-120	73-127	2	0-20	
Bromoform	111	108	80-120	73-127	2	0-20	
Bromomethane	82	82	80-120	73-127	0	0-20	
n-Butylbenzene	105	104	77-123	69-131	1	0-25	
sec-Butylbenzene	100	102	80-120	73-127	1	0-20	
tert-Butylbenzene	107	104	80-120	73-127	3	0-20	
Carbon Disulfide	106	107	80-120	73-127	1	0-20	
Carbon Tetrachloride	103	103	69-135	58-146	0	0-13	
Chlorobenzene	100	102	85-109	81-113	2	0-8	
Chloroethane	95	100	80-120	73-127	6	0-20	
Chloroform	102	121	80-120	73-127	17	0-20	
Chloromethane	96	103	80-120	73-127	7	0-20	
2-Chlorotoluene	100	104	80-120	73-127	4	0-20	
4-Chlorotoluene	102	103	80-120	73-127	0	0-20	
Dibromochloromethane	116	117	80-120	73-127	1	0-20	
1,2-Dibromo-3-Chloropropane	118	117	80-120	73-127	1	0-20	
1,2-Dibromoethane	110	112	80-120	73-127	2	0-20	
Dibromomethane	117	119	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	99	101	80-110	75-115	2	0-10	
1,3-Dichlorobenzene	102	102	80-120	73-127	0	0-20	
1,4-Dichlorobenzene	98	97	80-120	73-127	1	0-20	
Dichlorodifluoromethane	100	106	80-120	73-127	5	0-20	
1,1-Dichloroethane	105	114	80-120	73-127	8	0-20	
1,2-Dichloroethane	104	108	80-120	73-127	4	0-20	
1,1-Dichloroethene	106	107	83-125	76-132	1	0-10	
c-1,2-Dichloroethene	85	119	80-120	73-127	34	0-20	
t-1,2-Dichloroethene	99	101	80-120	73-127	2	0-20	
1,2-Dichloropropane	106	112	79-115	73-121	5	0-25	
1,3-Dichloropropane	106	114	80-120	73-127	8	0-20	
2,2-Dichloropropane	98	119	80-120	73-127	19	0-20	
1,1-Dichloropropene	102	102	80-120	73-127	0	0-20	
c-1,3-Dichloropropene	119	121	80-120	73-127	2	0-20	
t-1,3-Dichloropropene	129	133	80-120	73-127	3	0-20	
Ethylbenzene	103	106	80-120	73-127	3	0-20	
Isopropylbenzene	107	109	80-120	73-127	2	0-20	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: N/A
Work Order No: 09-07-1179
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-709-182	Solid	GC/MS Z	07/17/09	07/17/09	090717L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	108	106	80-120	73-127	2	0-20	
Methylene Chloride	100	101	80-120	73-127	1	0-20	
Naphthalene	101	104	80-120	73-127	3	0-20	
n-Propylbenzene	106	107	80-120	73-127	2	0-20	
Styrene	109	113	80-120	73-127	4	0-20	
Ethanol	101	102	50-134	36-148	1	0-23	
1,1,1,2-Tetrachloroethane	102	103	80-120	73-127	1	0-20	
1,1,2,2-Tetrachloroethane	103	106	80-120	73-127	3	0-20	
Tetrachloroethene	86	99	80-120	73-127	14	0-20	
Toluene	102	102	79-115	73-121	0	0-8	
1,2,3-Trichlorobenzene	99	101	80-120	73-127	2	0-20	
1,2,4-Trichlorobenzene	99	99	80-120	73-127	0	0-20	
1,1,1-Trichloroethane	101	102	80-120	73-127	2	0-20	
1,1,2-Trichloroethane	111	118	80-120	73-127	7	0-20	
Trichloroethene	100	101	87-111	83-115	2	0-7	
Trichlorofluoromethane	100	100	80-120	73-127	0	0-20	
1,2,3-Trichloropropane	117	120	80-120	73-127	3	0-20	
1,2,4-Trimethylbenzene	109	107	80-120	73-127	2	0-20	
1,3,5-Trimethylbenzene	105	110	80-120	73-127	5	0-20	
Vinyl Acetate	116	117	80-120	73-127	1	0-20	
Vinyl Chloride	91	92	72-126	63-135	1	0-10	
p/m-Xylene	107	110	80-120	73-127	2	0-20	
o-Xylene	103	105	80-120	73-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	102	107	75-129	66-138	4	0-13	
Tert-Butyl Alcohol (TBA)	93	92	66-126	56-136	1	0-24	
Diisopropyl Ether (DIPE)	103	105	77-125	69-133	2	0-13	
Ethyl-t-Butyl Ether (ETBE)	91	108	72-132	62-142	17	0-12	
Tert-Amyl-Methyl Ether (TAME)	101	106	77-125	69-133	5	0-10	

Total number of LCS compounds : 66

Total number of ME compounds : 2

Total number of ME compounds allowed : 3

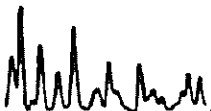
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Glossary of Terms and Qualifiers

Work Order Number: 09-07-1179

<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery above limit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.



<u>Qualifier</u>	<u>Definition</u>
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed. Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.



BP/ARC Project Name: _____

Req Due Date (mm/dd/yy): 1179

BP/ARC Facility No: 472

Lab Work Order Number: _____

Rush TAT: Yes ___ No X

Lab Name: CALSTRAC
 Lab Address: 7440 LINCOLN Way Garden Grove
 Lab PM: PICHAUD V.
 Lab Phone: (714) 995-5494
 Lab Shipping Acct: 9255
 Lab Bottle Order No: _____
 Other Info: _____

BP/ARC Facility Address: 6415 INT - BLD
 City, State, ZIP Code: CARLEAD, CA.
 Lead Regulatory Agency: SMC EX1
 California Global ID No.: T1000000 417
 Enfos Proposal No: 00410-0002
 Accounting Mode: Provision ___ OOC-BU ___ OOC-RM X
 Stage: APPRAISAL Activity: FIELD CHARACTERIZATION

Consultant/Contractor: STRATUS
 Consultant/Contractor Project No: 6472
 Address: 3330 Cameron Park Dr #550
 Consultant/Contractor PM: Jas JOHNSON
 Phone: (530) 676 6000
 Email EDD To: CHIEF@STRATUSINC.NET
 Invoice To: BP/ARC X Contractor _____

Lab No.	Sample Description	Date	Time	Matrix				No. Containers / Preservative				Requested Analyses				Report Type & QC Level		
				Soil / Solid	Water / Liquid	Air / Vapor	Total Number of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	4015B GAO (C ₆ -C ₁₀) 8015B	4015B DLO (C ₁₂ -C ₁₄) 8015B	4015B DLO (C ₁₆ -C ₁₈) 8015B	8260B BTEX	Standard <u>X</u>	Full Data Package ___
1	MW-1 6.5'	07/14/09	1055	X			1	X										
2	MW-1 8'		1058	X			1	X										
3	MW-1 9.5'		1100	X			1	X										
4	MW-1 11'		1102	X			1	X										
5	MW-1 12.5'		1105	X			1	X										
6	MW-1 14.5'		1107	X			1	X										
7	MW-2 6.5'		1600	X			1	X										
8	MW-2 8'		1602	X			1	X										
9	MW-2 9.5'		1605	X			1	X										
10	MW-2 11'		1607	X			1	X										

Sampler's Name: CF
 Sampler's Company: STRATUS
 Shipment Method: GSO Ship Date: 7/14/09
 Shipment Tracking No: 106160247

Relinquished By / Affiliation: Chad P. Date: 7/14/09 Time: 1800
 Accepted By / Affiliation: _____ Date: _____ Time: _____

Special Instructions: _____

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: _____ °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No

BP/ARC Project Name: _____

Req Due Date (mm/dd/yy): _____

1179

Rush TAT: Yes ___ No

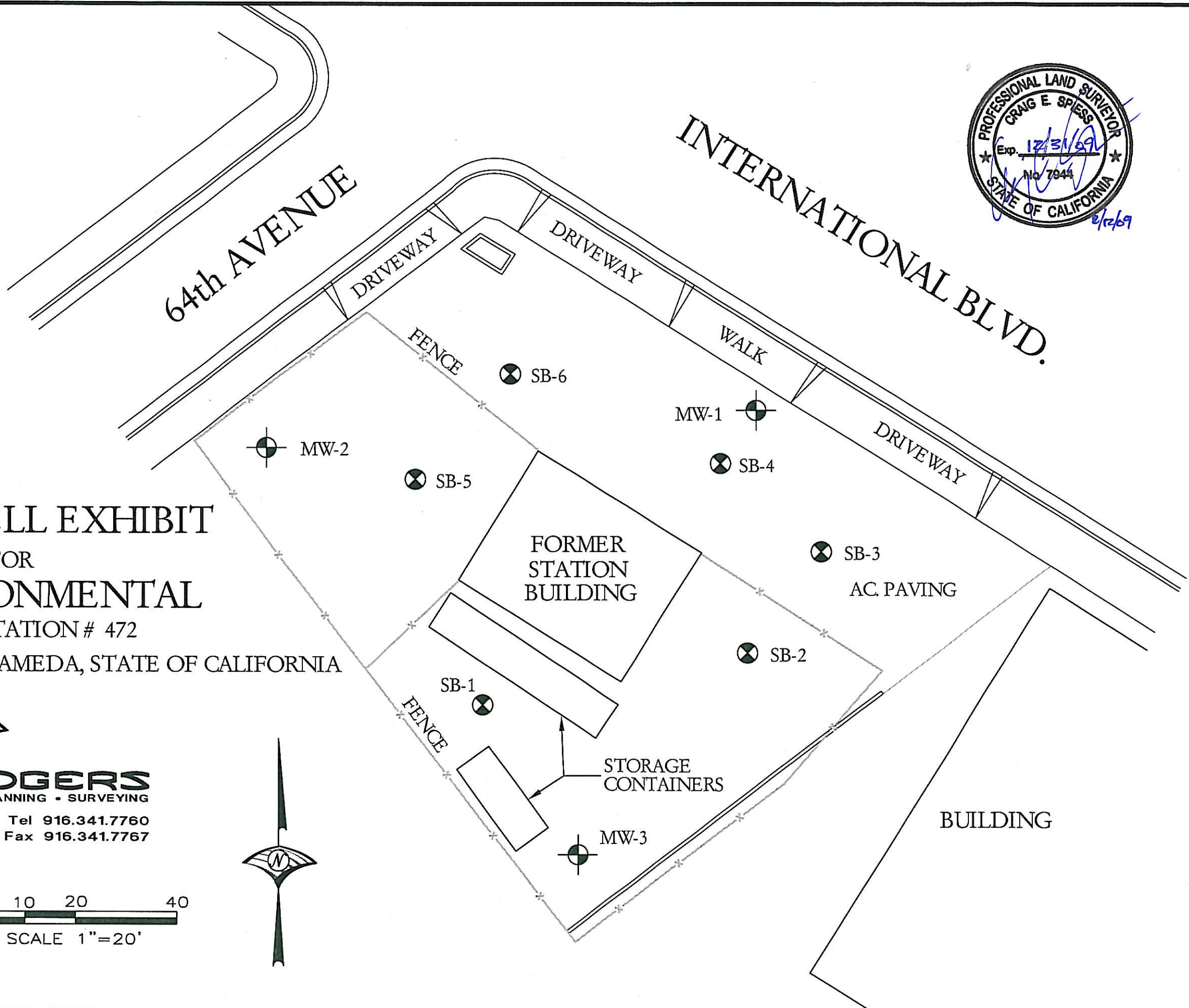
BP/ARC Facility No: 472

Lab Work Order Number: _____

Lab Name: <u>CASUERO</u>	BP/ARC Facility Address: <u>6415 INT. BLVD</u>	Consultant/Contractor: <u>STRATIS</u>
Lab Address: <u>7410 LINCOLN WAY FARMER GREEN</u>	City, State, ZIP Code: <u>OAKLAND CA.</u>	Consultant/Contractor Project No: <u>E 472</u>
Lab PM: <u>Pickens V.</u>	Lead Regulatory Agency: <u>SMLFH</u>	Address: <u>3300 CAMPBELL BLVD. # 555</u>
Lab Phone: <u>(714) 845-5444</u>	California Global ID No.: <u>1000000417</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
Lab Shipping Acct: <u>9255</u>	Enfos Proposal No: <u>00410-0002</u>	Phone: <u>(510) 845-5444</u>
Lab Bottle Order No:	Accounting Mode: Provision ___ OOC-BU ___ OOC-RM <input checked="" type="checkbox"/>	Email EDD To: <u>CLIFF@STRATIS.COM</u>
Other Info:	Stage: <u>AP Permit</u> Activity: <u>Final Remediation</u>	Invoice To: BP/ARC <input checked="" type="checkbox"/> Contractor ___
BP/ARC EBM: <u>Paul Surpin</u>	Matrix	Report Type & QC Level

Lab No.	Sample Description	Date	Time	No. Containers / Preservative								Requested Analyses								Report Type & QC Level	Comments	
				Soil / Solid	Water / Liquid	Air / Vapor	Total Number of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	610 (Cu-Cu)	805B	610 (Cu-Cu)	805B	610 (Cu-Cu)	805B	610 (Cu-Cu)			805B
11	MW-2 12.5'	07/14/09	1610	F			1	F								X	X	X	X			
12	MW-2 14.5'		1612	F			1	F								X	X	X	X			
13	MW-2 17'		1615	F			1	F								X	X	X	X			
14	MW-3 6.5'		1405	F			1	F								X	X	X	X			
15	MW-3 8'		1407	F			1	F								X	X	X	X			
16	MW-3 9.5'		1410	F			1	F								X	X	X	X			
17	MW-3 11'		1412	F			1	F								X	X	X	X			
18	MW-3 12.5'		1415	F			1	F								X	X	X	X			
19	MW-3 14.5'		1417	F			1	F								X	X	X	X			
20	MW-3 17'	V	1420	F			1	F								X	X	X	X			

Sampler's Name: <u>CF</u>	Relinquished By / Affiliation: <u>Cliff</u>	Date: <u>7/14/09</u>	Time: <u>1600</u>	Accepted By / Affiliation: _____	Date: _____	Time: _____
Sampler's Company: <u>STRATIS</u>	Shipment Method: <u>GISO</u>	Ship Date: <u>7/14/09</u>	Shipment Tracking No: _____	Special Instructions: _____	Page 43 of 44	



MONITORING WELL EXHIBIT

PREPARED FOR

STRATUS ENVIRONMENTAL

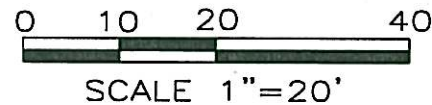
FORMER ARCO STATION # 472

CITY OF OAKLAND, COUNTY OF ALAMEDA, STATE OF CALIFORNIA



WOOD RODGERS
ENGINEERING • MAPPING • PLANNING • SURVEYING

3301 C St., Bldg. 100-B Tel 916.341.7760
Sacramento, CA 95816 Fax 916.341.7767



AUGUST 3, 2009

Sheet 1 of 1

2479.033

GLOBAL_ID	FIELD_PT_NAME	FIELD_PT_XY_SURVEY	LATITUDE	LONGITUDE	XY_METHOD	XY_DATUM	XY_ACC_VAL	XY_SURVEY_ORG	GPS_EQUIP_TY	XY_SURVEY_DES
MW-1	MW	8/3/2009	37.7630934	-122.1956161	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
MW-2	MW	8/3/2009	37.7630681	-122.1959522	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
MW-3	MW	8/3/2009	37.7628495	-122.1957342	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
SB-1		8/3/2009	37.7629300	-122.1958012	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
SB-2		8/3/2009	37.7629609	-122.1956191	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
SB-3		8/3/2009	37.7630169	-122.1955699	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
SB-4		8/3/2009	37.7630640	-122.1956397	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
SB-5		8/3/2009	37.7630523	-122.1958504	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	
SB-6		8/3/2009	37.7631107	-122.1957865	CGPS	NAD83	30	WOOD RODGERS PLS 7944	TR	

GLOBAL_ID	FIELD_PT_NAME	ELEV_SURVEY_DATE	ELEVATION	ELEV_METHOD	ELEV_DATUM	ELEV_ACC_VAL	ELEV_SURVEY_ORG	RISER_HT	ELEV_DESC	EFF_DATE
MW-1		8/3/2009	24.17	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.29		
MW-2		8/3/2009	23.62	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.63		
MW-3		8/3/2009	24.73	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944	-0.44		
SB-1		8/3/2009	24.82	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944			
SB-2		8/3/2009	24.87	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944			
SB-3		8/3/2009	24.48	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944			
SB-4		8/3/2009	24.59	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944			
SB-5		8/3/2009	24.38	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944			
SB-6		8/3/2009	24.55	DIG	NAVD88	0.01	WOOD RODGERS PLS 7944			

DESCRIPTION	NORTHING(GRID)	EASTING(GRID)	TOP CASING	TOP OF BOX	CONC. PATCH
MW-1	2104761.72	6071545.56	24.17	24.46	
MW-2	2104754.28	6071448.26	23.62	24.25	
MW-3	2104673.56	6071509.81	24.73	25.17	
SB-1	2104703.21	6071490.98			24.82
SB-2	2104713.52	6071543.82			24.87
SB-3	2104733.64	6071558.42			24.48
SB-4	2104751.14	6071538.56			24.59
SB-5	2104747.99	6071477.56			24.38
SB-6	2104768.93	6071496.43			24.55

APPENDIX C

GEOTRACKER UPLOAD CONFIRMATION RECEIPTS

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER ESI

UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

<u>Submittal Type:</u>	GEO_BORE
<u>Facility Global ID:</u>	T10000000417
<u>Field Point:</u>	MW-1
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	GEO_BORE MW-1.pdf
<u>Username:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	8/28/2009 8:01:21 AM
<u>Confirmation Number:</u>	5284066617

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UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

<u>Submittal Type:</u>	GEO_BORE
<u>Facility Global ID:</u>	T10000000417
<u>Field Point:</u>	MW-2
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	GEO_BORE MW-2.pdf
<u>Username:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	8/28/2009 8:01:34 AM
<u>Confirmation Number:</u>	3809073209

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UPLOADING A GEO_BORE FILE

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Your GEO_BORE file has been successfully submitted!

<u>Submittal Type:</u>	GEO_BORE
<u>Facility Global ID:</u>	T10000000417
<u>Field Point:</u>	MW-3
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	GEO_BORE MW-3.pdf
<u>Username:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	8/28/2009 8:01:47 AM
<u>Confirmation Number:</u>	7936303555

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UPLOADING A GEO_MAP FILE

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Your GEO_MAP file has been successfully submitted!

<u>Submittal Type:</u>	GEO_MAP
<u>Facility Global ID:</u>	T10000000417
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	GEO_MAP.pdf
<u>Username:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	8/28/2009 8:02:06 AM
<u>Confirmation Number:</u>	1155214607

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UPLOADING A GEO_XY FILE

SUCCESS

Processing is complete. No errors were found!
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<u>Submittal Type:</u>	GEO_XY
<u>Submittal Title:</u>	GEO_XY MW-1 TO 3
<u>Facility Global ID:</u>	T10000000417
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	GEO_XY.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	8/28/2009 7:53:53 AM
<u>Confirmation Number:</u>	8412344694

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GEOTRACKER ESI

UPLOADING A GEO_Z FILE

SUCCESS

Processing is complete. No errors were found!
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<u>Submittal Type:</u>	GEO_Z
<u>Submittal Title:</u>	GEO_Z MW-1 TO 3
<u>Facility Global ID:</u>	T10000000417
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	GEO_Z.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	8/28/2009 7:56:51 AM
<u>Confirmation Number:</u>	2130113899

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UPLOADING A EDF FILE

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<u>Submittal Type:</u>	EDF - Soil and Water Investigation Report
<u>Submittal Title:</u>	Drilling Activities 0709
<u>Facility Global ID:</u>	T1000000417
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	09071179 fix.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	8/28/2009 8:14:10 AM
<u>Confirmation Number:</u>	2462387561

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

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<u>Submittal Type:</u>	GEO_WELL
<u>Submittal Title:</u>	3Q09 GEO_WELL 472
<u>Facility Global ID:</u>	T1000000417
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	9/29/2009 1:41:39 PM
<u>Confirmation Number:</u>	2892702400

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GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

Processing is complete. No errors were found!
Your file has been successfully submitted!

<u>Submittal Type:</u>	EDF - Monitoring Report - Quarterly
<u>Submittal Title:</u>	3Q09 GW Monitoring
<u>Facility Global ID:</u>	T10000000417
<u>Facility Name:</u>	ARCO # / PLUCKY LIQUORS
<u>File Name:</u>	09082088.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	9/29/2009 1:44:39 PM
<u>Confirmation Number:</u>	9909532845

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)

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APPENDIX D

STRATUS GROUND-WATER SAMPLING DATA PACKAGE

(Includes Field Data Sheets, Laboratory Analytical Report with Chain-of-Custody Documentation, and Field Procedures)



3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

September 17, 2009

Mr. Rob Miller
Broadbent & Associates, Inc.
2000 Kirman Avenue
Reno, NV 89502

Re: Groundwater Sampling Data Package, ARCO Service Station No. 472, located at
6415 International Boulevard, Oakland, California.

General Information

Data Submittal Prepared / Reviewed by: Carol Huff / Scott Bittinger / Jay Johnson

Phone Number: (530) 676-6000

On-Site Supplier Representative: Collin Fischer

Sampling Date: August 25, 2009

Unusual Field Conditions: None noted.

Scope of Work Performed: Quarterly groundwater monitoring and sampling

Variations from Work Scope: None noted.

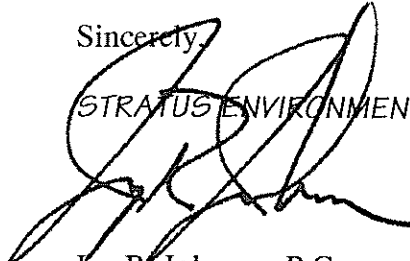
This submittal presents the data collected in association with routine groundwater monitoring. The attachments include field data sheets, chain of custody documentation, certified analytical results, and field procedures for groundwater sampling documentation. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.

Mr. Rob Miller, Broadbent & Associates, Inc.
Groundwater Sampling Data Package
ARCO Service Station 472, Oakland, CA
Page 2

September 17, 2009

Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

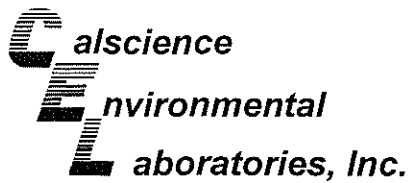

STRATUS ENVIRONMENTAL, INC.
PROFESSIONAL GEOLOGIST
Jay R. Johnson
No. 5867
STATE OF CALIFORNIA

Attachments:

- Field Data Sheets
- Chain of Custody Documentation
- Certified Analytical Results
- Field Procedures for Groundwater Sampling

cc: Mr. Chuck Carmel, BP/ARCO

time						time					
purge stop time						purge stop time					
Well ID <i>MW-1</i>						Well ID					
purge start time						purge start time					
	Temp C	pH	cond	gallons			Temp C	pH	cond	gallons	
time 1025	22.4	7.15	468	0	time						
time 1026	22.6	7.17	469	5	time						
time 1031	22.1	7.08	483	10	time						
time 1037	21.7	7.21	524	15	time						
purge stop time						purge stop time					
Well ID <i>MW-2</i>						Well ID					
purge start time						purge start time					
	Temp C	pH	cond	gallons			Temp C	pH	cond	gallons	
time 1053	21.3	7.20	422	0	time						
time 1057	21.8	7.35	412	5	time						
time 1101	21.6	7.31	424	10	time						
time 1107	21.5	7.30	417	15	time						
purge stop time						purge stop time					
Well ID <i>MW-3</i>						Well ID					
purge start time						purge start time					
	Temp C	pH	cond	gallons			Temp C	pH	cond	gallons	
time 1121	19.6	7.17	535	0	time						
time 1124	19.9	7.13	525	4	time						
time 1127	19.6	7.12	528	8	time						
time 1130	19.4	7.09	520	12	time						
purge stop time						purge stop time					



September 08, 2009

Jay Johnson
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Subject: **Calscience Work Order No.: 09-08-2088**
Client Reference: 472

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/26/2009 and analyzed in accordance with the attached chain-of-custody.

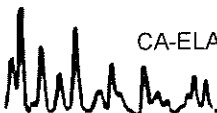
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows 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.

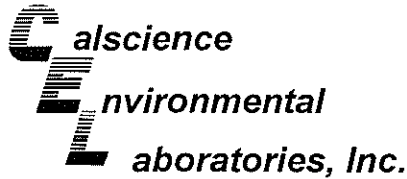
If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Villafania".

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager





Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 08/26/09
Work Order No: 09-08-2088
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: 472

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	09-08-2088-1-G	08/25/09 12:00	Aqueous	GC 49	08/26/09	08/27/09 20:25	090826B12

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	99	68-140			

MW-1	09-08-2088-2-G	08/25/09 11:45	Aqueous	GC 49	08/26/09	08/27/09 20:41	090826B12
------	----------------	-------------------	---------	-------	----------	-------------------	-----------

Comment(s): -LX = Quantitation of unknown hydrocarbon(s) in sample based on diesel.

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	190	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	95	68-140			

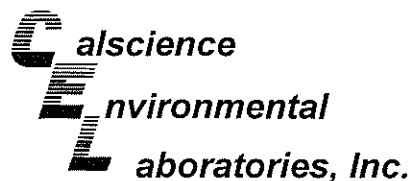
MW-3	09-08-2088-3-G	08/25/09 12:20	Aqueous	GC 49	08/26/09	08/27/09 20:57	090826B12
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	85	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	98	68-140			

Method Blank	099-12-699-169	N/A	Aqueous	GC 49	08/26/09	08/27/09 19:38	090826B12
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	97	68-140			

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



Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 08/26/09
Work Order No: 09-08-2088
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: 472

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	09-08-2088-1-G	08/25/09 12:00	Aqueous	GC 49	08/26/09	08/27/09 20:25	090826B11

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	250	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	99	68-140			

MW-1	09-08-2088-2-G	08/25/09 11:45	Aqueous	GC 49	08/26/09	08/27/09 20:41	090826B11
------	----------------	-------------------	---------	-------	----------	-------------------	-----------

Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	250	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	95	68-140			

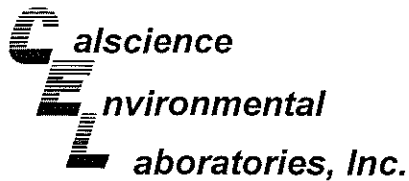
MW-3	09-08-2088-3-G	08/25/09 12:20	Aqueous	GC 49	08/26/09	08/27/09 20:57	090826B11
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Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	250	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	98	68-140			

Method Blank	099-12-711-24	N/A	Aqueous	GC 49	08/26/09	08/27/09 15:58	090826B11
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Parameter	Result	RL	DF	Qual	Units
Motor Oil Range Organics (C17-C44)	ND	250	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	101	68-140			

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



Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 08/26/09
Work Order No: 09-08-2088
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: 472

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	09-08-2088-1-D	08/25/09 12:00	Aqueous	GC 1	08/26/09	08/26/09 18:00	090826B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	85	38-134			

MW-1	09-08-2088-2-D	08/25/09 11:45	Aqueous	GC 1	08/26/09	08/26/09 19:35	090826B01
------	----------------	-------------------	---------	------	----------	-------------------	-----------

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	530	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	96	38-134			

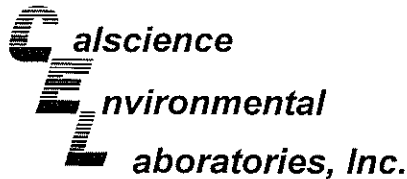
MW-3	09-08-2088-3-D	08/25/09 12:20	Aqueous	GC 1	08/26/09	08/26/09 20:06	090826B01
------	----------------	-------------------	---------	------	----------	-------------------	-----------

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	63	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	84	38-134			

Method Blank	099-12-695-648	N/A	Aqueous	GC 1	08/26/09	08/26/09 13:13	090826B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	79	38-134			

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



Analytical Report



Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

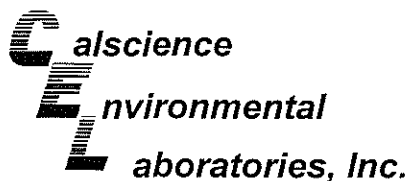
Date Received: 08/26/09
Work Order No: 09-08-2088
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: 472

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID		
MW-2	09-08-2088-1-A	08/25/09 12:00	Aqueous	GC/MS BB	08/28/09	08/28/09 20:10	090828L01		
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	97	80-128			Dibromofluoromethane	100	80-127		
Toluene-d8	89	80-120			1,4-Bromofluorobenzene	96	68-120		
MW-1	09-08-2088-2-A	08/25/09 11:45	Aqueous	GC/MS BB	08/28/09	08/28/09 20:38	090828L01		
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.54	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	90	80-128			Dibromofluoromethane	99	80-127		
Toluene-d8	86	80-120			1,4-Bromofluorobenzene	102	68-120		
MW-3	09-08-2088-3-A	08/25/09 12:20	Aqueous	GC/MS BB	08/28/09	08/28/09 21:07	090828L01		
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	1.2	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	94	80-128			Dibromofluoromethane	99	80-127		
Toluene-d8	87	80-120			1,4-Bromofluorobenzene	96	68-120		

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



Analytical Report

net

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 08/26/09
Work Order No: 09-08-2088
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: 472

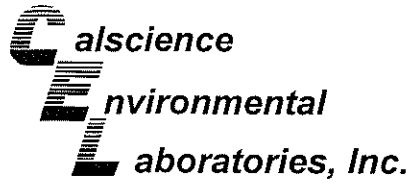
Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-1,059	N/A	Aqueous	GC/MS BB	08/28/09	08/28/09 13:01	090828L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	94	80-128			Dibromofluoromethane	97	80-127		
Toluene-d8	80	80-120			1,4-Bromofluorobenzene	93	68-120		

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





Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.
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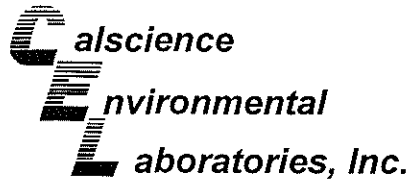
Date Received: 08/26/09
 Work Order No: 09-08-2088
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-2	Aqueous	GC 1	08/26/09	08/26/09	090826S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	103	97	38-134	5	0-25	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate

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Cameron Park, CA 95682-8861

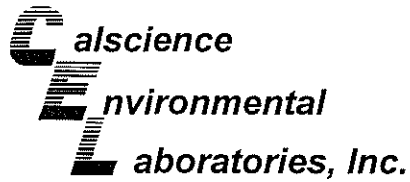
Date Received: 08/26/09
Work Order No: 09-08-2088
Preparation: EPA 5030B
Method: EPA 8260B

Project 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-08-2297-5	Aqueous	GC/MS BB	08/28/09	08/28/09	090828S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	109	76-124	3	0-20	
Carbon Tetrachloride	93	95	74-134	2	0-20	
Chlorobenzene	104	107	80-120	3	0-20	
1,2-Dibromoethane	94	100	80-120	6	0-20	
1,2-Dichlorobenzene	100	105	80-120	4	0-20	
1,1-Dichloroethene	109	109	73-127	0	0-20	
Ethylbenzene	100	100	78-126	0	0-20	
Toluene	100	96	80-120	4	0-20	
Trichloroethene	102	106	77-120	5	0-20	
Vinyl Chloride	92	98	72-126	6	0-20	
Methyl-t-Butyl Ether (MTBE)	93	100	67-121	7	0-49	
Tert-Butyl Alcohol (TBA)	111	109	36-162	3	0-30	
Diisopropyl Ether (DIPE)	100	105	60-138	5	0-45	
Ethyl-t-Butyl Ether (ETBE)	93	98	69-123	6	0-30	
Tert-Amyl-Methyl Ether (TAME)	89	95	65-120	6	0-20	
Ethanol	144	121	30-180	17	0-72	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

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Cameron Park, CA 95682-8861

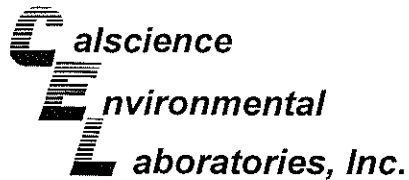
Date Received: N/A
Work Order No: 09-08-2088
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-699-169	Aqueous	GC 49	08/26/09	08/27/09	090826B12

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C28)	95	100	75-117	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

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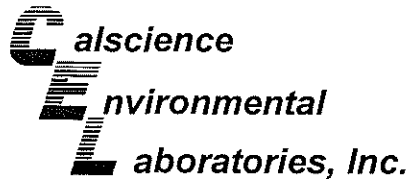
Date Received: N/A
Work Order No: 09-08-2088
Preparation: EPA 3510C
Method: EPA 8015B (M)

Project: 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-711-24	Aqueous	GC 49	08/26/09	08/27/09	090826B11

Parameter	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Motor Oil Range Organics (C17-C44)	101	113	53-141	11	0-25	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
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Cameron Park, CA 95682-8861

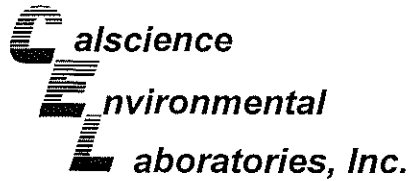
Date Received: N/A
Work Order No: 09-08-2088
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-648	Aqueous	GC 1	08/26/09	08/26/09	090826B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	104	111	78-120	7	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

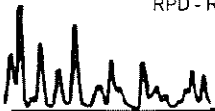
Date Received: N/A
Work Order No: 09-08-2088
Preparation: EPA 5030B
Method: EPA 8260B

Project: 472

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-1,059	Aqueous	GC/MS BB	08/28/09	08/28/09	090828L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	106	104	80-120	73-127	2	0-20	
Carbon Tetrachloride	94	89	74-134	64-144	6	0-20	
Chlorobenzene	104	101	80-120	73-127	3	0-20	
1,2-Dibromoethane	97	100	79-121	72-128	2	0-20	
1,2-Dichlorobenzene	101	103	80-120	73-127	1	0-20	
1,1-Dichloroethene	113	107	78-126	70-134	6	0-28	
Ethylbenzene	102	97	80-120	73-127	5	0-20	
Toluene	112	104	80-120	73-127	7	0-20	
Trichloroethene	107	103	79-127	71-135	4	0-20	
Vinyl Chloride	104	102	72-132	62-142	2	0-20	
Methyl-t-Butyl Ether (MTBE)	93	97	69-123	60-132	4	0-20	
Tert-Butyl Alcohol (TBA)	105	106	63-123	53-133	1	0-20	
Diisopropyl Ether (DIPE)	99	99	59-137	46-150	0	0-37	
Ethyl-t-Butyl Ether (ETBE)	93	94	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	89	93	70-120	62-128	5	0-20	
Ethanol	124	133	28-160	6-182	7	0-57	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



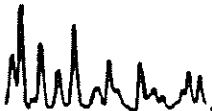
Glossary of Terms and Qualifiers

Work Order Number: 09-08-2088

<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.



<u>Qualifier</u>	<u>Definition</u>
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.





Laboratory Management Program LaMP Chain of Custody Record 189409

Page 1 of 1

BP/ARC Project Name: _____

Req Due Date (mm/dd/yy): _____

Rush TAT: Yes ___ No

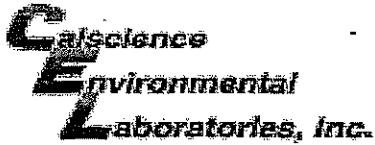
BP/ARC Facility No: 472

Lab Work Order Number: 2088

Lab Name: <u>CALSCIENCE</u>				BP/ARC Facility Address: <u>6415 INT. BLVD.</u>				Consultant/Contractor: <u>STRATUS</u>														
Lab Address: <u>7440 LINCOLN WAY, GARDEN HURST</u>				City, State, ZIP Code: <u>OAKLAND, CA-</u>				Consultant/Contractor Project No: <u>E472</u>														
Lab PM: <u>Richard V.</u>				Lead Regulatory Agency: <u>ACEH</u>				Address: <u>3770 CAMDEN PARK DR. #550</u>														
Lab Phone: <u>(714) 895-5494</u>				California Global ID No.: <u>T000000417</u>				Consultant/Contractor PM: <u>Jay Johnson</u>														
Lab Shipping Acct: <u>1255</u>				Enfos Proposal No: <u>004LO-0002</u>				Phone: <u>(510) 676 6000</u>														
Lab Bottle Order No: _____				Accounting Mode: Provision ___ OOC-BU ___ OOC-RM <input checked="" type="checkbox"/>				Email EDD To: <u>CHUFF@STRATUSINC.NET</u>														
Other Info: _____				Stage: <u>APPRAISE</u> Activity: <u>FIELD CHARACTERIZATION</u>				Invoice To: BP/ARC <input checked="" type="checkbox"/> Contractor _____														
BP/ARC EBM: <u>Paul Supple</u>				Matrix				No. Containers / Preservative				Requested Analyses				Report Type & QC Level						
EBM Phone: _____																Standard <input checked="" type="checkbox"/>						
EBM Email: _____																Full Data Package _____						
Lab No.	Sample Description	Date	Time	Soil / Solid	Water / Liquid	Air / Vapor	Total Number of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GRD (805B)	PRD (805B)	ORL (805B)	BETE+ (8260)	EDB (8260)	1/2 PCA (8260)	FURNACE (8260)	TRIP BLANK	Comments	
1	MW-2	8/25/09	1200	+			2	+					+	+								
2	MW-2		1205	+			6				+		+	+								
3	MW-1		1145	+			2	+														
4	MW-1		1147	+			6				+											
5	MW-3		1220	+			2	+														
6	MW-3		1225	+			6				+											
7	TRIP BLANK		1330	+			2	+														
Sampler's Name: <u>CF</u>				Relinquished By / Affiliation: <u>CF</u>				Date: <u>8/25/09</u>		Time: <u>1030</u>		Accepted By / Affiliation: <u>[Signature]</u>				Date: <u>8/26/09</u>		Time: <u>1030</u>				
Sampler's Company: <u>STRATUS</u>																						
Shipment Method: <u>GRSO</u> Ship Date: <u>8/25/09</u>																						
Shipment Tracking No: <u>106160267</u>																						
Special Instructions: _____																						

THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: _____ °F/C Trip Blank: Yes / No MS/MSD Sample Submitted: Yes / No

Laboratory Copy



WORK ORDER #: 09-08-2088

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 8/26/09

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen)

Temperature 3.7 °C - 0.2°C (CF) = 3.5 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Metals Only PCBs Only Initial: JP

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Initial: JP

Sample _____ No (Not Intact) Not Present Initial: PS

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> COC not relinquished. <input type="checkbox"/> No date relinquished. <input type="checkbox"/> No time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct containers and volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve EnCores® TerraCores® _____

Water: VOA VOA⁶h VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 500PB 500PBna

250PB 250PBn 125PB 125PBz_{nn}a 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Summa® _____ Other: _____ Checked/Labeled by: PS

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelop Reviewed by: JK

Preservative: h: HCL n: HNO₃ na₂:Na₂S₂O₃ Na: NaOH p: H₃PO₄ s: H₂SO₄ znnq: ZnAc₂+NaOH f: Field-filtered Scanned by: PS

ATTACHMENT

FIELD PROCEDURES FOR GROUNDWATER SAMPLING

The sampling procedures for groundwater monitoring events are contained in this appendix.

Groundwater and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

Prior to measuring the depth to liquid in the well, the well caps are removed and the liquid level allowed to stabilize. A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the groundwater depth in monitoring wells that do not contain LPH. Depth to groundwater or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typically a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Groundwater

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Sampling

In many cases, determining whether to purge or not to purge wells prior to sample collection is made in the field and is often based on depth to water relative to the screen interval of the well. Site-specific field data sheets present details associated with the purge method and equipment used.

Monitoring wells, when purged, use a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water has been removed. Field measuring equipment is calibrated and maintained according to the manufacturer's instructions. If three well volumes cannot be removed in one half hour's time the well is allowed to recharge to 80% of original level. After recharging, a groundwater sample is then collected from each of the wells using disposable bailers.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These

bottles will be filled completely to prevent air accumulation in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Groundwater Sample Labeling and Preservation

Samples are collected in appropriate containers supplied by the laboratory. All required chemical preservation is added to the bottles prior to delivery to Stratus. Sample label information includes a unique sample identification number, job identification number, date, and time. After labeling, all groundwater samples are placed in a Ziploc[®] type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip and temperature blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

Equipment Cleaning

All reusable sampling equipments are cleaned using phosphate-free detergents and rinsed with de-ionized water.