Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, CA 94583
Phone: (925) 275-3801
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6 August 2009

Re: Vapor Intrusion Assessment and Soil & Ground-Water Investigation Report
Atlantic Richfield Company Station No.601
712 Lewelling Boulevard
San Leandro, California
ACEH Case #RO0000309

"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:

Paul Supple
Environmental Business Manger

VAPOR INTRUSION ASSESSMENT AND SOIL & GROUND-WATER INVESTIGATION REPORT

Atlantic Richfield Company Station No. 601
712 Lewelling Boulevard, San Leandro, California
ACEH Fuel Leak Case No. RO0000309

Prepared for:

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

Prepared by:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

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6 August 2009

Project No. 06-88-605

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BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL, WATER RESOURCES & ENGINEERING

6 August 2009

Project No. 06-88-605

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

Attn.: Mr. Paul Supple

Re: Vapor Intrusion Assessment and Soil & Ground-Water Investigation Report, Atlantic Richfield Company Station No.601, 712 Lewelling Boulevard, San Leandro, California; ACEH Case No.RO0000309

Dear Mr. Supple:

Broadbent & Associates, Inc. (BAI) is pleased to submit this *Vapor Intrusion Assessment and Soil & Ground-Water Investigation Report* for Atlantic Richfield Company Station No.601 (herein referred to as Station No.601) located at 712 Lewelling Boulevard, San Leandro, California (Site). This report contains the results of an on-site vapor intrusion assessment and soil and ground-water investigation. These activities were conducted in accordance to the *Initial Site Conceptual Model with Soil & Ground-Water Investigation Work Plan* (BAI, 03/24/2009) as approved with technical comments by ACEH in their letter dated 2 April 2009.

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

Sincerely,
BROADBENT & ASSOCIATES, INC.

Thomas A. Venus
Senior Engineer, P.E.

Robert H. Miller, P.G., C.HG.
Principal Hydrogeologist

Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)
Mr. Karl Busche, City of San Leandro, 835 East 14th St., San Leandro, CA 94577
Electronic copy uploaded to GeoTracker

VAPOR INTRUSION ASSESSMENT AND SOIL & GROUND-WATER INVESTIGATION REPORT
Atlantic Richfield Company Station No. 601
712 Lewelling Boulevard, San Leandro, California

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VAPOR INTRUSION ASSESSMENT AND SOIL & GROUND-WATER INVESTIGATION REPORT
Atlantic Richfield Company Station No. 601
712 Lewelling Boulevard, San Leandro, California

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company, RM - a BP affiliated company, Broadbent & Associates, Inc. (BAI) has prepared this Vapor Intrusion Assessment and Soil & Ground-Water Investigation Report for the Atlantic Richfield Company Station No. 601, located at 712 Lewelling Boulevard, San Leandro, Alameda County, California (Site). The vapor intrusion assessment and soil and ground-water investigation activities were conducted in accordance to the *Initial Site Conceptual Model with Soil & Ground-Water Investigation Work Plan* (BAI, 24 March 2009) as approved with technical comments by ACEH in their letter dated 2 April 2009. A copy of recent regulatory correspondence is provided within Appendix A. This document includes discussions on the site background, vapor intrusion assessment activities including analytical results, soil and ground-water investigation activities including monitoring well construction details and analytical results, conclusions and recommendations. Drawings and appendices referenced within this document are provided following the conclusion of the document's text.

2.0 SITE BACKGROUND

The Site is located at 712 Lewelling Boulevard in San Leandro, California. It is an active ARCO-brand gasoline station (Station No.601) with convenience store. Current structures on the Site include four 10,000-gallon underground storage tanks (USTs), two fuel dispenser islands with a total of eight dispensers, and a convenience store building with two unused vehicle service bays. The majority of the Site is paved with asphalt and cement concrete. The location of the Site is shown in Drawing 1.

The Site is bound by the four-to six lane Lewelling Boulevard to the northwest, the four to six-lane Washington Avenue to the east, multi-family residential dwellings of the Chateau Manor Apartments adjacent to the southwest, and a commercial building (Dentist's Office) and parking lot adjacent to the southeast. Across Washington Avenue to the east is a large parking lot and Walgreens store. Across Lewelling Boulevard to the northwest are a Speedy Smog smog check station at the corner of Washington Avenue, Salel's Mobile Home Park, and the parking lot and playground for Lewelling School further southwest. The Smog Check Station at 15275 Washington Avenue is the former Shell Gasoline Service Station No.129460 and an active release site (ACEH Case No. RO0000372 / GeoTracker Global ID T0600101226).

A substantial summary of previous environmental investigations with Site characterization, local and area geology and hydrogeology, remediation status, and preliminary Site conceptual exposure model was recently submitted in the *Initial Site Conceptual Model with Soil & Ground-Water Investigation Work Plan* (BAI, 24 March 2009).

3.0 VAPOR INTRUSION ASSESSMENT

Vapor intrusion assessment activities were originally proposed in the *Initial Site Conceptual Model with Soil & Ground-Water Investigation Work Plan* (BAI, 03/24/2009). Vapor intrusion assessment activities were approved with technical comments by ACEH in their letter dated 2 April 2009, and clarified with subsequent emails and telephone conversations.

3.1 Preliminary Field Activities

Prior to initiating field activities, Stratus Environmental Inc. (Stratus) obtained the necessary well drilling permits from the Alameda County Public Works Agency (See Appendix B). Stratus also 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. Due to the presence of a footing or buried metal object identified during the utility clearance, boring SG-9 had to be moved slightly to the north-northeast.

3.2 Soil Borings

Soil borings for soil vapor sampling locations SG-9 through SG-14 (See Drawing 2) were advanced on 11 and 12 June 2009 by RSI Drilling of Woodland, California using a hand auger. Each boring was advanced to a total depth of approximately 3.5 ft bgs. Due to the shallow nature of the borings, soils were not classified during boring installation activities. Field notes and well construction logs are provided in Appendix B. A GEO_MAP depicting the boring locations was uploaded to the GeoTracker AB2886 database. A copy of the upload confirmation receipt is provided in Appendix C.

3.3 Soil Vapor Well Construction

The soil vapor sampling wells were constructed by placing a 6-inch long soil vapor probe at the bottom of each boring attached to 0.25-inch diameter nylon tubing extending to the surface. The probes were constructed of double-woven stainless steel wire screen with a pore diameter of 0.057 inch, equipped with stainless steel end fittings. The annulus of the soil vapor sampling wells were constructed with No.2/12 sand filter packs from 3.5 ft bgs to 2.5 ft bgs, overlain with a bentonite annular seal from 2.5 ft bgs to 1.0 ft bgs. The remainder of the annulus was filled with neat cement grout to the surface. The wells were completed with flush, traffic-rated well boxes, with a concrete surface seal to match the existing grade. The cement grout was allowed to cure for approximately 18 days prior to sampling. Residual solids and liquids generated during well construction activities were stored temporarily onsite in a 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.

3.4 Soil Gas Sampling Procedures

Soil gas sampling activities were completed by Stratus on 30 June 2009. One-liter Summa® canisters were used to collect the samples for analysis. The Summa® canisters were shipped by the laboratory under high vacuum, leak checked, and batch certified to be free of contaminants. The initial canister vacuum was measured before use and verified to be approximately 29 to 30 inches of Mercury (in.Hg). A purge canister was used to purge the sampling train (sampling point and tubing) a minimum of three volumes prior to sample collection. Swagelok fittings were used to connect the canisters to the tubing. Once the purge canister was connected to the tubing, the sampling train was checked for leaks by applying a vacuum for approximately 11-16 minutes. The vacuum in the canisters did not change, indicating that the sampling trains were properly sealed and not leaking.

Once the leak test was complete, the in-line valve was closed and the sample canister was connected to the tubing. The in-line valve was then opened and the sample collected. The sampling flow rate was set at approximately 167 milliliters per minute (mL/min) as restricted by a laboratory supplied flow regulator. Samples were collected until the pressure in the canister(s) reached approximately 9 to 10 in.Hg.

A leak test was performed as a further check to make sure significant ambient air was not leaking into the sampling trains. Prior to and during sample collection, a tracer/leak test compound (1,1-Difluoroethane [1,1-DFA]) was applied around the probe at the ground surface and at connections in the sampling system. The tracer/leak test compound was emplaced by spraying Dust-Off® around the test locations during sample collection. The leak test compound 1,1-DFA was included in the laboratory analysis. An ambient air sample was not collected outside the Station Building as proposed within the work plan due to a misunderstanding by Stratus.

3.5 Laboratory Analysis of Soil Gas Samples

Collected samples were submitted promptly under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. in Garden Grove, California (CA-ELAP #1230, NELAP #03220CA). Soil gas samples were analyzed for Gasoline Range Organics (GRO, hydrocarbon chain lengths C6-12), Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE), Ethanol, Tertiary Butyl Alcohol (TBA), Di-Isopropyl Ether (DIPE), Ethyl Tertiary Butyl Ether (ETBE), Tertiary Amyl Methyl Ether (TAME), and 1,1-DFA (the leak check compound) by EPA Method TO-15. Soil gas samples were also analyzed for Oxygen (O_2) and Argon, Carbon Dioxide (CO_2), and Methane (CH_4) by Modified Method ASTM D-1946. Laboratory analyses for soil gas samples were performed in accordance with the EPA standard holding times for Summa® canisters. The laboratory analytical report for the soil gas samples, including chain-of-custody documentation, is provided in Appendix B. Soil vapor laboratory analytical results along with Environmental Screening Levels (ESLs) for shallow soil gas (residential land use) established by the California Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) are also summarized in tabular format on the following page.

Soil Gas Samples - Laboratory Analytical Results

Sample Identification	Toluene (mg/m^3)	Oxygen (%)	Carbon Dioxide (%)
SG-9	<0.0031	**4.16**	**14.4**
SG-10	<0.0039	**12.5**	**8.36**
SG-11	**0.0033**	**11.3**	**9.75**
SG-12	<0.0031	**14.2**	**6.99**
SG-13	<0.0031	**22.3**	**1.19**
SG-14	<0.0033	**19.6**	**3.74**
ESLs	**63**	NA	NA

mg/m^3 = milligrams per cubic meter
NA = not applicable

Concentrations of GRO, benzene, ethylbenzene, total xylenes, MTBE, TBA, DIPE, ETBE, TAME, 1,1-DFA, and methane are not included in the above table as the results for these constituents were below their respective laboratory reporting limits. No significant irregularities were reported during laboratory analysis of the soil gas samples. The laboratory results for soil gas sample analyses were uploaded to the GeoTracker AB2886 database. A copy of the GeoTracker upload confirmation receipt (EDF) is provided within Appendix C.

3.6 Discussion of Vapor Intrusion Results

The results obtained during the vapor intrusion assessment activities conducted on-site at Station No.601 indicates that a very minor concentration of Toluene (slightly above the reporting limit of 0.0032 mg/m^3) is present within the shallow subsurface soil at sampling point SG-11. This location is immediately west and adjacent to the USTs. However, the soil gas concentration of Toluene observed is below the residential land use ESL for shallow soil gas established by the SFRWQCB. The residential land use ESLs were used for comparison in an effort to utilize the most conservative approach. The leak test compound, 1,1-DFA, was not detected above laboratory reporting limits in the six soil gas samples collected, which indicates that the sampling trains and fittings were securely sealed during soil vapor sampling collection. The analytical results also indicated the presence of oxygen and carbon dioxide within the shallow subsurface soils at the Site. The presence of oxygen and carbon dioxide in the soil suggests that biodegradation of petroleum hydrocarbons is likely occurring within the soil pore space. Based on the trace concentration of Toluene barely detected above laboratory reporting limit in one sample, the absence of other petroleum contaminants, and the presence of oxygen and carbon dioxide within the shallow subsurface soil, the vapor intrusion to indoor air migration pathway does not appear to be a valid and complete exposure pathway to humans within onsite and/or adjacent buildings.

4.0 SOIL AND GROUND-WATER INVESTIGATION

At the request of ACEH, this soil and ground-water investigation was conducted to further characterize residual hydrocarbon contamination within soils down-gradient and laterally northwest of the source area, presumed to include the former gasoline UST complex. ACEH also requested further ground-water investigation due to the periodically "dry" conditions observed in wells MW-4 through MW-7 in order to ensure that collected ground-water samples provide representative data that will ultimately justify ground-water contaminant plume stability.

Soil and ground-water investigation activities were originally proposed in the *Initial Site Conceptual Model with Soil & Ground-Water Investigation Work Plan* (BAI, 24 March 2009). Soil and ground-water investigation activities were approved with technical comments by ACEH in their letter dated 2 April 2009.

4.1 Field Activities Performed

On 12 June 2009, Stratus oversaw RSI Drilling, Inc. advance four hollow-stem auger soil borings (identified as MW-16 through MW-19) at the Site. The boring locations for MW-16, MW-17, and MW-18 were repositioned prior to boring advancement due to the presence of large metal anomalies and underground utilities detected during underground clearance activities. Boring MW-16 was located approximately ten feet west of well MW-4, west of the former USTs and the western pump island. Boring MW-17 was located approximately ten feet north of well MW-5, northwest of the former USTs. Boring MW-18 was located approximately ten feet north-northeast of well MW-6, south of the former USTs. Boring MW-19 was located approximately ten feet northeast of well MW-7, along the southeastern property boundary. The soil boring/monitor well locations from this investigation are shown in Drawing 2.

4.2 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. Boreholes were physically cleared to 6.5 ft bgs using an air knife rig on 11 June 2009 in accordance with the safety protocols within BP's Ground Disturbance Defined Practice.

4.3 Soil Boring Advancement

On 12 June 2009, Stratus field personnel observed RSI Drilling (RSI) of Woodland, California advance four soil borings (MW-16 through MW-19). RSI utilized a hollow stem auger CME-75 drill rig equipped with a 10 inch auger to advance each soil boring to a total depth of 15 ft bgs. During drilling activities, the soil borings were described by the on-site Stratus geologist using the Universal Soil Classification System (USCS). Soils encountered at each sampling location

were screened for volatile organic compounds (VOCs) in the field using a photo-ionization detector (PID). Field notes, lithologic boring logs and well construction logs are provided in Appendix B. Boring logs and a site layout plan were uploaded to the GeoTracker AB2886 database. Copies of the upload confirmation receipts (GEO_MAP and GEO_BORE files) are provided in Appendix C.

Soil boring MW-16 was advanced to a total depth of 15 ft bgs. Soil samples were collected at 6.5, eight, 9.5, 11, 12.5, and 15 ft bgs. PID readings observed during boring advancement reached a maximum value of 629 part per million (ppm) at 11 ft bgs. Silty sand was observed from approximately 6.5 to 10 ft bgs. Silty clay was encountered from approximately 10 to 15 ft bgs, the final depth of the boring. Following completion of soil boring advancement and soil classification and sampling, well installation activities began for well MW-16.

Soil boring MW-17 was advanced to a total depth of 15 ft bgs. Soil samples were collected at 6.5, eight, 9.5, 11, 12.5, and 15 feet bgs. PID readings observed during boring advancement reached a maximum value of over 8,000 ppm at eight ft bgs. Silty sand with clay was observed from approximately 6.5 to 8.5 ft bgs. Silty clay was encountered from approximately 8.5 to 12 ft bgs. Clay was observed from approximately 12 to 15 ft bgs, the final depth of the boring. Following completion of soil boring advancement and soil classification and sampling, well installation activities began for well MW-17.

Soil boring MW-18 was advanced to a total depth of 15 ft bgs. Soil samples were collected at 6.5, eight, 9.5, 11, 12.5, and 15 feet bgs. PID readings observed during boring advancement reached a maximum value of 495 ppm at 9.5 ft bgs. Sandy clay was observed from approximately 6.5 to seven ft bgs. Clayey sand was encountered from approximately seven to nine feet bgs. Silty sand was observed from approximately nine to 10 ft bgs and 13 to 13.5 ft bgs. Silty clay was encountered from approximately 10 to 13 ft bgs and 13.5 to 15 ft bgs, the final depth of the boring. Following completion of soil boring advancement and soil classification and sampling, well installation activities began for well MW-18.

Soil boring MW-19 was advanced to a total depth of 15 ft bgs. Soil samples were collected at 6.5, eight, 9.5, 11, 12.5, and 15 feet bgs. A PID reading of 42 ppm was observed during boring advancement at 11 ft bgs. Clayey sand was observed from approximately 6.5 to eight ft bgs. Silty clay was encountered from approximately eight to 15 ft bgs, the final depth of the boring. Following completion of soil boring advancement and soil classification and sampling, well installation activities began for well MW-19.

4.4 Laboratory Analysis of Soil Samples

Soil samples were collected at 6.5, eight, 9.5, 11, 12.5, and 15 ft bgs during the drilling associated with the monitoring well installations. Collected soil samples were delivered under standard chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove, California), a State of California-certified analytical laboratory. Samples were analyzed for GRO (hydrocarbon chain lengths C6-12) by EPA Method 8015M; for BTEX, TAME, TBA, DIPE, EDB, 1,2-DCA, ETBE, and MTBE by EPA Method 8260B; and for lead by EPA Method

200.7. The laboratory analytical reports for soil boring samples, including chain-of-custody documentation, are provided in Appendix B. Soil laboratory analytical results are also summarized in tabular format on the following page.

Soil Boring Samples - Laboratory Analytical Results (mg/kg)

Sample Identification	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total Lead
MW16 6.5'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	**7.33**
MW16 8'	**78**	<0.10	<0.10	<0.10	<0.10	**6.24**
MW16 9.5'	**150**	<0.10	<0.10	**1.8**	**0.38**	**5.48**
MW16 11'	**330**	<1.0	**2.2**	**13**	**71**	**7.25**
MW16 12.5'	**2.0**	<0.0010	**0.0031**	**0.047**	**0.21**	**7.06**
MW16 15'	**4.5**	**0.0025**	**0.0077**	**0.096**	**0.39**	**8.59**
MW17 6.5'	**8.6**	<0.0010	<0.0010	**0.019**	**0.0017**	**12.6**
MW17 8'	**1,200**	<1.0	<1.0	**20**	**69**	**5.02**
MW17 9.5'	**120**	**0.17**	**1.5**	**4.4**	**22**	**6.94**
MW17 11'	<0.50	<0.0010	**0.0018**	**0.0036**	**0.015**	**7.64**
MW17 12.5'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	**7.53**
MW17 15'	<0.50	<0.0010	<0.0010	<0.0010	**0.0021**	**7.47**
MW18 6.5'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	**7.03**
MW18 8'	**5.1**	<0.0010	<0.0010	<0.0010	<0.0010	**6.68**
MW18 9.5'	**480**	<0.20	<0.20	**4.7**	<0.20	**5.67**
MW18 11'	**14**	<0.10	<0.10	**1.0**	<0.10	**7.00**
MW18 12.5'	**0.82**	<0.0010	<0.0010	**0.011**	<0.0010	**7.25**
MW18 15'	**1.5**	<0.0010	<0.0010	**0.019**	<0.0010	**7.64**
MW19 6.5'	<0.50	<0.0010	<0.0010	<0.0010	**0.0040**	**16.6**
MW19 8'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	**8.38**
MW19 9.5'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	**7.50**
MW19 11'	**2.3**	<0.0010	<0.0010	<0.0010	<0.0010	**5.76**
MW19 12.5'	**2.6**	<0.0010	<0.0010	<0.0010	<0.0010	**5.89**
MW19 15'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	**5.23**

mg/kg = milligrams per kilogram

Concentrations detected above laboratory reporting limits are represented with bold-typed font. Concentrations of DIPE, EDB, ETBE, MTBE, TAME, TBA and 1,2-DCA are not included in the above table as the results for these constituents were below their respective laboratory reporting limits. The reporting limits for each constituent analyzed for in sample MW16 8' with the exception of GRO and lead were "raised due to high hydrocarbon background." The laboratory stated "quantitation of unknown hydrocarbon(s) in sample based on gasoline" for sample MW-18 8'. No other significant irregularities were reported during laboratory analysis of the soil boring samples. The laboratory results for soil sample analyses were uploaded to the GeoTracker AB2886 database. A copy of the GeoTracker upload confirmation receipt (EDF) is provided within Appendix C.

4.5 Monitoring Well Construction

Monitoring wells MW-16 through MW-19 were constructed using flush-threaded, four-inch diameter Schedule 40 PVC pipe. The factory-slotted 0.010-inch screen intervals extend from five ft bgs to 15 ft bgs in each well. The filter packs surrounding the screen intervals consist of No.2 1/2 silica sand from four ft bgs to 15 ft bgs in each well. Each well was sealed with bentonite from two to four ft bgs, and with Portland cement grout from two ft bgs to slightly 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. A copy of the GeoTracker upload confirmation report is provided within Appendix C.

4.6 Well Development and Surveying

Monitor wells MW-16 through MW-19 were developed on 1 July 2009. Well development activities for each well consisted of surging and bailing the well until relatively silt-free water was removed. Due to slow recharge of the wells, less than 10 well casing volumes were removed from each well. Approximately 17 gallons of water were purged from well MW-16, 16 gallons from well MW-17 and 15 gallons each from wells MW-18 and MW-19. Field sheets from the well development activities are provided within Appendix B.

The soil gas sampling points and new monitoring wells MW-16 through MW-19 were surveyed by Wood Rodgers of Sacramento, California on 23 June 2009. The survey map from Wood Rodgers is provided within Appendix B. The well survey information was uploaded to the GeoTracker AB2886 database. Copies of the GeoTracker upload confirmation reports (GEO_MAP, GEO_XY, and GEO_Z files) are provided within Appendix C.

Ground-water samples will be collected from these wells during the third quarter 2009 ground-water monitoring event and the results will be reported under separate cover.

4.7 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.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

BAI prepared this *Vapor Intrusion Assessment and Soil & Ground-Water Investigation Report* for Station No.601 following implementation of the scope of work proposed in the *Initial Conceptual Site Model with Soil & Ground-Water Investigation Work Plan* (BAI, 24 March 2009). BAI makes the following conclusions:

- **Vapor Intrusion Assessment** – A minor concentration of toluene was detected in the soil gas sample collected from sampling point SG-11 at approximately 3.5 ft bgs. However, this concentration was below the established SFRWQCB ESL. Oxygen and carbon dioxide were also detected in the soil gas samples, suggesting that biodegradation of petroleum hydrocarbons may potentially be occurring within the subsurface soils. The vapor intrusion to indoor air migration pathway does not appear to be a valid and complete exposure pathway to humans within onsite and/or adjacent buildings.
- **Soil and Ground-Water Investigation** – Four monitoring wells (MW-16 through MW-19) were successfully installed on-site with screen intervals from five to 15 ft bgs, which is appropriate given historical depth-to-water measurements on-site have ranged from approximately five to eleven ft bgs. The lithology and hydrocarbon concentrations observed in the soil samples collected during soil boring activities associated with this investigation were generally comparable to the lithology and concentrations observed during boring advancement associated with the installation of wells MW-4 through MW-7 (borings B-9 through B-12) in 1991.

5.2 Recommendations

Based on the information obtained and presented in this report, BAI makes the following recommendations:

- No further action regarding vapor intrusion assessment is warranted at this time.
- Monitoring wells MW-16 through MW-19 will be sampled during the Third Quarter 2009 ground-water monitoring event, replacing wells MW-4 through MW-7 in the monitoring/sampling schedule.
- Begin coordinated co-monitoring with the adjacent Former Shell Station #129460 at 15275 Washington Avenue to help determine a more accurate ground-water flow direction/ gradient of the combined area and distribution and severity of subsurface petroleum contaminants.

6.0 CLOSURE

The findings presented in this document are based upon: observation of field personnel from previous consultants, the points investigated, and results of laboratory tests performed by various laboratories. Our services were performed in accordance with the generally accepted standard of

practice at the time this document was written. No other warranty, expressed on implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

7.0 REFERENCES

ACEH, 2 April 2009. *Fuel Leak Case No. RO0000309 and Geotracker Global ID T0600100108, ARCO #601, 712 Lewelling Boulevard, San Leandro, CA 94579.* Letter from Mr. Paresh Khatri (ACEH) to Mr. Paul Supple (Atlantic Richfield Company) approving work plan with technical comments.

BAI, 24 March 2009. *Initial Site Conceptual Model with Soil & Ground-Water Investigation Work Plan, Atlantic Richfield Company Station #601, 712 Lewelling Boulevard, San Leandro, California, ACEH Case #RO0000309.* Submitted to Messrs. Paul Supple for Atlantic Richfield Company and Mr. Paresh Khatri for ACEH.

California Regional Water Quality Control Board, San Francisco Bay Region, May 2008. *Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater*.

N

0 2000 4000

APPROXIMATE SCALE (ft)

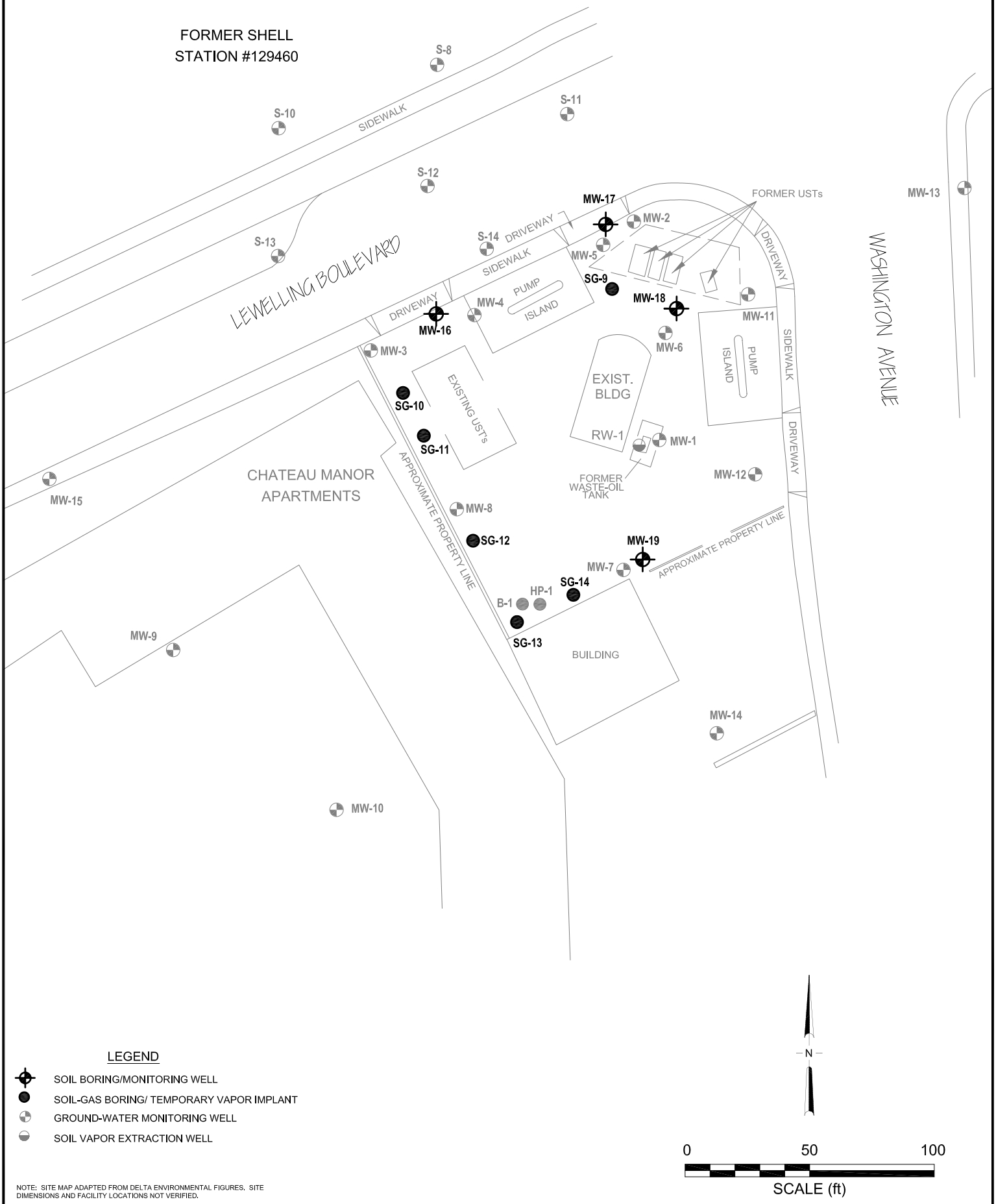
IMAGE SOURCE: USGS

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, CA 95926
Project No.: 06-88-605 Date: 07/31/09

Station #601
712 Lewelling Boulevard
San Leandro, California

Site Location Map

Drawing
1



NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California

Project No.: 06-88-605 Date: 7/31/09

Station #601
712 Lewelling Boulevard
San Leandro, California

Site Layout Plan

Drawing
2

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

April 2, 2009

Paul Supple
Atlantic Richfield Company
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P.O. Box 1257
San Ramon, CA 94583

Subject: Fuel Leak Case No. RO0000309 and GeoTracker Global ID T0600100108, ARCO #0601, 712 Lewelling Boulevard, San Leandro, CA 94579

Dear Mr. Supple:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Initial Site Conceptual Model with Soil & Groundwater Investigation Work Plan," dated March 24, 2009, which was prepared by Broadbent & Associates, Inc. (BAI) for the subject site. In addition to the "dry" monitoring wells, source area characterization, and potential contaminant volatilization to indoor air exposure scenario, BAI identified coordinated groundwater monitoring with the adjacent Shell site and bio-parameter analyses as additional data gaps.

ACEH generally concurs with the proposed scope of work and the proposed scope of work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed.

We request that you address the following technical comments, perform the proposed work, and send us the technical reports requested below.

TECHNICAL COMMENTS

1. **Soil Vapor Sampling Methodology** – BAI proposes to install six shallow soil vapor sampling wells to a depth of 3.5 feet bgs. Prior to and during sampling, BAI proposes to use a tracer/leak check compound (i.e. shaving cream or liquid tracer) applied around the probe at the ground surface and at various connections/fittings on the sampling train.

   It is recommended that soil vapor wells or probes are constructed with the sampling device and all fittings placed under a shroud with pliable weather-stripping along its base. Inside the shroud, a known concentration of tracer gas can be released and monitored to ensure that a tracer gas atmosphere is maintained. The shroud should ensure that there is tracer gas around all sampling connections. The shroud should have a port for inserting a monitoring and sampling device (e.g. Photo Ionization Detector) to ensure that tracer gas atmosphere is maintained.

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:

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

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, Inc., 1324 Mangrove Ave., Ste 212, Chico, CA 95926
Donna Drogos, ACEH
Paresh Khatri, ACEH
GeoTracker
File

APPENDIX B

STRATUS MONITORING AND SOIL GAS WELL INSTALLATION DATA PACKAGE
(Includes Field Notes, Soil Boring Logs, Well Construction Logs, Well Completion Reports, Well Permits, Site Layout Plan, and Laboratory Analytical Reports with Chain-of-Custody Documentation)

STRATUS
ENVIRONMENTAL, INC.

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

July 10, 2009

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

Re: Monitoring and Soil Gas Well Installation Data Package, ARCO Service Station No. 601, located at 712 Lewelling Boulevard, San Leandro, California (field activities performed between May 29, 2009 and July 1, 2009).

General Information

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

Date: May 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 underground utilities onsite and sketch locations on site map per ground disturbance procedures. Cleared 4 boring locations and 6 soil gas wells and mark site for Underground Service Alert (USA).
Variations from Work Scope: Boring locations MW-16, MW-17, MW-18, and SG-9 were adjusted from the positions proposed in the work plan due to the presence of a large metal anomaly detected during underground utility locating activities.

Date: June 8, 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 underground utility locations on site map per ground disturbance procedures.
Variations from Work Scope: None noted

Date: June 11, 2009
On-Site Supplier Representative: Collin Fischer
Scope of Work Performed: Health and safety meeting with air knife subcontractor (RSI Drilling). Clear 4 boring locations (MW-16, MW-17, MW-18 and MW-19) to 6.5' bgs. with air knife. Install 2 soil gas wells (SG-13 and SG-14) to 3.5' bgs.
Variations from Work Scope: None noted.

Date: June 12, 2009
On-Site Supplier Representative: Collin Fischer and Levi Ford
Scope of Work Performed: Health and safety meeting with drilling subcontractor (RSI Drilling). Install 4 soil gas wells (SG-9, SG-10, SG-11 and SG-12) to 3.5' bgs. Install 4 monitoring wells (MW-16, MW-17, MW-18 and MW-19) to 15' bgs.
Variations from Work Scope: None noted

Date: June 30, 2009
On-Site Supplier Representative: Collin Fischer
Scope of Work Performed: Fill out health and safety forms. Purge and sample 6 soil gas wells (SG-9 through SG-14).
Variations from Work Scope: None noted

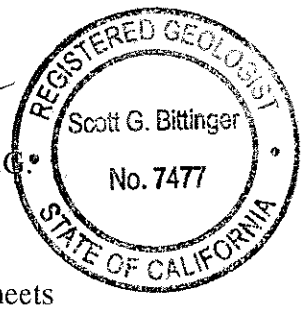
Date: July 1, 2009
On-Site Supplier Representative: Collin Fischer
Scope of Work Performed: Fill out health and safety forms. Develop wells MW-16 through MW-19 by surging and bailing.
Variations from Work Scope: Due to very slow groundwater recharge rates, less than 10 well casing volumes were removed from the wells during development (purged dry).

This submittal presents the tabulation of data collected in association with the installation and development of 4 groundwater monitoring wells and the installation and sampling of 6 soil gas wells. The attachments include field data sheets, soil boring logs, DWR well completion reports, well detail diagrams for the soil gas wells, a 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.

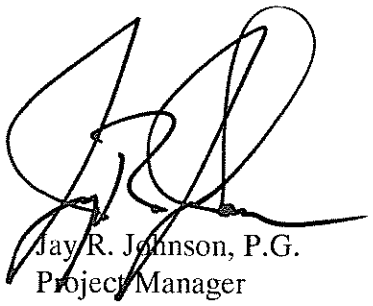
Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.



Scott G. Bittinger, P.G.
Project Geologist



Jay R. Johnson, P.G.
Project Manager

Attachments:

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

Cc: Paul Supple, BP/ARCO

5/29/09
Sunny
Clear

ARCO 601 - Collin Fischer
Cruz Bros

1415 → ONSITE, Fill out SAFETY PAPERWORK, SAFETY MEETING, SITE WALK

1430 → START LOCATING UTILITIES, TALK w/ MANAGER ABOUT WORK DATES, ALSO OLD JUNCTION BOX FOUND INSIDE OF STATION BUILDING. WILL FLOOR ONTO old BOX & TRY & LOCATE HISTORIC WIRES. 2 NEW JUNCTION BOXES ALSO FOUND & WILL BE FLOORED ONTO & WIRES LOCATED.

1510 → H2O & ELECTRIC MAIN FOUND & MARKED, COMM AS WELL, IN SAME TRENCH AS ELECTRIC. GAS NOT FOUND, STATION MANAGER SAYS THAT PG&E ONLY HAS ELECTRIC, NO GAS LINE TO SITE.

1620. → NEW TANK/PUMP SENSOR LINES COMM & ELECTRIC LOCATED & MARKED, SEWER CLEANOUT MARKED & LOCATED. START CLEARING BORING LOCATIONS. ALL UTILITIES HAVE BEEN MARKED & LOCATED.

- MW-17 MUST BE MOVED TO NW OF MW-5 DUE TO METAL OBJECT
- MW-16 MUST BE MOVED TO NW OF MW-4 "
- MW-18 & SG-9 LOCATIONS BOTH INSIDE OF A ZONE OF METAL PROPOSED TO BE A FOOTING OR A METAL OBJECT.

1645 → ~~*~~ OTHER THAN ABOVE NOTED PROBLEMS, ALL BORING LOCATION CLEARED & ALL UTILITIES MARKED & SKETCHED ON SITE MAP. CLEAN UP AREA, PUT AWAY EQUIPMENT & MAKE SITE FOR USA.

1700 ~~***~~ → OFFSITE

Collin Fischer

STRATUS ENV., INC.

ARCO 601 - Collin Research

060809
Closure

0745 -> ONSITE, Fill out SITE PAPERWORK.

0800 -> UPDATE USA TRACKING SHEET, & SKETCH ANY ADDITIONAL UTILITIES ON SITE MAP.

0845 -> OFFSITE

Collin Finn

STRATUS ENV., INC.

Cleanup
6/4/09

ARCO 601 - Collin Fiscus, RSI Drilling

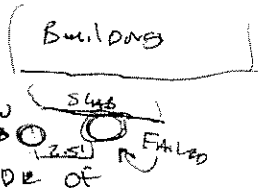
0715 → ONSITE, Fill out safety paperwork.
0815 → RSI onsite, Safety Meeting.
0845 → Set up on (MW-19) & Begin air knifing.
0945 → Done Clearing (MW-19) to 6.5' Bgs. Move to (SG-14) & Begin hand auger / well installation.
1015 → to 3.5' Bgs @ (SG-14) Install well

Screen	3.5-3.0
Sand	3.5-2.5
Bent	2.5-1
Grout	1-0

1100 → Move to (SG-13) & Begin hand Auger
1125 → @ Depth, Set well (SG-13)

Screen	3.5-3.0
Sand	3.5-2.5
Bent	2.5-1.0
Grout	1.0-0

1200 → Done w/ (SG-13) Take lunch.
1230 → Resume work, move to (MW-18) & Begin Cleaning
1320 → Edge of Cement Slab found in Building side of boring about 2" inside hole diameter @ ~10" depth. Move Boring ~ 2.5' E & Retry.



1400 → (MW-18) Cleared to 6.5' Bgs, Secure hole, Patch Failed attempt & move to (MW-17).

1445 → Start air knife @ (MW-17).
1540 → (MW-17) Cleared to 6.5' Bgs. Secure hole & move to (MW-16).
1600 → Start air knife @ (MW-16).
1650 → (MW-16) Cleared to 6.5' Bgs. Secure hole.
1700 → Fill Drums & Cleanup site, Label Drums. Secure all areas.

1745 → Offsite

Collin Fiscus
Stearns Env., Inc.

Clouds
6/12/09

ARCO 601 – Collin Fischer, Levi Fox, RSI Drilling

0800 → onsite, safety meeting, Drill Rig set up on (MW-17) Hand Auger Crew set up on (SG-10)

0830 → Begin Drilling & Hand Auger.

0845 → @ 35' BGS @ (SG-10) set well (SG-10)

Screen 3.5–3.0
Sand 3.5–2.5
Bent 2.5–1
Grout 1–0

0930 → Done w/ (SG-10) Move to (SG-11)
Drill Rig @ depth set well (MW-17)

Screen 5–15
Sand 4–15
Bent 2–4
Grout 0–2

1000 → @ depth @ (SG-11) set well (SG-11)

Screen 3.5–3.0
Sand 3.5–2.5
Bent 2.5–1
Grout 0

1020 → (MW-17) set & Grouted, Move to (MW-18) & Begin Drilling. Hand Augers move to (SG-12)

1115 → @ depth, set well (MW-18)

@ depth @ (SG-12)

Screen 3.5–3
Sand 3.5–2.5
Bent 1–2.5
Grout 0–1

Screen 5–15
Sand 4–15
Bent 2–4
Grout 0–2

1200 → lunch

1230 → Resume work, Hand Augers move to (SG-9) & Drill Rig to (MW-16)

1315 → (SG-9) @ depth set well (SG-9)

Screen 3–3.5
Sand 3.5–2.5
Bent 2.5–1
Grout 0–1

MW-16 @ depth, set (MW-16)

Screen 5–15
Sand 4–15
Bent 2–4
Grout 0–2

1420 → Set up on (MW-19) & Begin Drilling.
Hand Auger Crew offsite.

1500 → @ depth, set (MW-19)

Screen 5–15
Sand 4–15
Bent 2–4
Grout 0–2

1520 → TD @ (SW-9)

1630 → Collin offsite

ARCO 601 - Collin Figuer

9/30/09
Sunny
Clear

ONSITE -> 0800 -> Fill out safety paperwork, set up & begin sampling.

WELL	FC #	CAN #	Leak Screen	Leak Stop	Purge Start	Purge Stop	Sample Start	Sample Stop
SG-10	A154	D770	0834(-30)	0850(-30)	0850(-30)	0903(-18)	0905(-30)	0926(-10)
SG-11	A175	D092	0930(-30)	0950(-30)	0950(-30)	1001(-18)	1002(-30)	1021(-9)
SG-12	A195	D398	1026(-18)	1046(-18)	1046(-18)	1102(-5)	1102(-30)	1124(-10)
SG-13	A144	D525	1128(-29)	1148(-29)	1148(-29)	1200(-17)	1200(-30)	1219(-10)
SG-14	A268	D303	1225(-17)	1245(-17)	1245(-17)	1300(-3)	1302(-30)	1325(-10)
SG-9	A177	D582	1330(-18)	1350(-18)	1350(-18)	1405(-4)	1407(-29)	1435(-10)

PID's all 0 @ time of sample collection.

1435 -> Begin cleanup & take down, label canisters.

1445 -> OFFSITE

Collin Fi[illegible]

Stratus Env, Inc.

STRATUS ENVIRONMENTAL INC.

Site Address 712 LEWELLING BLVD
City SAN LEANDRO, CA.
Sampled by: CE
Signature

Site Number 601
Project Number E601
Project PM JAY JOHNSON
DATE 7/1/09

Water Level Data					Purge Volume Calculations					Purge Method				Sample Record			Field Data
Well ID	Time	Depth to Product (feet)	Depth to Water (feet)	Total Depth (feet)	Water column (feet)	Diameter (inches)	Multiplier	10 casing volumes (gallons)	Actual water purged (gallons)	No Purge	Bailer	Pump	other	DTW at sample time (feet)	Sample I.D	Sample Time	DO (mg/L)
MW-16	0645		7.14	15.20	8.06	4"	6.67	53	17		X						
	AFTER 24 HRS –		(14.92)	BAIL DRY AGAIN & FINISH													
MW-17	0656		7.48	15.14	7.66	4"	6.67	51	16		X						
MW-18	0703		8.46	14.76	6.30	4"	6.67	42	15		X						
MW-19	0712		9.29	15.05	5.76	4"	6.67	38	15		X						

Multiplier
2" = 0.5 3" = 1.0 4" = 2.0 6" = 4.4

Please refer to groundwater sampling field procedures
pH/Conductivity/temperature Meter - Oakton Model PC-10
DO Meter - Oakton 300 Series (DO is always measured before purge)

CALIBRATION DATE
pH
Conductivity
DO

ARCO 601 7/1/09

time					time				
purge stop time					pugre stop time				
Well ID MW-16					Well ID MW-19				
purge start time 0750					purge start time 0830				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time 0753	21.0	7.83	641	0	time 0830	19.7	7.83	975	0
time 0817	20.6	7.77	738	15	time 0840	19.6	7.81	795	12
time 1030	19.9	7.85	740	17	time 1050	19.6	7.85	710	15
time					time				
purge stop time					purge stop time				
Well ID MW-18					Well ID MW-17				
purge start time 0856					purge start time 0931				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time 0858	21.3	7.98	881	0	time 0933	20.8	7.61	909	0
time 0921	21.2	8.01	865	14	time 0948	19.9	7.82	865	18
time 1105	20.9	7.99	770	15	time 1121	20.4	7.76	773	16
time					time				
purge stop time					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				

DRY
DRY STILL

DRY
DRY AGAIN

DRY
DRY AGAIN

ONSITE -> 0615, FILL OUT SAFETY PAPERWORK, SET UP & REMOVE WELL CAPS

0645 -> START H2O LEVEL MEASUREMENT, DO [redacted] PURGE CALCULATIONS & PREPARE BAILERS

0750 -> BEGIN DEVELOPING.

1125 -> CLEANUP & CLOSE ALL WELLS.

1145 -> OFFSITE.

[redacted]

STRATUS ENV., INC.

SOIL BORING LOG **Boring No. MW-16** **Sheet: 1 of 1**

Client	ARCO 601	Date	June 12, 2009
Address	712 Lewelling Boulevard	Drilling Co.	RSI Drilling rig type: CME-75
	San Leandro, CA	Driller	Jorge
Project No.	E601	Method	Hollow Stem Auger Hole Diameter: 10 inches
Logged By:	Collin Fischer	Sampler:	
Well Pack	sand: 4 ft. to 15 ft	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 5 ft. to 15 ft.
	bent.: 2 ft. to 4 ft.		Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
	grout: 0 ft. to 2 ft.		

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
						1		Cleared to 6.5' bgs. with air knife.	
						2			
						3			
						4			
						5			
						6			
S	MW-16 6.5'	N/A	1400	100		7			0
S	MW-16 8'	N/A	1402	100		8			1.6
						9	SM	Silty sand, SM, (6.5'-10'), dark grayish brown, wet 80% fine grained sand, 20% silt	
S	MW-16 9.5'	N/A	1405	100		10			48
S	MW-16 11'	N/A	1407	100		11			629
						12			
S	MW-16 12.5'	N/A	1410	100		13	CL	Silty clay, CL, (10'-15'), dark grayish brown, moist, medium plasticity 85% clay, 15% silt	310
						14			
S	MW-16 15'	N/A	1412	100		15			35
						16			
						17			
						18			
						19			
						20			

Comments:

STRATUS ENVIRONMENTAL, INC.

SOIL BORING LOG **Boring No. MW-17** **Sheet: 1 of 1**

Client	ARCO 601	Date	June 12, 2009
Address	712 Lewelling Boulevard	Drilling Co.	RSI Drilling rig type: CME-75
	San Leandro, CA	Driller	Jorge
Project No.	E601	Method	Hollow Stem Auger Hole Diameter: 10 inches
Logged By:	Collin Fischer	Sampler:	
Well Pack	sand: 4 ft. to 15 ft	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 5 ft. to 15 ft.
	bent.: 2 ft. to 4 ft.		Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
	grout: 0 ft. to 2 ft.		

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
						1		Cleared to 6.5' bgs. with air knife.	
						2			
						3			
						4			
						5			
						6			
S	MW-17 6.5'	N/A	0920	100		7			482
S	MW-17 8'	N/A	0923	100		8	SM	Silty sand with clay, SM, (6.5'-8.5'), grayish brown, moist 60% fine to medium grained sand, 30% silt, 10% clay	8000+
						9			
S	MW-17 9.5'	N/A	0925	100		10		Silty clay, CL, (8.5'-10.5'), dark grayish brown, moist, medium plasticity 85% clay, 15% silt	1058
S	MW-17 11'	N/A	0933	100		11			0
						12		Silty clay, CL, (10.5'-12'), grayish brown, moist, medium plasticity 85% clay, 15% silt	
S	MW-17 12.5'	N/A	0936	100		13	CL		0
						14		Clay, CL, (12'-15'), grayish brown, moist, medium plasticity 100% clay	
S	MW-17 15'	N/A	0939	100		15			0
						16			
						17			
						18			
						19			
						20			

Comments:

STRATUS ENVIRONMENTAL, INC.

SOIL BORING LOG **Boring No. MW-18** **Sheet: 1 of 1**

Client	ARCO 601	Date	June 12, 2009
Address	712 Lewelling Boulevard	Drilling Co.	RSI Drilling rig type: CME-75
	San Leandro, CA	Driller	Jorge
Project No.	E601	Method	Hollow Stem Auger Hole Diameter: 10 inches
Logged By:	Collin Fischer	Sampler:	
Well Pack	sand: 4 ft. to 15 ft	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 5 ft. to 15 ft.
	bent.: 2 ft. to 4 ft.		Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
	grout: 0 ft. to 2 ft.		

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
						1		Cleared to 6.5' bgs. with air knife.	
						2			
						3			
						4			
						5			
						6			
S	MW-18 6.5'	N/A	1048	100		7	CL	Sandy clay, CL, (6.5'-7'), dark brown, moist, medium plasticity 70% clay, 30% fine grained sand	0
S	MW-18 8'	N/A	1050	100		8	SC	Clayey sand, SC, (7'-9'), grayish brown, moist 75% fine grained sand, 25% clay	35
						9			
S	MW-18 9.5'	N/A	1052	100		10	SM	Silty sand, SM, (9'-10'), dark gray, wet 80% fine grained sand, 20% silt	495
S	MW-18 11'	N/A	1055	100		11	CL		0
						12		Silty clay, CL, (10'-13'), dark grayish brown, moist, medium plasticity 85% clay, 15% silt	
S	MW-18 12.5'	N/A	1058	100		13			126
						14	SM	Silty sand, SM, (13'-13.5'), dark gray, moist, medium plasticity 80% fine grained sand, 20% silt	
S	MW-18 15'	N/A	1100	100		15	CL	Silty clay, CL, (13.5'-15'), dark grayish brown, moist, medium plasticity 85% clay, 15% silt	55
						16			
						17			
						18			
						19			
						20			

Comments:

STRATUS ENVIRONMENTAL, INC.

SOIL BORING LOG **Boring No. MW-19** **Sheet: 1 of 1**

Client	ARCO 601	Date	June 12, 2009
Address	712 Lewelling Boulevard	Drilling Co.	RSI Drilling rig type: CME-75
	San Leandro, CA	Driller	Jorge
Project No.	E601	Method	Hollow Stem Auger Hole Diameter: 10 inches
Logged By:	Collin Fischer	Sampler:	
Well Pack	sand: 4 ft. to 15 ft	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 5 ft. to 15 ft.
	bent.: 2 ft. to 4 ft.		Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
	grout: 0 ft. to 2 ft.		

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
								Cleared to 6.5' bgs. with air knife.	
S	MW-19 6.5'	N/A	1500	100		7			0
S	MW-19 8'	N/A	1502	100		8	SC	Clayey sand, SC, (6.5'-8'), yellowish brown, moist 60% fine to medium grained sand, 40% clay	0
S	MW-19 9.5'	N/A	1505	100		10			0
S	MW-19 11'	N/A	1507	100		11	CL	Silty clay, CL, (8'-15'), grayish brown, moist, medium plasticity 85% clay, 15% silt	42
S	MW-19 12.5'	N/A	1510	100		13			0
S	MW-19 15'	N/A	1512	100		15			0

Comments:

STRATUS ENVIRONMENTAL, INC.

SOIL GAS WELL DETAILS

PROJECT NUMBER E601

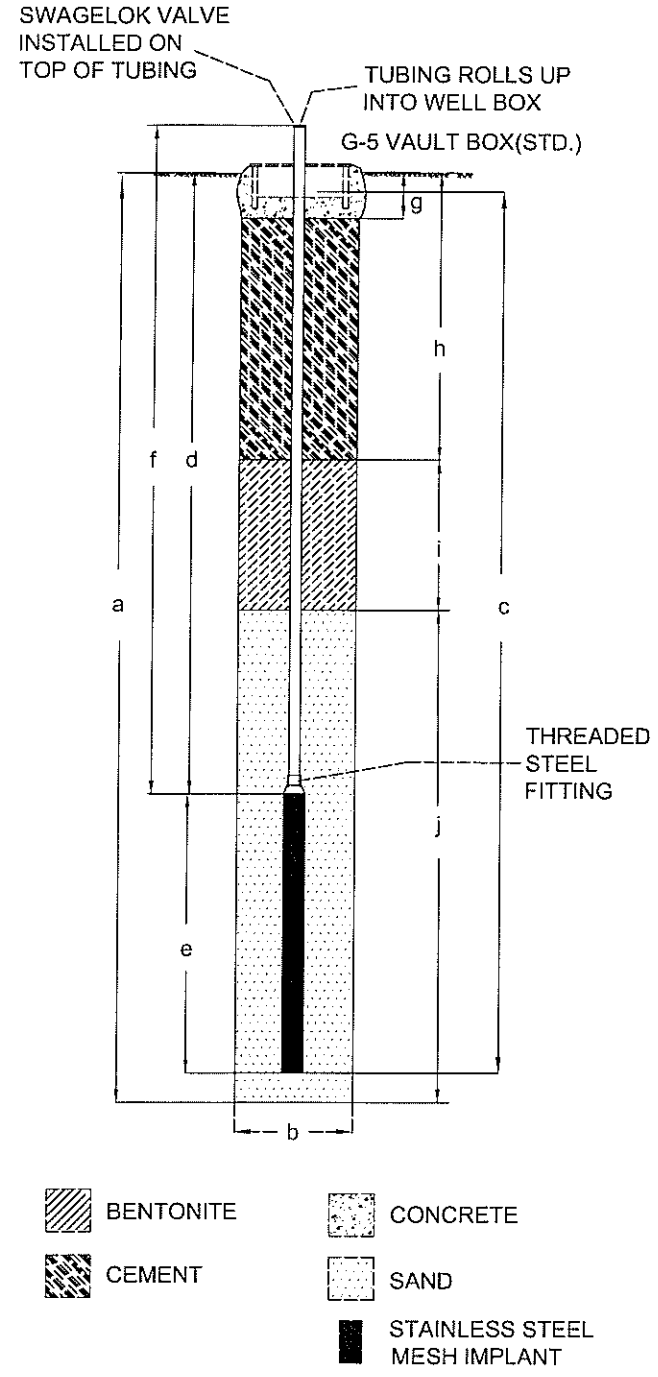
PROJECT NAME ARCO Service Station No. 601

LOCATION 712 Lewelling Blvd, San Leandro, CA

BORING/WELL NO. SG-9

WELL PERMIT NO. W2009-0445

INSTALLATION DATE June 11, 2009



NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 3.5 ft.

b. DIAMETER 6 in.

DRILLING METHOD Hand Augering

WELL CONSTRUCTION

c. TOTAL WELL DEPTH 3.5 ft.

WELL SCREEN MATERIAL 3/8" dia. Stainless steel mesh implant

d. DEPTH TO TOP PERFORATIONS 3.0 ft.

e. PERFORATED

INTERVAL FROM 3.0 TO 3.5 ft.

f. LENGTH OF TUBING 7 ft.

TUBING CONNECTED TO WELL SCREEN AT 3.0 ft.

TUBING DIAMETER 0.25 in.

TUBING MATERIAL Nyaflow

g. SURFACE SEAL 0 to 0.5 ft.

SEAL MATERIAL Concrete

h. BACKFILL 0.5 to 1.0 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 1.0 to 2.5 ft.

SEAL MATERIAL Bentonite

j. FILTER PACK 2.5 to 3.5 ft.

FILTER PACK MATERIAL #2/12 Sand

SOIL GAS WELL DETAILS

PROJECT NUMBER E601

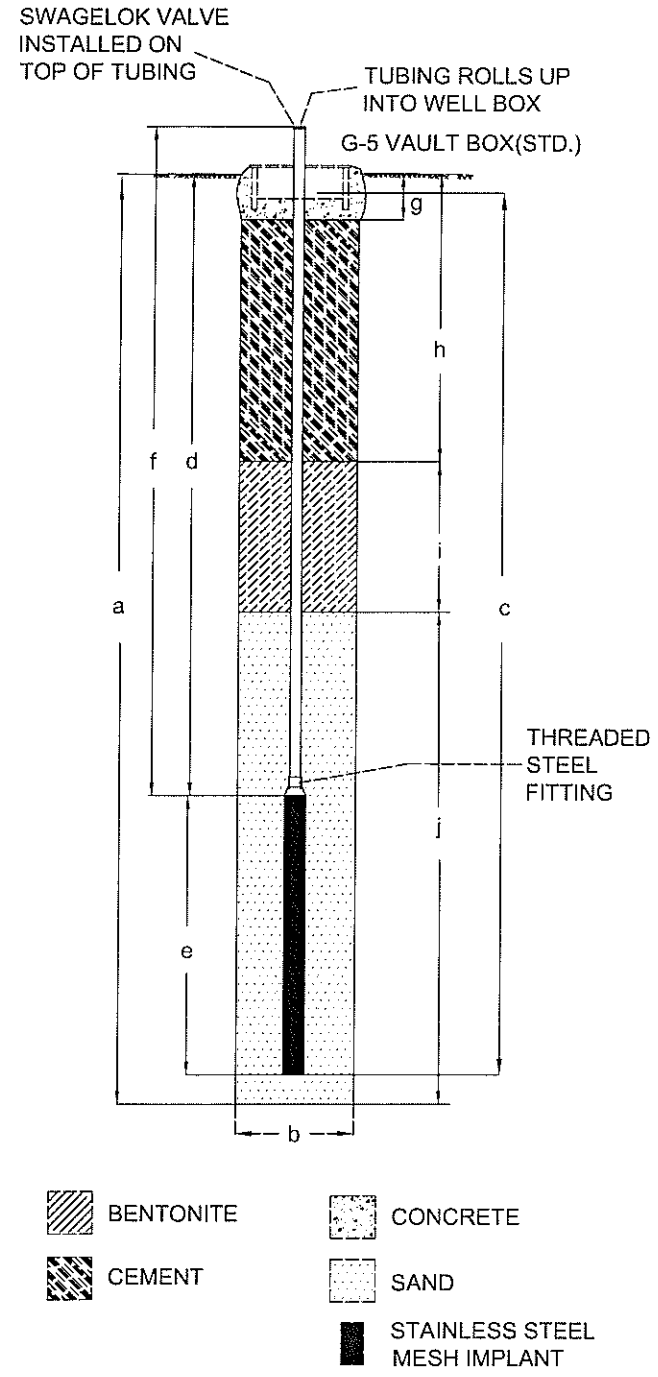
PROJECT NAME ARCO Service Station No. 601

LOCATION 712 Lewelling Blvd, San Leandro, CA

BORING/WELL NO. SG-10

WELL PERMIT NO. W2009-0445

INSTALLATION DATE June 11, 2009



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EXPLORATORY BORING

a. TOTAL DEPTH 3.5 ft.

b. DIAMETER 6 in.

DRILLING METHOD Hand Augering

WELL CONSTRUCTION

c. TOTAL WELL DEPTH 3.5 ft.

WELL SCREEN MATERIAL 3/8" dia. Stainless steel mesh implant

d. DEPTH TO TOP PERFORATIONS 3.0 ft.

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INTERVAL FROM 3.0 TO 3.5 ft.

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BACKFILL MATERIAL Neat Cement

i. SEAL 1.0 to 2.5 ft.

SEAL MATERIAL Bentonite

j. FILTER PACK 2.5 to 3.5 ft.

FILTER PACK MATERIAL #2/12 Sand

SOIL GAS WELL DETAILS

PROJECT NUMBER E601

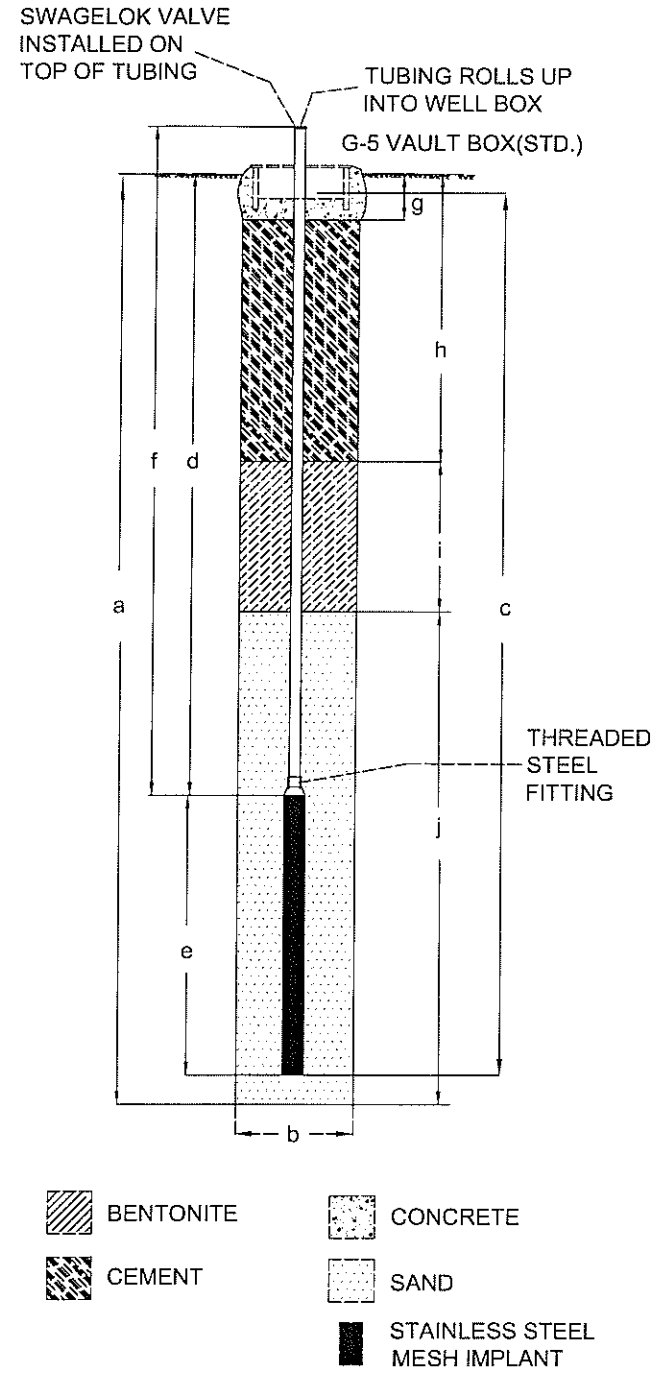
PROJECT NAME ARCO Service Station No. 601

LOCATION 712 Lewelling Blvd, San Leandro, CA

BORING/WELL NO. SG-11

WELL PERMIT NO. W2009-0445

INSTALLATION DATE June 11, 2009



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EXPLORATORY BORING

a. TOTAL DEPTH 3.5 ft.

b. DIAMETER 6 in.

DRILLING METHOD Hand Augering

WELL CONSTRUCTION

c. TOTAL WELL DEPTH 3.5 ft.

WELL SCREEN MATERIAL 3/8" dia. Stainless steel mesh implant

d. DEPTH TO TOP PERFORATIONS 3.0 ft.

e. PERFORATED

INTERVAL FROM 3.0 TO 3.5 ft.

f. LENGTH OF TUBING 7 ft.

TUBING CONNECTED TO WELL SCREEN AT 3.0 ft.

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TUBING MATERIAL Nyaflow

g. SURFACE SEAL 0 to 0.5 ft.

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h. BACKFILL 0.5 to 1.0 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 1.0 to 2.5 ft.

SEAL MATERIAL Bentonite

j. FILTER PACK 2.5 to 3.5 ft.

FILTER PACK MATERIAL #2/12 Sand

SOIL GAS WELL DETAILS

PROJECT NUMBER E601

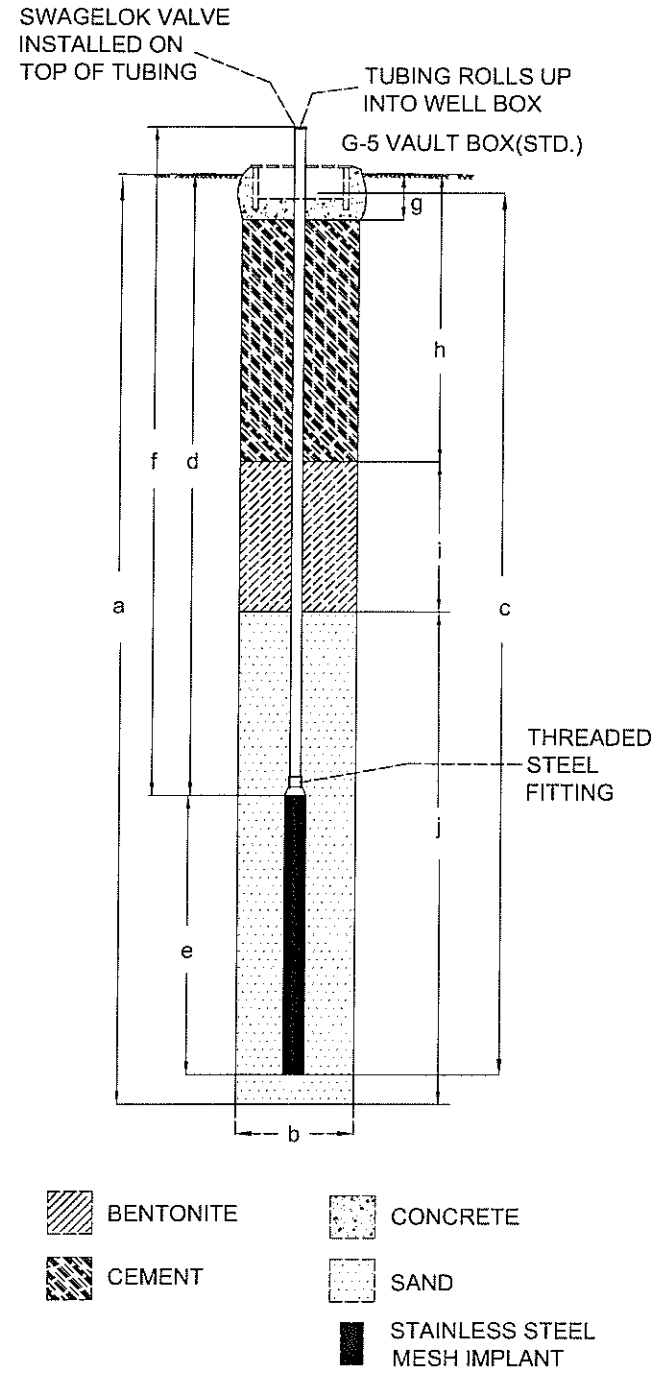
PROJECT NAME ARCO Service Station No. 601

LOCATION 712 Lewelling Blvd, San Leandro, CA

BORING/WELL NO. SG-12

WELL PERMIT NO. W2009-0445

INSTALLATION DATE June 11, 2009



NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 3.5 ft.

b. DIAMETER 6 in.

DRILLING METHOD Hand Augering

WELL CONSTRUCTION

c. TOTAL WELL DEPTH 3.5 ft.

WELL SCREEN MATERIAL 3/8" dia. Stainless steel mesh implant

d. DEPTH TO TOP PERFORATIONS 3.0 ft.

e. PERFORATED

INTERVAL FROM 3.0 TO 3.5 ft.

f. LENGTH OF TUBING 7 ft.

TUBING CONNECTED TO WELL SCREEN AT 3.0 ft.

TUBING DIAMETER 0.25 in.

TUBING MATERIAL Nyaflow

g. SURFACE SEAL 0 to 0.5 ft.

SEAL MATERIAL Concrete

h. BACKFILL 0.5 to 1.0 ft.

BACKFILL MATERIAL Neat Cement

i. SEAL 1.0 to 2.5 ft.

SEAL MATERIAL Bentonite

j. FILTER PACK 2.5 to 3.5 ft.

FILTER PACK MATERIAL #2/12 Sand

SOIL GAS WELL DETAILS

PROJECT NUMBER E601

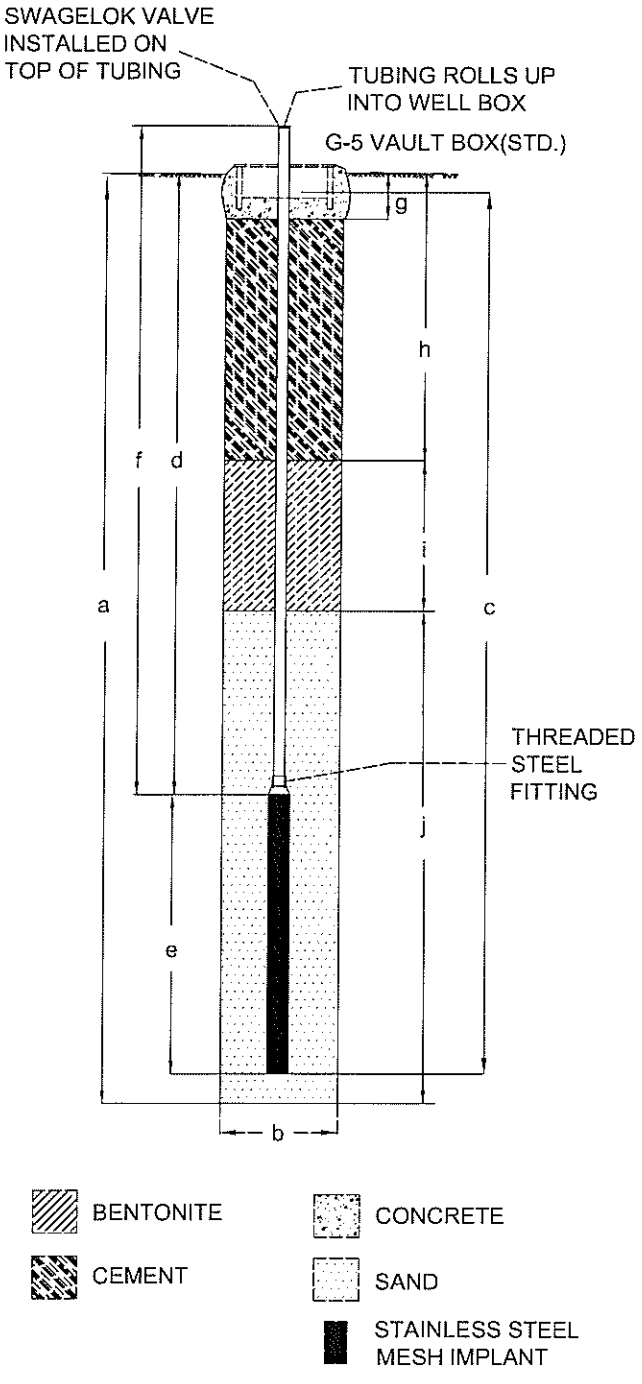
PROJECT NAME ARCO Service Station No. 601

LOCATION 712 Lewelling Blvd, San Leandro, CA

BORING/WELL NO. SG-13

WELL PERMIT NO. W2009-0445

INSTALLATION DATE June 11, 2009



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EXPLORATORY BORING

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b. DIAMETER 6 in.

DRILLING METHOD Hand Augering

WELL CONSTRUCTION

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WELL SCREEN MATERIAL 3/8" dia. Stainless steel mesh implant

d. DEPTH TO TOP PERFORATIONS 3.0 ft.

e. PERFORATED

INTERVAL FROM 3.0 TO 3.5 ft.

f. LENGTH OF TUBING 7 ft.

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BACKFILL MATERIAL Neat Cement

i. SEAL 1.0 to 2.5 ft.

SEAL MATERIAL Bentonite

j. FILTER PACK 2.5 to 3.5 ft.

FILTER PACK MATERIAL #2/12 Sand

SOIL GAS WELL DETAILS

PROJECT NUMBER E601

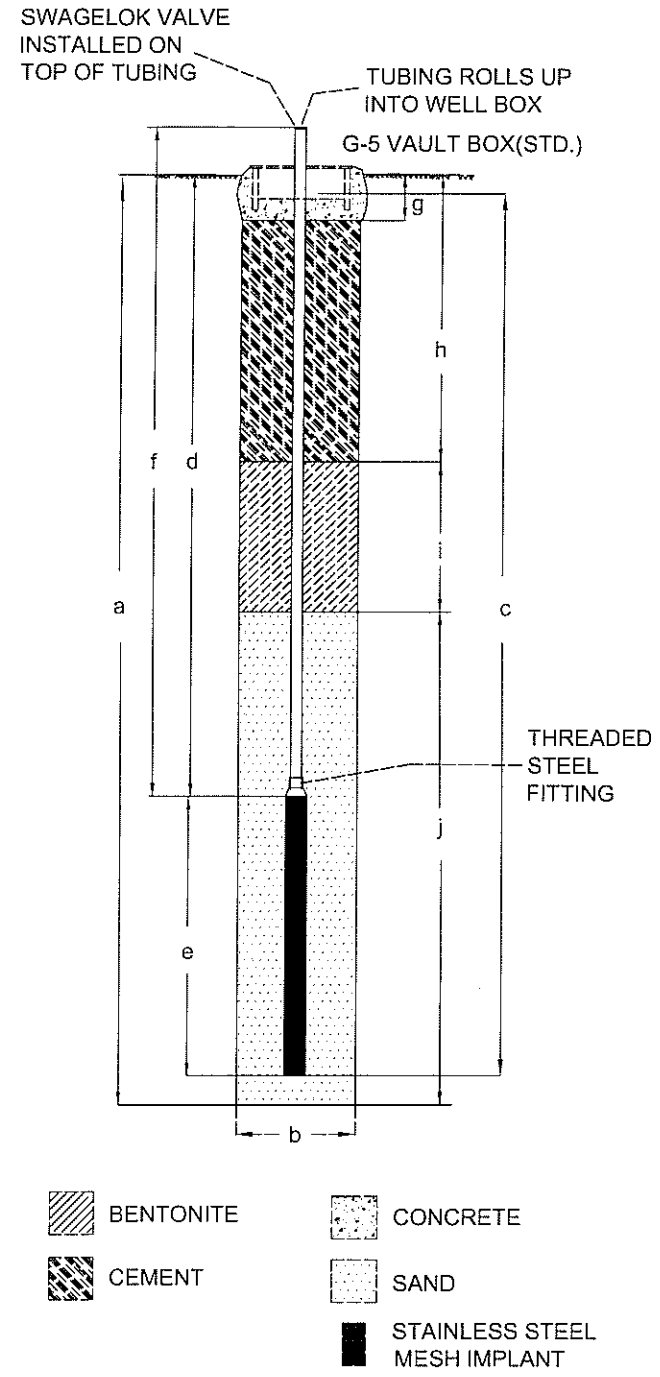
PROJECT NAME ARCO Service Station No. 601

LOCATION 712 Lewelling Blvd, San Leandro, CA

BORING/WELL NO. SG-14

WELL PERMIT NO. W2009-0445

INSTALLATION DATE June 11, 2009



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EXPLORATORY BORING

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WELL CONSTRUCTION

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WELL SCREEN MATERIAL 3/8" dia. Stainless steel mesh implant

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BACKFILL MATERIAL Neat Cement

i. SEAL 1.0 to 2.5 ft.

SEAL MATERIAL Bentonite

j. FILTER PACK 2.5 to 3.5 ft.

FILTER PACK MATERIAL #2/12 Sand

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

CONFIDENTIAL

STATE OF CALIFORNIA DWR
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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: 06/03/2009 By jamesy

Permit Numbers: W2009-0441 to W2009-0445
Permits Valid from 06/11/2009 to 06/15/2009

Application Id: 1243640028523
City of Project Site: San Leandro
Site Location: 712 Lewelling Bl, San Leandro, CA
Project Start Date: 06/11/2009
Completion Date: 06/15/2009
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant: Stratus Envr. - Scott Bittinger
3330 Cameron Park Dr #550, Cameron Park, CA 95682
Phone: 530-676-2062

Property Owner: BPI ARCO
6 Centerpointe Dr., La Palma, CA 90623
Phone: 925-275-3801

Client: ** same as Property Owner **

	Total Due:	$1610.00
Receipt Number: WR2009-0198	**Total Amount Paid:**	$1610.00
Payer Name : Stratus	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 4 Wells
Driller: RSI Drilling - Lic #: 802334 - Method: Hand

Work Total: $1380.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009-0441	06/03/2009	09/09/2009	MW-16	10.00 in.	4.00 in.	3.00 ft	16.00 ft
W2009-0442	06/03/2009	09/09/2009	MW-17	10.00 in.	4.00 in.	3.00 ft	16.00 ft
W2009-0443	06/03/2009	09/09/2009	MW-18	10.00 in.	4.00 in.	3.00 ft	16.00 ft
W2009-0444	06/03/2009	09/09/2009	MW-19	10.00 in.	4.00 in.	3.00 ft	16.00 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. 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.

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

4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

5. 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.

6. 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.

7. Minimum surface seal thickness is two inches of cement grout placed by tremie

8. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

9. 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.

Remediation Well Construction-Vapor Remediation Well - 1 Wells
Driller: RSI Drilling - Lic #: 802334 - Method: Hand **Work Total: $230.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009-0445	06/03/2009	09/09/2009	SG9-SG14	6.00 in.	0.50 in.	1.50 ft	5.00 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. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with 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.

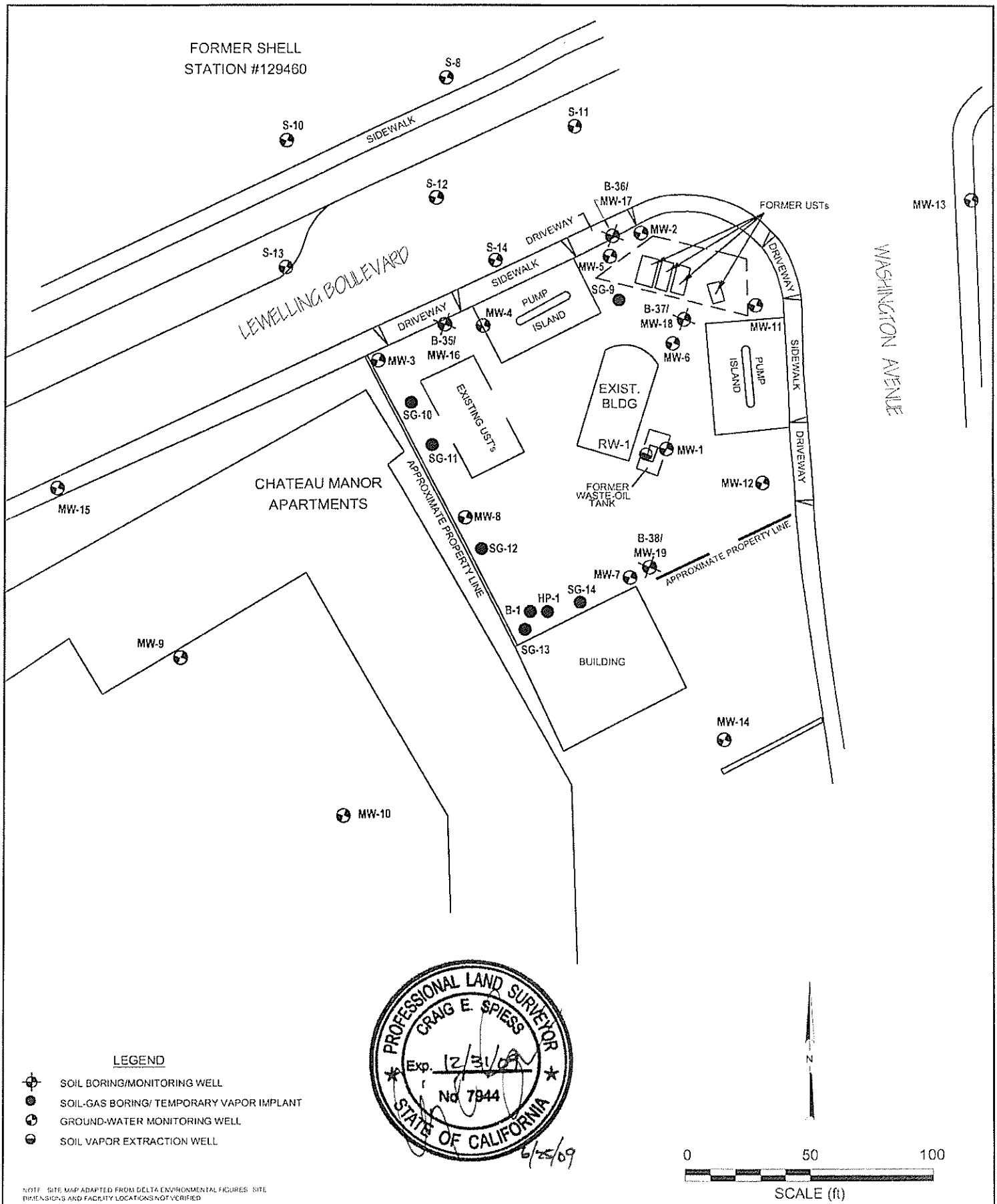
4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

5. 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.

6. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

7. 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.

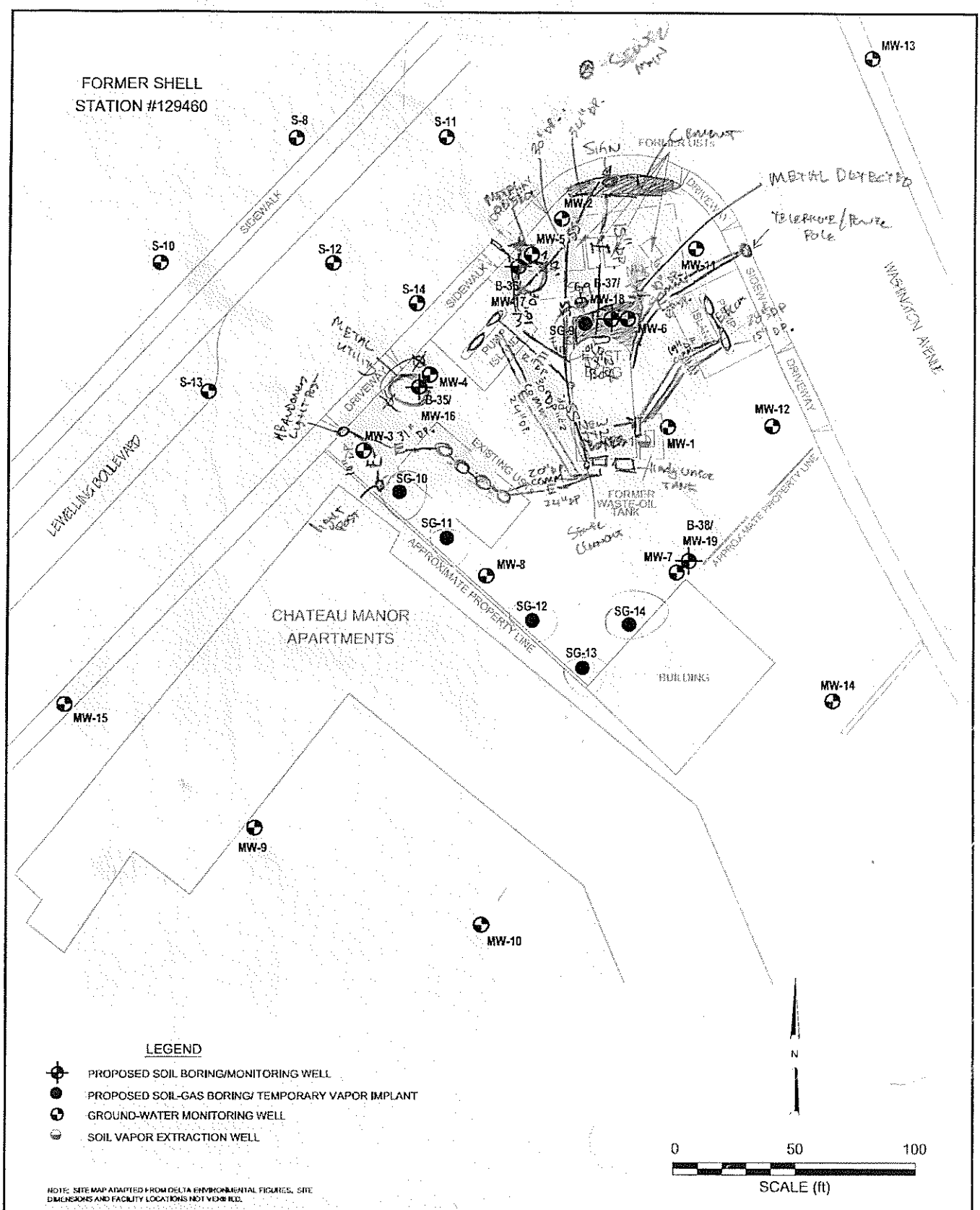
8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a 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.



NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California Project No.: 06-08-605 Date: 2/27/09	Station #601 712 Lewelling Boulevard San Leandro, California	Site Layout Plan Soil-Gas Boring and Monitor Well Locations

Drawing
8



NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California

Project No.: 06-08-605 Date: 2/27/09

Station #601
712 Lewelling Boulevard
San Leandro, California

Site Layout Plan With Proposed
Soil-Gas Boring and Monitor Well Locations

Drawing
8

Calscience Environmental Laboratories, Inc.

June 24, 2009

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

Subject: **Calscience Work Order No.: 09-06-1341**
Client Reference: ARCO 601

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/13/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1341
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SWC	**09-06-1341-1-A**	**06/12/09 15:30**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:02**	**090622L03**

Parameter	Result	RL	DF	Qual	Units
Lead	6.45	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-12,440**	**N/A**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 09:55**	**090622L03**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1341
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SWC	**09-06-1341-1-A**	**06/12/09 15:30**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 12:33**	**090615B01**

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			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-697-120**	**N/A**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 10:25**	**090615B01**

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	87	42-126			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1341
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: ARCO 601		Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SWC	**09-06-1341-1-A**	**06/12/09 15:30**	**Solid**	**GC/MS Z**	**06/15/09**	**06/15/09 21:05**	**090615L01**

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						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	94	75-141		1,2-Dichloroethane-d4	124	73-151	
Toluene-d8	97	87-111		1,4-Bromofluorobenzene	97	71-113	

Method Blank	099-12-709-153	N/A	Solid	GC/MS Z	06/15/09	06/15/09 18:37	090615L01

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						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	98	75-141		1,2-Dichloroethane-d4	103	73-151	
Toluene-d8	96	87-111		1,4-Bromofluorobenzene	91	71-113	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1341
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SWC	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622S03**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	99	101	75-125	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Stratus Environmental, inc.	Date Received	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1341
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
SWC	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622S03**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	96	93	75-125	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1341
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SWC	**Solid**	**GC 1**	**06/15/09**	**06/15/09**	**090615S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	87	82	42-126	5	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1341
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1342-11	**Solid**	**GC/MS Z**	**06/15/09**	**06/15/09**	**090615S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	92	90	78-114	2	0-14	
Chloroform	95	95	80-120	0	0-20	
1,1-Dichloroethane	91	91	80-120	0	0-20	
1,2-Dichloroethane	92	89	80-120	4	0-20	
1,1-Dichloroethene	93	93	73-127	1	0-21	
Ethanol	94	89	45-135	5	0-29	
Tetrachloroethene	83	80	80-120	3	0-20	
Toluene	93	92	74-116	2	0-16	
Trichloroethene	90	89	74-122	1	0-17	
Methyl-t-Butyl Ether (MTBE)	84	85	69-123	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1341
Cameron Park, CA 95682-8861		Preparation:	EPA 3050B
		Method:	EPA 6010B

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-12,440	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622L03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	102	98	80-120	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1341
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-120	**Solid**	**GC 1**	**06/15/09**	**06/15/09**	**090615B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	95	96	70-118	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1341
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-153	**Solid**	**GC/MS Z**	**06/15/09**	**06/15/09**	**090615L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	104	103	84-114	79-119	1	0-7	
Bromobenzene	102	105	80-120	73-127	3	0-20	
Bromochloromethane	119	89	80-120	73-127	29	0-20	
Bromodichloromethane	104	102	80-120	73-127	2	0-20	
Bromoform	102	101	80-120	73-127	0	0-20	
Bromomethane	111	97	80-120	73-127	14	0-20	
n-Butylbenzene	109	107	77-123	69-131	1	0-25	
sec-Butylbenzene	109	107	80-120	73-127	2	0-20	
tert-Butylbenzene	111	109	80-120	73-127	2	0-20	
Carbon Disulfide	108	105	80-120	73-127	3	0-20	
Carbon Tetrachloride	102	100	69-135	58-146	2	0-13	
Chlorobenzene	103	103	85-109	81-113	0	0-8	
Chloroethane	102	96	80-120	73-127	6	0-20	
Chloroform	107	92	80-120	73-127	15	0-20	
Chloromethane	102	98	80-120	73-127	4	0-20	
2-Chlorotoluene	105	107	80-120	73-127	2	0-20	
4-Chlorotoluene	104	103	80-120	73-127	2	0-20	
Dibromochloromethane	102	104	80-120	73-127	2	0-20	
1,2-Dibromo-3-Chloropropane	105	104	80-120	73-127	1	0-20	
1,2-Dibromoethane	102	103	80-120	73-127	1	0-20	
Dibromomethane	101	100	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	104	101	80-110	75-115	2	0-10	
1,3-Dichlorobenzene	103	101	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	102	99	80-120	73-127	3	0-20	
Dichlorodifluoromethane	106	103	80-120	73-127	4	0-20	
1,1-Dichloroethane	103	102	80-120	73-127	2	0-20	
1,2-Dichloroethane	102	102	80-120	73-127	0	0-20	
1,1-Dichloroethene	105	102	83-125	76-132	3	0-10	
c-1,2-Dichloroethene	101	97	80-120	73-127	4	0-20	
t-1,2-Dichloroethene	108	104	80-120	73-127	3	0-20	
1,2-Dichloropropane	102	103	79-115	73-121	0	0-25	
1,3-Dichloropropane	104	104	80-120	73-127	0	0-20	
2,2-Dichloropropane	100	98	80-120	73-127	2	0-20	
1,1-Dichloropropene	107	105	80-120	73-127	2	0-20	
c-1,3-Dichloropropene	108	106	80-120	73-127	1	0-20	
t-1,3-Dichloropropene	108	108	80-120	73-127	0	0-20	
Ethylbenzene	107	107	80-120	73-127	1	0-20	
Isopropylbenzene	109	109	80-120	73-127	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1341
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-153	**Solid**	**GC/MS Z**	**06/15/09**	**06/15/09**	**090615L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	107	107	80-120	73-127	1	0-20	
Methylene Chloride	105	102	80-120	73-127	3	0-20	
Naphthalene	97	99	80-120	73-127	1	0-20	
n-Propylbenzene	109	110	80-120	73-127	0	0-20	
Styrene	108	108	80-120	73-127	0	0-20	
Ethanol	116	122	50-134	36-148	5	0-23	
1,1,1,2-Tetrachloroethane	100	102	80-120	73-127	2	0-20	
1,1,2,2-Tetrachloroethane	102	104	80-120	73-127	2	0-20	
Tetrachloroethene	94	96	80-120	73-127	2	0-20	
Toluene	104	105	79-115	73-121	1	0-8	
1,2,3-Trichlorobenzene	97	98	80-120	73-127	1	0-20	
1,2,4-Trichlorobenzene	98	98	80-120	73-127	0	0-20	
1,1,1-Trichloroethane	101	101	80-120	73-127	1	0-20	
1,1,2-Trichloroethane	102	101	80-120	73-127	1	0-20	
Trichloroethene	101	101	87-111	83-115	0	0-7	
Trichlorofluoromethane	105	102	80-120	73-127	2	0-20	
1,2,3-Trichloropropane	102	100	80-120	73-127	3	0-20	
1,2,4-Trimethylbenzene	108	106	80-120	73-127	2	0-20	
1,3,5-Trimethylbenzene	109	109	80-120	73-127	0	0-20	
Vinyl Acetate	112	106	80-120	73-127	5	0-20	
Vinyl Chloride	100	97	72-126	63-135	2	0-10	
p/m-Xylene	108	108	80-120	73-127	1	0-20	
o-Xylene	107	108	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	97	96	75-129	66-138	1	0-13	
Tert-Butyl Alcohol (TBA)	101	101	66-126	56-136	0	0-24	
Diisopropyl Ether (DIPE)	98	96	77-125	69-133	2	0-13	
Ethyl-t-Butyl Ether (ETBE)	97	98	72-132	62-142	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	99	77-125	69-133	2	0-10	

Total number of LCS compounds : 66
Total number of ME compounds : 0
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-06-1341

Qualifier	Definition
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.

Work Order Number: 09-06-1341

Qualifier	Definition
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.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name:

BP/ARC Facility No: 601

Req Due Date (mm/dd/yy):

Rush TAT: Yes ___ No X

Lab Work Order Number: 09-06-1341

Lab Name: CALSCIENCE	BP/ARC Facility Address: 712 LEWELLING BLVD
Lab Address: 7440 LINCOLN WAY, GARDEN GROVE, CA.	City, State, ZIP Code: SAN LEANDRO, CA.
Lab PM: RICHARD V.	Lead Regulatory Agency: ACPWA
Lab Phone: (714) 895 5494	California Global ID No.: T0600100108
Lab Shipping Accnt: 9255	Enfos Proposal No: 00051-0004
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___
Other Info:	Stage: Activity:
BP/ARC EBM: PAUL SUPPLEE	
EBM Phone:	
EBM Email:	

Consultant/Contractor: STRATUS	
Consultant/Contractor Project No: E601	
Address: 3330 CAMERON PARK DR. #550	
Consultant/Contractor PM: JIM JOHNSON	
Phone: 530 676 6000	
Email EDD To: CHUFFO@STRATUSINC.NET	
Invoice To: BP/ARC X	Contractor ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	No. Containers / Preservative: Unpreserved	No. Containers / Preservative: H_2SO_4	No. Containers / Preservative: HNO_3	No. Containers / Preservative: HCl	No. Containers / Preservative: Methanol	Requested Analyses: GRO	Requested Analyses: BTEX	Requested Analyses: MTBE	Requested Analyses: TOTAL LEAD
1	SW C	6/12/09	1530	X			1	X					X	X	X	X

Report Type & QC Level

Standard ___

Full Data Package ___

Comments

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: COLLIN FISCHER	
Sampler's Company: STRATUS	
Shipment Method: GSO	Ship Date: 6/12/09
Shipment Tracking No: 106160211	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
	6/12/09	1800		6/13/09	8:40

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-06-1 3 4 1

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus DATE: 6/13/09

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

Temperature 4.1 °C - 0.2 °C (CF) = 3.9 °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:** WSC

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** WSC

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:**

SAMPLE CONDITION:

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB ☐100PB**na$_2$** ☐_____ ☐_____ ☐_____

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

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

Preservative: h: HCL n: HNO3 na$_2$: $Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:**

Calscience
Environmental
Laboratories, Inc.

June 25, 2009

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

Subject: **Calscience Work Order No.: 09-06-1342**
Client Reference: BP/ARCO 601

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/13/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 06/13/09
Work Order No: 09-06-1342
Preparation: EPA 3050B
Method: EPA 6010B

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 6.5'	**09-06-1342-1-A**	**06/12/09 14:00**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:12**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.33	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 8'	**09-06-1342-2-A**	**06/12/09 14:02**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:13**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	6.24	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 9.5'	**09-06-1342-3-A**	**06/12/09 14:05**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:14**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	5.48	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 11'	**09-06-1342-4-A**	**06/12/09 14:07**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:15**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.25	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 12.5'	**09-06-1342-5-A**	**06/12/09 14:10**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:15**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.06	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 15'	**09-06-1342-6-A**	**06/12/09 14:12**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:16**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	8.59	0.500	1		mg/kg

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 6.5'	**09-06-1342-7-A**	**06/12/09 09:20**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:07**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	12.6	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 8'	**09-06-1342-8-A**	**06/12/09 09:23**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:17**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	5.02	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 9.5'	**09-06-1342-9-A**	**06/12/09 09:25**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:18**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	6.94	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 11'	**09-06-1342-10-A**	**06/12/09 09:33**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:21**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.64	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 12.5'	**09-06-1342-11-A**	**06/12/09 09:36**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:22**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.53	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 15'	**09-06-1342-12-A**	**06/12/09 09:39**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:23**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.47	0.500	1		mg/kg

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 6.5'	**09-06-1342-13-A**	**06/12/09 10:48**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:24**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.03	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 8'	**09-06-1342-14-A**	**06/12/09 10:50**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:24**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	6.68	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 9.5'	**09-06-1342-15-A**	**06/12/09 10:52**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:25**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	5.67	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 11'	**09-06-1342-16-A**	**06/12/09 10:55**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:26**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.00	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 12.5'	**09-06-1342-17-A**	**06/12/09 10:58**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:27**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.25	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 15'	**09-06-1342-18-A**	**06/12/09 11:00**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:27**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	7.64	0.500	1		mg/kg

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 6.5'	**09-06-1342-19-A**	**06/12/09 15:00**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:28**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	16.6	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 8'	**09-06-1342-20-A**	**06/12/09 15:02**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:37**	**090622L04**

Parameter	Result	RL	DF	Qual	Units
Lead	8.38	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 9.5'	**09-06-1342-21-A**	**06/12/09 15:05**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:38**	**090622L03**

Parameter	Result	RL	DF	Qual	Units
Lead	7.50	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 11'	**09-06-1342-22-A**	**06/12/09 15:07**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:39**	**090622L03**

Parameter	Result	RL	DF	Qual	Units
Lead	5.76	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 12.5'	**09-06-1342-23-A**	**06/12/09 15:10**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:40**	**090622L03**

Parameter	Result	RL	DF	Qual	Units
Lead	5.89	0.500	1		mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 15'	**09-06-1342-24-A**	**06/12/09 15:12**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 10:40**	**090622L03**

Parameter	Result	RL	DF	Qual	Units
Lead	5.23	0.500	1		mg/kg

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-12,440**	**N/A**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 09:55**	**090622L03**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-12,441**	**N/A**	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09 09:56**	**090622L04**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 6.5'	**09-06-1342-1-A**	**06/12/09 14:00**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 14:09**	**090615B01**

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	83	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 8'	**09-06-1342-2-A**	**06/12/09 14:02**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 11:24**	**090615B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	78	12	25		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	100	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 9.5'	**09-06-1342-3-A**	**06/12/09 14:05**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 07:41**	**090615B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	150	25	50		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	104	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 11'	**09-06-1342-4-A**	**06/12/09 14:07**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 11:56**	**090615B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	330	50	100		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	96	42-126			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 12.5'	**09-06-1342-5-A**	**06/12/09 14:10**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 17:20**	**090615B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	2.0	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	92	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 15'	**09-06-1342-6-A**	**06/12/09 14:12**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 17:52**	**090615B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	4.5	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	99	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 6.5'	**09-06-1342-7-A**	**06/12/09 09:20**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 18:24**	**090615B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	8.6	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	125	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 8'	**09-06-1342-8-A**	**06/12/09 09:23**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 08:44**	**090615B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	1200	50	100		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	127	42-126		LH,AY	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 9.5'	**09-06-1342-9-A**	**06/12/09 09:25**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 12:28**	**090615B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	120	12	25		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	102	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 11'	**09-06-1342-10-A**	**06/12/09 09:33**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 19:28**	**090615B01**

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	88	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 12.5'	**09-06-1342-11-A**	**06/12/09 09:36**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 20:00**	**090615B01**

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	84	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 15'	**09-06-1342-12-A**	**06/12/09 09:39**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 20:31**	**090615B01**

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 06/13/09
Work Order No: 09-06-1342
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 6.5'	**09-06-1342-13-A**	**06/12/09 10:48**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 21:35**	**090615B01**

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			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 8'	**09-06-1342-14-A**	**06/12/09 10:50**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 22:07**	**090615B01**

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

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	5.1	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	95	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 9.5'	**09-06-1342-15-A**	**06/12/09 10:52**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 09:16**	**090615B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	480	62	125		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	106	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 11'	**09-06-1342-16-A**	**06/12/09 10:55**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 22:39**	**090615B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	14	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	129	42-126		LH,AY	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 12.5'	**09-06-1342-17-A**	**06/12/09 10:58**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 23:11**	**090615B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	0.82	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	89	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 15'	**09-06-1342-18-A**	**06/12/09 11:00**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 23:43**	**090615B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	1.5	0.50	1		mg/kg
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	93	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 6.5'	**09-06-1342-19-A**	**06/12/09 15:00**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 00:14**	**090615B01**

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	84	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 8'	**09-06-1342-20-A**	**06/12/09 15:02**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 00:46**	**090615B01**

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	83	42-126			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 9.5'	**09-06-1342-21-D**	**06/12/09 15:05**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 07:09**	**090615B02**

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	85	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 11'	**09-06-1342-22-D**	**06/12/09 15:07**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 03:58**	**090615B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	2.3	0.50	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	105	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 12.5'	**09-06-1342-23-D**	**06/12/09 15:10**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 04:29**	**090615B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	2.6	0.50	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	107	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 15'	**09-06-1342-24-D**	**06/12/09 15:12**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 05:01**	**090615B02**

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	82	42-126			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-697-120**	**N/A**	**Solid**	**GC 1**	**06/15/09**	**06/15/09 10:25**	**090615B01**

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	87	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-697-121**	**N/A**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 02:54**	**090615B02**

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	84	42-126			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-697-122**	**N/A**	**Solid**	**GC 1**	**06/15/09**	**06/16/09 03:26**	**090615B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	5.0	10		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	86	42-126			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/ARCO 601		Page 1 of 11

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 6.5'	**09-06-1342-1-A**	**06/12/09 14:00**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 03:59**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	102	75-141			1,2-Dichloroethane-d4	112	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	94	71-113		

MW16 8'	**09-06-1342-2-A**	**06/12/09 14:02**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 04:28**	**090615L04**

Comment(s): BF - Reporting limits raised due to high hydrocarbon background.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.10	100		Xylenes (total)	ND	0.10	100	
1,2-Dibromoethane	ND	0.10	100		Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100		Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Ethylbenzene	ND	0.10	100		Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethanol	ND	10	100		Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Toluene	ND	0.10	100		Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	92	75-141			1,2-Dichloroethane-d4	102	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	102	71-113		

MW16 9.5'	**09-06-1342-3-A**	**06/12/09 14:05**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 16:48**	**090616L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.10	100		Xylenes (total)	0.38	0.10	100	
1,2-Dibromoethane	ND	0.10	100		Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100		Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Ethylbenzene	1.8	0.10	100		Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethanol	ND	10	100		Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Toluene	ND	0.10	100		Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	98	75-141			1,2-Dichloroethane-d4	123	73-151		
Toluene-d8	103	87-111			1,4-Bromofluorobenzene	101	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 06/13/09
Work Order No: 09-06-1342
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 11'	**09-06-1342-4-A**	**06/12/09 14:07**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 05:28**	**090615L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.0	1000		Xylenes (total)	71	1.0	1000	
1,2-Dibromoethane	ND	1.0	1000		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1000	
1,2-Dichloroethane	ND	1.0	1000		Tert-Butyl Alcohol (TBA)	ND	10	1000	
Ethylbenzene	13	1.0	1000		Diisopropyl Ether (DIPE)	ND	2.0	1000	
Ethanol	ND	100	1000		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1000	
Toluene	2.2	1.0	1000		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1000	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	98	75-141		1,2-Dichloroethane-d4	100	73-151	
Toluene-d8	100	87-111		1,4-Bromofluorobenzene	98	71-113	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 12.5'	**09-06-1342-5-A**	**06/12/09 14:10**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 05:57**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	0.21	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	0.047	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	0.0031	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	99	75-141		1,2-Dichloroethane-d4	103	73-151	
Toluene-d8	104	87-111		1,4-Bromofluorobenzene	100	71-113	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW16 15'	**09-06-1342-6-A**	**06/12/09 14:12**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 06:27**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.0025	0.0010	1		Xylenes (total)	0.39	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	0.096	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	0.0077	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	101	75-141		1,2-Dichloroethane-d4	103	73-151	
Toluene-d8	102	87-111		1,4-Bromofluorobenzene	103	71-113	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/ARCO 601		Page 3 of 11

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 6.5'	**09-06-1342-7-A**	**06/12/09 09:20**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 06:56**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	0.0017	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	0.019	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	99	75-141			1,2-Dichloroethane-d4	107	73-151		
Toluene-d8	100	87-111			1,4-Bromofluorobenzene	99	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 8'	**09-06-1342-8-A**	**06/12/09 09:23**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 07:26**	**090615L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.0	1000		Xylenes (total)	69	1.0	1000	
1,2-Dibromoethane	ND	1.0	1000		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1000	
1,2-Dichloroethane	ND	1.0	1000		Tert-Butyl Alcohol (TBA)	ND	10	1000	
Ethylbenzene	20	1.0	1000		Diisopropyl Ether (DIPE)	ND	2.0	1000	
Ethanol	ND	100	1000		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1000	
Toluene	ND	1.0	1000		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1000	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	99	75-141			1,2-Dichloroethane-d4	101	73-151		
Toluene-d8	102	87-111			1,4-Bromofluorobenzene	98	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 9.5'	**09-06-1342-9-A**	**06/12/09 09:25**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 17:17**	**090616L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.17	0.10	100		Xylenes (total)	22	0.10	100	
1,2-Dibromoethane	ND	0.10	100		Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100		Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Ethylbenzene	4.4	0.10	100		Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethanol	ND	10	100		Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Toluene	1.5	0.10	100		Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	100	75-141			1,2-Dichloroethane-d4	102	73-151		
Toluene-d8	100	87-111			1,4-Bromofluorobenzene	100	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 06/13/09
Work Order No: 09-06-1342
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 11'	**09-06-1342-10-A**	**06/12/09 09:33**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 08:25**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	0.015	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	0.0036	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	0.0018	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	99	75-141			1,2-Dichloroethane-d4	104	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	95	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 12.5'	**09-06-1342-11-A**	**06/12/09 09:36**	**Solid**	**GC/MS Z**	**06/15/09**	**06/15/09 19:06**	**090615L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	100	75-141			1,2-Dichloroethane-d4	108	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	94	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW17 15'	**09-06-1342-12-A**	**06/12/09 09:39**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 08:54**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	0.0021	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	98	75-141			1,2-Dichloroethane-d4	106	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	95	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 06/13/09
Work Order No: 09-06-1342
Preparation: EPA 5030B
Method: EPA 8260B
Units: mg/kg

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 6.5'	**09-06-1342-13-A**	**06/12/09 10:48**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 09:24**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	97	75-141			1,2-Dichloroethane-d4	106	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	93	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 8'	**09-06-1342-14-A**	**06/12/09 10:50**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 09:53**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	83	75-141			1,2-Dichloroethane-d4	105	73-151		
Toluene-d8	101	87-111			1,4-Bromofluorobenzene	102	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 9.5'	**09-06-1342-15-A**	**06/12/09 10:52**	**Solid**	**GC/MS Z**	**06/17/09**	**06/17/09 18:34**	**090617L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.20	200		Xylenes (total)	ND	0.20	200	
1,2-Dibromoethane	ND	0.20	200		Methyl-t-Butyl Ether (MTBE)	ND	0.20	200	
1,2-Dichloroethane	ND	0.20	200		Tert-Butyl Alcohol (TBA)	ND	2.0	200	
Ethylbenzene	4.7	0.20	200		Diisopropyl Ether (DIPE)	ND	0.40	200	
Ethanol	ND	20	200		Ethyl-t-Butyl Ether (ETBE)	ND	0.40	200	
Toluene	ND	0.20	200		Tert-Amyl-Methyl Ether (TAME)	ND	0.40	200	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	99	75-141			1,2-Dichloroethane-d4	104	73-151		
Toluene-d8	101	87-111			1,4-Bromofluorobenzene	98	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 11'	**09-06-1342-16-A**	**06/12/09 10:55**	**Solid**	**GC/MS Z**	**06/17/09**	**06/17/09 19:04**	**090617L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.10	100		Xylenes (total)	ND	0.10	100	
1,2-Dibromoethane	ND	0.10	100		Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100		Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Ethylbenzene	1.0	0.10	100		Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethanol	ND	10	100		Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Toluene	ND	0.10	100		Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	94	75-141			1,2-Dichloroethane-d4	98	73-151		
Toluene-d8	100	87-111			1,4-Bromofluorobenzene	96	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 12.5'	**09-06-1342-17-A**	**06/12/09 10:58**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 19:45**	**090616L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	0.011	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	101	75-141			1,2-Dichloroethane-d4	105	73-151		
Toluene-d8	100	87-111			1,4-Bromofluorobenzene	97	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW18 15'	**09-06-1342-18-A**	**06/12/09 11:00**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 20:15**	**090616L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	0.019	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	101	75-141			1,2-Dichloroethane-d4	104	73-151		
Toluene-d8	103	87-111			1,4-Bromofluorobenzene	99	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/ARCO 601		Page 7 of 11

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 6.5'	**09-06-1342-19-A**	**06/12/09 15:00**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 20:44**	**090616L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	0.0040	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	104	75-141			1,2-Dichloroethane-d4	110	73-151		
Toluene-d8	99	87-111			1,4-Bromofluorobenzene	94	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 8'	**09-06-1342-20-A**	**06/12/09 15:02**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 21:14**	**090616L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	99	75-141			1,2-Dichloroethane-d4	108	73-151		
Toluene-d8	100	87-111			1,4-Bromofluorobenzene	91	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 9.5'	**09-06-1342-21-A**	**06/12/09 15:05**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 21:43**	**090616L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	99	75-141			1,2-Dichloroethane-d4	105	73-151		
Toluene-d8	99	87-111			1,4-Bromofluorobenzene	93	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/ARCO 601			Page 8 of 11

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 11'	**09-06-1342-22-A**	**06/12/09 15:07**	**Solid**	**GC/MS Z**	**06/18/09**	**06/18/09 17:16**	**090618L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	86	75-141			1,2-Dichloroethane-d4	111	73-151		
Toluene-d8	100	87-111			1,4-Bromofluorobenzene	115	71-113		LH,AY

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 12.5'	**09-06-1342-23-A**	**06/12/09 15:10**	**Solid**	**GC/MS Z**	**06/17/09**	**06/17/09 20:33**	**090617L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	97	75-141			1,2-Dichloroethane-d4	102	73-151		
Toluene-d8	100	87-111			1,4-Bromofluorobenzene	104	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW19 15'	**09-06-1342-24-A**	**06/12/09 15:12**	**Solid**	**GC/MS Z**	**06/18/09**	**06/18/09 17:45**	**090618L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	100	75-141			1,2-Dichloroethane-d4	130	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	96	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg
Project: BP/ARCO 601		Page 9 of 11

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-153**	**N/A**	**Solid**	**GC/MS Z**	**06/15/09**	**06/15/09 18:37**	**090615L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	98	75-141			1,2-Dichloroethane-d4	103	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	91	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-154**	**N/A**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 03:29**	**090615L03**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	100	75-141			1,2-Dichloroethane-d4	104	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	93	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-156**	**N/A**	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09 03:00**	**090615L04**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.10	100		Xylenes (total)	ND	0.10	100	
1,2-Dibromoethane	ND	0.10	100		Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100		Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Ethylbenzene	ND	0.10	100		Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethanol	ND	10	100		Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Toluene	ND	0.10	100		Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	102	75-141			1,2-Dichloroethane-d4	106	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	93	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	mg/kg

Project: BP/ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-157**	**N/A**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 13:50**	**090616L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	102	75-141			1,2-Dichloroethane-d4	106	73-151		
Toluene-d8	98	87-111			1,4-Bromofluorobenzene	94	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-158**	**N/A**	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09 13:20**	**090616L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.10	100		Xylenes (total)	ND	0.10	100	
1,2-Dibromoethane	ND	0.10	100		Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100		Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Ethylbenzene	ND	0.10	100		Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethanol	ND	10	100		Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Toluene	ND	0.10	100		Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	87	75-141			1,2-Dichloroethane-d4	110	73-151		
Toluene-d8	99	87-111			1,4-Bromofluorobenzene	94	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-159**	**N/A**	**Solid**	**GC/MS Z**	**06/17/09**	**06/17/09 15:36**	**090617L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	100	75-141			1,2-Dichloroethane-d4	107	73-151		
Toluene-d8	96	87-111			1,4-Bromofluorobenzene	91	71-113		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	mg/kg
Project: BP/ARCO 601			Page 11 of 11

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-160**	**N/A**	**Solid**	**GC/MS Z**	**06/17/09**	**06/17/09 15:07**	**090617L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.10	100		Xylenes (total)	ND	0.10	100	
1,2-Dibromoethane	ND	0.10	100		Methyl-t-Butyl Ether (MTBE)	ND	0.10	100	
1,2-Dichloroethane	ND	0.10	100		Tert-Butyl Alcohol (TBA)	ND	1.0	100	
Ethylbenzene	ND	0.10	100		Diisopropyl Ether (DIPE)	ND	0.20	100	
Ethanol	ND	10	100		Ethyl-t-Butyl Ether (ETBE)	ND	0.20	100	
Toluene	ND	0.10	100		Tert-Amyl-Methyl Ether (TAME)	ND	0.20	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	106	75-141			1,2-Dichloroethane-d4	110	73-151		
Toluene-d8	99	87-111			1,4-Bromofluorobenzene	93	71-113		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-161**	**N/A**	**Solid**	**GC/MS Z**	**06/18/09**	**06/18/09 13:07**	**090618L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	105	75-141			1,2-Dichloroethane-d4	110	73-151		
Toluene-d8	95	87-111			1,4-Bromofluorobenzene	90	71-113		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1341-1	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622S03**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	99	101	75-125	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Stratus Environmental, inc.	Date Received	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
09-06-1341-1	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622S03**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	96	93	75-125	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW17 6.5'	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622S04**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	102	96	75-125	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Stratus Environmental, inc.	Date Received	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 3050B
	Method:	EPA 6010B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
MW17 6.5'	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622S04**

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	91	94	75-125	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1341-1	**Solid**	**GC 1**	**06/15/09**	**06/15/09**	**090615S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	87	82	42-126	5	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW19 15'	**Solid**	**GC 1**	**06/15/09**	**06/16/09**	**090615S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	87	85	42-126	3	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW17 12.5'	**Solid**	**GC/MS Z**	**06/15/09**	**06/15/09**	**090615S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	92	90	78-114	2	0-14	
Chloroform	95	95	80-120	0	0-20	
1,1-Dichloroethane	91	91	80-120	0	0-20	
1,2-Dichloroethane	92	89	80-120	4	0-20	
1,1-Dichloroethene	93	93	73-127	1	0-21	
Ethanol	94	89	45-135	5	0-29	
Tetrachloroethene	83	80	80-120	3	0-20	
Toluene	93	92	74-116	2	0-16	
Trichloroethene	90	89	74-122	1	0-17	
Methyl-t-Butyl Ether (MTBE)	84	85	69-123	1	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1281-1	**Solid**	**GC/MS Z**	**06/16/09**	**06/16/09**	**090616S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	98	79-115	3	0-13	
Toluene	96	98	79-115	2	0-15	
Ethylbenzene	96	99	70-130	2	0-30	
Methyl-t-Butyl Ether (MTBE)	91	97	68-128	6	0-14	
Tert-Butyl Alcohol (TBA)	91	98	44-134	6	0-37	
Diisopropyl Ether (DIPE)	98	103	75-123	6	0-12	
Ethyl-t-Butyl Ether (ETBE)	90	96	75-117	6	0-12	
Tert-Amyl-Methyl Ether (TAME)	88	92	79-115	4	0-12	
Ethanol	119	130	42-138	9	0-28	
1,1-Dichloroethene	100	102	69-123	2	0-16	
1,2-Dibromoethane	100	103	70-130	4	0-30	
1,2-Dichlorobenzene	90	92	63-123	2	0-23	
Carbon Tetrachloride	90	95	55-139	5	0-15	
Chlorobenzene	92	94	79-115	2	0-17	
Trichloroethene	92	93	66-144	1	0-14	
Vinyl Chloride	96	97	60-126	1	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No: 09-06-1342
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8260B

Project BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1572-1	**Solid**	**GC/MS Z**	**06/17/09**	**06/17/09**	**090617S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	90	93	79-115	2	0-13	
Carbon Tetrachloride	82	84	55-139	2	0-15	
Chlorobenzene	97	99	79-115	2	0-17	
1,2-Dibromoethane	98	101	70-130	2	0-30	
1,2-Dichlorobenzene	98	102	63-123	4	0-23	
1,1-Dichloroethene	92	94	69-123	2	0-16	
Ethylbenzene	100	102	70-130	2	0-30	
Toluene	91	93	79-115	3	0-15	
Trichloroethene	115	120	66-144	4	0-14	
Vinyl Chloride	90	88	60-126	3	0-14	
Methyl-t-Butyl Ether (MTBE)	79	80	68-128	2	0-14	
Tert-Butyl Alcohol (TBA)	107	121	44-134	12	0-37	
Diisopropyl Ether (DIPE)	93	95	75-123	2	0-12	
Ethyl-t-Butyl Ether (ETBE)	83	83	75-117	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	79	82	79-115	4	0-12	
Ethanol	134	106	42-138	23	0-28	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/13/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-1663-2	**Solid**	**GC/MS Z**	**06/18/09**	**06/18/09**	**090618S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	94	79-115	2	0-13	
Carbon Tetrachloride	87	86	55-139	2	0-15	
Chlorobenzene	101	99	79-115	2	0-17	
1,2-Dibromoethane	107	105	70-130	2	0-30	
1,2-Dichlorobenzene	102	101	63-123	1	0-23	
1,1-Dichloroethene	96	95	69-123	1	0-16	
Ethylbenzene	103	102	70-130	1	0-30	
Toluene	97	94	79-115	3	0-15	
Trichloroethene	91	90	66-144	2	0-14	
Vinyl Chloride	102	102	60-126	0	0-14	
Methyl-t-Butyl Ether (MTBE)	87	86	68-128	1	0-14	
Tert-Butyl Alcohol (TBA)	105	99	44-134	6	0-37	
Diisopropyl Ether (DIPE)	105	102	75-123	3	0-12	
Ethyl-t-Butyl Ether (ETBE)	90	89	75-117	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	88	86	79-115	2	0-12	
Ethanol	141	136	42-138	4	0-28	LM,AY

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 3050B
		Method:	EPA 6010B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-12,440	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622L03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	102	98	80-120	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 3050B
		Method:	EPA 6010B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-12,441	**Solid**	**ICP 5300**	**06/22/09**	**06/23/09**	**090622L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	101	100	80-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-122	**Solid**	**GC 1**	**06/15/09**	**06/16/09**	**090615B03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	92	95	70-118	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-120	**Solid**	**GC 1**	**06/15/09**	**06/15/09**	**090615B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	95	96	70-118	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-121	**Solid**	**GC 1**	**06/15/09**	**06/16/09**	**090615B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	92	95	70-118	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-153	Solid	GC/MS Z	06/15/09	06/15/09	090615L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	104	103	84-114	79-119	1	0-7	
Bromobenzene	102	105	80-120	73-127	3	0-20	
Bromochloromethane	119	89	80-120	73-127	29	0-20	
Bromodichloromethane	104	102	80-120	73-127	2	0-20	
Bromoform	102	101	80-120	73-127	0	0-20	
Bromomethane	111	97	80-120	73-127	14	0-20	
n-Butylbenzene	109	107	77-123	69-131	1	0-25	
sec-Butylbenzene	109	107	80-120	73-127	2	0-20	
tert-Butylbenzene	111	109	80-120	73-127	2	0-20	
Carbon Disulfide	108	105	80-120	73-127	3	0-20	
Carbon Tetrachloride	102	100	69-135	58-146	2	0-13	
Chlorobenzene	103	103	85-109	81-113	0	0-8	
Chloroethane	102	96	80-120	73-127	6	0-20	
Chloroform	107	92	80-120	73-127	15	0-20	
Chloromethane	102	98	80-120	73-127	4	0-20	
2-Chlorotoluene	105	107	80-120	73-127	2	0-20	
4-Chlorotoluene	104	103	80-120	73-127	2	0-20	
Dibromochloromethane	102	104	80-120	73-127	2	0-20	
1,2-Dibromo-3-Chloropropane	105	104	80-120	73-127	1	0-20	
1,2-Dibromoethane	102	103	80-120	73-127	1	0-20	
Dibromomethane	101	100	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	104	101	80-110	75-115	2	0-10	
1,3-Dichlorobenzene	103	101	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	102	99	80-120	73-127	3	0-20	
Dichlorodifluoromethane	106	103	80-120	73-127	4	0-20	
1,1-Dichloroethane	103	102	80-120	73-127	2	0-20	
1,2-Dichloroethane	102	102	80-120	73-127	0	0-20	
1,1-Dichloroethene	105	102	83-125	76-132	3	0-10	
c-1,2-Dichloroethene	101	97	80-120	73-127	4	0-20	
t-1,2-Dichloroethene	108	104	80-120	73-127	3	0-20	
1,2-Dichloropropane	102	103	79-115	73-121	0	0-25	
1,3-Dichloropropane	104	104	80-120	73-127	0	0-20	
2,2-Dichloropropane	100	98	80-120	73-127	2	0-20	
1,1-Dichloropropene	107	105	80-120	73-127	2	0-20	
c-1,3-Dichloropropene	108	106	80-120	73-127	1	0-20	
t-1,3-Dichloropropene	108	108	80-120	73-127	0	0-20	
Ethylbenzene	107	107	80-120	73-127	1	0-20	
Isopropylbenzene	109	109	80-120	73-127	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-153	Solid	GC/MS Z	06/15/09	06/15/09	090615L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	107	107	80-120	73-127	1	0-20	
Methylene Chloride	105	102	80-120	73-127	3	0-20	
Naphthalene	97	99	80-120	73-127	1	0-20	
n-Propylbenzene	109	110	80-120	73-127	0	0-20	
Styrene	108	108	80-120	73-127	0	0-20	
Ethanol	116	122	50-134	36-148	5	0-23	
1,1,1,2-Tetrachloroethane	100	102	80-120	73-127	2	0-20	
1,1,2,2-Tetrachloroethane	102	104	80-120	73-127	2	0-20	
Tetrachloroethene	94	96	80-120	73-127	2	0-20	
Toluene	104	105	79-115	73-121	1	0-8	
1,2,3-Trichlorobenzene	97	98	80-120	73-127	1	0-20	
1,2,4-Trichlorobenzene	98	98	80-120	73-127	0	0-20	
1,1,1-Trichloroethane	101	101	80-120	73-127	1	0-20	
1,1,2-Trichloroethane	102	101	80-120	73-127	1	0-20	
Trichloroethene	101	101	87-111	83-115	0	0-7	
Trichlorofluoromethane	105	102	80-120	73-127	2	0-20	
1,2,3-Trichloropropane	102	100	80-120	73-127	3	0-20	
1,2,4-Trimethylbenzene	108	106	80-120	73-127	2	0-20	
1,3,5-Trimethylbenzene	109	109	80-120	73-127	0	0-20	
Vinyl Acetate	112	106	80-120	73-127	5	0-20	
Vinyl Chloride	100	97	72-126	63-135	2	0-10	
p/m-Xylene	108	108	80-120	73-127	1	0-20	
o-Xylene	107	108	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	97	96	75-129	66-138	1	0-13	
Tert-Butyl Alcohol (TBA)	101	101	66-126	56-136	0	0-24	
Diisopropyl Ether (DIPE)	98	96	77-125	69-133	2	0-13	
Ethyl-t-Butyl Ether (ETBE)	97	98	72-132	62-142	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	99	77-125	69-133	2	0-10	

Total number of LCS compounds : 66
Total number of ME compounds : 0
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

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: 09-06-1342
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-154	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09**	**090615L03**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	106	109	84-114	79-119	4	0-7	
Bromobenzene	104	105	80-120	73-127	1	0-20	
Bromochloromethane	124	119	80-120	73-127	3	0-20	
Bromodichloromethane	108	108	80-120	73-127	0	0-20	
Bromoform	103	103	80-120	73-127	1	0-20	
Bromomethane	115	113	80-120	73-127	2	0-20	
n-Butylbenzene	102	110	77-123	69-131	8	0-25	
sec-Butylbenzene	108	117	80-120	73-127	8	0-20	
tert-Butylbenzene	106	115	80-120	73-127	8	0-20	
Carbon Disulfide	107	112	80-120	73-127	5	0-20	
Carbon Tetrachloride	103	109	69-135	58-146	5	0-13	
Chlorobenzene	103	107	85-109	81-113	4	0-8	
Chloroethane	103	107	80-120	73-127	4	0-20	
Chloroform	111	112	80-120	73-127	1	0-20	
Chloromethane	103	109	80-120	73-127	6	0-20	
2-Chlorotoluene	104	108	80-120	73-127	4	0-20	
4-Chlorotoluene	100	105	80-120	73-127	5	0-20	
Dibromochloromethane	108	107	80-120	73-127	1	0-20	
1,2-Dibromo-3-Chloropropane	101	107	80-120	73-127	6	0-20	
1,2-Dibromoethane	107	107	80-120	73-127	0	0-20	
Dibromomethane	107	105	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	102	103	80-110	75-115	1	0-10	
1,3-Dichlorobenzene	98	103	80-120	73-127	5	0-20	
1,4-Dichlorobenzene	96	98	80-120	73-127	3	0-20	
Dichlorodifluoromethane	105	113	80-120	73-127	7	0-20	
1,1-Dichloroethane	106	110	80-120	73-127	4	0-20	
1,2-Dichloroethane	107	106	80-120	73-127	1	0-20	
1,1-Dichloroethene	106	112	83-125	76-132	5	0-10	
c-1,2-Dichloroethene	113	125	80-120	73-127	10	0-20	
t-1,2-Dichloroethene	105	110	80-120	73-127	4	0-20	
1,2-Dichloropropane	108	108	79-115	73-121	0	0-25	
1,3-Dichloropropane	107	109	80-120	73-127	2	0-20	
2,2-Dichloropropane	91	90	80-120	73-127	1	0-20	
1,1-Dichloropropene	105	113	80-120	73-127	7	0-20	
c-1,3-Dichloropropene	107	108	80-120	73-127	1	0-20	
t-1,3-Dichloropropene	106	106	80-120	73-127	0	0-20	
Ethylbenzene	106	113	80-120	73-127	6	0-20	
Isopropylbenzene	107	115	80-120	73-127	7	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-154	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09**	**090615L03**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	104	112	80-120	73-127	7	0-20	
Methylene Chloride	108	109	80-120	73-127	1	0-20	
Naphthalene	96	96	80-120	73-127	0	0-20	
n-Propylbenzene	107	114	80-120	73-127	6	0-20	
Styrene	109	112	80-120	73-127	3	0-20	
Ethanol	125	121	50-134	36-148	3	0-23	
1,1,1,2-Tetrachloroethane	104	106	80-120	73-127	1	0-20	
1,1,2,2-Tetrachloroethane	99	99	80-120	73-127	0	0-20	
Tetrachloroethene	105	117	80-120	73-127	11	0-20	
Toluene	105	110	79-115	73-121	4	0-8	
1,2,3-Trichlorobenzene	92	91	80-120	73-127	2	0-20	
1,2,4-Trichlorobenzene	86	86	80-120	73-127	0	0-20	
1,1,1-Trichloroethane	102	108	80-120	73-127	6	0-20	
1,1,2-Trichloroethane	107	107	80-120	73-127	0	0-20	
Trichloroethene	105	110	87-111	83-115	5	0-7	
Trichlorofluoromethane	104	110	80-120	73-127	6	0-20	
1,2,3-Trichloropropane	103	105	80-120	73-127	2	0-20	
1,2,4-Trimethylbenzene	105	110	80-120	73-127	5	0-20	
1,3,5-Trimethylbenzene	107	113	80-120	73-127	6	0-20	
Vinyl Acetate	88	80	80-120	73-127	9	0-20	
Vinyl Chloride	101	105	72-126	63-135	4	0-10	
p/m-Xylene	106	112	80-120	73-127	6	0-20	
o-Xylene	108	112	80-120	73-127	4	0-20	
Methyl-t-Butyl Ether (MTBE)	99	96	75-129	66-138	3	0-13	
Tert-Butyl Alcohol (TBA)	104	101	66-126	56-136	3	0-24	
Diisopropyl Ether (DIPE)	104	103	77-125	69-133	1	0-13	
Ethyl-t-Butyl Ether (ETBE)	100	109	72-132	62-142	9	0-12	
Tert-Amyl-Methyl Ether (TAME)	99	95	77-125	69-133	4	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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-156	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09**	**090615L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	106	109	84-114	79-119	4	0-7	
Bromobenzene	104	105	80-120	73-127	1	0-20	
Bromochloromethane	124	119	80-120	73-127	3	0-20	
Bromodichloromethane	108	108	80-120	73-127	0	0-20	
Bromoform	103	103	80-120	73-127	1	0-20	
Bromomethane	115	113	80-120	73-127	2	0-20	
n-Butylbenzene	102	110	77-123	69-131	8	0-25	
sec-Butylbenzene	108	117	80-120	73-127	8	0-20	
tert-Butylbenzene	106	115	80-120	73-127	8	0-20	
Carbon Disulfide	107	112	80-120	73-127	5	0-20	
Carbon Tetrachloride	103	109	69-135	58-146	5	0-13	
Chlorobenzene	103	107	85-109	81-113	4	0-8	
Chloroethane	103	107	80-120	73-127	4	0-20	
Chloroform	111	112	80-120	73-127	1	0-20	
Chloromethane	103	109	80-120	73-127	6	0-20	
2-Chlorotoluene	104	108	80-120	73-127	4	0-20	
4-Chlorotoluene	100	105	80-120	73-127	5	0-20	
Dibromochloromethane	108	107	80-120	73-127	1	0-20	
1,2-Dibromo-3-Chloropropane	101	107	80-120	73-127	6	0-20	
1,2-Dibromoethane	107	107	80-120	73-127	0	0-20	
Dibromomethane	107	105	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	102	103	80-110	75-115	1	0-10	
1,3-Dichlorobenzene	98	103	80-120	73-127	5	0-20	
1,4-Dichlorobenzene	96	98	80-120	73-127	3	0-20	
Dichlorodifluoromethane	105	113	80-120	73-127	7	0-20	
1,1-Dichloroethane	106	110	80-120	73-127	4	0-20	
1,2-Dichloroethane	107	106	80-120	73-127	1	0-20	
1,1-Dichloroethene	106	112	83-125	76-132	5	0-10	
c-1,2-Dichloroethene	113	125	80-120	73-127	10	0-20	
t-1,2-Dichloroethene	105	110	80-120	73-127	4	0-20	
1,2-Dichloropropane	108	108	79-115	73-121	0	0-25	
1,3-Dichloropropane	107	109	80-120	73-127	2	0-20	
2,2-Dichloropropane	91	90	80-120	73-127	1	0-20	
1,1-Dichloropropene	105	113	80-120	73-127	7	0-20	
c-1,3-Dichloropropene	107	108	80-120	73-127	1	0-20	
t-1,3-Dichloropropene	106	106	80-120	73-127	0	0-20	
Ethylbenzene	106	113	80-120	73-127	6	0-20	
Isopropylbenzene	107	115	80-120	73-127	7	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-156	**Solid**	**GC/MS Z**	**06/15/09**	**06/16/09**	**090615L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	104	112	80-120	73-127	7	0-20	
Methylene Chloride	108	109	80-120	73-127	1	0-20	
Naphthalene	96	96	80-120	73-127	0	0-20	
n-Propylbenzene	107	114	80-120	73-127	6	0-20	
Styrene	109	112	80-120	73-127	3	0-20	
Ethanol	125	121	50-134	36-148	3	0-23	
1,1,1,2-Tetrachloroethane	104	106	80-120	73-127	1	0-20	
1,1,2,2-Tetrachloroethane	99	99	80-120	73-127	0	0-20	
Tetrachloroethene	105	117	80-120	73-127	11	0-20	
Toluene	105	110	79-115	73-121	4	0-8	
1,2,3-Trichlorobenzene	92	91	80-120	73-127	2	0-20	
1,2,4-Trichlorobenzene	86	86	80-120	73-127	0	0-20	
1,1,1-Trichloroethane	102	108	80-120	73-127	6	0-20	
1,1,2-Trichloroethane	107	107	80-120	73-127	0	0-20	
Trichloroethene	105	110	87-111	83-115	5	0-7	
Trichlorofluoromethane	104	110	80-120	73-127	6	0-20	
1,2,3-Trichloropropane	103	105	80-120	73-127	2	0-20	
1,2,4-Trimethylbenzene	105	110	80-120	73-127	5	0-20	
1,3,5-Trimethylbenzene	107	113	80-120	73-127	6	0-20	
Vinyl Acetate	88	80	80-120	73-127	9	0-20	
Vinyl Chloride	101	105	72-126	63-135	4	0-10	
p/m-Xylene	106	112	80-120	73-127	6	0-20	
o-Xylene	108	112	80-120	73-127	4	0-20	
Methyl-t-Butyl Ether (MTBE)	99	96	75-129	66-138	3	0-13	
Tert-Butyl Alcohol (TBA)	104	101	66-126	56-136	3	0-24	
Diisopropyl Ether (DIPE)	104	103	77-125	69-133	1	0-13	
Ethyl-t-Butyl Ether (ETBE)	100	109	72-132	62-142	9	0-12	
Tert-Amyl-Methyl Ether (TAME)	99	95	77-125	69-133	4	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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-157	Solid	GC/MS Z	06/16/09	06/16/09	090616L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	102	107	84-114	79-119	5	0-7	
Bromobenzene	102	104	80-120	73-127	2	0-20	
Bromochloromethane	121	93	80-120	73-127	26	0-20	
Bromodichloromethane	103	103	80-120	73-127	0	0-20	
Bromoform	99	100	80-120	73-127	1	0-20	
Bromomethane	107	112	80-120	73-127	4	0-20	
n-Butylbenzene	107	110	77-123	69-131	3	0-25	
sec-Butylbenzene	106	110	80-120	73-127	3	0-20	
tert-Butylbenzene	110	110	80-120	73-127	0	0-20	
Carbon Disulfide	106	112	80-120	73-127	6	0-20	
Carbon Tetrachloride	99	102	69-135	58-146	3	0-13	
Chlorobenzene	102	106	85-109	81-113	4	0-8	
Chloroethane	104	107	80-120	73-127	2	0-20	
Chloroform	108	109	80-120	73-127	2	0-20	
Chloromethane	103	106	80-120	73-127	3	0-20	
2-Chlorotoluene	105	107	80-120	73-127	3	0-20	
4-Chlorotoluene	102	105	80-120	73-127	3	0-20	
Dibromochloromethane	103	105	80-120	73-127	3	0-20	
1,2-Dibromo-3-Chloropropane	93	104	80-120	73-127	11	0-20	
1,2-Dibromoethane	103	105	80-120	73-127	2	0-20	
Dibromomethane	101	103	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	102	103	80-110	75-115	1	0-10	
1,3-Dichlorobenzene	100	102	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	99	101	80-120	73-127	2	0-20	
Dichlorodifluoromethane	101	105	80-120	73-127	4	0-20	
1,1-Dichloroethane	106	108	80-120	73-127	2	0-20	
1,2-Dichloroethane	102	102	80-120	73-127	1	0-20	
1,1-Dichloroethene	105	109	83-125	76-132	4	0-10	
c-1,2-Dichloroethene	122	104	80-120	73-127	17	0-20	
t-1,2-Dichloroethene	103	109	80-120	73-127	5	0-20	
1,2-Dichloropropane	105	108	79-115	73-121	2	0-25	
1,3-Dichloropropane	106	107	80-120	73-127	1	0-20	
2,2-Dichloropropane	99	101	80-120	73-127	2	0-20	
1,1-Dichloropropene	106	109	80-120	73-127	3	0-20	
c-1,3-Dichloropropene	109	110	80-120	73-127	2	0-20	
t-1,3-Dichloropropene	109	109	80-120	73-127	0	0-20	
Ethylbenzene	105	109	80-120	73-127	4	0-20	
Isopropylbenzene	106	110	80-120	73-127	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-157	Solid	GC/MS Z	06/16/09	06/16/09	090616L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	104	109	80-120	73-127	4	0-20	
Methylene Chloride	108	108	80-120	73-127	0	0-20	
Naphthalene	97	98	80-120	73-127	1	0-20	
n-Propylbenzene	107	112	80-120	73-127	4	0-20	
Styrene	108	111	80-120	73-127	2	0-20	
Ethanol	114	131	50-134	36-148	14	0-23	
1,1,1,2-Tetrachloroethane	101	103	80-120	73-127	2	0-20	
1,1,2,2-Tetrachloroethane	102	104	80-120	73-127	2	0-20	
Tetrachloroethene	87	101	80-120	73-127	15	0-20	
Toluene	102	107	79-115	73-121	5	0-8	
1,2,3-Trichlorobenzene	99	97	80-120	73-127	2	0-20	
1,2,4-Trichlorobenzene	99	97	80-120	73-127	2	0-20	
1,1,1-Trichloroethane	98	100	80-120	73-127	2	0-20	
1,1,2-Trichloroethane	105	104	80-120	73-127	1	0-20	
Trichloroethene	99	104	87-111	83-115	5	0-7	
Trichlorofluoromethane	101	104	80-120	73-127	3	0-20	
1,2,3-Trichloropropane	96	103	80-120	73-127	7	0-20	
1,2,4-Trimethylbenzene	104	108	80-120	73-127	3	0-20	
1,3,5-Trimethylbenzene	107	110	80-120	73-127	2	0-20	
Vinyl Acetate	111	112	80-120	73-127	1	0-20	
Vinyl Chloride	100	105	72-126	63-135	5	0-10	
p/m-Xylene	105	110	80-120	73-127	4	0-20	
o-Xylene	106	109	80-120	73-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	99	96	75-129	66-138	2	0-13	
Tert-Butyl Alcohol (TBA)	99	104	66-126	56-136	5	0-24	
Diisopropyl Ether (DIPE)	106	105	77-125	69-133	1	0-13	
Ethyl-t-Butyl Ether (ETBE)	100	98	72-132	62-142	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	94	77-125	69-133	2	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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-158	Solid	GC/MS Z	06/16/09	06/16/09	090616L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	102	107	84-114	79-119	5	0-7	
Bromobenzene	102	104	80-120	73-127	2	0-20	
Bromochloromethane	121	93	80-120	73-127	26	0-20	
Bromodichloromethane	103	103	80-120	73-127	0	0-20	
Bromoform	99	100	80-120	73-127	1	0-20	
Bromomethane	107	112	80-120	73-127	4	0-20	
n-Butylbenzene	107	110	77-123	69-131	3	0-25	
sec-Butylbenzene	106	110	80-120	73-127	3	0-20	
tert-Butylbenzene	110	110	80-120	73-127	0	0-20	
Carbon Disulfide	106	112	80-120	73-127	6	0-20	
Carbon Tetrachloride	99	102	69-135	58-146	3	0-13	
Chlorobenzene	102	106	85-109	81-113	4	0-8	
Chloroethane	104	107	80-120	73-127	2	0-20	
Chloroform	108	109	80-120	73-127	2	0-20	
Chloromethane	103	106	80-120	73-127	3	0-20	
2-Chlorotoluene	105	107	80-120	73-127	3	0-20	
4-Chlorotoluene	102	105	80-120	73-127	3	0-20	
Dibromochloromethane	103	105	80-120	73-127	3	0-20	
1,2-Dibromo-3-Chloropropane	93	104	80-120	73-127	11	0-20	
1,2-Dibromoethane	103	105	80-120	73-127	2	0-20	
Dibromomethane	101	103	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	102	103	80-110	75-115	1	0-10	
1,3-Dichlorobenzene	100	102	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	99	101	80-120	73-127	2	0-20	
Dichlorodifluoromethane	101	105	80-120	73-127	4	0-20	
1,1-Dichloroethane	106	108	80-120	73-127	2	0-20	
1,2-Dichloroethane	102	102	80-120	73-127	1	0-20	
1,1-Dichloroethene	105	109	83-125	76-132	4	0-10	
c-1,2-Dichloroethene	122	104	80-120	73-127	17	0-20	
t-1,2-Dichloroethene	103	109	80-120	73-127	5	0-20	
1,2-Dichloropropane	105	108	79-115	73-121	2	0-25	
1,3-Dichloropropane	106	107	80-120	73-127	1	0-20	
2,2-Dichloropropane	99	101	80-120	73-127	2	0-20	
1,1-Dichloropropene	106	109	80-120	73-127	3	0-20	
c-1,3-Dichloropropene	109	110	80-120	73-127	2	0-20	
t-1,3-Dichloropropene	109	109	80-120	73-127	0	0-20	
Ethylbenzene	105	109	80-120	73-127	4	0-20	
Isopropylbenzene	106	110	80-120	73-127	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-158	Solid	GC/MS Z	06/16/09	06/16/09	090616L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	104	109	80-120	73-127	4	0-20	
Methylene Chloride	108	108	80-120	73-127	0	0-20	
Naphthalene	97	98	80-120	73-127	1	0-20	
n-Propylbenzene	107	112	80-120	73-127	4	0-20	
Styrene	108	111	80-120	73-127	2	0-20	
Ethanol	114	131	50-134	36-148	14	0-23	
1,1,1,2-Tetrachloroethane	101	103	80-120	73-127	2	0-20	
1,1,2,2-Tetrachloroethane	102	104	80-120	73-127	2	0-20	
Tetrachloroethene	87	101	80-120	73-127	15	0-20	
Toluene	102	107	79-115	73-121	5	0-8	
1,2,3-Trichlorobenzene	99	97	80-120	73-127	2	0-20	
1,2,4-Trichlorobenzene	99	97	80-120	73-127	2	0-20	
1,1,1-Trichloroethane	98	100	80-120	73-127	2	0-20	
1,1,2-Trichloroethane	105	104	80-120	73-127	1	0-20	
Trichloroethene	99	104	87-111	83-115	5	0-7	
Trichlorofluoromethane	101	104	80-120	73-127	3	0-20	
1,2,3-Trichloropropane	96	103	80-120	73-127	7	0-20	
1,2,4-Trimethylbenzene	104	108	80-120	73-127	3	0-20	
1,3,5-Trimethylbenzene	107	110	80-120	73-127	2	0-20	
Vinyl Acetate	111	112	80-120	73-127	1	0-20	
Vinyl Chloride	100	105	72-126	63-135	5	0-10	
p/m-Xylene	105	110	80-120	73-127	4	0-20	
o-Xylene	106	109	80-120	73-127	2	0-20	
Methyl-t-Butyl Ether (MTBE)	99	96	75-129	66-138	2	0-13	
Tert-Butyl Alcohol (TBA)	99	104	66-126	56-136	5	0-24	
Diisopropyl Ether (DIPE)	106	105	77-125	69-133	1	0-13	
Ethyl-t-Butyl Ether (ETBE)	100	98	72-132	62-142	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	94	77-125	69-133	2	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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-159	Solid	GC/MS Z	06/17/09	06/17/09	090617L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	104	105	84-114	79-119	1	0-7	
Bromobenzene	101	101	80-120	73-127	0	0-20	
Bromochloromethane	99	101	80-120	73-127	2	0-20	
Bromodichloromethane	105	106	80-120	73-127	1	0-20	
Bromoform	98	99	80-120	73-127	1	0-20	
Bromomethane	109	108	80-120	73-127	1	0-20	
n-Butylbenzene	104	104	77-123	69-131	0	0-25	
sec-Butylbenzene	104	104	80-120	73-127	0	0-20	
tert-Butylbenzene	104	104	80-120	73-127	0	0-20	
Carbon Disulfide	110	112	80-120	73-127	2	0-20	
Carbon Tetrachloride	96	100	69-135	58-146	3	0-13	
Chlorobenzene	103	101	85-109	81-113	2	0-8	
Chloroethane	108	108	80-120	73-127	0	0-20	
Chloroform	99	100	80-120	73-127	1	0-20	
Chloromethane	106	109	80-120	73-127	3	0-20	
2-Chlorotoluene	103	102	80-120	73-127	1	0-20	
4-Chlorotoluene	100	101	80-120	73-127	1	0-20	
Dibromochloromethane	103	104	80-120	73-127	0	0-20	
1,2-Dibromo-3-Chloropropane	91	96	80-120	73-127	5	0-20	
1,2-Dibromoethane	103	105	80-120	73-127	2	0-20	
Dibromomethane	106	107	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	102	103	80-110	75-115	0	0-10	
1,3-Dichlorobenzene	99	100	80-120	73-127	1	0-20	
1,4-Dichlorobenzene	99	98	80-120	73-127	1	0-20	
Dichlorodifluoromethane	100	100	80-120	73-127	0	0-20	
1,1-Dichloroethane	110	113	80-120	73-127	2	0-20	
1,2-Dichloroethane	103	107	80-120	73-127	3	0-20	
1,1-Dichloroethene	109	112	83-125	76-132	3	0-10	
c-1,2-Dichloroethene	103	107	80-120	73-127	4	0-20	
t-1,2-Dichloroethene	106	109	80-120	73-127	2	0-20	
1,2-Dichloropropane	107	109	79-115	73-121	2	0-25	
1,3-Dichloropropane	108	108	80-120	73-127	0	0-20	
2,2-Dichloropropane	97	98	80-120	73-127	1	0-20	
1,1-Dichloropropene	106	107	80-120	73-127	1	0-20	
c-1,3-Dichloropropene	107	110	80-120	73-127	3	0-20	
t-1,3-Dichloropropene	105	106	80-120	73-127	1	0-20	
Ethylbenzene	104	104	80-120	73-127	0	0-20	
Isopropylbenzene	104	105	80-120	73-127	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-159	**Solid**	**GC/MS Z**	**06/17/09**	**06/17/09**	**090617L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	102	102	80-120	73-127	0	0-20	
Methylene Chloride	112	116	80-120	73-127	4	0-20	
Naphthalene	95	97	80-120	73-127	2	0-20	
n-Propylbenzene	106	106	80-120	73-127	0	0-20	
Styrene	107	107	80-120	73-127	0	0-20	
Ethanol	137	135	50-134	36-148	1	0-23	LQ
1,1,1,2-Tetrachloroethane	99	99	80-120	73-127	0	0-20	
1,1,2,2-Tetrachloroethane	103	105	80-120	73-127	2	0-20	
Tetrachloroethene	94	92	80-120	73-127	2	0-20	
Toluene	105	105	79-115	73-121	0	0-8	
1,2,3-Trichlorobenzene	96	96	80-120	73-127	0	0-20	
1,2,4-Trichlorobenzene	94	93	80-120	73-127	1	0-20	
1,1,1-Trichloroethane	96	98	80-120	73-127	2	0-20	
1,1,2-Trichloroethane	107	107	80-120	73-127	1	0-20	
Trichloroethene	100	102	87-111	83-115	2	0-7	
Trichlorofluoromethane	100	102	80-120	73-127	2	0-20	
1,2,3-Trichloropropane	98	99	80-120	73-127	1	0-20	
1,2,4-Trimethylbenzene	103	103	80-120	73-127	1	0-20	
1,3,5-Trimethylbenzene	105	105	80-120	73-127	0	0-20	
Vinyl Acetate	109	120	80-120	73-127	9	0-20	
Vinyl Chloride	107	109	72-126	63-135	2	0-10	
p/m-Xylene	104	104	80-120	73-127	0	0-20	
o-Xylene	105	105	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	95	98	75-129	66-138	3	0-13	
Tert-Butyl Alcohol (TBA)	102	106	66-126	56-136	3	0-24	
Diisopropyl Ether (DIPE)	111	113	77-125	69-133	2	0-13	
Ethyl-t-Butyl Ether (ETBE)	99	101	72-132	62-142	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	92	95	77-125	69-133	3	0-10	

Total number of LCS compounds : 66
Total number of ME compounds : 1
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-160	Solid	GC/MS Z	06/17/09	06/17/09	090617L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	104	105	84-114	79-119	1	0-7	
Bromobenzene	101	101	80-120	73-127	0	0-20	
Bromochloromethane	99	101	80-120	73-127	2	0-20	
Bromodichloromethane	105	106	80-120	73-127	1	0-20	
Bromoform	98	99	80-120	73-127	1	0-20	
Bromomethane	109	108	80-120	73-127	1	0-20	
n-Butylbenzene	104	104	77-123	69-131	0	0-25	
sec-Butylbenzene	104	104	80-120	73-127	0	0-20	
tert-Butylbenzene	104	104	80-120	73-127	0	0-20	
Carbon Disulfide	110	112	80-120	73-127	2	0-20	
Carbon Tetrachloride	96	100	69-135	58-146	3	0-13	
Chlorobenzene	103	101	85-109	81-113	2	0-8	
Chloroethane	108	108	80-120	73-127	0	0-20	
Chloroform	99	100	80-120	73-127	1	0-20	
Chloromethane	106	109	80-120	73-127	3	0-20	
2-Chlorotoluene	103	102	80-120	73-127	1	0-20	
4-Chlorotoluene	100	101	80-120	73-127	1	0-20	
Dibromochloromethane	103	104	80-120	73-127	0	0-20	
1,2-Dibromo-3-Chloropropane	91	96	80-120	73-127	5	0-20	
1,2-Dibromoethane	103	105	80-120	73-127	2	0-20	
Dibromomethane	106	107	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	102	103	80-110	75-115	0	0-10	
1,3-Dichlorobenzene	99	100	80-120	73-127	1	0-20	
1,4-Dichlorobenzene	99	98	80-120	73-127	1	0-20	
Dichlorodifluoromethane	100	100	80-120	73-127	0	0-20	
1,1-Dichloroethane	110	113	80-120	73-127	2	0-20	
1,2-Dichloroethane	103	107	80-120	73-127	3	0-20	
1,1-Dichloroethene	109	112	83-125	76-132	3	0-10	
c-1,2-Dichloroethene	103	107	80-120	73-127	4	0-20	
t-1,2-Dichloroethene	106	109	80-120	73-127	2	0-20	
1,2-Dichloropropane	107	109	79-115	73-121	2	0-25	
1,3-Dichloropropane	108	108	80-120	73-127	0	0-20	
2,2-Dichloropropane	97	98	80-120	73-127	1	0-20	
1,1-Dichloropropene	106	107	80-120	73-127	1	0-20	
c-1,3-Dichloropropene	107	110	80-120	73-127	3	0-20	
t-1,3-Dichloropropene	105	106	80-120	73-127	1	0-20	
Ethylbenzene	104	104	80-120	73-127	0	0-20	
Isopropylbenzene	104	105	80-120	73-127	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received:	N/A
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-1342
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-160	Solid	GC/MS Z	06/17/09	06/17/09	090617L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	102	102	80-120	73-127	0	0-20	
Methylene Chloride	112	116	80-120	73-127	4	0-20	
Naphthalene	95	97	80-120	73-127	2	0-20	
n-Propylbenzene	106	106	80-120	73-127	0	0-20	
Styrene	107	107	80-120	73-127	0	0-20	
Ethanol	137	135	50-134	36-148	1	0-23	LQ
1,1,1,2-Tetrachloroethane	99	99	80-120	73-127	0	0-20	
1,1,2,2-Tetrachloroethane	103	105	80-120	73-127	2	0-20	
Tetrachloroethene	94	92	80-120	73-127	2	0-20	
Toluene	105	105	79-115	73-121	0	0-8	
1,2,3-Trichlorobenzene	96	96	80-120	73-127	0	0-20	
1,2,4-Trichlorobenzene	94	93	80-120	73-127	1	0-20	
1,1,1-Trichloroethane	96	98	80-120	73-127	2	0-20	
1,1,2-Trichloroethane	107	107	80-120	73-127	1	0-20	
Trichloroethene	100	102	87-111	83-115	2	0-7	
Trichlorofluoromethane	100	102	80-120	73-127	2	0-20	
1,2,3-Trichloropropane	98	99	80-120	73-127	1	0-20	
1,2,4-Trimethylbenzene	103	103	80-120	73-127	1	0-20	
1,3,5-Trimethylbenzene	105	105	80-120	73-127	0	0-20	
Vinyl Acetate	109	120	80-120	73-127	9	0-20	
Vinyl Chloride	107	109	72-126	63-135	2	0-10	
p/m-Xylene	104	104	80-120	73-127	0	0-20	
o-Xylene	105	105	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	95	98	75-129	66-138	3	0-13	
Tert-Butyl Alcohol (TBA)	102	106	66-126	56-136	3	0-24	
Diisopropyl Ether (DIPE)	111	113	77-125	69-133	2	0-13	
Ethyl-t-Butyl Ether (ETBE)	99	101	72-132	62-142	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	92	95	77-125	69-133	3	0-10	

Total number of LCS compounds : 66
Total number of ME compounds : 1
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-161	Solid	GC/MS Z	06/18/09	06/18/09	090618L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	98	98	84-114	79-119	0	0-7	
Bromobenzene	104	104	80-120	73-127	0	0-20	
Bromochloromethane	114	114	80-120	73-127	1	0-20	
Bromodichloromethane	99	98	80-120	73-127	1	0-20	
Bromoform	101	101	80-120	73-127	0	0-20	
Bromomethane	98	90	80-120	73-127	8	0-20	
n-Butylbenzene	114	114	77-123	69-131	0	0-25	
sec-Butylbenzene	114	114	80-120	73-127	0	0-20	
tert-Butylbenzene	114	112	80-120	73-127	2	0-20	
Carbon Disulfide	98	98	80-120	73-127	1	0-20	
Carbon Tetrachloride	91	91	69-135	58-146	0	0-13	
Chlorobenzene	104	105	85-109	81-113	1	0-8	
Chloroethane	107	109	80-120	73-127	1	0-20	
Chloroform	102	101	80-120	73-127	1	0-20	
Chloromethane	112	113	80-120	73-127	2	0-20	
2-Chlorotoluene	107	108	80-120	73-127	1	0-20	
4-Chlorotoluene	109	108	80-120	73-127	1	0-20	
Dibromochloromethane	107	108	80-120	73-127	1	0-20	
1,2-Dibromo-3-Chloropropane	105	108	80-120	73-127	3	0-20	
1,2-Dibromoethane	107	108	80-120	73-127	1	0-20	
Dibromomethane	99	99	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	110	109	80-110	75-115	1	0-10	
1,3-Dichlorobenzene	108	106	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	106	104	80-120	73-127	1	0-20	
Dichlorodifluoromethane	116	115	80-120	73-127	0	0-20	
1,1-Dichloroethane	103	103	80-120	73-127	0	0-20	
1,2-Dichloroethane	97	97	80-120	73-127	0	0-20	
1,1-Dichloroethene	97	97	83-125	76-132	0	0-10	
c-1,2-Dichloroethene	94	115	80-120	73-127	20	0-20	
t-1,2-Dichloroethene	96	97	80-120	73-127	0	0-20	
1,2-Dichloropropane	104	104	79-115	73-121	0	0-25	
1,3-Dichloropropane	110	112	80-120	73-127	2	0-20	
2,2-Dichloropropane	95	89	80-120	73-127	6	0-20	
1,1-Dichloropropene	99	100	80-120	73-127	1	0-20	
c-1,3-Dichloropropene	105	106	80-120	73-127	1	0-20	
t-1,3-Dichloropropene	113	114	80-120	73-127	0	0-20	
Ethylbenzene	108	108	80-120	73-127	0	0-20	
Isopropylbenzene	108	109	80-120	73-127	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-1342
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: BP/ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-161	**Solid**	**GC/MS Z**	**06/18/09**	**06/18/09**	**090618L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	112	111	80-120	73-127	1	0-20	
Methylene Chloride	103	100	80-120	73-127	3	0-20	
Naphthalene	108	110	80-120	73-127	2	0-20	
n-Propylbenzene	110	110	80-120	73-127	0	0-20	
Styrene	111	112	80-120	73-127	0	0-20	
Ethanol	142	140	50-134	36-148	2	0-23	LQ
1,1,1,2-Tetrachloroethane	101	103	80-120	73-127	2	0-20	
1,1,2,2-Tetrachloroethane	103	104	80-120	73-127	1	0-20	
Tetrachloroethene	95	97	80-120	73-127	2	0-20	
Toluene	99	99	79-115	73-121	0	0-8	
1,2,3-Trichlorobenzene	104	106	80-120	73-127	1	0-20	
1,2,4-Trichlorobenzene	103	103	80-120	73-127	0	0-20	
1,1,1-Trichloroethane	90	92	80-120	73-127	2	0-20	
1,1,2-Trichloroethane	109	111	80-120	73-127	1	0-20	
Trichloroethene	96	96	87-111	83-115	0	0-7	
Trichlorofluoromethane	97	98	80-120	73-127	1	0-20	
1,2,3-Trichloropropane	101	101	80-120	73-127	0	0-20	
1,2,4-Trimethylbenzene	113	113	80-120	73-127	0	0-20	
1,3,5-Trimethylbenzene	109	110	80-120	73-127	1	0-20	
Vinyl Acetate	117	110	80-120	73-127	6	0-20	
Vinyl Chloride	108	110	72-126	63-135	1	0-10	
p/m-Xylene	107	108	80-120	73-127	0	0-20	
o-Xylene	109	109	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	97	95	75-129	66-138	1	0-13	
Tert-Butyl Alcohol (TBA)	111	108	66-126	56-136	2	0-24	
Diisopropyl Ether (DIPE)	109	108	77-125	69-133	0	0-13	
Ethyl-t-Butyl Ether (ETBE)	100	110	72-132	62-142	9	0-12	
Tert-Amyl-Methyl Ether (TAME)	96	95	77-125	69-133	0	0-10	

Total number of LCS compounds : 66
Total number of ME compounds : 1
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-06-1342

Qualifier	Definition
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.

Work Order Number: 09-06-1342

Qualifier	Definition
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.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name:
BP/ARC Facility No: 601

Req Due Date (mm/dd/yy):
Lab Work Order Number: 09-06-1342

Rush TAT: Yes ___ No X

Lab Name: Calscience	BP/ARC Facility Address: 712 Lewelling Blvd	Consultant/Contractor: Stratus
Lab Address: 7440 Lincoln Way, Garden Grove, CA.	City, State, ZIP Code: San Leandro, CA.	Consultant/Contractor Project No: E601
Lab PM: Richard V.	Lead Regulatory Agency: ACPWA	Address: 3330 Cameron Park Dr. #550
Lab Phone: (714) 895 5494	California Global ID No.: T0600100108	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt: 9255	Enfos Proposal No: 00051-0004	Phone: 530 676 6000
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: Activity:	Invoice To: BP/ARC X Contractor ___
BP/ARC EBM: Paul Supple		
EBM Phone:		
EBM Email:		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	GRO (8015B)	BTEX (8260)	5 Oxy (8260)	EDB (8260)	1,2 DCA (8260)	Ethanol (8260)	Total Lead (200.7)	Comments
1	MW-16 6.5'	6/12/09	1400	X			1	X					X	X	X	X	X	X	X	
2	MW-16 8'	↓	1402	↓			1	↓					↓	↓	↓	↓	↓	↓	↓	
3	MW-16 9.5'		1405				1													
4	MW-16 11'		1407				1													
5	MW-16 12.5'		1410				1													
6	MW-16 15'		1412				1													
7	MW-17 6.5'		0920				1													
8	MW-17 8'		0923				1													
9	MW-17 9.5'		0925				1													
10	MW-17 11'	↓	0933	↓			1	↓					↓	↓	↓	↓	↓	↓	↓	

Report Type & QC Level: Standard ___ Full Data Package ___

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: Collin Fischer
Sampler's Company: Stratus
Shipment Method: GSO Ship Date: 6/12/09
Shipment Tracking No: 106166211
Special Instructions:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature]	6/12/09	1800	[signature] CEL	6/13-09	~~8:45~~ 845

WSC 6/13

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 LaMP COC Rev. 6 01/01/2009

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name:

BP/ARC Facility No: 601

Req Due Date (mm/dd/yy):

Rush TAT: Yes ___ No X

Lab Work Order Number: 09-06-1342

Page 2 of 3

Lab Name: CALSCIENCE	BP/ARC Facility Address: 712 LEWELLING BLVD	Consultant/Contractor: STRATUS
Lab Address: 7440 LINCOLN WAY, GARDEN GROVE, CA.	City, State, ZIP Code: SAN LEANDRO, CA.	Consultant/Contractor Project No: 601
Lab PM: RICHARD V.	Lead Regulatory Agency: ACPWA	Address: 3330 CAMERON PARK DR. #550
Lab Phone: (714) 895 5494	California Global ID No.: T0600100108	Consultant/Contractor PM: TOM JOHNSON
Lab Shipping Acct: 9255	Enfos Proposal No: 00051-0004	Phone: 530 676 6000
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: CHUFF@STRATUSINC.NET
Other Info:	Stage: Activity:	Invoice To: BP/ARC X Contractor ___
BP/ARC EBM: PAUL SUPPLE		
EBM Phone:		
EBM Email:		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: Geo (8015B)	Btex (8260)	Soils (8260)	EDB (8260)	1,2 DCA (8260)	Ethanol (8260)	TOTAL Lead (200.7)	Report Type & QC Level
11	MW-17 12.5'	6/12/09	0936	X			1	X					X	X	X	X	X	X	X	Standard ___
12	MW-17 15'		0939				1													Full Data Package ___
13	MW-18 6.5'		1048				1													
14	MW-18 8'		1050				1													
15	MW-18 9.5'		1052				1													
16	MW-18 11'		1055				1													
17	MW-18 12.5'		1058				1													
18	MW-18 15'		1100				1													
19	MW-19 6.5'		1500				1													
20	MW-19 8'	↓	1502	↓			1	↓					↓	↓	↓	↓	↓	↓	↓	

Comments

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: COLLIN FISCHER	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: STRATUS		6/12/09	1800		6/13/09	8:45
Shipment Method: GSO Ship Date: 6/12/09						
Shipment Tracking No: 106160211						

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

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name:
BP/ARC Facility No: 601
Req Due Date (mm/dd/yy):
Rush TAT: Yes ___ No X
Lab Work Order Number: 09-06-1342

Lab Name: CALSCIENCE	BP/ARC Facility Address: 712 LEWELLING BLVD	Consultant/Contractor: STRATUS
Lab Address: 7440 LINCOLN WAY, GARDEN GROVE, CA.	City, State, ZIP Code: SAN LEANDRO, CA.	Consultant/Contractor Project No: E601
Lab PM: RICHARD V.	Lead Regulatory Agency: ACPWA	Address: 3330 CAMERON PARK DR. #550
Lab Phone: (714) 895 5494	California Global ID No.: T0600100188	Consultant/Contractor PM: JIM JOHNSON
Lab Shipping Accnt: 9255	Enfos Proposal No: 00051-0004	Phone: 530 676 6000
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: CHUFF@STRATUSINC.NET
Other Info:	Stage: Activity:	Invoice To: BP/ARC X Contractor ___
BP/ARC EBM: PAUL SUPPLE		
EBM Phone:		
EBM Email:		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO (8015B)	BTEX (8260)	SOHg (8260)	EDB (8260)	1,2 DCA (8260)	Benzene (8260)	TOTAL LEAD (200.7)
21	MW-19 9.5'	6/12/09	1505	X			1	X					X	X	X	X	X	X	X
22	MW-19 11'	↓	1507				1												
23	MW-19 12.5'		1510				1												
24	MW-19 15'	↓	1512	↓			1	↓					↓	↓	↓	↓	↓	↓	↓

Report Type & QC Level: Standard ___ Full Data Package ___

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: COLLIN FISCHER	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation
Sampler's Company: STRATUS		6/12/09	1800	CBL
Shipment Method: GSO Ship Date: 6/12/09				
Shipment Tracking No: 1616-211				

Date	Time
6/13/09	8:49

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-06- 1 3 4 2

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 6/13/09

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

Temperature 4.1 °C - 0.2 °C (CF) = 3.9 °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: WSC

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: WSC

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: JD

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB ☐100PB**na$_2$** ☐_____ ☐_____ ☐_____

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

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

Preservative: h: HCL n: HNO3 na$_2$:$Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** JD

Calscience
Environmental
Laboratories, Inc.

July 08, 2009

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

Subject: **Calscience Work Order No.: 09-07-0008**
Client Reference: ARCO 601

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 7/1/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 07/01/09
Work Order No: 09-07-0008
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-9	**09-07-0008-1-A**	**06/30/09 14:35**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.835	1.67		Oxygen + Argon	4.16	0.835	1.67	
Carbon Dioxide	14.4	0.835	1.67						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-10	**09-07-0008-2-A**	**06/30/09 09:26**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	1.02	2.05		Oxygen + Argon	12.5	1.02	2.05	
Carbon Dioxide	8.36	1.02	2.05						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-11	**09-07-0008-3-A**	**06/30/09 10:21**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.860	1.72		Oxygen + Argon	11.3	0.860	1.72	
Carbon Dioxide	9.75	0.860	1.72						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-12	**09-07-0008-4-A**	**06/30/09 11:24**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.825	1.65		Oxygen + Argon	14.2	0.825	1.65	
Carbon Dioxide	6.99	0.825	1.65						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-13	**09-07-0008-5-A**	**06/30/09 12:19**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.815	1.63		Oxygen + Argon	22.3	0.815	1.63	
Carbon Dioxide	1.19	0.815	1.63						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-14	**09-07-0008-6-A**	**06/30/09 13:25**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.870	1.74		Oxygen + Argon	19.6	0.870	1.74	
Carbon Dioxide	3.74	0.870	1.74						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-03-002-830**	**N/A**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	ND	0.500	1	
Carbon Dioxide	ND	0.500	1						

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3
Project: ARCO 601		Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-9	**09-07-0008-1-A**	**06/30/09 14:35**	**Air**	**GC/MS V**	**N/A**	**07/02/09 20:07**	**090702L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0027	1.67		Xylenes (total)	ND	0.015	1.67	
Diisopropyl Ether (DIPE)	ND	0.014	1.67		Tert-Amyl-Methyl Ether (TAME)	ND	0.014	1.67	
Ethanol	ND	0.016	1.67		Tert-Butyl Alcohol (TBA)	ND	0.010	1.67	
Ethyl-t-Butyl Ether (ETBE)	ND	0.014	1.67		Toluene	ND	0.0031	1.67	
Ethylbenzene	ND	0.0036	1.67		1,1-Difluoroethane	ND	0.0090	1.67	
Methyl-t-Butyl Ether (MTBE)	ND	0.012	1.67						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	85	57-129			1,2-Dichloroethane-d4	88	47-137		
Toluene-d8	100	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-10	**09-07-0008-2-A**	**06/30/09 09:26**	**Air**	**GC/MS DD**	**N/A**	**07/01/09 22:47**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0033	2.05		Xylenes (total)	ND	0.018	2.05	
Diisopropyl Ether (DIPE)	ND	0.017	2.05		Tert-Amyl-Methyl Ether (TAME)	ND	0.017	2.05	
Ethanol	ND	0.019	2.05		Tert-Butyl Alcohol (TBA)	ND	0.012	2.05	
Ethyl-t-Butyl Ether (ETBE)	ND	0.017	2.05		Toluene	ND	0.0039	2.05	
Ethylbenzene	ND	0.0045	2.05		1,1-Difluoroethane	ND	0.011	2.05	
Methyl-t-Butyl Ether (MTBE)	ND	0.015	2.05						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	104	57-129			1,2-Dichloroethane-d4	117	47-137		
Toluene-d8	105	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-11	**09-07-0008-3-A**	**06/30/09 10:21**	**Air**	**GC/MS DD**	**N/A**	**07/01/09 23:34**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0027	1.72		Xylenes (total)	ND	0.015	1.72	
Diisopropyl Ether (DIPE)	ND	0.014	1.72		Tert-Amyl-Methyl Ether (TAME)	ND	0.014	1.72	
Ethanol	ND	0.016	1.72		Tert-Butyl Alcohol (TBA)	ND	0.010	1.72	
Ethyl-t-Butyl Ether (ETBE)	ND	0.014	1.72		Toluene	0.0033	0.0032	1.72	
Ethylbenzene	ND	0.0037	1.72		1,1-Difluoroethane	ND	0.0093	1.72	
Methyl-t-Butyl Ether (MTBE)	ND	0.012	1.72						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	100	57-129			1,2-Dichloroethane-d4	109	47-137		
Toluene-d8	99	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3
Project: ARCO 601		Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-12	**09-07-0008-4-A**	**06/30/09 11:24**	**Air**	**GC/MS DD**	**N/A**	**07/02/09 00:21**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0026	1.65		Xylenes (total)	ND	0.014	1.65	
Diisopropyl Ether (DIPE)	ND	0.014	1.65		Tert-Amyl-Methyl Ether (TAME)	ND	0.014	1.65	
Ethanol	ND	0.016	1.65		Tert-Butyl Alcohol (TBA)	ND	0.010	1.65	
Ethyl-t-Butyl Ether (ETBE)	ND	0.014	1.65		Toluene	ND	0.0031	1.65	
Ethylbenzene	ND	0.0036	1.65		1,1-Difluoroethane	ND	0.0089	1.65	
Methyl-t-Butyl Ether (MTBE)	ND	0.012	1.65						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	105	57-129			1,2-Dichloroethane-d4	120	47-137		
Toluene-d8	105	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-13	**09-07-0008-5-A**	**06/30/09 12:19**	**Air**	**GC/MS DD**	**N/A**	**07/02/09 01:08**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0026	1.63		Xylenes (total)	ND	0.014	1.63	
Diisopropyl Ether (DIPE)	ND	0.014	1.63		Tert-Amyl-Methyl Ether (TAME)	ND	0.014	1.63	
Ethanol	ND	0.015	1.63		Tert-Butyl Alcohol (TBA)	ND	0.0099	1.63	
Ethyl-t-Butyl Ether (ETBE)	ND	0.014	1.63		Toluene	ND	0.0031	1.63	
Ethylbenzene	ND	0.0035	1.63		1,1-Difluoroethane	ND	0.0088	1.63	
Methyl-t-Butyl Ether (MTBE)	ND	0.012	1.63						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	87	57-129			1,2-Dichloroethane-d4	108	47-137		
Toluene-d8	101	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-14	**09-07-0008-6-A**	**06/30/09 13:25**	**Air**	**GC/MS DD**	**N/A**	**07/02/09 01:56**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0028	1.74		Xylenes (total)	ND	0.015	1.74	
Diisopropyl Ether (DIPE)	ND	0.015	1.74		Tert-Amyl-Methyl Ether (TAME)	ND	0.015	1.74	
Ethanol	ND	0.016	1.74		Tert-Butyl Alcohol (TBA)	ND	0.011	1.74	
Ethyl-t-Butyl Ether (ETBE)	ND	0.015	1.74		Toluene	ND	0.0033	1.74	
Ethylbenzene	ND	0.0038	1.74		1,1-Difluoroethane	ND	0.0094	1.74	
Methyl-t-Butyl Ether (MTBE)	ND	0.013	1.74						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	95	57-129			1,2-Dichloroethane-d4	110	47-137		
Toluene-d8	102	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3
Project: ARCO 601		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-7,853**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**07/01/09 14:54**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Ethanol	ND	0.0094	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1		Toluene	ND	0.0019	1	
Ethylbenzene	ND	0.0022	1		1,1-Difluoroethane	ND	0.0054	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	57-129		1,2-Dichloroethane-d4	116	47-137	
Toluene-d8	96	78-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-7,870**	**N/A**	**Air**	**GC/MS V**	**N/A**	**07/02/09 10:49**	**090702L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Ethanol	ND	0.0094	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1		Toluene	ND	0.0019	1	
Ethylbenzene	ND	0.0022	1		1,1-Difluoroethane	ND	0.0054	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	102	57-129		1,2-Dichloroethane-d4	105	47-137	
Toluene-d8	97	78-156					

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0008
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-3M

Project: ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-9	**09-07-0008-1-A**	**06/30/09 14:35**	**Air**	**GC 19**	**N/A**	**07/01/09 12:50**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	64	1.67		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-10	**09-07-0008-2-A**	**06/30/09 09:26**	**Air**	**GC 19**	**N/A**	**07/01/09 13:23**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	78	2.05		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-11	**09-07-0008-3-A**	**06/30/09 10:21**	**Air**	**GC 19**	**N/A**	**07/01/09 13:57**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	66	1.72		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-12	**09-07-0008-4-A**	**06/30/09 11:24**	**Air**	**GC 19**	**N/A**	**07/01/09 14:32**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	63	1.65		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-13	**09-07-0008-5-A**	**06/30/09 12:19**	**Air**	**GC 19**	**N/A**	**07/01/09 15:05**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	62	1.63		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-14	**09-07-0008-6-A**	**06/30/09 13:25**	**Air**	**GC 19**	**N/A**	**07/01/09 15:41**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	67	1.74		mg/m3

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-3M

Project: ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-685-169**	**N/A**	**Air**	**GC 19**	**N/A**	**07/01/09 08:39**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	38	1		mg/m3

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-3M

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
09-07-0012-1	**Air**	**GC 19**	**N/A**	**07/01/09**	**090701D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	5700	6100	6	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0008
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	ASTM D-1946

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-03-002-830	**Air**	**GC 36**	**N/A**	**07/01/09**	**090701L01**

Parameter	LCS Conc	LCSD Conc	RPD	RPD CL	Qualifiers
Carbon Dioxide	4.844	4.853	0	0-30	
Oxygen + Argon	17.90	17.84	0	0-30	
Nitrogen	61.24	61.10	0	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0008
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-7,853	Air	GC/MS DD	N/A	07/01/09	090701L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	120	104	60-156	44-172	14	0-40	
Carbon Tetrachloride	139	116	64-154	49-169	18	0-32	
1,2-Dibromoethane	127	111	54-144	39-159	14	0-36	
1,2-Dichlorobenzene	117	113	34-160	13-181	3	0-47	
1,2-Dichloroethane	148	122	69-153	55-167	19	0-30	
1,2-Dichloropropane	123	107	67-157	52-172	14	0-35	
1,4-Dichlorobenzene	114	112	36-156	16-176	2	0-47	
c-1,3-Dichloropropene	154	132	61-157	45-173	15	0-35	
Ethylbenzene	136	116	52-154	35-171	16	0-38	
o-Xylene	135	116	52-148	36-164	15	0-38	
p/m-Xylene	132	112	42-156	23-175	16	0-41	
Tetrachloroethene	128	105	56-152	40-168	20	0-40	
Toluene	121	101	56-146	41-161	18	0-43	
Trichloroethene	130	111	63-159	47-175	16	0-34	
1,1,2-Trichloroethane	129	111	65-149	51-163	15	0-37	
Vinyl Chloride	135	116	45-177	23-199	15	0-36	

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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0008
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-7,870	Air	GC/MS V	N/A	07/02/09	090702L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	120	112	60-156	44-172	7	0-40	
Carbon Tetrachloride	97	94	64-154	49-169	3	0-32	
1,2-Dibromoethane	119	113	54-144	39-159	5	0-36	
1,2-Dichlorobenzene	124	121	34-160	13-181	3	0-47	
1,2-Dichloroethane	102	97	69-153	55-167	5	0-30	
1,2-Dichloropropane	118	111	67-157	52-172	7	0-35	
1,4-Dichlorobenzene	124	119	36-156	16-176	4	0-47	
c-1,3-Dichloropropene	131	125	61-157	45-173	5	0-35	
Ethylbenzene	128	121	52-154	35-171	6	0-38	
o-Xylene	128	122	52-148	36-164	5	0-38	
p/m-Xylene	124	118	42-156	23-175	5	0-41	
Tetrachloroethene	119	112	56-152	40-168	6	0-40	
Toluene	123	115	56-146	41-161	7	0-43	
Trichloroethene	109	104	63-159	47-175	5	0-34	
1,1,2-Trichloroethane	117	111	65-149	51-163	5	0-37	
Vinyl Chloride	120	111	45-177	23-199	8	0-36	

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

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-07-0008

Qualifier	Definition
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.

Work Order Number: 09-07-0008

Qualifier	Definition
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.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name:

BP/ARC Facility No: ARCO 601

Req Due Date (mm/dd/yy):

Rush TAT: Yes ___ No X

Lab Work Order Number: 09-07-0008

Lab Name: CH2SCIENCE	BP/ARC Facility Address: 712 Lewelling Blvd.
Lab Address: 7440 Lincoln Way	City, State, ZIP Code: San Leandro, CA.
Lab PM: Pictures V.	Lead Regulatory Agency: Alameda County EH
Lab Phone: (714) 895 5494	California Global ID No.: T0600100108
Lab Shipping Accnt: 9255	Enfos Proposal No: 00051-00004
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___
Other Info:	Stage: Activity:
BP/ARC EBM: Paul Supply	
EBM Phone:	
EBM Email: Paul.Supply@BP.com	

Consultant/Contractor: STRATUS	
Consultant/Contractor Project No: E601	
Address: 3330 Cameron Park Dr. #550	
Consultant/Contractor PM: Jay Johnson	
Phone: 530 672 6000	
Email EDD To: CHuff@STRATUSINC.NET	
Invoice To: BP/ARC X Contractor ___	

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO	BTEX	SOM5	Ethanol	O2	CO2	CH4	1,1 DCA
1	SG-9	6/30/09	1435			X	1	X					X	X	X	X	X	X	X	X
2	SG-10		0926			X	1	X					X	X	X	X	X	X	X	X
3	SG-11		1021			X	1	X					X	X	X	X	X	X	X	X
4	SG-12		1124			X	1	X					X	X	X	X	X	X	X	X
5	SG-13		1219			X	1	X					X	X	X	X	X	X	X	X
6	SG-14		1325			X	1	X					X	X	X	X	X	X	X	X

Report Type & QC Level: Standard ___ Full Data Package ___

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name: CF	
Sampler's Company: STRATUS	
Shipment Method: GSO	Ship Date: 6/30/09
Shipment Tracking No: 106279854	
Special Instructions: 106279853	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Callie Fair	6/30/09	1800	[signature] CCL	7/01/09	1038

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

106279852

ARCO 601 - Collin Fischer

6/30/09
Sunny
Clear

ONSITE -> 0800 -> Fill out safety paperwork, set up & begin sampling.

Well	FC #	CAN #	Leak Start	Leak Stop	Purge Start	Purge Stop	Sample Start	Sample Stop
SG-10	A154	D770	0830(-30)	0850(-30)	0850(-30)	0903(-18)	0905(-30)	0926(-10)
SG-11	A175	D092	0930(-30)	0950(-30)	0950(-30)	1001(-18)	1002(-30)	1021(-9)
SG-12	A195	D398	1026(-18)	1046(-18)	1046(-18)	1102(-5)	1102(-30)	1124(-10)
SG-13	A144	D525	1128(-24)	1148(-24)	1148(-24)	1200(-17)	1200(-30)	1219(-10)
SG-14	A268	D303	1225(-17)	1245([illegible])	1245(-17)	1300(-3)	1302(-30)	1325(-10)
SG-9	A177	D582	1330(-18)	1350(-18)	1350(-18)	1405(-4)	1407(-29)	1435(-10)

PID'S ALL 0 @ SAMPLE COLLECTION

1435 -> Begin cleanup & take down, label canisters.

1445 -> OFFSITE

[signature]

Stratus Env, Inc.

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-07-0008

SAMPLE RECEIPT FORM

Box ~~Cooler~~ 1 of 3 @ 7/1/09 p

CLIENT: Stratus

DATE: 07/01/09

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

Temperature ____.____ °C - 0.2 °C (CF) = ____.____ °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:** NC

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** NC

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** NC

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** NC

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

Preservative: h: HCL n: HNO3 na$_2$:$Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:**

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-07-0008

SAMPLE RECEIPT FORM

Box ~~Cooler~~ 2 of 3 @ 7/1/09 D

CLIENT: Stratus DATE: 07/01/09

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

Temperature ____.____ °C - 0.2 °C (CF) = ____.____ °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:** NC

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** NC

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** NC

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** NC

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

Preservative: **h:** HCL **n:** HNO3 **na$_2$:** $Na_2S_2O_3$ **Na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:**

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-07-0008

SAMPLE RECEIPT FORM

Box ~~Cooler~~ 3 of 3 @ 7/1/09 D

CLIENT: Stratus DATE: 07/01/09

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

Temperature ____.____ °C - 0.2 °C (CF) = ____.____ °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:** NC

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** NC

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** NC

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** NC

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

Preservative: h: HCL n: HNO3 na$_2$: $Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** @

APPENDIX C

GEOTRACKER UPLOAD CONFIRMATION RECEIPTS

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

Submittal Type:	**EDF - Soil and Water Investigation Report**
Submittal Title:	**SOIL INVESTIGATION**
Facility Global ID:	**T0600100108**
Facility Name:	**ARCO #0601**
File Name:	**09061342 FIX.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 11:03:55 AM**
Confirmation Number:	**6908479988**

VIEW QC REPORT

VIEW DETECTIONS REPORT

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

Submittal Type:	**EDF - Site Investigation**
Submittal Title:	**Vapor Intrusion Assessment**
Facility Global ID:	**T0600100108**
Facility Name:	**ARCO #0601**
File Name:	**09070008.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 11:15:10 AM**
Confirmation Number:	**7258194446**

VIEW QC REPORT

VIEW DETECTIONS REPORT

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_MAP FILE

SUCCESS

Your GEO_MAP file has been successfully submitted!

Submittal Type:	**GEO_MAP**
Facility Global ID:	**T0600100108**
Facility Name:	**ARCO #0601**
File Name:	**712 Lewelling Blvd_2009-06-23.pdf**
Username:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/8/2009 11:49:20 AM**
Confirmation Number:	**2093584358**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

Submittal Type:	**GEO_BORE**
Facility Global ID:	**T0600100108**
Field Point:	**MW-16**
Facility Name:	**ARCO #0601**
File Name:	**GEO_BORE MW-16.pdf**
Username:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 10:48:07 AM**
Confirmation Number:	**1320870518**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

Submittal Type:	**GEO_BORE**
Facility Global ID:	**T0600100108**
Field Point:	**MW-17**
Facility Name:	**ARCO #0601**
File Name:	**GEO_BORE MW-17.pdf**
Username:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 10:48:39 AM**
Confirmation Number:	**6980028450**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

Submittal Type:	**GEO_BORE**
Facility Global ID:	**T0600100108**
Field Point:	**MW-18**
Facility Name:	**ARCO #0601**
File Name:	**GEO_BORE MW-18.pdf**
Username:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 10:48:56 AM**
Confirmation Number:	**3745215177**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_BORE FILE

SUCCESS

Your GEO_BORE file has been successfully submitted!

Submittal Type:	**GEO_BORE**
Facility Global ID:	**T0600100108**
Field Point:	**MW-19**
Facility Name:	**ARCO #0601**
File Name:	**GEO_BORE MW-19.pdf**
Username:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**8/3/2009 10:49:15 AM**
Confirmation Number:	**4735009312**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_XY FILE

SUCCESS

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

Submittal Type:	**GEO_XY**
Submittal Title:	**GEO_XY 6-23-2009 B-1, HP-1, SG-9 to 14**
Facility Global ID:	**T0600100108**
Facility Name:	**ARCO #0601**
File Name:	**GEO_XY.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/8/2009 12:06:24 PM**
Confirmation Number:	**8486914396**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_XY FILE

SUCCESS

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

Submittal Type:	**GEO_XY**
Submittal Title:	**GEO_XY 6-23-2009 MW-1 to 3, MW-16 to 19**
Facility Global ID:	**T0600100108**
Facility Name:	**ARCO #0601**
File Name:	**GEO_XY.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/8/2009 11:48:01 AM**
Confirmation Number:	**5692404508**

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_Z FILE

SUCCESS

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

Submittal Type:	**GEO_Z**
Submittal Title:	**GEO_XY 6-23-2009 MW-1 to 3, MW-16 to 19**
Facility Global ID:	**T0600100108**
Facility Name:	**ARCO #0601**
File Name:	**GEO_Z.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/8/2009 11:46:52 AM**
Confirmation Number:	**4501999378**