Soil and Water Investigation Report

Atlantic Richfield Company Station #601
712 Lewelling Boulevard
San Leandro, California

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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28 March 2007

Project No. 06-08-605

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

28 March 2007 Project No. 06-08-605

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

Attn.: Mr. Paul Supple

Re: Soil and Water Investigation Report, Atlantic Richfield Company (a BP affiliated company) Station #601, 712 Lewelling Boulevard, San Leandro, Alameda County, California; ACEH Case #RO0000309

Dear Mr. Supple:

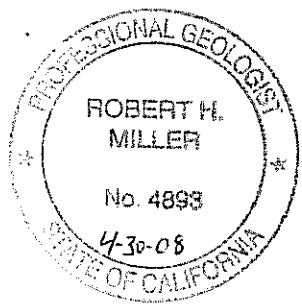
Attached is the *Soil and Water Investigation Report* for Atlantic Richfield Company Station #601 (herein referred to as Station #601) located at 712 Lewelling Boulevard, San Leandro, California (Site). This report presents the results of the soil and ground water boring investigation conducted at Station #601 on 30 November 2006. This investigation was conducted in accordance with the letter dated 31 May 2006 from the Alameda County Health Care, Environmental Health Services (ACEH). This Soil and Water Investigation Report includes descriptions of the site background, scope of investigation and field work performed, discussion of findings, conclusions and recommendations.

Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

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



Enclosure

cc: Mr. Steven Plunkett, 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

1.0 INTRODUCTION

This report presents the results of the soil and ground water investigation conducted at Station #601 on 30 November 2006. This investigation was conducted in accordance with the *Work Plan for On-Site Investigation, ARCO Service Station #0601, 712 Lewelling Boulevard, San Leandro, California, ACEH Case No.4275* (URS Corporation, 3 March 2006) which was presented to ACEH for approval. The Alameda County Health Care, Environmental Health Services (ACEH) responded to the proposed work with a letter dated 31 May 2006. Therefore this Soil and Water Investigation was also performed in order to comply with the stipulations within the ACEH letter dated 31 May 2006. This Soil and Water Investigation Report includes descriptions of the site background, scope of investigation and field work performed, discussion of findings, conclusions and recommendations.

2.0 SITE BACKGROUND

2.1 Site Description

The Site is located at 712 Lewelling Boulevard in San Leandro, California (Figures 1 and 2) and is an active ARCO gasoline service station. The Site is bound by Lewelling Boulevard to the northwest, Washington Avenue to the northeast, multi-family residential units to the southwest, and a commercial building and parking lot to the southeast. The majority of the Site is paved with cement and asphalt concrete.

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.

2.2 Previous Work

According to the *Additional Offsite Subsurface Investigation Aquifer Pumping Test and Remedial Alternatives Feasibility Study*, prepared by RESNA Industries Inc. (RESNA, 1993), two 6,000-gallon and two 4,000-gallon single-walled steel product USTs and a 280-gallon waste oil UST were excavated and removed from the Site by Gettler-Ryan Inc. of Hayward, California during January 1990. Investigations performed by Applied GeoSystems (AGS) prior to removal of these USTs revealed petroleum hydrocarbons on the north and east sides of the product USTs and in the vicinity of the waste oil UST.

In February 1990, four double-walled steel clad 10,000-gallon USTs were installed at the Site.

In December 1990, AGS converted three soil borings to ground-water monitoring wells (MW-1 through MW-3).

Product removal began at the Site in August 1991.

In October 1991, RESNA advanced six soil borings, converted five soil borings to ground-water monitoring wells (MW-4 through MW-8), and performed a vapor extraction test. Vapor extraction was deemed not feasible due to high ground-water elevation (average of approximately eight feet below ground surface) at the Site.

In October 1991, a well survey revealed a total of sixty-nine wells within a half-mile radius of the Site; two domestic wells (up-gradient), one cathodic protection well (half-mile east of Site),

twenty-seven monitoring wells (majority up-gradient), thirty-two irrigation wells (west and northwest of Site), four test wells (three located north and one located one-third mile south), two abandoned wells, and one well with an unidentified use (northeast).

In March 1992, RESNA submitted an addendum to a *Work Plan for Interim Groundwater Remediation*, proposing the installation of a ground-water extraction and treatment (GWET) system.

In October 1992, RESNA advanced nine off-site soil borings, and converted four of these borings to ground-water monitoring wells (MW-11 through MW-14).

In December 1992, the California Regional Water Quality Control Board (RWQCB) issued Cleanup and Abatement Order No. 92-147 (CAO 92-147) to ARCO Products Company (ARCO) and John J. Sullivan. This order required an access agreement be made between ARCO and Mr. Sullivan for the purpose of additional investigation of ground water and soil, or for Mr. Sullivan to submit a work plan to conduct the investigation himself.

In March 1993, one off-site down-gradient groundwater monitoring well (MW-15) was installed.

In August 1993, RESNA advanced four soil borings and converted three of these soil borings to ground-water monitoring wells (MW-9, MW-10, and MW-18). Two of these wells (MW-9 and MW-10) were installed on Mr. Sullivan's property, as originally requested in CAO 92-147. RESNA also performed a step drawdown aquifer test on wells MW-8 and MW-12 at that time, which indicated that pump and treat remediation would not be feasible due to numerous discrete water bearing sand zones. RESNA submitted their *Remedial Action Plan* at this time, which most notably stated that the shallowest ground water in the area was not of beneficial use due to local and regional impact by contaminants including arsenic, iron, manganese, tetrachloro-ethylene (also known as perchloroethylene, or PCE), trichloroethylene (TCE), and sewage.

In February 1997, EMCON Associates of San Jose (EMCON) conducted vapor testing at the Site near identified receptor locations in preparation for a *Risk-Based Corrective Action* (RBCA) report. Low concentrations of benzene were detected; however, the levels identified during this investigation required no further evaluation for potential sensitive receptor pathways.

In June 1997, EMCON prepared a *RBCA, Tier I and Tier II*, for the Site. EMCON concluded that the impact at the Site did not represent a hazard to human health (on-site commercial or off-site residential), that no further remedial action was necessary, and that all possible migration pathways had been investigated or were being investigated.

In July 2002, Delta Environmental Consultants, Inc. (Delta) conducted PG&E utility trench hand borings, as reported in a *Hand Auger Boring Installation Report* (Delta, 2002). Delta concluded that migration of contaminants had been occurring in utility trenches. High levels of total petroleum hydrocarbons as gasoline (TPH-g); benzene, toluene, ethylbenzene, and total xylenes (BTEX) were detected. Methyl tert-Butyl ether (MTBE) was not detected.

In June 2003, URS Corporation supervised the removal, disposal, and replacement of all product lines and dispensers, as reported in a *Dispenser and Product Line Removal and Upgrade Soil Sampling Report* (URS, 2003). A total of approximately 21,000 gallons of ground water was extracted during these activities.

In 2004, an oxygen release compound (ORC) was installed in wells MW-2, MW-3, MW-5, and MW-8.

Quarterly ground-water monitoring at the Site was initiated in June 1990 by RESNA, then by EMCON and URS for an unknown period of time, and is currently performed by Stratus Environmental, Inc. (Stratus).

2.3 Site Geology and Hydrogeology

The Site is situated within the East Bay Plain, located in the west-central portion of the San Leandro Cone (Hickenbottom and Muir, 1988). Helley *et. al.* (1979), mapped the subsurface material underlying the Site area as Quaternary bay mud deposits composed primarily of dark plastic clays and silty clay rich in organic material.

Based on interpretations made by RESNA in 1993, the shallow local water-bearing zone consists of one to three thin (1/2 to 5 feet thick) sand to clayey sand layers at depths ranging from 2 to 14 feet below ground surface (bgs). These sand layers are confined above and below by generally unsaturated clay and silt layers. According to geologic cross section and Site boring interpretations, these sand layers appear to be discontinuous, and appear to pinch out or bifurcate into multiple layers laterally over short distances. Geologic cross sections and a map showing cross section orientation are included as Figures 2 and 3.

According to a 27 January 1993 letter to Mr. Chuck Carmel (BP) from ACEH, ground water in the central San Leandro region has been impacted by volatile organic compounds (VOCs); primarily PCE, TCE, and dichloroethylene. Significant levels of primarily gasoline and diesel hydrocarbons, toxic metals, and nitrates have also been detected in the regional groundwater.

2.4 Surface Water

Based on the review of area topographic maps produced by the United States Geological Survey (USGS), three surface water bodies were located within a two-mile radius of the Site. San Lorenzo Creek (a channelized concrete aqueduct), Estudillo Canal, and Roberts Landing on the eastern shoreline of the San Francisco Bay are located approximately 700 feet south, 1,400 feet west, and 1 ¾ mile southwest of the Site, respectively.

3.0 SCOPE OF WORK

3.1 Source Area Characterization

Work was performed in accordance with the *Work Plan for On-Site Investigation, ARCO Service Station #0601, 712 Lewelling Boulevard, San Leandro, California, ACEH Case No.4275* (URS, 3 March 2006), as amended by stipulations within the ACEH letter dated 31 May 2006. Work performed on-site included advancing one soil boring and one Hydropunch (B-1 and HP-1, respectively), to assess the presence of hydrocarbons in soil and ground water at depth on the Site. Figure 1 depicts the soil boring and Hydropunch boring locations.

3.1.1 *Preliminary Field Activities*

Prior to initiating field activities, a soil boring permit from Alameda County Public Works Agency (ACPWA) was appropriated. A site-specific Health and Safety Plan (HASP) was

prepared for the proposed work. The HASP described hazards and health concerns specific to the Site and also the route to the closest hospital in the area in case of emergency. Utility clearance of the Site, including notification of Underground Service Alert (USA-North) and contracting Cruz Brothers (a private utility locating company), was performed to confirm the absence of underground utilities. In addition, both borings were cleared to depth of five feet below ground surface (bgs) with the use of an air knife.

3.1.2 *Soil Boring Advancement and Soil Samples*

RSI Drilling, Inc., a California-licensed drilling contractor, advanced one soil boring (B-1) on 30 November 2006 to a total depth of 58 feet bgs using a Geoprobe 6600 rig. This exceeded the originally-anticipated maximum depth of approximately 50 ft bgs, due to the absence of higher water bearing zones. The soil boring B-1 was continuously cored using direct-push technology. Encountered lithology soil was described by the on-site Stratus geologist using the Universal Soil Classification System (USCS). Soil was screened with a photo-ionization detector (PID) for measurable hydrocarbons. The Soil Boring Log for boring B-1 is provided within Appendix A.

In the absence of evidence indicating gross contamination while screening with the PID, soil samples were collected every eight feet. Collected soil samples were submitted to Test America (Morgan Hill, California) for analysis of total petroleum hydrocarbons: Oil-range organics (ORO, C16-C36), Diesel-range organics (DRO, C10-C28), and gasoline-range organics (GRO, C4-C12), and for BTEX, MTBE, ethanol, tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), and tertiary butyl alcohol (TBA). Laboratory analytical reports and chain-of-custody documentation are provided in Appendix A. Following completion of sampling activities, boring B-1 was sealed to the surface using a neat Portland cement grout.

3.1.3 *Ground Water Sampling*

Ground water was sampled on 30 November 2006 using Hydropunch direct-push technology. Hydropunch sampling activities included advancing the boring down to the targeted water-bearing zone identified in the adjacent soil boring B-1, then sampling within the saturated zone. The Hydropunch boring HP-1 was advanced into the saturated zone to a total depth of 58 ft bgs, then withdrawn three feet, exposing the Hydropunch screen from 55-58 ft bgs. Following completion of sampling activities, boring HP-1 was sealed to the surface using a neat Portland cement grout. The collected ground water sample B1-58W from boring HP-1 was similarly submitted to Test America for analysis of ORO, DRO, GRO, BTEX, MTBE, ethanol, TAME, ETBE, DIPE, and TBA.

3.2 Geology and Hydrogeology

The lithology of soils encountered within boring B-1 consists of thick layers of clay (USCS classification CL) with intermittent thin layers of damp to moist, but not wet clayey sand (USCS classification SC) between 26.5-27 ft bgs and 46.5-47 ft bgs. At 55 ft bgs, boring B-1 encountered wet sand with clay (USCS classification SP-SC). The Soil Boring Log for boring B-1 is provided within Appendix A.

4.0 ANALYTICAL RESULTS

Collected soil and ground-water samples were submitted to Test America, Inc. (Morgan Hill) under chain-of-custody protocol. Samples were originally analyzed between 5 December and 12 December 2006, within allowable holding times. Based on comments noted by the laboratory that the chromatogram profile was inconsistent with the referenced fuel standards, BAI requested copies of the processed chromatograms for the subject analyses. Based on this review, the laboratory re-analyzed certain samples following silica-gel extraction on 7 February 2007. These later analyses were after expiration of the recommended holding time. The laboratory analytical reports and chain-of-custody documentation are provided in Appendix A.

4.1 Soil Analytical Results

Collected soil samples were analyzed for ORO and DRO by EPA Method 8015B, for GRO by CA LUFT GCMS Method, and for BTEX, ethanol, MTBE, TAME, ETBE, DIPE, and TBA by EPA Method 8260B. The table below provides analytical concentrations in milligrams per kilogram (mg/kg) for ORO, DRO, GRO, BTEX, and MTBE.

Analytical Results of Soil Boring Samples (mg/kg)								
Boring	**ORO**	**DRO**	**GRO**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**MTBE**
B1-15	<10	**1.8**	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005
	<10*	<1.0*						
B1-23	<10	<1.0	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005
B1-31	<10	<1.0	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005
B1-39	<10	<1.0	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005
B1-47	<10	**1.2**	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005
	<10*	<1.0*						
B1-54	<10	<1.0	<0.10	<0.005	<0.005	<0.005	<0.005	<0.005

* Samples re-analyzed on 7 February 2007 following silica-gel cleanup of extract.

Concentrations above laboratory reporting limits are shown in bold font. DIPE, ethanol, ETBE, TAME, and TBA were not detected above the respective reporting limits, and therefore, not included in the above table. Concentrations of DRO were detected above laboratory reporting limits during the original analysis on 8 December 2006. However, the laboratory reported that the chromatogram profiles for DRO in samples B1-15 and B1-47 were inconsistent with the patterns of referenced fuel standards. Following review of the chromatograms (provided within Appendix A), the laboratory was requested to re-analyze samples B1-15 and B1-47 following silica-gel cleanup of the extracts. Subsequent analysis on 7 February 2007 found that DRO was not detected above the reporting limit of 1.0 mg/kg.

4.2 Ground-Water Analytical Results

The collected ground-water sample was analyzed for ORO and DRO by EPA Method 8015B, for GRO by the CA LUFT GCMS method, and for BTEX, ethanol, MTBE, TAME, ETBE, DIPE, and TBA by EPA Method 8260B. The table below provides analytical concentrations in micrograms per liter (µg/L) for ORO, DRO, GRO, BTEX, and MTBE.

Analytical Results of Hydropunch Ground-Water Sample (µg/L)								
Boring	**ORO**	**DRO**	**GRO**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**MTBE**
B1-58W	<470	**310**	<50	<0.50	<0.50	<0.50	**0.58**	<0.50
	<470*	**260***						

* Sample re-analyzed on 7 February 2007 following silica-gel extraction procedure.

Concentrations above laboratory reporting limits are shown in bold font. DIPE, ethanol, ETBE, TAME, and TBA were not detected above the respective reporting limits, and therefore, not included in the above table. DRO and xylenes were detected above laboratory reporting limits. However, the laboratory reported that the chromatogram profile for DRO in sample B1-58W was inconsistent with the patterns of referenced fuel standards. Following review of the chromatogram (provided within Appendix A), the laboratory was requested to re-analyze samples B1-58W following the silica-gel extraction procedure. Subsequent analysis on 7 February 2007 detected a lower concentration of DRO at 260 µg/L. It should be noted that the detected total Xylenes concentration of 0.58 µg/L was only marginally above the laboratory reporting limit of 0.50 µg/L.

4.3 GeoTracker Reporting

Soil and ground-water analytical results were uploaded to the GeoTracker AB2886 Database. Copies of the confirmation pages are provided in Appendix B.

4.4 Investigation-Derived Waste Disposal

During the boring and sampling activities, one 55 gallon drum of purge water and one 55 gallon drum of soil cuttings were generated. This waste material was scheduled to be picked up by Belshire Environmental Services, Inc. (Lake Forest, California) during the week of 22 January 2007. Belshire Environmental Services was to transport and dispose of the investigation-derived wastes in accordance with BP Remediation Management protocols.

5.0 DISCUSSION OF FINDINGS

The purpose of this Soil and Water Investigation was to delineate the vertical extent of onsite petroleum hydrocarbon contamination from Station #601. The soil and Hydropunch borings confirmed the presence of a thick clay layer beneath the Site to a depth of over 55 ft bgs. The presence and significant thickness of this material makes downward vertical migration of petroleum contamination from Station #601 highly unlikely.

Gasoline range organics, oil range organics, BTEX, MTBE, ethanol, TAME, ETBE, DIPE, and TBA were not detected above the laboratory reporting limits in soil samples collected from the numerous depths sampled within soil boring B-1. Concentrations of some petroleum hydrocarbons within the diesel range were detected in soil samples from 15 ft and 47 ft bgs, but at concentrations of 1.8 mg/kg and 1.2 mg/kg, respectively, barely above the laboratory reporting limit of 1.0 mg/kg. Furthermore, the laboratory noted that the gas chromatograms were inconsistent with the reference pattern for the DRO fuel standard. Subsequent silica-gel cleanup of the sample extracts and re-analysis did not detect DRO above the laboratory reporting limit.

Gasoline range organics, oil range organics, Benzene, Toluene, Ethylbenzene, MTBE, ethanol, TAME, ETBE, DIPE, and TBA were not detected above the laboratory reporting limits in the water sample B1-58W. Concentrations of some petroleum hydrocarbons within the diesel range were detected in the sample at a concentration of 310 µg/L. However, the laboratory noted that the gas chromatographic profile did not match the typical reference pattern for the DRO fuel standard. Subsequent silica-gel cleanup of the sample and re-analysis detected a lower concentration of DRO of 260 µg/L. Xylenes were detected at a concentration of 0.58 µg/L, but this is only marginally (0.08 parts per billion, or 80 parts per trillion) above the reliable laboratory reporting limit of 0.50 µg/L.

Typical diesel range organics have not been regularly detected at the Site in the past. However, petroleum hydrocarbons in the diesel range, but not resembling diesel, have been recorded at a few locations on the Site in the past. In the 18 July 1990 ground-water sample from well MW-2, reported 850 µg/L Total Petroleum Hydrocarbons in the Diesel range (TPH-d), but the laboratory noted that the chromatogram resembled gasoline, not diesel. Similarly, between late 1992 and mid-1993, TPH-d was reported at concentrations of 460 µg/L, 1100 µg/L, and 5300 µg/L. Again however, the laboratory reported that "The sample(s) contained a lower boiling point hydrocarbon mixture quantitated as diesel. The chromatogram does not match the typical diesel fingerprint."

6.0 CONCLUSIONS AND RECOMMENDATIONS

A soil and water investigation was performed in order to delineate the vertical extent of petroleum contamination from the Site. The soil and Hydropunch borings confirmed the presence of a thick clay layer beneath the Site to a depth of over 55 ft bgs. The presence and significant thickness of this material makes downward vertical migration of petroleum contamination from Station #601 highly unlikely. The absence of contamination at depth (aside from Xylenes in ground water just barely above the detection limit and something appearing within the range of diesel but not resembling diesel), concludes that the objective for this investigation was fulfilled.

Based on the findings and conclusions presented above, no further vertical contamination assessment at the Site is warranted nor recommended at this time. BAI recommends continued quarterly reporting at the Site in accordance with the current monitoring schedule.

7.0 LIMITATIONS

The findings presented in this report are based upon: observations of Stratus field personnel (see Appendix A), the points investigated, and results of laboratory tests performed by Test America (Morgan Hill, CA). Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or 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.

8.0 REFERENCES

Helley, E.J., and K.R. LaJoie, 1979. *Flatland deposits of the San Francisco Bay Region, California - their geology and engineering properties, and their importance to comprehensive planning.* U.S. Geological Survey Professional Paper 943.

Hickenbottom, Kelvin, and Muir, Kenneth S., 1988. *Geohydrology and Groundwater Quality Overview of the East Bay Plain Area, Alameda County, California.* Alameda County Flood Control and Water Conservation District.

Applied GeoSystems, 9 November 1989. *Limited Environmental Site Assessment at ARCO Service Station No. 601, San Leandro, California.*

GeoStrategies, Inc., 29 June 1990. *Tank Replacement Report, ARCO Service Station #601, San Leandro, California.*

RESNA/Applied GeoSystems, 14 December 1990. *Subsurface Environmental Assessment at ARCO Station 601.*

RESNA, 17 October 1991. *Subsurface Environmental Assessment and Vapor Extraction Test at ARCO Service Station 601.*

RESNA, 14 September 1992. *Addendum Five to Work Plan for Additional Subsurface Investigation.*

California Regional Water Quality Control Board, San Francisco Region, December 1992. *Cleanup & Abatement Order No. 92-147.* Issued to ARCO and Mr. John J. Sullivan.

RESNA, 5 August 1993. *Additional Offsite Subsurface Investigation, Aquifer Pumping Test and Remedial Alternatives Feasibility Study at ARCO Station 601, 712 Lewelling Boulevard, San Leandro, California.*

EMCON, June 1997. *Risk-Based Corrective Action Report, Tier I and Tier II, ARCO Service Station #0601, 712 Lewelling Boulevard, San Leandro, California.*

Delta Environmental Consultants, July 2002. *Hand Auger Boring Installation Report, ARCO Service Station #601, 712 Lewelling Boulevard, San Leandro, California.*

URS, June 2003. *Dispenser and Product Line Removal and Upgrade, Soil Sampling Report, ARCO Service Station #601, 712 Lewelling Boulevard, San Leandro, California.*

URS, March 2006. *Work Plan for On-Site Investigation, ARCO Service Station #0601, 712 Lewelling Boulevard, San Leandro, California, ACEH Case No. 4275.*

ACEH, 31 May 2006. *Fuel Leak Case No. RO0000309, Arco #0601, 712 Lewelling Boulevard, San Leandro, CA 94579.*

ATTACHMENTS:

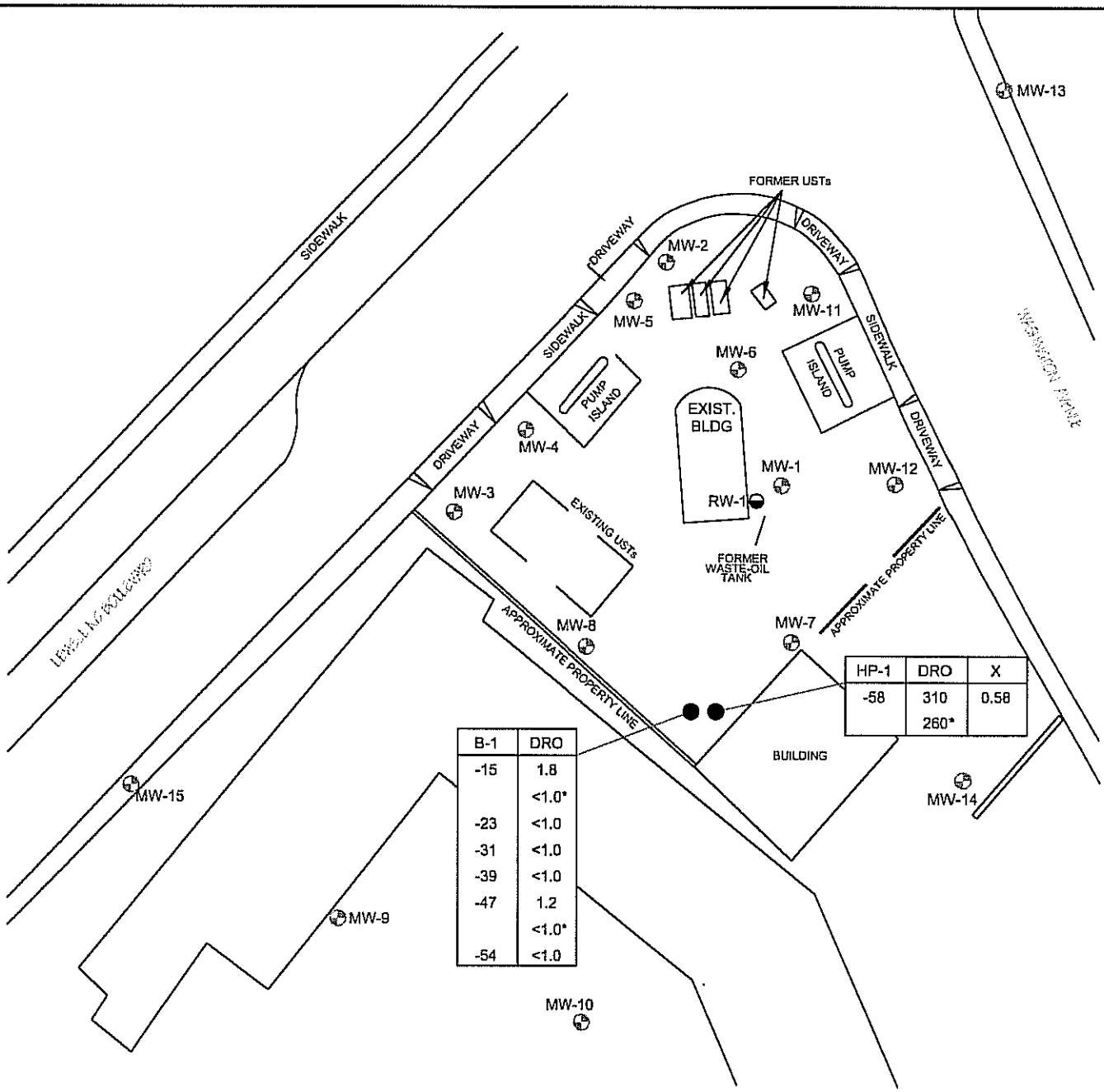
Figure 1. Site Map with Soil/Hydropunch Boring Locations, 30 November 2006, Station #601, 712 Lewelling Boulevard, San Leandro, California

Figure 2. Generalized Site Plan, Station #601, 712 Lewelling Boulevard, San Leandro, California (RESNA, 1993)

Figure 3. Geologic Cross Sections A-A', B-B', and C-C', Station #601, 712 Lewelling Boulevard, San Leandro, California (RESNA, 1993)

Appendix A. Stratus Subsurface Assessment Data Package (Includes Field Data Sheets and Laboratory Analytical Report with Chain of Custody Documentation)

Appendix B. GeoTracker Upload Confirmations



LEGEND

- GROUND-WATER MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- APPROXOMATE SOIL BORING/HYDROPUNCH LOCATION
- < NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS

Soil Boring B-1 Diesel Range Organics (DRO) Concentrations in mg/Kg

Hydropunch Boring HP-1 DRO and Xylenes Concentrations in ug/L

- * Revised Concentrations Following Silica-Gel Extraction Procedure

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

N

0 60 120

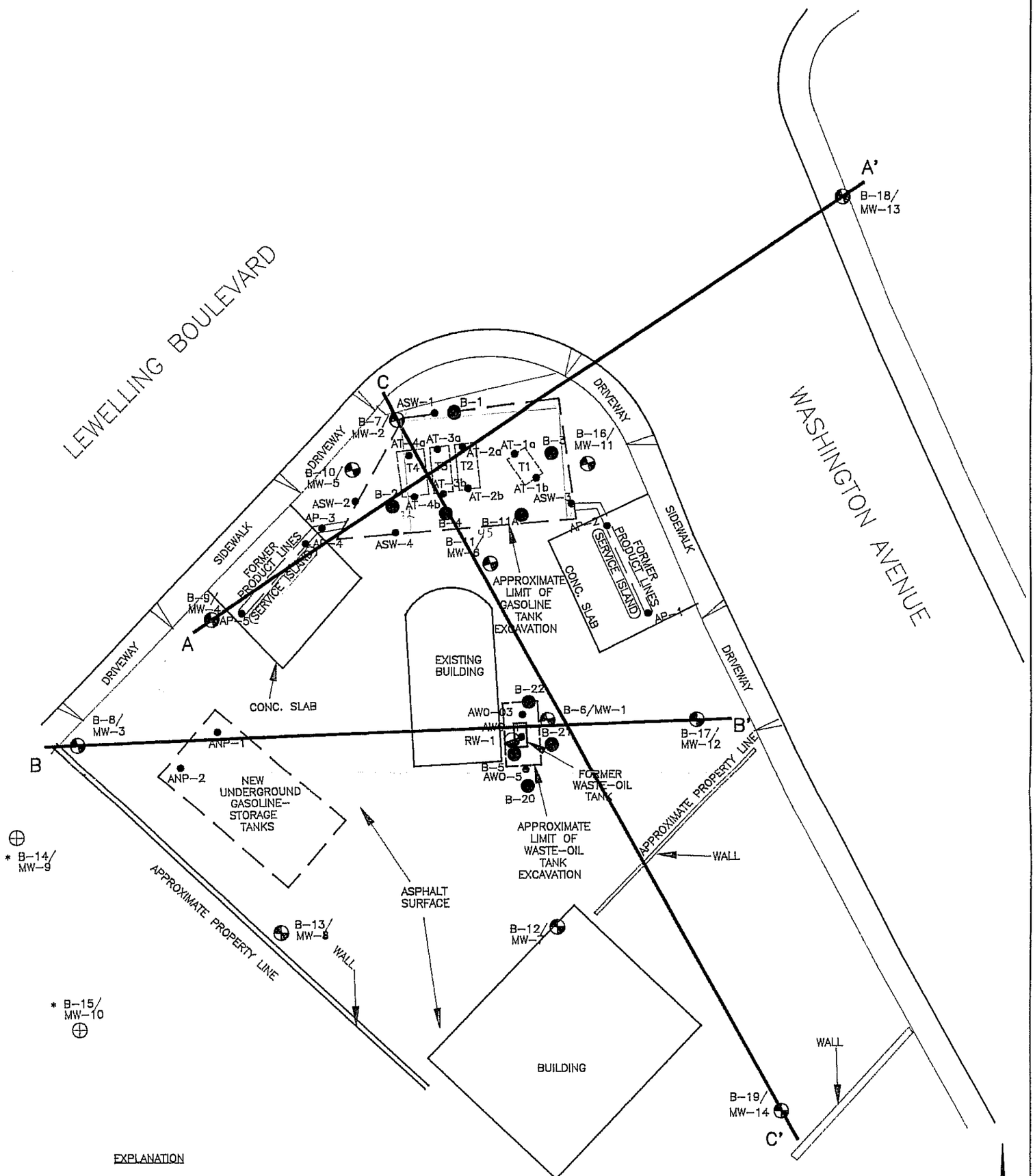
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California
Project No.: 06-08-605 Date: 01/18/07

Station #601
712 Lewelling Boulevard
San Leandro, California

Site Plan with Soil/
Hydropunch Boring Locations
30 November 2006

Drawing
1



EXPLANATION

RW-1 = Product recovery well (GeoStrategies, Jan. 1990)

B-15/MW-10 = Proposed boring/groundwater monitoring well

AWO-5 = Soil sample (GeoStrategies, Jan. 1990)

B-19/MW-14 = Vapor extraction/ground-water monitoring well (RESNA/Applied GeoSystems, June 1990 through November 1992)

B-22 = Soil boring (RESNA/Applied GeoSystems, August 1989 through October 1992)

T4 = Former gasoline underground storage tanks

C — C' = Geologic cross section locations

* = Wells not yet installed due to difficulty obtaining access

Approximate Scale

30 15 0 30 60

feet

Source: Surveyed by Ron Archer, Civil Engineer Inc. modified by John Koch Land Surveyor.

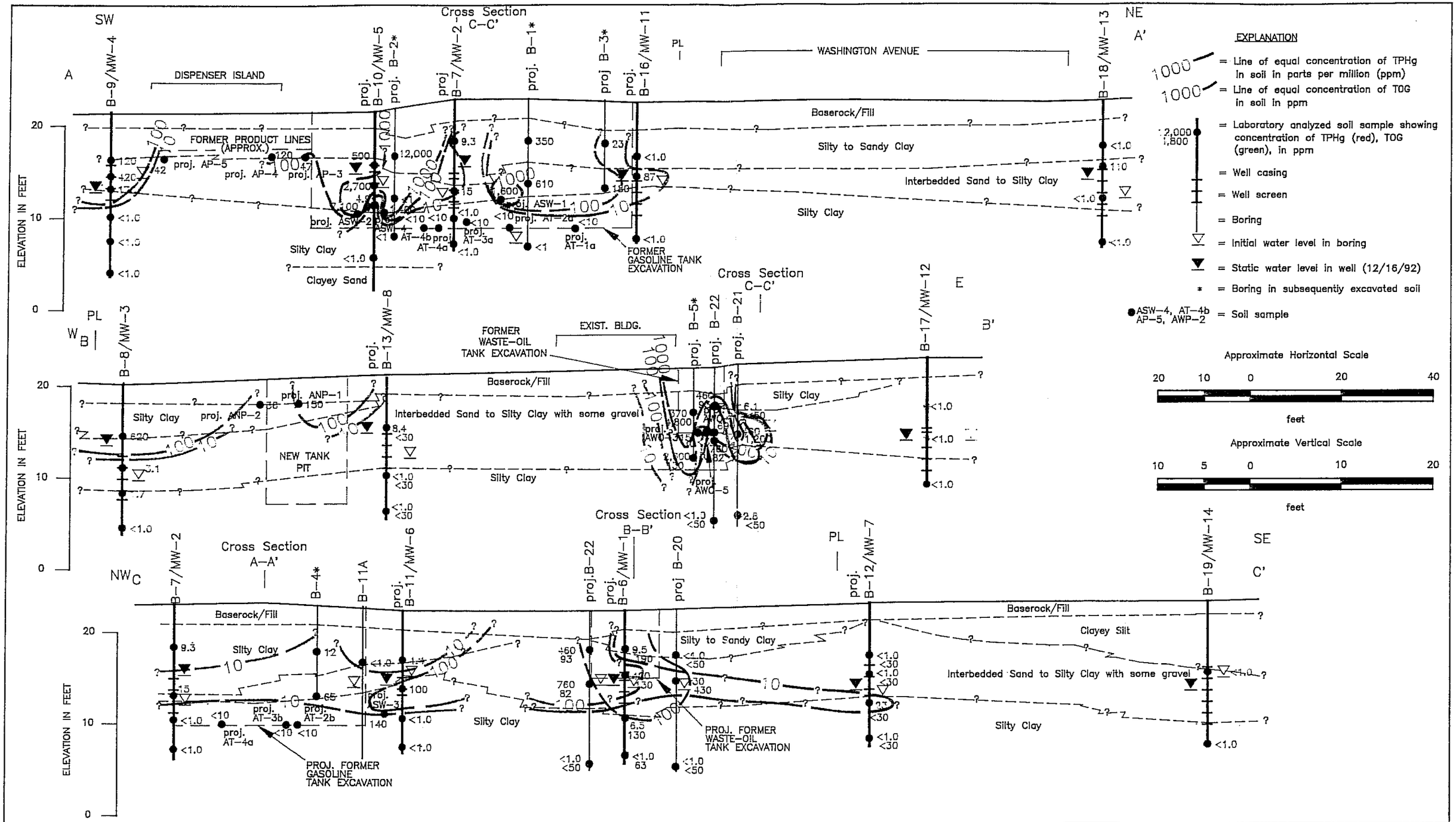
RESNA Working to Restore Nature

PROJECT 69034.10

GENERALIZED SITE PLAN
ARCO Station 601
712 Lewelling Boulevard
San Leandro, California

PLATE

2



RESNA
Working to Restore Nature

PROJECT 69034.10

GEOLOGIC CROSS SECTIONS A-A', B-B' AND C-C'
ARCO Station 601
712 Lewelling Boulevard
San Leandro, California

PLATE
11

APPENDIX A

STRATUS SUBSURFACE ASSESSMENT DATA PACKAGE
(INCLUDES FIELD DATA SHEETS AND LABORATORY ANALYTICAL REPORT
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

January 10, 2007

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

Re: Subsurface Assessment Data Package, ARCO Service Station No. 601, located at 712 Lewelling Boulevard, San Leandro, California (utility locating and assessment activities performed between November 20 and 30, 2006)

General Information

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

Date: November 20, 2006 *Arrival:* 07:45 *Departure:* 08:40
On-Site Supplier Representative: Scott Bittinger
Scope of Work Performed: Meet with utility locating contractor at site to clear boring location, mark for USA.
Variations from Work Scope: None noted
Weather Conditions: Not noted
Unusual Field Conditions: None noted

Date: November 22, 2006 *Arrival:* 07:40 *Departure:* 12:40
On-Site Supplier Representative: Scott Bittinger
Scope of Work Performed: Air knifed holes for soil boring event
Variations from Work Scope: None noted
Weather Conditions: Not noted
Unusual Field Conditions: None noted

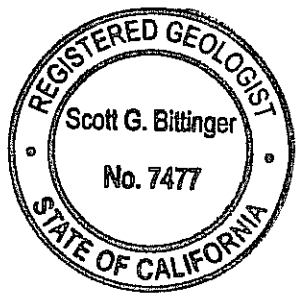
Date: November 30, 2006 *Arrival:* 07:30 *Departure:* 12:45
On-Site Supplier Representative: Scott Bittinger
Scope of Work Performed: Complete one direct push boring for continuous soil sampling, and one direct push soil boring to collect hydropunch water sample.
Variations from Work Scope: Boring extended to approximately 60 feet bgs instead of 50 feet bgs.
Weather Conditions: Not noted
Unusual Field Conditions: None noted

This submittal presents the tabulation of data collected in association with the installation of one vapor extraction well. The attachments include field data sheets, boring log, well details, well completion report, well installation permit, chain of custody documentation and certified analytical results. 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



Attachments:

- Field Data Sheets
- Boring Log
- Borehole Sampling Log
- Soil Boring Permit
- Site Plan
- Chain-of-Custody Documentation
- Certified Analytical Results

Cc: Paul Supple, BP/Arco

Area 601, San Leandro 11-20-06

Onsite 7:45 to mark borings for USA clearance & conduct utility clearance.

Meet Chris from Cruz Brothers at 8:15
Conduct H&S meeting & start work.

Drilling area is away from trafficked area, in a parking area.
Drilling will not require hot work permit or Air watch.

Offsite 8:40. Drilling will be on asphalt.

Scott Bullington

Stratus Environmental, Inc.

Arco Station 601, San Leandro 11-22-06

Onsite 7:40.

RSI drilling arrives 7:45-8:00. Have safety meeting & setup work area.
Use 8" asphalt coring machine to get through asphalt.
Begin air knifing at 9:00
air knifing goes quickly due to sandy soils
Clear each boring to 5' bgs, approximately 4" to 5" diameter
each hole backfilled with #2/16 sand.
replace asphalt cores over each location.

Paul Supple onsite 10:00-10:35 for audit / visit.

finish air knifing & back filling 12:00
Offsite ~~[illegible]~~ 12:40

Scott Bittinger
Stratus Environmental, Inc.

Arcu [illegible] 11-30-06

Onsite 7:30 talk to manager & get cars moved from work area.
RSI onsite 7:55. Have meeting & set-up.
Begin geoprobing at 8:35

Vicki from Alameda County onsite 9:30-9:40
Paul Supple onsite 9:40 - 11:35

drill to 58' bgs, grout hole
begin hydro punch boring at 10:55.
water comes in well (quickly).
Collect water sample from 11:15 -

Grout hole & depart site at 12:45

1 drum water & 1 drum soil onsite.

SOIL BORING LOG Boring No. B-1 Sheet 1 of 3

Client: ARCO Station No. 601
Address: 712 Lewelling Boulevard
San Leandro, CA
Project No.: E-601
Logged By: Scott Bittinger

Date: 11/30/2006
Driller: RSI Drilling rig type: Geoprobe 6600
Drilling Foreman: Jose
Method: Dual-cased direct push hole diam.: 2"

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Construct.	Depth Scale	LITHO COLUMN	Descriptions of Materials and Conditions	PID (PPM)
						1		asphalt surface	
						2			
						3		Upper 5' of borehole not logged during air knife clearing...material observed to be sandy fill with asphalt and concrete pieces	
						4			
						5			
						6		very poor recovery 5' to 8' bgs	
						7			
						8			
						9	CL	CLAY, very dark gray, moist (8'-9')	
						10	CL	CLAY, dark grayish brown, 3% very fine grained sand, moist (9'-11.5')	
S	B1-11		8:42			11			0.5
						12			
						13			
						14			
S	B1-15		8:45			15	CL	CLAY, very dark gray, dry (11.5'-21')	0.5
						16			
						17			
						18			
						19			
S	B1-19		8:48			20			0.7

Comments:

SOIL BORING LOG Boring No. B-1 Sheet 2 of 3

Client: ARCO Station No. 601
Address: 712 Lewelling Boulevard
San Leandro, CA
Project No.: E-601
Logged By: Scott Bittinger

Date: 11/30/2006
Driller: RSI Drilling rig type: Geoprobe 6600
Drilling Foreman: Jose
Method: Dual-cased direct push hole diam.: 2"

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Construct.	Depth Scale	LITHO COLUMN	Descriptions of Materials and Conditions	PID (PPM)
						21	CL	CLAY, very dark gray, dry (11.5'-21')	
						22	CL	CLAY, light olive brown, moist (21'-22')	
						23	CL	CLAY, light gray, moist (22'-22.7')	
S	B1-23		8:52			24	CL	CLAY with SAND, light olive brown, 5-10% very fine grained sand, moist (22.7'-24.5')	0.5
						25			
						26	CL	SANDY CLAY, light olive brown, 20% very fine grained sand, 80% clay, moist (24.5'-26.5')	
						27	SC	CLAYEY SAND light olive brown, 55% very fine grained sand, 45% clayey fines, damp (26.5'-27')	
S	B1-27		8:54			28			0.9
						29	CL	SILTY CLAY, light olive brown, dry (27'-33.5')	
						30			
						31			
S	B1-31		9:00			32			0.6
						33			
						34			
						35	CL	CLAY, light olive brown, moist (33.5'-35')	
S	B1-35		9:03			36			0.9
						37			
						38			
						39	CL	CLAY, dark gray, moist (35'-42')	
S	B1-39		9:05			40			0.5

Comments:

SOIL BORING LOG Boring No. B-1 Sheet 3 of 3

Client: ARCO Station No. 601
Address: 712 Lewelling Boulevard
San Leandro, CA
Project No.: E-601
Logged By: Scott Bittinger

Date: 11/30/2006
Driller: RSI Drilling rig type: Geoprobe 6600
Drilling Foreman: Jose
Method: Dual-cased direct push hole diam.: 2"

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Construct.	Depth Scale	LITHO COLUMN	Descriptions of Materials and Conditions	PID (PPM)
						41	CL	CLAY, dark gray, moist (35'-42')	
						42			
						43	CL	CLAY with SAND, olive gray, 5% very fine grained sand, 95% clay, moist (42'-45')	
S	B1-43		9:10			44			0.6
						45	CL	CLAY with SAND, gray, trace iron oxide stains, 3-5% very fine grained sand, 95-97% clay, moist (45'-46.5')	
						46			
						47	SC	CLAYEY SAND, gray with iron oxide staining, 60% fine grained sand, 5% coarse grained sand, 35% clay, moist (46.5'-47')	
S	B1-47		9:15			48	CL	CLAY, olive brown, trace iron and manganese oxide staining, moist (47'-48')	0.7
						49			
						50	CL	CLAY, olive gray with iron oxide stains, moist (48'-51')	
						51			
S	B1-51		9:17			52			0.5
						53	CL	CLAY, dark bluish gray, trace silt, moist (51'-54')	
						54			
S	B1-54		10:08			55	SC	CLAYEY SAND, olive gray, 60% fine grained sand, 40% clayey fines, moist	0.8
						56			
						57	SP-SC	SAND with CLAY, 90-98% fine grained sand, 2-20% clayey fines, damp to wet (55'-58')	
						58			

Comments: total depth is 58 feet bgs.

BOREHOLE SAMPLING LOG

HP-1

STRATUS Project No.: E-601	Site: ARCO Station #601	Drilling Company: RSI Drilling
	712 Lewelling Boulevard, San Leandro, CA	Driller: Jose
Date: November 30, 2006		Field Geologist: Scott Bittinger

Drilling Rig:	Geoprobe 6600	Drilling Method:	Direct Push
Borehole Diameter:	2 inches	Soil Sample Equipment:	NA
Total Depth:	60 feet bgs	Water Sampling Equipment:	Hydropunch™

Well Completion Data

Slotted Interval:	Casing Material:
Filter Pack Material:	Casing Diameter:
Seal Material:	Slot Size:
Backfill Material: Neat Cement Slurry	

Sample ID	Depth (ft.)	Sample Interval (ft.)	% Rec.	Time	PID (ppm)	Soil Class/ Water	Description:
B1-58W	58	56-60				Water	6 voas, 2 amber bottles

STRATUS ENVIRONMENTAL INC.

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: 11/15/2006 By jamesy

Permit Numbers: W2006-0962
Permits Valid from 11/30/2006 to 12/01/2006

Application Id:	1163525707886
Site Location:	712 Lewelling Blvd, San Leandro, CA 94579
Project Start Date:	11/30/2006
Applicant:	Stratus Environmental Inc. - Scott Bittinger 3330 Cameron Park Dr. #550, Cameron Park, CA 95682
Property Owner:	BP/ ARCO 4 Centerpointe Dr., La Palma, CA 90623
Client:	** same as Property Owner **

City of Project Site: San Leandro

Completion Date: 12/01/2006

Phone: 530-676-2062

Phone: 925-946-1085

Receipt Number: WR2006-0515
Payer Name : Stratus Envirtonmental Inc.

Total Due: $200.00
Total Amount Paid: $200.00
Paid By: CHECK
PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 2 Boreholes
Driller: RSI Drilling - Lic #: 802334 - Method: other

Work Total: $200.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2006-0962	11/15/2006	02/28/2007	2	2.00 in.	60.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. 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.

4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 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.

5. 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.

6. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

PROGRAMS AND SERVICES

Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at:
399 Elmhurst Street
Hayward, CA 94544
For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org
For Drilling Permit information and process contact James Yoo at
Phone: 510-670-6633
FAX: 510-782-1939
Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88 . The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

Drilling Permit Jurisdictions in Alameda County: There are four jurisdictions in Alameda County.

Location: Agency with Jurisdiction Contact Number

Berkeley City of Berkeley Ph: 510-981-7460
Fax: 510-540-5672

Fremont, Newark, Union City Alameda County Water District Ph: 510-668-4460
Fax: 510-651-1760

Pleasanton, Dublin, Livermore, Sunol Zone 7 Water Agency Ph: 925-454-5000
Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of **Oakland, Alameda,Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley**, and **Hayward** . The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

Permits are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application *(30 Kb)** , along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Fees
Beginning April 11, 2005 , the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells (*Horizontal hillside dewatering and dewatering for construction period only), shall cost $300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost $200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: **Treasurer, County of Alameda**

Permit Fees are exempt to State & Federal Projects
Applicants shall submit a letter from the agency requesting the fee exemption.

Scheduling Work/Inspections:
Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **James Yoo at 510-670-6633** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when Inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

Request for Permit Extension:
Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

Cancel a Drilling Permit:
Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

Refunds/Service Charge:
A service charge of $25.00 dollars for the first check returned and $35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of $50.00 (fifty Dollars).

To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed $500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is $1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors. The forms to request for refunds under $500.00 (Five Hundred Dollars) are available at this office or any County Offices. If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

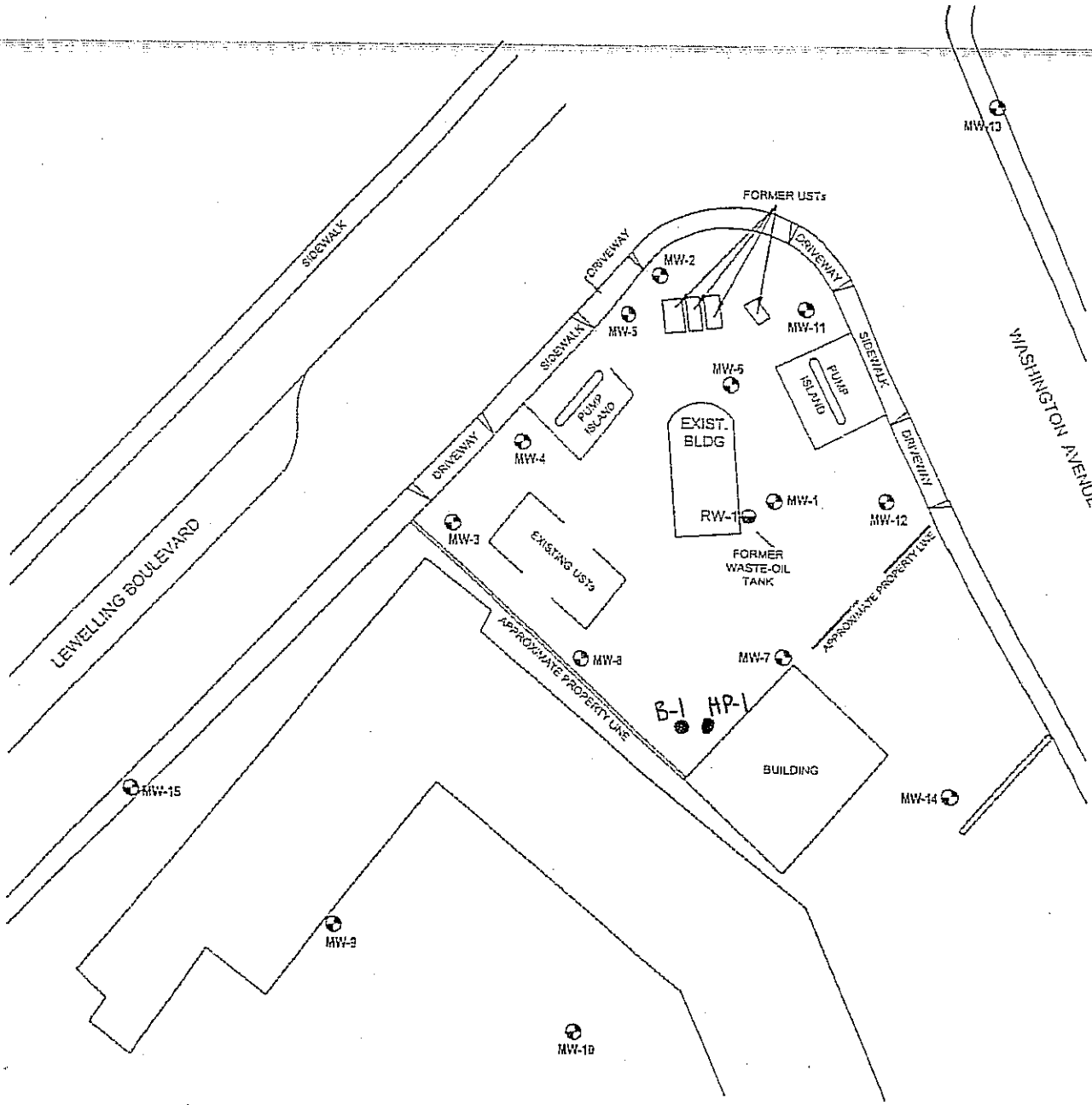
Enforcement
Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars ($500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such

violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

Enforcement actions will be determined by this office on a case-by-case basis
Drilling without a permit shall be the cost of the permit(s) and a fine of $500.00 (Five Hundred Dollars).

Well Completion Reports (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies.

See our website (www.acgov.org/pwa/wells/index.shtml) for links to additional forms.



LEGEND:

- GROUNDWATER MONITORING WELL
- SOIL VAPOR EXTRACTION WELL
- SOIL BORING / HYDROPUNCH LOCATION (Approximate)

NORTH

0 60 120

SCALE IN FEET

NOTES: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

URS	Project No. 38487284 ARCO Service Station #0601 712 Lewelling Boulevard San Leandro, California	SITE PLAN	FIGURE 2

jxquick0 Feb 02, 2006 - 4:19pm
X:\x_env_waste\BP GEM\Sites\Alok Kolekar - Sites\0601\Soil Investigation\Work Plan\Drawings\0601 Site Plan.dwg

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

Page 1 of 1

Project Name: Arco Station 601 - Assessment
BP BU/AR Region/Enfos Segment: BP/America/West Coast/Retail/Alameda/601
State or Lead Regulatory Agency: Alameda County Env. Health
Requested Due Date (mm/dd/yy): Std. TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: Test America	BP/AR Facility No.: 601
Address: 885 Jarvis Dr. Morgan Hill, CA 95037	BP/AR Facility Address: 712 Lewelling Blvd., San Leandro
Lab PM: Lisa Race	Site Lat/Long:
Tele/Fax: 408-782-8156	California Global ID No.: T06 001 001 08
BP/AR EBM: Paul Supple	Enfos Project No.: GOC 23-022
Address: 2010 Crow Canyon Pl. #150 San Ramon, CA	Provision of OOC (circle one)
Tele/Fax: 925-275-3506	Phase/WBS: 01 - Assessment
	Sub Phase/Task: 03 - Analytical
	Cost Element: 01 - Contractor labor

Consultant/Contractor: Stratus Environmental, Inc.	
Address: 3330 Cameron Park Dr. #550 Cameron Park, CA 95682	
Consultant/Contractor Project No.: E601	
Consultant/Contractor PM: J. Johnson	
Tele/Fax: 530-676-6000 / 676-6005	
Report Type & QC Level: level 1 w/ EDF	
E-mail EDD To:	
Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)	

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO	Requested Analysis: TPH-D	Requested Analysis: TPH-MO	Requested Analysis: BTEX	Requested Analysis: 5 oxys	Requested Analysis: EtOH	Sample Point Lat/Long and Comments
1	B1-58W	11:30	11-30-06		✓			6						✓	✓	✓	✓	✓	✓	2 amber bottles unpreserved 6 vials HCl preserved
2																				
3																				
4																				
5																				
6																				
7																				
8																				10.6 °C
9																				
10																				

Sampler's Name: Scott Bittinger	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus Environmental, Inc.	Scott Bittinger	11-30	14:30		11/30	1430
Shipment Date: 11-30						
Shipment Method: hand delivered						
Shipment Tracking No:						

Special Instructions:

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

Chain of Custody Record

Page 1 of 1

Project Name: Arco Station 601- Assessment
BP BU/AR Region/Enfos Segment: BP/Americas/West Coast/ Retail/ Alameda
State or Lead Regulatory Agency: Alameda County Environmental Health 601
Requested Due Date (mm/dd/yy): Std. TAT.

On-site Time: Temp:
Off-site Time: Temp:
Sky Conditions:
Meteorological Events:
Wind Speed: Direction:

Lab Name: Test America
Address: 885 Jarvis Dr. Morgan Hill, CA 95037
Lab PM: Lisa Race
Tele/Fax: 408-782-8156
BP/AR EBM: P. Supple
Address: 2010 Crow Canyon Pl., #150 San Ramon, CA
Tele/Fax: 925-275-3506
Lab Bottle Order No:

BP/AR Facility No.: 601
BP/AR Facility Address: 712 Lewelling Blvd, San Leandro
Site Lat/Long:
California Global ID No.: T0600100108
Enfos Project No.: G0C23-022
Provision or OOC (circle one) — Provision circled
Phase/WBS: 01- Assessment
Sub Phase/Task: 03-analytical
Cost Element: 01 -contractor labor

Consultant/Contractor: Stratus Environmental, Inc.
Address: 3330 Cameron Park Dr. #550 Cameron Park, CA 95682
Consultant/Contractor Project No.: E601
Consultant/Contractor PM: J. Johnson
Tele/Fax: 530-676-6000 / 676-6005
Report Type & QC Level: level 1 w/ EDF
E-mail EDD To:
Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one) — Atlantic Richfield Co. circled

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analysis: EGRO	8 pex	total lead							Sample Point Lat/Long and Comments
1	Waste Composite	10:30	11:30	✓				4						✓	✓	✓							
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							10.6 °C

Sampler's Name: Scott Bittinger
Sampler's Company: Stratus Environmental, Inc.
Shipment Date: 11-30-06
Shipment Method: ~~FedEX~~ hand delivered
Shipment Tracking No:
Special Instructions: ~~Rob Mahoney, Broadbent & Associates~~

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Scott Bittinger	11-30	14:30	[signature]	11/30	1430

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

Chain of Custody Record

Page 1 of 1

Project Name: ARCO Station 601 - Assessment
BP BU/AR Region/Enfos Segment: BP/Americas/Western/Retail/Alameda/601
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): Std. TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: Test America	BP/AR Facility No.: 601
Address: 885 Jarvis Dr. Morgan Hill, CA 95037	BP/AR Facility Address: 717 Lewelling Blvd., San Leandro
Lab PM: Lisa Race	Site Lat/Long:
Tele/Fax: 408-782-8156	California Global ID No.: T0600100108
BP/AR EBM: Paul Supple	Enfos Project No.: GOC23-0072
Address: 2010 Crow Canyon Pl., #150 San Ramon, CA	Provision or OOC (circle one)
Tele/Fax: 925 275-3506	Phase/WBS: 01 - Assessment
	Sub Phase/Task: 03 - analytical
	Cost Element: 01 - contractor labor

Consultant/Contractor: Stratus Environmental, Inc.	
Address: 3330 Cameron Park Dr., #550 Cameron Park, CA 95682	
Consultant/Contractor Project No.: E601	
Consultant/Contractor PM: J. Johnson	
Tele/Fax: 530-676-6000 / 530-676-6005	
Report Type & QC Level: level 1 w/ EDF	
E-mail EDD To:	
Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)	

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1	B1-15	8:45	11-30	✓				1						✓	✓	✓	✓	✓	✓	
2	B1-23	8:52						1												
3	B1-31	9:00						1												
4	B1-39	9:05						1												
5	B1-47	9:15						1												
6	B1-54	10:00	↓	↓				1												10.6 °C
7																				
8																				
9																				
10																				

Sampler's Name:	Scott Bittinger
Sampler's Company:	Stratus Environmental, Inc.
Shipment Date:	11-30-06
Shipment Method:	~~FedEx~~ hand delivered
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Scott Bittinger	11-30-06	14:30		11/30	1430

Special Instructions: CC: Rob Mitton - Broadbent Associates

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

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23 February, 2007

Jay Johnson
Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park, CA 95682

RE: ARCO #0601, San Leandro, CA
Work Order: MPL0018

Enclosed are the results of analyses for samples received by the laboratory on 12/01/06 08:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

Amended Report

CA ELAP Certificate # 1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1-15	MPL0018-01	Soil	11/30/06 08:45	12/01/06 08:00
B1-23	MPL0018-02	Soil	11/30/06 08:52	12/01/06 08:00
B1-31	MPL0018-03	Soil	11/30/06 09:00	12/01/06 08:00
B1-39	MPL0018-04	Soil	11/30/06 09:05	12/01/06 08:00
B1-47	MPL0018-05	Soil	11/30/06 09:15	12/01/06 08:00
B1-54	MPL0018-06	Soil	11/30/06 10:08	12/01/06 08:00

Revised report created 010507. Matrix units revised to report in mg/Kg.
Revised report created 2/23/07. Report includes the added TPH-D/MO with silica gel cleanup.

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Total Purgeable Hydrocarbons by GC/MS (CA LUFT)

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-15 (MPL0018-01) Soil Sampled: 11/30/06 08:45 Received: 12/01/06 08:00									
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg	1	6L04011	12/01/06	12/05/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*55-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95 %*	*60-120*		"	"	"	"	
Surrogate: Dibromofluoromethane		*97 %*	*70-120*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*70-120*		"	"	"	"	
B1-15 (MPL0018-01RE1) Soil Sampled: 11/30/06 08:45 Received: 12/01/06 08:00									
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg	1	6L04001	12/04/06	12/05/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*55-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95 %*	*60-120*		"	"	"	"	
Surrogate: Dibromofluoromethane		*97 %*	*70-120*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*70-120*		"	"	"	"	
B1-23 (MPL0018-02) Soil Sampled: 11/30/06 08:52 Received: 12/01/06 08:00									
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg	1	6L04011	12/01/06	12/05/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*55-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98 %*	*60-120*		"	"	"	"	
Surrogate: Dibromofluoromethane		*98 %*	*70-120*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*70-120*		"	"	"	"	
B1-31 (MPL0018-03) Soil Sampled: 11/30/06 09:00 Received: 12/01/06 08:00									
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg	1	6L04011	12/01/06	12/05/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*55-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*60-120*		"	"	"	"	
Surrogate: Dibromofluoromethane		*98 %*	*70-120*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*70-120*		"	"	"	"	

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Total Purgeable Hydrocarbons by GC/MS (CA LUFT)

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-39 (MPL0018-04) Soil Sampled: 11/30/06 09:05 Received: 12/01/06 08:00									
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg	1	6L05027	12/05/06	12/05/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*55-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92 %*	*60-120*		"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*70-120*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*70-120*		"	"	"	"	
B1-47 (MPL0018-05) Soil Sampled: 11/30/06 09:15 Received: 12/01/06 08:00									
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg	1	6L04011	12/01/06	12/05/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*55-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*60-120*		"	"	"	"	
Surrogate: Dibromofluoromethane		*99 %*	*70-120*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*70-120*		"	"	"	"	
B1-54 (MPL0018-06) Soil Sampled: 11/30/06 10:08 Received: 12/01/06 08:00									
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg	1	6L04011	12/01/06	12/05/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*55-135*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*60-120*		"	"	"	"	
Surrogate: Dibromofluoromethane		*94 %*	*70-120*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*70-120*		"	"	"	"	

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Extractable Hydrocarbons by EPA 8015B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-15 (MPL0018-01) Soil Sampled: 11/30/06 08:45 Received: 12/01/06 08:00									
Motor Oil (C16-C36)	ND	10	mg/kg	1	6L07020	12/07/06	12/08/06	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	**1.8**	1.0	"	"	"	"	"	"	HD
Surrogate: n-Octacosane		*93 %*	*40-120*		"	"	"	"	
B1-23 (MPL0018-02) Soil Sampled: 11/30/06 08:52 Received: 12/01/06 08:00									
Motor Oil (C16-C36)	ND	10	mg/kg	1	6L07020	12/07/06	12/08/06	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	ND	1.0	"	"	"	"	"	"	
Surrogate: n-Octacosane		*59 %*	*40-120*		"	"	"	"	
B1-31 (MPL0018-03) Soil Sampled: 11/30/06 09:00 Received: 12/01/06 08:00									
Motor Oil (C16-C36)	ND	10	mg/kg	1	6L07020	12/07/06	12/08/06	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	ND	1.0	"	"	"	"	"	"	
Surrogate: n-Octacosane		*93 %*	*40-120*		"	"	"	"	
B1-39 (MPL0018-04) Soil Sampled: 11/30/06 09:05 Received: 12/01/06 08:00									
Motor Oil (C16-C36)	ND	10	mg/kg	1	6L07020	12/07/06	12/08/06	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	ND	1.0	"	"	"	"	"	"	
Surrogate: n-Octacosane		*90 %*	*40-120*		"	"	"	"	
B1-47 (MPL0018-05) Soil Sampled: 11/30/06 09:15 Received: 12/01/06 08:00									
Motor Oil (C16-C36)	ND	10	mg/kg	1	6L07020	12/07/06	12/08/06	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	**1.2**	1.0	"	"	"	"	"	"	HD
Surrogate: n-Octacosane		*87 %*	*40-120*		"	"	"	"	
B1-54 (MPL0018-06) Soil Sampled: 11/30/06 10:08 Received: 12/01/06 08:00									
Motor Oil (C16-C36)	ND	10	mg/kg	1	6L07020	12/07/06	12/08/06	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	ND	1.0	"	"	"	"	"	"	
Surrogate: n-Octacosane		*90 %*	*40-120*		"	"	"	"	

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-15 (MPL0018-01) Soil Sampled: 11/30/06 08:45 Received: 12/01/06 08:00									**BU**
Motor Oil (C16-C36)	ND	10	mg/kg	1	6L07020	12/07/06	02/07/07	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	ND	1.0	"	"	"	"	"	"	
Surrogate: n-Octacosane		*79 %*	*40-120*		"	"	"	"	
B1-47 (MPL0018-05) Soil Sampled: 11/30/06 09:15 Received: 12/01/06 08:00									**BU**
Motor Oil (C16-C36)	ND	10	mg/kg	1	6L07020	12/07/06	02/07/07	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	ND	1.0	"	"	"	"	"	"	
Surrogate: n-Octacosane		*71 %*	*40-120*		"	"	"	"	

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-15 (MPL0018-01) Soil Sampled: 11/30/06 08:45 Received: 12/01/06 08:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	6L04011	12/01/06	12/05/06	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*97 %*		*70-120*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*		*55-135*		"	"	"	
Surrogate: Toluene-d8		*101 %*		*70-120*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*95 %*		*60-120*		"	"	"	
B1-23 (MPL0018-02) Soil Sampled: 11/30/06 08:52 Received: 12/01/06 08:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	6L04011	12/01/06	12/05/06	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*98 %*		*70-120*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*		*55-135*		"	"	"	
Surrogate: Toluene-d8		*101 %*		*70-120*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*98 %*		*60-120*		"	"	"	

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Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-31 (MPL0018-03) Soil Sampled: 11/30/06 09:00 Received: 12/01/06 08:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	6L04011	12/01/06	12/05/06	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*98 %*	*70-120*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*55-135*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*70-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*60-120*		"	"	"	"	
B1-39 (MPL0018-04) Soil Sampled: 11/30/06 09:05 Received: 12/01/06 08:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	6L05027	12/05/06	12/05/06	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*70-120*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*55-135*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*70-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92 %*	*60-120*		"	"	"	"	

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-47 (MPL0018-05) Soil Sampled: 11/30/06 09:15 Received: 12/01/06 08:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	6L04011	12/01/06	12/05/06	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*99 %*	*70-120*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*55-135*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*70-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*60-120*		"	"	"	"	
B1-54 (MPL0018-06) Soil Sampled: 11/30/06 10:08 Received: 12/01/06 08:00									
tert-Amyl methyl ether	ND	0.0050	mg/kg	1	6L04011	12/01/06	12/05/06	EPA 8260B	
Benzene	ND	0.0050	"	"	"	"	"	"	
tert-Butyl alcohol	ND	0.020	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.0050	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.0050	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.0050	"	"	"	"	"	"	
Ethanol	ND	0.10	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*94 %*	*70-120*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*55-135*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*70-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*60-120*		"	"	"	"	

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L04001 - EPA 5030B P/T / LUFT GCMS										
Blank (6L04001-BLK1)				Prepared & Analyzed: 12/04/06						
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	*0.00546*		"	*0.00500*		*109*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00514*		"	*0.00500*		*103*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00484*		"	*0.00500*		*97*	*70-120*			
Surrogate: Toluene-d8	*0.00514*		"	*0.00500*		*103*	*70-120*			
Laboratory Control Sample (6L04001-BS2)				Prepared & Analyzed: 12/04/06						
Gasoline Range Organics (C4-C12)	0.846	0.10	mg/kg	0.880		96	75-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00540*		"	*0.00500*		*108*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00534*		"	*0.00500*		*107*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00520*		"	*0.00500*		*104*	*70-120*			
Surrogate: Toluene-d8	*0.00520*		"	*0.00500*		*104*	*70-120*			
Laboratory Control Sample Dup (6L04001-BSD2)				Prepared & Analyzed: 12/04/06						
Gasoline Range Organics (C4-C12)	0.791	0.10	mg/kg	0.880		90	75-140	7	35	
Surrogate: 1,2-Dichloroethane-d4	*0.00554*		"	*0.00500*		*111*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00528*		"	*0.00500*		*106*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00494*		"	*0.00500*		*99*	*70-120*			
Surrogate: Toluene-d8	*0.00526*		"	*0.00500*		*105*	*70-120*			
Batch 6L04011 - EPA 5030 (pres 48h)/5035 / LUFT GCMS										
Blank (6L04011-BLK1)				Prepared & Analyzed: 12/04/06						
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	*0.00546*		"	*0.00500*		*109*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00514*		"	*0.00500*		*103*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00484*		"	*0.00500*		*97*	*70-120*			
Surrogate: Toluene-d8	*0.00514*		"	*0.00500*		*103*	*70-120*			

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L04011 - EPA 5030 (pres 48h)/5035 / LUFT GCMS										
Laboratory Control Sample (6L04011-BS2)				Prepared & Analyzed: 12/04/06						
Gasoline Range Organics (C4-C12)	0.846	0.10	mg/kg	0.880		96	75-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00542*		"	*0.00500*		*108*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00530*		"	*0.00500*		*106*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00496*		"	*0.00500*		*99*	*70-120*			
Surrogate: Toluene-d8	*0.00526*		"	*0.00500*		*105*	*70-120*			
Laboratory Control Sample Dup (6L04011-BSD2)				Prepared & Analyzed: 12/04/06						
Gasoline Range Organics (C4-C12)	0.791	0.10	mg/kg	0.880		90	75-140	7	35	
Surrogate: 1,2-Dichloroethane-d4	*0.00554*		"	*0.00500*		*111*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00528*		"	*0.00500*		*106*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00494*		"	*0.00500*		*99*	*70-120*			
Surrogate: Toluene-d8	*0.00526*		"	*0.00500*		*105*	*70-120*			
Batch 6L05027 - EPA 5030 (pres 48h)/5035 / LUFT GCMS										
Blank (6L05027-BLK1)				Prepared & Analyzed: 12/05/06						
Gasoline Range Organics (C4-C12)	ND	0.10	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	*0.00508*		"	*0.00500*		*102*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00506*		"	*0.00500*		*101*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00522*		"	*0.00500*		*104*	*70-120*			
Surrogate: Toluene-d8	*0.00534*		"	*0.00500*		*107*	*70-120*			
Laboratory Control Sample (6L05027-BS2)				Prepared & Analyzed: 12/05/06						
Gasoline Range Organics (C4-C12)	1.11	0.10	mg/kg	0.880		126	75-140			
Surrogate: 1,2-Dichloroethane-d4	*0.00490*		"	*0.00500*		*98*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00556*		"	*0.00500*		*111*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00492*		"	*0.00500*		*98*	*70-120*			
Surrogate: Toluene-d8	*0.00542*		"	*0.00500*		*108*	*70-120*			

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Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L05027 - EPA 5030 (pres 48h)/5035 / LUFT GCMS										
Laboratory Control Sample Dup (6L05027-BSD2)				Prepared & Analyzed: 12/05/06						
Gasoline Range Organics (C4-C12)	1.11	0.10	mg/kg	0.880		126	75-140	0	35	
Surrogate: 1,2-Dichloroethane-d4	*0.00474*		"	*0.00500*		*95*	*55-135*			
Surrogate: 4-Bromofluorobenzene	*0.00572*		"	*0.00500*		*114*	*60-120*			
Surrogate: Dibromofluoromethane	*0.00496*		"	*0.00500*		*99*	*70-120*			
Surrogate: Toluene-d8	*0.00536*		"	*0.00500*		*107*	*70-120*			

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Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Extractable Hydrocarbons by EPA 8015B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L07020 - EPA 3550B / EPA 8015B-SVOA										
Blank (6L07020-BLK1)				Prepared: 12/07/06	Analyzed: 12/08/06					
Motor Oil (C16-C36)	ND	10	mg/kg							
Diesel Range Organics (C10-C28)	ND	1.0	"							
Surrogate: n-Octacosane	*1.71*		"	*1.67*		*102*	*40-120*			
Laboratory Control Sample (6L07020-BS1)				Prepared: 12/07/06	Analyzed: 12/08/06					
Diesel Range Organics (C10-C28)	16.1	1.0	mg/kg	16.7		96	60-115			
Surrogate: n-Octacosane	*1.73*		"	*1.67*		*104*	*40-120*			
Matrix Spike (6L07020-MS1)	**Source: MPL0130-08**			Prepared: 12/07/06	Analyzed: 12/08/06					
Diesel Range Organics (C10-C28)	23.2	2.0	mg/kg	16.7	12	67	60-115			
Surrogate: n-Octacosane	*1.99*		"	*1.67*		*119*	*40-120*			
Matrix Spike Dup (6L07020-MSD1)	**Source: MPL0130-08**			Prepared: 12/07/06	Analyzed: 12/08/06					
Diesel Range Organics (C10-C28)	25.5	2.0	mg/kg	16.7	12	81	60-115	9	40	
Surrogate: n-Octacosane	*2.13*		"	*1.67*		*128*	*40-120*			*LH,AY*

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Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L07020 - EPA 3550B / EPA 8015B-SVOA										
Blank (6L07020-BLK1)				Prepared: 12/07/06 Analyzed: 02/07/07						**BU**
Motor Oil (C16-C36)	ND	10	mg/kg							
Diesel Range Organics (C10-C28)	ND	1.0	"							
Surrogate: n-Octacosane	*1.14*		"	*1.67*		*68*	*40-120*			
Laboratory Control Sample (6L07020-BS1)				Prepared: 12/07/06 Analyzed: 02/07/07						**BU**
Diesel Range Organics (C10-C28)	15.6	1.0	mg/kg	16.7		93	60-115			
Surrogate: n-Octacosane	*1.55*		"	*1.67*		*93*	*40-120*			

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Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L04011 - EPA 5030 (pres 48h)/5035 / EPA 8260B										
Blank (6L04011-BLK1)				Prepared & Analyzed: 12/04/06						
tert-Amyl methyl ether	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
tert-Butyl alcohol	ND	0.020	"							
Di-isopropyl ether	ND	0.0050	"							
1,2-Dibromoethane (EDB)	ND	0.0050	"							
1,2-Dichloroethane	ND	0.0050	"							
Ethanol	ND	0.10	"							
Ethyl tert-butyl ether	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: Dibromofluoromethane	*0.00484*		"	*0.00500*		*97*	*70-120*			
Surrogate: 1,2-Dichloroethane-d4	*0.00546*		"	*0.00500*		*109*	*55-135*			
Surrogate: Toluene-d8	*0.00514*		"	*0.00500*		*103*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*0.00514*		"	*0.00500*		*103*	*60-120*			
Laboratory Control Sample (6L04011-BS1)				Prepared & Analyzed: 12/04/06						
tert-Amyl methyl ether	0.0233	0.0050	mg/kg	0.0200		116	65-140			
Benzene	0.0213	0.0050	"	0.0200		106	70-130			
tert-Butyl alcohol	0.428	0.020	"	0.400		107	75-130			
Di-isopropyl ether	0.0222	0.0050	"	0.0200		111	70-130			
1,2-Dibromoethane (EDB)	0.0234	0.0050	"	0.0200		117	80-135			
1,2-Dichloroethane	0.0232	0.0050	"	0.0200		116	70-120			
Ethanol	0.360	0.10	"	0.400		90	65-150			
Ethyl tert-butyl ether	0.0236	0.0050	"	0.0200		118	70-125			
Ethylbenzene	0.0228	0.0050	"	0.0200		114	75-130			
Methyl tert-butyl ether	0.0239	0.0050	"	0.0200		120	75-130			
Toluene	0.0221	0.0050	"	0.0200		110	75-130			
Xylenes (total)	0.0686	0.0050	"	0.0600		114	75-135			
Surrogate: Dibromofluoromethane	*0.00520*		"	*0.00500*		*104*	*70-120*			
Surrogate: 1,2-Dichloroethane-d4	*0.00540*		"	*0.00500*		*108*	*55-135*			
Surrogate: Toluene-d8	*0.00520*		"	*0.00500*		*104*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*0.00534*		"	*0.00500*		*107*	*60-120*			

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3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L04011 - EPA 5030 (pres 48h)/5035 / EPA 8260B										
Matrix Spike (6L04011-MS1)	**Source: MPL0018-01**			Prepared: 12/04/06		Analyzed: 12/05/06				
tert-Amyl methyl ether	0.0234	0.0050	mg/kg	0.0200	ND	117	65-140			
Benzene	0.0224	0.0050	"	0.0200	ND	112	70-130			
tert-Butyl alcohol	0.452	0.020	"	0.400	ND	113	75-130			
Di-isopropyl ether	0.0232	0.0050	"	0.0200	ND	116	70-130			
1,2-Dibromoethane (EDB)	0.0236	0.0050	"	0.0200	ND	118	80-135			
1,2-Dichloroethane	0.0232	0.0050	"	0.0200	ND	116	70-120			
Ethanol	0.339	0.10	"	0.400	ND	85	65-150			
Ethyl tert-butyl ether	0.0240	0.0050	"	0.0200	ND	120	70-125			
Ethylbenzene	0.0246	0.0050	"	0.0200	ND	123	75-130			
Methyl tert-butyl ether	0.0245	0.0050	"	0.0200	0.00040	120	75-130			
Toluene	0.0231	0.0050	"	0.0200	ND	116	75-130			
Xylenes (total)	0.0751	0.0050	"	0.0600	0.00098	124	75-135			
Surrogate: Dibromofluoromethane	*0.00512*		"	*0.00500*		*102*	*70-120*			
Surrogate: 1,2-Dichloroethane-d4	*0.00528*		"	*0.00500*		*106*	*55-135*			
Surrogate: Toluene-d8	*0.00516*		"	*0.00500*		*103*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*0.00508*		"	*0.00500*		*102*	*60-120*			
Matrix Spike Dup (6L04011-MSD1)	**Source: MPL0018-01**			Prepared: 12/04/06		Analyzed: 12/05/06				
tert-Amyl methyl ether	0.0216	0.0050	mg/kg	0.0200	ND	108	65-140	8	25	
Benzene	0.0195	0.0050	"	0.0200	ND	98	70-130	14	25	
tert-Butyl alcohol	0.405	0.020	"	0.400	ND	101	75-130	11	25	
Di-isopropyl ether	0.0207	0.0050	"	0.0200	ND	104	70-130	11	40	
1,2-Dibromoethane (EDB)	0.0215	0.0050	"	0.0200	ND	108	80-135	9	20	
1,2-Dichloroethane	0.0212	0.0050	"	0.0200	ND	106	70-120	9	30	
Ethanol	0.301	0.10	"	0.400	ND	75	65-150	12	30	
Ethyl tert-butyl ether	0.0219	0.0050	"	0.0200	ND	110	70-125	9	30	
Ethylbenzene	0.0210	0.0050	"	0.0200	ND	105	75-130	16	30	
Methyl tert-butyl ether	0.0227	0.0050	"	0.0200	0.00040	112	75-130	8	25	
Toluene	0.0200	0.0050	"	0.0200	ND	100	75-130	14	20	
Xylenes (total)	0.0645	0.0050	"	0.0600	0.00098	106	75-135	15	25	
Surrogate: Dibromofluoromethane	*0.00520*		"	*0.00500*		*104*	*70-120*			
Surrogate: 1,2-Dichloroethane-d4	*0.00540*		"	*0.00500*		*108*	*55-135*			
Surrogate: Toluene-d8	*0.00520*		"	*0.00500*		*104*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*0.00500*		"	*0.00500*		*100*	*60-120*			

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L05027 - EPA 5030 (pres 48h)/5035 / EPA 8260B										
Blank (6L05027-BLK1)				Prepared & Analyzed: 12/05/06						
tert-Amyl methyl ether	ND	0.0050	mg/kg							
Benzene	ND	0.0050	"							
tert-Butyl alcohol	ND	0.020	"							
Di-isopropyl ether	ND	0.0050	"							
1,2-Dibromoethane (EDB)	ND	0.0050	"							
1,2-Dichloroethane	ND	0.0050	"							
Ethanol	ND	0.10	"							
Ethyl tert-butyl ether	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.0050	"							
Toluene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: Dibromofluoromethane	*0.00522*		"	*0.00500*		*104*	*70-120*			
Surrogate: 1,2-Dichloroethane-d4	*0.00508*		"	*0.00500*		*102*	*55-135*			
Surrogate: Toluene-d8	*0.00534*		"	*0.00500*		*107*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*0.00506*		"	*0.00500*		*101*	*60-120*			
Laboratory Control Sample (6L05027-BS1)				Prepared & Analyzed: 12/05/06						
tert-Amyl methyl ether	0.0237	0.0050	mg/kg	0.0200		118	65-140			
Benzene	0.0224	0.0050	"	0.0200		112	70-130			
tert-Butyl alcohol	0.392	0.020	"	0.400		98	75-130			
Di-isopropyl ether	0.0218	0.0050	"	0.0200		109	70-130			
1,2-Dibromoethane (EDB)	0.0240	0.0050	"	0.0200		120	80-135			
1,2-Dichloroethane	0.0217	0.0050	"	0.0200		108	70-120			
Ethanol	0.370	0.10	"	0.400		92	65-150			
Ethyl tert-butyl ether	0.0220	0.0050	"	0.0200		110	70-125			
Ethylbenzene	0.0208	0.0050	"	0.0200		104	75-130			
Methyl tert-butyl ether	0.0227	0.0050	"	0.0200		114	75-130			
Toluene	0.0222	0.0050	"	0.0200		111	75-130			
Xylenes (total)	0.0663	0.0050	"	0.0600		110	75-135			
Surrogate: Dibromofluoromethane	*0.00514*		"	*0.00500*		*103*	*70-120*			
Surrogate: 1,2-Dichloroethane-d4	*0.00480*		"	*0.00500*		*96*	*55-135*			
Surrogate: Toluene-d8	*0.00546*		"	*0.00500*		*109*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*0.00544*		"	*0.00500*		*109*	*60-120*			

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(408) 776-9600
FAX (408) 782-6308
www.testamericainc.com

Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L05027 - EPA 5030 (pres 48h)/5035 / EPA 8260B										
Matrix Spike (6L05027-MS1)	**Source: MPL0046-04RE2**			Prepared & Analyzed: 12/05/06						
tert-Amyl methyl ether	0.0230	0.0050	mg/kg	0.0200	ND	115	65-140			
Benzene	0.0210	0.0050	"	0.0200	ND	105	70-130			
tert-Butyl alcohol	0.385	0.020	"	0.400	ND	96	75-130			
Di-isopropyl ether	0.0230	0.0050	"	0.0200	ND	115	70-130			
1,2-Dibromoethane (EDB)	0.0225	0.0050	"	0.0200	ND	112	80-135			
1,2-Dichloroethane	0.0223	0.0050	"	0.0200	ND	112	70-120			
Ethanol	0.402	0.10	"	0.400	ND	100	65-150			
Ethyl tert-butyl ether	0.0224	0.0050	"	0.0200	ND	112	70-125			
Ethylbenzene	0.0187	0.0050	"	0.0200	0.00026	92	75-130			
Methyl tert-butyl ether	0.0223	0.0050	"	0.0200	ND	112	75-130			
Toluene	0.0207	0.0050	"	0.0200	ND	104	75-130			
Xylenes (total)	0.0589	0.0050	"	0.0600	0.00096	97	75-135			
Surrogate: Dibromofluoromethane	*0.00534*		"	*0.00500*		*107*	*70-120*			
Surrogate: 1,2-Dichloroethane-d4	*0.00540*		"	*0.00500*		*108*	*55-135*			
Surrogate: Toluene-d8	*0.00540*		"	*0.00500*		*108*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*0.00534*		"	*0.00500*		*107*	*60-120*			
Matrix Spike Dup (6L05027-MSD1)	**Source: MPL0046-04RE2**			Prepared & Analyzed: 12/05/06						
tert-Amyl methyl ether	0.0208	0.0050	mg/kg	0.0200	ND	104	65-140	10	25	
Benzene	0.0199	0.0050	"	0.0200	ND	100	70-130	5	25	
tert-Butyl alcohol	0.371	0.020	"	0.400	ND	93	75-130	4	25	
Di-isopropyl ether	0.0216	0.0050	"	0.0200	ND	108	70-130	6	40	
1,2-Dibromoethane (EDB)	0.0207	0.0050	"	0.0200	ND	104	80-135	8	20	
1,2-Dichloroethane	0.0208	0.0050	"	0.0200	ND	104	70-120	7	30	
Ethanol	0.469	0.10	"	0.400	ND	117	65-150	15	30	
Ethyl tert-butyl ether	0.0204	0.0050	"	0.0200	ND	102	70-125	9	30	
Ethylbenzene	0.0183	0.0050	"	0.0200	0.00026	90	75-130	2	30	
Methyl tert-butyl ether	0.0200	0.0050	"	0.0200	ND	100	75-130	11	25	
Toluene	0.0198	0.0050	"	0.0200	ND	99	75-130	4	20	
Xylenes (total)	0.0574	0.0050	"	0.0600	0.00096	94	75-135	3	25	
Surrogate: Dibromofluoromethane	*0.00496*		"	*0.00500*		*99*	*70-120*			
Surrogate: 1,2-Dichloroethane-d4	*0.00526*		"	*0.00500*		*105*	*55-135*			
Surrogate: Toluene-d8	*0.00526*		"	*0.00500*		*105*	*70-120*			
Surrogate: 4-Bromofluorobenzene	*0.00500*		"	*0.00500*		*100*	*60-120*			

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0018
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-0022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 14:53

Notes and Definitions

SG	A silica gel cleanup procedure was performed.
LH,AY	Surrogate recovery above the acceptance limits. Matrix interference suspected.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
BU	Sample analyzed after holding time expired
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Lisa Race

From: Scott Bittinger [sbittinger@stratusinc.net]
Sent: Friday, February 02, 2007 10:08 AM
To: Lisa Race
Subject: ARCO Station 601 sample issues

Revised
~~MPL0018~~
MPL0018
MPL0020

Please proceed with the silica gel clean-up procedure and re-run of these samples.

Scott Bittinger

-----Original Message-----
From: Rob Miller [mailto:rhmiller@broadbentinc.com]
Sent: Friday, February 02, 2007 9:03 AM
To: Tom Venus; jjohnson@stratusinc.net; 'Supple, Paul V'
Cc: 'Scott Bittinger'
Subject: Re: Request for Test America re: BP 601

All,
In speaking with Paul about re-running this analysis following silica gel cleanup, he would like us to move forward. Tom is on vacation starting today, so I'm not sure if he already requested Stratus to provide Test America with this go-ahead direction. If so, great. If not, Jay or Scott, could you provide authorization to Lisa to move forward with the rerun?
Many thanks,
Rob

----- Original Message -----
From: Tom Venus
To: jjohnson@stratusinc.net ; 'Supple, Paul V' ; 'Rob Miller'
Cc: 'Scott Bittinger'
Sent: Wednesday, January 31, 2007 4:44 PM
Subject: RE: Request for Test America re: BP 601

I spoke with Lisa Race at Test America about the chromatograms. The sharp distinct peak at 19.6 minutes is the Test Surrogate (It is intentionally introduced in the lab – It was not within the sample). Lisa also said that it was highly unlikely that the peaks were those of solvents, which would have been expected to appear much sooner after the methylene chloride solvent carrier flush around the first minute of run time. The peak at 17.8 minutes in water sample 20-01 appears around the average expected time for motor oil. Test America could rerun the sample extracts following silica gel cleanup, but that request would have to come from Stratus.

Tom Venus, PE
Senior Engineer
Broadbent & Associates, Inc.
1324 Mangrove Ave., Ste. 212
Chico, California 95926
(530) 566-1400 phone
(530) 566-1401 fax
(530) 588-5887 mobile
tvenus@broadbentinc.com

From: Lisa Race [mailto:lrace@testamericainc.com]
Sent: Wednesday, January 31, 2007 3:19 PM
To: Tom Venus; Scott Bittinger

Cc: jjohnson@stratusinc.net; Supple, Paul V; Rob Miller
Subject: RE: Request for Test America re: BP 601

Please find attached the chromatograms for the requested samples. We still have the extracts if you would like to have the Silica Gel cleanup done on them. That may clean up some of the peaks. We have identified the peaks to the best of our abilities using this method on the attached chromatograms.

Lisa Race
Senior Project Manager, Morgan Hill, CA
TestAmerica Analytical Testing Corporation
Tel.: 408-776-9600
Direct.: 408-782-8156
Fax: 408-782-6308
e-mail: lrace@testamericainc.com
NOTE NEW E-MAIL ADDRESS

From: Tom Venus [mailto:tvenus@broadbentinc.com]
Sent: Monday, January 29, 2007 4:10 PM
To: 'Scott Bittinger'
Cc: jjohnson@stratusinc.net; 'Supple, Paul V'; Lisa Race; 'Rob Miller'
Subject: Request for Test America re: BP 601

Scott,

Paul Supple asked me to ask Test America if they could tentatively identify the compound(s) that were detected in the DRO analyses during the deep boring investigation at BP 601 (1.8 and 1.2 mg/kg in soil samples B1-15 and B1-47; and 310 µg/L in water sample B1-58)

I contacted Test America, who informed me that the request must come from Stratus. Therefore, would you please ask Test America if they can clarify how the pattern differed from the DRO standard, or perhaps even tentatively identify the compound in the samples listed below? If they can not tentatively identify the compounds from the previous analyses, would you ask them if they have any of the samples left to re-analyze, following silica-gel extraction?

Test America Report/Order No. MPL0018
Soil Sample B1-15 (MPL0018-01)
Soil Sample B1-47 (MPL0018-05

Test America Report/Order No. MPL0020
Water Sample B1-58 (MPL0020-01)

Probably the easiest for you would be to forward this email to Lisa Race at lrace@testamericainc.com

Any questions, please call me at your earliest convenience.
With regards,

Tom Venus, PE
Senior Engineer
Broadbent & Associates, Inc.
1324 Mangrove Ave., Ste. 212
Chico, California 95926
(530) 566-1400 phone
(530) 566-1401 fax

(530) 588-5887 mobile
tvenus@broadbentinc.com

Atlantic Richfield Company

bp A BP affiliated company

Chain of Custody Record

Project Name: ARCO Station 601 - Assessment
BP BU/AR Region/Enfos Segment: BP/Americas/Western/Retail/Alameda/601
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): Std. TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: Test America	BP/AR Facility No.: 601
Address: 885 Jarvis Dr. Morgan Hill, CA 95037	BP/AR Facility Address: 717 Lewelling Blvd., San Leandro
Lab PM: Lisa Race	Site Lat/Long:
Tele/Fax: 408-782-8156	California Global ID No.: T0600100103
BP/AR EBM: Paul Supple	Enfos Project No.: GOC23-0072
Address: 2010 Crow Canyon Pl., #150 San Ramon, CA	Provision or OOC (circle one)
Tele/Fax: 925 275-3506	Phase/WBS: 01 - Assessment
	Sub Phase/Task: 03 - analytical
	Cost Element: 01 - contractor labor

Consultant/Contractor: Stratus Environmental, Inc.	
Address: 3330 Cameron Park Dr., #550 Cameron Park, CA 95682	
Consultant/Contractor Project No.: E601	
Consultant/Contractor PM: J. Johnson	
Tele/Fax: 530-676-6000 / 916 676-6005	
Report Type & QC Level: level 1 w/ EDF	
E-mail EDD To:	
Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)	

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO	Requested Analysis: TPHD	Requested Analysis: TPH-motor oil	Requested Analysis: BTEX	Requested Analysis: 5 oxys	Requested Analysis: ethylene dibromide	Sample Point Lat/Long and Comments
1	B1-15	8:45	11-30	✓			01	1						✓	✓	✓	✓	✓	✓	HP20018
2	B1-23	8:52	↓	↓			02	1						↓	↓	↓	↓	↓	↓	
3	B1-31	9:00					03	1												
4	B1-39	9:05					04	1												
5	B1-47	9:15					05	1												
6	B1-54	10:08	↓	↓			06	1						↓	↓	↓	↓	↓	↓	
7																				
8																				
9																				10.6 °C
10																				

Sampler's Name:	Scott Bittinger
Sampler's Company:	Stratus Environmental, Inc.
Shipment Date:	11-30-06
Shipment Method:	~~FedEx~~ hand delivered
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Scott Bittinger	11-30	14:30			
	11/30	1432	JAMIE NG (MH)	11/30	1430
				12/01	0800

Special Instructions: cc: Rob Miller - Broadbent Associates

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 4.3 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: BP/ARCO
REC. BY (PRINT) JULIE NG.
WORKORDER: MPL0018

DATE REC'D AT LAB: 12/01/06
TIME REC'D AT LAB: 0800
DATE LOGGED IN: 12-1-06

For Regulatory Purposes?
DRINKING WATER YES / (NO)
WASTE WATER YES / (NO)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / (Absent) Intact / Broken*	01	B1 - 15	1 plastic core	—	—	S	11/30	
2. Chain-of-Custody (Present) / Absent*	02	- 23	↓	↓	↓	↓	↓	
3. Traffic Reports or Packing List: Present / (Absent)	03	- 31						
4. Airbill: Airbill / Sticker (Present) / Absent	04	- 39						
5. Airbill #: 1001011274 2849	05	- 47						
6. Sample Labels: (Present) / Absent	06	- 54						
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody								
8. Sample Condition: (Intact) / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No*								
10. Sample received within hold time? (Yes) / No*								
11. Adequate sample volume received? (Yes) / No*								
12. Proper preservatives used? (Yes) / No*								
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / (No*)								
14. Read Temp: 3.3°C								
Corrected Temp: 4.3°C								
Is corrected temp 4 +/-2°C? (Yes) / No**								

(Acceptance range for samples requiring thermal pres.)

Exception (if any): METALS / DFF ON ICE
Problem COC

12/01/06
JULIE NG

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

(19/05)

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23 February, 2007

Jay Johnson
Stratus Environmental Inc. [Arco]
3330 Cameron Park Dr., Suite 550
Cameron Park, CA 95682

RE: ARCO #0601, San Leandro, CA
Work Order: MPL0020

Enclosed are the results of analyses for samples received by the laboratory on 12/01/06 08:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race
Senior Project Manager

Amended Report

CA ELAP Certificate # 1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0020
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1-58W	MPL0020-01	Water	11/30/06 11:30	12/01/06 08:00

Revised report created 2/23/07. Report includes the added TPH-D/MO with silica gel cleanup.

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3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Total Purgeable Hydrocarbons by GC/MS (CA LUFT)

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-58W (MPL0020-01) Water Sampled: 11/30/06 11:30 Received: 12/01/06 08:00									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6L08028	12/08/06	12/09/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		*116 %*	*60-145*		"	"	"	"	

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Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0020
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Extractable Hydrocarbons by EPA 8015B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-58W (MPL0020-01) Water Sampled: 11/30/06 11:30 Received: 12/01/06 08:00									
Motor Oil (C16-C36)	ND	470	ug/l	1	6L05022	12/05/06	12/07/06	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	**310**	47	"	"	"	"	"	"	HD
Surrogate: n-Octacosane		*98 %*	*30-115*		"	"	"	"	

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0020
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-58W (MPL0020-01) Water Sampled: 11/30/06 11:30 Received: 12/01/06 08:00									**BU**
Motor Oil (C16-C36)	ND	470	ug/l	1	6L05022	12/05/06	02/07/07	EPA 8015B-SVOA	
Diesel Range Organics (C10-C28)	**260**	47	"	"	"	"	"	"	HD
Surrogate: n-Octacosane		*95 %*	*30-115*		"	"	"	"	

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3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B1-58W (MPL0020-01) Water Sampled: 11/30/06 11:30 Received: 12/01/06 08:00									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6L08028	12/08/06	12/09/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	IC
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	**0.58**	0.50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*		*75-130*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*116 %*		*60-145*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*70-130*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90 %*		*60-120*	"	"	"	"	

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3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	Reported:
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L08028 - EPA 5030B P/T / LUFT GCMS										
Blank (6L08028-BLK1)				Prepared & Analyzed: 12/08/06						
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	*2.60*		"	*2.50*		*104*	*60-145*			
Laboratory Control Sample (6L08028-BS2)				Prepared & Analyzed: 12/08/06						
Gasoline Range Organics (C4-C12)	468	50	ug/l	500		94	75-140			
Surrogate: 1,2-Dichloroethane-d4	*2.72*		"	*2.50*		*109*	*60-145*			
Laboratory Control Sample Dup (6L08028-BSD2)				Prepared & Analyzed: 12/08/06						
Gasoline Range Organics (C4-C12)	506	50	ug/l	500		101	75-140	8	20	
Surrogate: 1,2-Dichloroethane-d4	*2.72*		"	*2.50*		*109*	*60-145*			

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3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Extractable Hydrocarbons by EPA 8015B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L05022 - EPA 3510C / EPA 8015B-SVOA										
Blank (6L05022-BLK1)				Prepared & Analyzed: 12/05/06						
Motor Oil (C16-C36)	ND	500	ug/l							
Diesel Range Organics (C10-C28)	ND	50	"							
Surrogate: n-Octacosane	*34.4*		"	*50.0*		*69*	*30-115*			
Laboratory Control Sample (6L05022-BS1)				Prepared & Analyzed: 12/05/06						
Diesel Range Organics (C10-C28)	307	50	ug/l	500		61	40-140			
Surrogate: n-Octacosane	*36.6*		"	*50.0*		*73*	*30-115*			
Laboratory Control Sample Dup (6L05022-BSD1)				Prepared & Analyzed: 12/05/06						
Diesel Range Organics (C10-C28)	269	50	ug/l	500		54	40-140	13	35	
Surrogate: n-Octacosane	*31.4*		"	*50.0*		*63*	*30-115*			

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Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0020
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L05022 - EPA 3510C / EPA 8015B-SVOA										
Blank (6L05022-BLK1)				Prepared: 12/05/06	Analyzed: 02/07/07					**BU**
Motor Oil (C16-C36)	ND	500	ug/l							
Diesel Range Organics (C10-C28)	ND	50	"							
Surrogate: n-Octacosane	*40.0*		"	*50.0*		*80*	*30-115*			
Laboratory Control Sample (6L05022-BS1)				Prepared: 12/05/06	Analyzed: 02/07/07					**BU**
Diesel Range Organics (C10-C28)	369	50	ug/l	500		74	40-140			
Surrogate: n-Octacosane	*44.4*		"	*50.0*		*89*	*30-115*			
Laboratory Control Sample Dup (6L05022-BSD1)				Prepared: 12/05/06	Analyzed: 02/07/07					**BU**
Diesel Range Organics (C10-C28)	309	50	ug/l	500		62	40-140	18	35	
Surrogate: n-Octacosane	*36.4*		"	*50.0*		*73*	*30-115*			

TestAmerica
ANALYTICAL TESTING CORPORATION

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.testamericainc.com

Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0020
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L08028 - EPA 5030B P/T / EPA 8260B										
Blank (6L08028-BLK1)				Prepared & Analyzed: 12/08/06						
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
Ethanol	ND	300	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: Dibromofluoromethane	*2.43*		"	*2.50*		*97*	*75-130*			
Surrogate: 1,2-Dichloroethane-d4	*2.60*		"	*2.50*		*104*	*60-145*			
Surrogate: Toluene-d8	*2.52*		"	*2.50*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.33*		"	*2.50*		*93*	*60-120*			
Laboratory Control Sample (6L08028-BS1)				Prepared & Analyzed: 12/08/06						
tert-Amyl methyl ether	10.0	0.50	ug/l	10.0		100	65-135			
Benzene	9.60	0.50	"	10.0		96	70-125			
tert-Butyl alcohol	187	20	"	200		94	60-135			
Di-isopropyl ether	9.04	0.50	"	10.0		90	70-130			
Ethanol	151	300	"	200		76	15-150			
Ethyl tert-butyl ether	9.59	0.50	"	10.0		96	65-130			
Ethylbenzene	9.36	0.50	"	10.0		94	70-130			
Methyl tert-butyl ether	10.5	0.50	"	10.0		105	50-140			
Toluene	9.27	0.50	"	10.0		93	70-120			
Xylenes (total)	28.5	0.50	"	30.0		95	80-125			
Surrogate: Dibromofluoromethane	*2.64*		"	*2.50*		*106*	*75-130*			
Surrogate: 1,2-Dichloroethane-d4	*2.60*		"	*2.50*		*104*	*60-145*			
Surrogate: Toluene-d8	*2.63*		"	*2.50*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.60*		"	*2.50*		*104*	*60-120*			

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0020
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6L08028 - EPA 5030B P/T / EPA 8260B										
Matrix Spike (6L08028-MS1)	**Source: MPL0188-01**			Prepared: 12/08/06 Analyzed: 12/09/06						
tert-Amyl methyl ether	12.8	0.50	ug/l	10.0	ND	128	65-135			
Benzene	10.5	0.50	"	10.0	ND	105	70-125			
tert-Butyl alcohol	211	20	"	200	ND	106	60-135			
Di-isopropyl ether	11.7	0.50	"	10.0	ND	117	70-130			
Ethanol	231	300	"	200	ND	116	15-150			
Ethyl tert-butyl ether	11.8	0.50	"	10.0	ND	118	65-130			
Ethylbenzene	9.67	0.50	"	10.0	ND	97	70-130			
Methyl tert-butyl ether	13.0	0.50	"	10.0	ND	130	50-140			
Toluene	9.97	0.50	"	10.0	ND	100	70-120			
Xylenes (total)	29.6	0.50	"	30.0	ND	99	80-125			
Surrogate: Dibromofluoromethane	*2.94*		"	*2.50*		*118*	*75-130*			
Surrogate: 1,2-Dichloroethane-d4	*3.12*		"	*2.50*		*125*	*60-145*			
Surrogate: Toluene-d8	*2.65*		"	*2.50*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.70*		"	*2.50*		*108*	*60-120*			
Matrix Spike Dup (6L08028-MSD1)	**Source: MPL0188-01**			Prepared: 12/08/06 Analyzed: 12/09/06						
tert-Amyl methyl ether	10.4	0.50	ug/l	10.0	ND	104	65-135	21	25	
Benzene	9.44	0.50	"	10.0	ND	94	70-125	11	15	
tert-Butyl alcohol	193	20	"	200	ND	96	60-135	9	35	
Di-isopropyl ether	10.3	0.50	"	10.0	ND	103	70-130	13	35	
Ethanol	261	300	"	200	ND	130	15-150	12	35	
Ethyl tert-butyl ether	10.5	0.50	"	10.0	ND	105	65-130	12	35	
Ethylbenzene	8.79	0.50	"	10.0	ND	88	70-130	10	15	
Methyl tert-butyl ether	11.1	0.50	"	10.0	ND	111	50-140	16	25	
Toluene	9.19	0.50	"	10.0	ND	92	70-120	8	15	
Xylenes (total)	27.1	0.50	"	30.0	ND	90	80-125	9	15	
Surrogate: Dibromofluoromethane	*2.67*		"	*2.50*		*107*	*75-130*			
Surrogate: 1,2-Dichloroethane-d4	*3.10*		"	*2.50*		*124*	*60-145*			
Surrogate: Toluene-d8	*2.57*		"	*2.50*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*2.66*		"	*2.50*		*106*	*60-120*			

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Amended Report

Stratus Environmental Inc. [Arco]	Project: ARCO #0601, San Leandro, CA	MPL0020
3330 Cameron Park Dr., Suite 550	Project Number: G0C23-022	**Reported:**
Cameron Park CA, 95682	Project Manager: Jay Johnson	02/23/07 15:03

Notes and Definitions

SG	A silica gel cleanup procedure was performed.
IC	Calib. verif. is within method limits but outside contract limits
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stnds.
BU	Sample analyzed after holding time expired
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Lisa Race

From: Scott Bittinger [sbittinger@stratusinc.net]
Sent: Friday, February 02, 2007 10:08 AM
To: Lisa Race
Subject: ARCO Station 601 sample issues

Revised
~~MPL0018~~
MPL0018
MPL0020

Please proceed with the silica gel clean-up procedure and re-run of these samples.

Scott Bittinger

-----Original Message-----
From: Rob Miller [mailto:rhmiller@broadbentinc.com]
Sent: Friday, February 02, 2007 9:03 AM
To: Tom Venus; jjohnson@stratusinc.net; 'Supple, Paul V'
Cc: 'Scott Bittinger'
Subject: Re: Request for Test America re: BP 601

All,
In speaking with Paul about re-running this analysis following silica gel cleanup, he would like us to move forward. Tom is on vacation starting today, so I'm not sure if he already requested Stratus to provide Test America with this go-ahead direction. If so, great. If not, Jay or Scott, could you provide authorization to Lisa to move forward with the rerun?
Many thanks,
Rob

----- Original Message -----
From: Tom Venus
To: jjohnson@stratusinc.net ; 'Supple, Paul V' ; 'Rob Miller'
Cc: 'Scott Bittinger'
Sent: Wednesday, January 31, 2007 4:44 PM
Subject: RE: Request for Test America re: BP 601

I spoke with Lisa Race at Test America about the chromatograms. The sharp distinct peak at 19.6 minutes is the Test Surrogate (It is intentionally introduced in the lab – It was not within the sample). Lisa also said that it was highly unlikely that the peaks were those of solvents, which would have been expected to appear much sooner after the methylene chloride solvent carrier flush around the first minute of run time. The peak at 17.8 minutes in water sample 20-01 appears around the average expected time for motor oil. Test America could rerun the sample extracts following silica gel cleanup, but that request would have to come from Stratus.

Tom Venus, PE
Senior Engineer
Broadbent & Associates, Inc.
1324 Mangrove Ave., Ste. 212
Chico, California 95926
(530) 566-1400 phone
(530) 566-1401 fax
(530) 588-5887 mobile
tvenus@broadbentinc.com

From: Lisa Race [mailto:lrace@testamericainc.com]
Sent: Wednesday, January 31, 2007 3:19 PM
To: Tom Venus; Scott Bittinger

Cc: jjohnson@stratusinc.net; Supple, Paul V; Rob Miller
Subject: RE: Request for Test America re: BP 601

Please find attached the chromatograms for the requested samples. We still have the extracts if you would like to have the Silica Gel cleanup done on them. That may clean up some of the peaks. We have identified the peaks to the best of our abilities using this method on the attached chromatograms.

Lisa Race
Senior Project Manager, Morgan Hill, CA
TestAmerica Analytical Testing Corporation
Tel.: 408-776-9600
Direct.: 408-782-8156
Fax: 408-782-6308
e-mail: lrace@testamericainc.com
NOTE NEW E-MAIL ADDRESS

From: Tom Venus [mailto:tvenus@broadbentinc.com]
Sent: Monday, January 29, 2007 4:10 PM
To: 'Scott Bittinger'
Cc: jjohnson@stratusinc.net; 'Supple, Paul V'; Lisa Race; 'Rob Miller'
Subject: Request for Test America re: BP 601

Scott,

Paul Supple asked me to ask Test America if they could tentatively identify the compound(s) that were detected in the DRO analyses during the deep boring investigation at BP 601 (1.8 and 1.2 mg/kg in soil samples B1-15 and B1-47; and 310 µg/L in water sample B1-58)

I contacted Test America, who informed me that the request must come from Stratus. Therefore, would you please ask Test America if they can clarify how the pattern differed from the DRO standard, or perhaps even tentatively identify the compound in the samples listed below? If they can not tentatively identify the compounds from the previous analyses, would you ask them if they have any of the samples left to re-analyze, following silica-gel extraction?

Test America Report/Order No. MPL0018
Soil Sample B1-15 (MPL0018-01)
Soil Sample B1-47 (MPL0018-05

Test America Report/Order No. MPL0020
Water Sample B1-58 (MPL0020-01)

Probably the easiest for you would be to forward this email to Lisa Race at lrace@testamericainc.com

Any questions, please call me at your earliest convenience.
With regards,

Tom Venus, PE
Senior Engineer
Broadbent & Associates, Inc.
1324 Mangrove Ave., Ste. 212
Chico, California 95926
(530) 566-1400 phone
(530) 566-1401 fax

(530) 588-5887 mobile
tvenus@broadbentinc.com

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

Project Name: Arco Station 601 - Assessment
BP BU/AR Region/Enfos Segment: BP/America/West Coast/Retail/Alameda/601
State or Lead Regulatory Agency: Alameda County Env. Health
Requested Due Date (mm/dd/yy): Std. TAT.

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name: Test America	BP/AR Facility No.: 601
Address: 885 Jarvis Dr. Morgan Hill, CA 95037	BP/AR Facility Address: 712 Lewelling Blvd., San Leandro
Lab PM: Lisa Race	Site Lat/Long:
Tele/Fax: 408-782-8156	California Global ID No.: T06001601 08
BP/AR EBM: Paul Supple	Enfos Project No.: GOC 23-022
Address: 2010 Crow Canyon Pl. #150 San Ramon, CA	Provision of OOC (circle one)
Tele/Fax: 925-275-3506	Phase/WBS: 01 - Assessment
	Sub Phase/Task: 03 - Analytical
	Cost Element: 01 - Contractor Labor

Consultant/Contractor: Stratus Environmental, Inc.	
Address: 3330 Cameron Park Dr. #550 Cameron Park, CA 95682	
Consultant/Contractor Project No.: E601	
Consultant/Contractor PM: J. Johnson	
Tele/Fax: 530-676-6000 / 676-6005	
Report Type & QC Level: level 1 w/ EDF	
E-mail EDD To:	
Invoice to: Consultant or BP or ~~Atlantic Richfield Co.~~ (circle one)	

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO	Requested Analysis: TPHD	Requested Analysis: TPH-MO	Requested Analysis: BTEX	Requested Analysis: 5 oxys	Requested Analysis: EtOH	Sample Point Lat/Long and Comments
1	B1-58W	11:30	11/30/06		✓		01	4						✓	✓	✓	✓	✓	✓	MPL0020 2 amber bottles unpreserved 6 vials HCl preserved
2																				
3																				
4																				
5																				
6																				
7																				
8																				10.6 °C
9																				
10																				

Sampler's Name:	Scott Bittinger
Sampler's Company:	Stratus Environmental, Inc.
Shipment Date:	11-30
Shipment Method:	hand delivered
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Scott Bittinger	11-30	14:30		11/30	1430
	11/30	1432	JIMENG (MH)	12/01	0800

Special Instructions:

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 4.5 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

9 12/01/06

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: BP/ARCO 601
REC. BY (PRINT) JULIE NG.
WORKORDER: MPL0020

DATE REC'D AT LAB: 12/01/06
TIME REC'D AT LAB: 0800
DATE LOGGED IN: 12-01-06

For Regulatory Purposes?
DRINKING WATER YES / (NO)
WASTE WATER YES / (NO)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / (Absent) Intact / Broken*	01	B1-58W	2(L) A	—	—	W	11/30	
2. Chain-of-Custody (Present) / Absent*	↓	↓	6 VOA	HCl	↓	↓	↓	
3. Traffic Reports or Packing List: Present / (Absent)								
4. Airbill: Airbill / Sticker (Present) / Absent								
5. Airbill #: 818010112742849								
6. Sample Labels: (Present) / Absent								
7. Sample IDs: (Listed) / Not Listed on Chain-of-Custody								
8. Sample Condition: (Intact) / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree? (Yes) / No*								
10. Sample received within hold time? (Yes) / No*								
11. Adequate sample volume received? (Yes) / No*								
12. Proper preservatives used? (Yes) / No*								
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / (No*)								
14. Read Temp: 3.3°C Corrected Temp: 4.3°C Is corrected temp 4 +/-2°C? (Yes) / No**								

(Acceptance range for samples requiring thermal pres.)
**Exception (if any): METALS / DFF ON ICE
Problem COC

12/01/06
JULIE NG

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

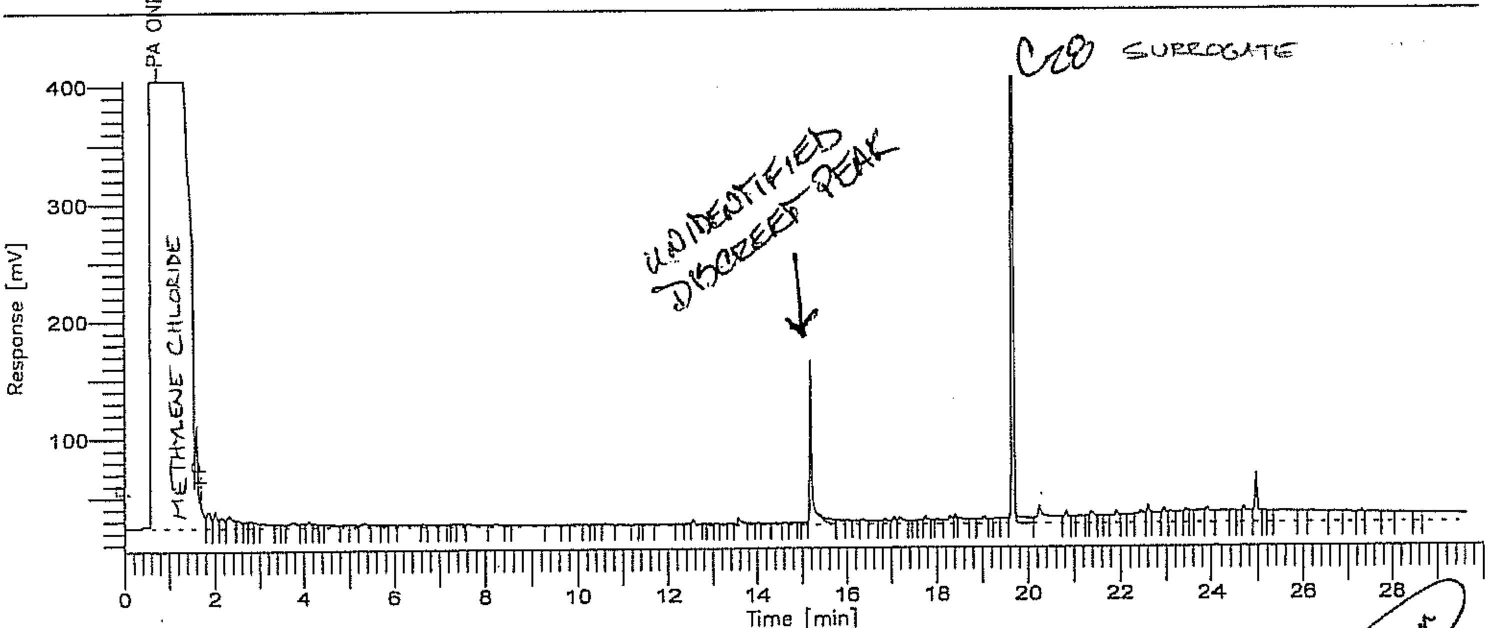
```
Software Version: 4.1<2F12>
Sample Name   : MPL0018-01                      Time  : 12/10/06  09:47 AM
Sample Number: B1-23                            Study : ARCO
Operator      : rv

Instrument    : GCHP_05                   Channel : A     A/D mV Range : 1000
AutoSampler   : HP7673A
Rack/Vial     : 0/36

Interface Serial # : NONE   Data Acquisition Time: 12/8/06  08:43 PM
Delay Time        : 0.00   min.
End Time          : 29.65  min.
Sampling Rate     : 1.2500   pts/sec

Raw Data File     : S:\GHP_05\120706\D07A054.RAW
Result File       : S:\GHP_05\120706\D07A054.RST
Inst Method       : S:\GHP_05\MET_SEQ\TPH05A from S:\GHP_05\120706\D07A054.RST
Proc Method       : S:\GHP_05\MET_SEQ\TPH05A.mth
Calib Method      : S:\GHP_05\MET_SEQ\TPH05A.mth
Sequence File     : S:\GHP_05\MET_SEQ\H05_1207.SEQ

Sample Volume     : 1.0000      uL          Area Reject       : 0.000000
Sample Amount     : 1.0000                  Dilution Factor   : 1.00
```



Time (min)	Component Name	Area [µV·s]	Raw Amount (ng)	Soil [mg/kg]	Water [µg/L]
4.422	n-C9 to n-C13 Mineral Spir	1113131	1.1	0.012	0.371
4.422	n-C9 to n-C13 Stoddard Solv	1113131	1.1	0.012	0.371
4.422	n-C9 to n-C13 Paint Thinner	1113131	1.1	0.012	0.371
5.591	n-C9 to n-C15 JP-4	1356884	1.4	0.015	0.452
6.611	n-C9 to n-C17 Jet A	1486462	97.6	1.084	32.524
6.611	n-C9 to n-C17 JP-5	1486462	1.5	0.017	0.495
7.090	n-C9 to n-C18 Kerosene	1545080	1.5	0.017	0.515
7.090	n-C9 to n-C18 JP-8	1545080	1.5	0.017	0.515
9.476	n-C9 to n-C24 TPH-D	2630664	159.6	1.773	53.185
9.695	LUFT DRO n-C10 to n-C23	2007104	129.9	1.444	43.307
10.149	n-C9 to n-C26 Heating Oil	2968232	3.0	0.033	0.989
11.124	B&C DIESEL C12 to C23	1527135	115.1	1.278	38.351
11.223	n-C10 to n-C28 8015 TOTAL	2607863	163.2	1.813	54.384
12.899	n-C9 to n-C36	7192190	7.2	0.080	2.397
13.365	n-C12 to n-C30 Transformer O	4690138	4.7	0.052	1.563
13.481	n-C10 to n-C36 DRO	6680241	416.7	4.630	138.894
14.067	n-C9 to n-C40 Total	8687616	579.2	6.435	193.050
14.540	n-C13 to n-C32 8015	4969271	358.2	3.980	119.392
15.438	n-C12 to n-C38 Fuel Oil #6	6890133	6.9	0.077	2.297
16.222	n-C15 to n-C34 Mineral Oil	5234473	5.2	0.058	1.745
16.762	n-C16 to n-C34 Transmiss Oil	5167820	5.2	0.057	1.723
17.248	n-C16 to n-C36 Motor Oil	5768654	427.2	4.747	142.407
18.416	n-C16 to n-C40 Hydraulic Oil	7264079	7.3	0.081	2.421
19.676	n-C28	2093163	140.4	1.560	46.800
21.398	B&C MOTOR OIL C23 to C40	6168562	554.4	6.161	184.815
		93306700	3180.0		

MO= 5768-2093 / 3x13.50x30 = 90.7407

3.024 ppm

Report stored in ASCII file: S:\GHP_05\120706\D07A054.TXO

Software Version: 4.1<2F12>
Sample Name : MPL0018-05
Sample Number: B1-47
Operator : rv

Time : 12/10/06 09:47 AM
Study : ARCO

Instrument : GCHP_05
AutoSampler : HP7673A
Rack/Vial : 0/40

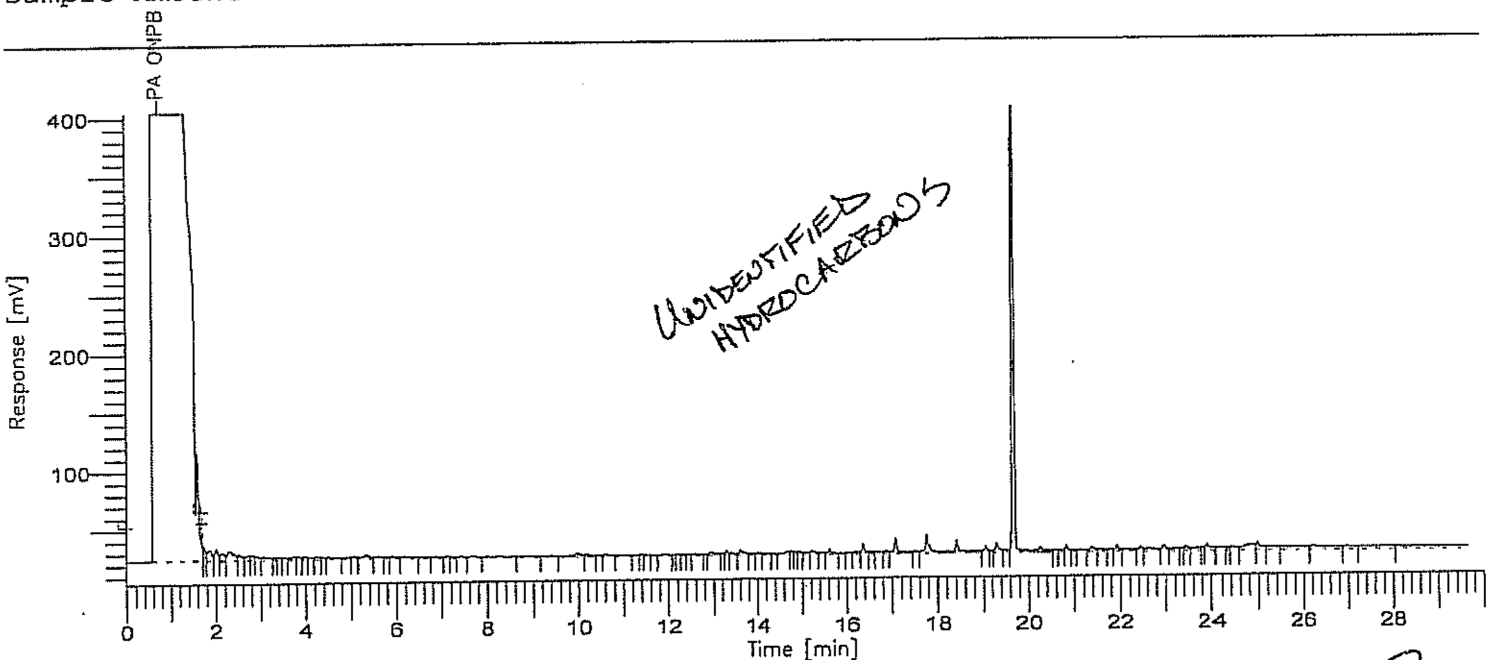
Channel : A A/D mV Range : 1000

Interface Serial # : NONE Data Acquisition Time: 12/8/06 11:11 PM
Delay Time : 0.00 min.
End Time : 29.65 min.
Sampling Rate : 1.2500 pts/sec

Raw Data File : S:\GHP_05\120706\D07A058.RAW
Result File : S:\GHP_05\120706\D07A058.RST
Inst Method : S:\GHP_05\MET_SEQ\TPH05A from S:\GHP_05\120706\D07A058.RST
Proc Method : S:\GHP_05\MET_SEQ\TPH05A.mth
Calib Method : S:\GHP_05\MET_SEQ\TPH05A.mth
Sequence File : S:\GHP_05\MET_SEQ\H05_1207.SEQ

Sample Volume : 1.0000 uL
Sample Amount : 1.0000

Area Reject : 0.000000
Dilution Factor : 1.00



Time [min]	Component Name	Area [µV·s]	Raw Amount (ng)	Soil [mg/kg]	Water [µg/L]
4.422	n-C9 to n-C13 Mineral Spir	855244	0.9	0.010	0.285
4.422	n-C9 to n-C13 Stoddard Solv	855244	0.9	0.010	0.285
4.422	n-C9 to n-C13 Paint Thinner	855244	0.9	0.010	0.285
5.591	n-C9 to n-C15 JP-4	1053219	1.1	0.012	0.351
6.611	n-C9 to n-C17 Jet A	1204252	79.0	0.878	26.349
6.611	n-C9 to n-C17 JP-5	1204252	1.2	0.013	0.401
7.090	n-C9 to n-C18 Kerosene	1273572	1.3	0.014	0.425
7.090	n-C9 to n-C18 JP-8	1273572	1.3	0.014	0.425
8.476	n-C9 to n-C24 TPH-D	1021683	110.5	1.228	36.830
9.695	LUFT DRO n-C10 to n-C23	1338900	86.7	0.963	28.889
10.149	n-C9 to n-C26 Heating Oil	2037592	2.0	0.023	0.679
11.124	B&C DIESEL C12 to C23	969931	73.1	0.812	24.358
11.223	n-C10 to n-C28 8015 TOTAL	1775182	111.1	1.234	37.019
12.899	n-C9 to n-C36	4649970	4.6	0.052	1.550
13.365	n-C12 to n-C30 Transformer O	3493871	3.5	0.039	1.165
13.481	n-C10 to n-C36 DRO	4279582	266.9	2.966	88.980
14.067	n-C9 to n-C40 Total	5148026	343.2	3.813	114.401
14.540	n-C13 to n-C32 8015	3506073	252.7	2.808	84.237
15.438	n-C12 to n-C38 Fuel Oil #6	4125439	4.1	0.046	1.375
16.222	n-C18 to n-C34 Mineral Oil	3441061	3.4	0.038	1.147
16.762	n-C16 to n-C34 Transmiss Oil	3355650	3.4	0.037	1.119
17.248	n-C16 to n-C36 Motor Oil	3511339	260.0	2.889	86.682
18.416	n-C16 to n-C40 Hydraulic Oil	4009396	4.0	0.045	1.336
19.676	n-C28	1956702	131.2	1.450	43.749
21.398	B&C MOTOR OIL C23 to C40	3438739	309.1	3.434	103.027
		61433738	2056.0		

MO = 3511 - A56 / 3x13.50+30 : 38.3950 (1.27 ppm)

Report stored in ASCII file: S:\GHP_05\120706\D07A058.TX0

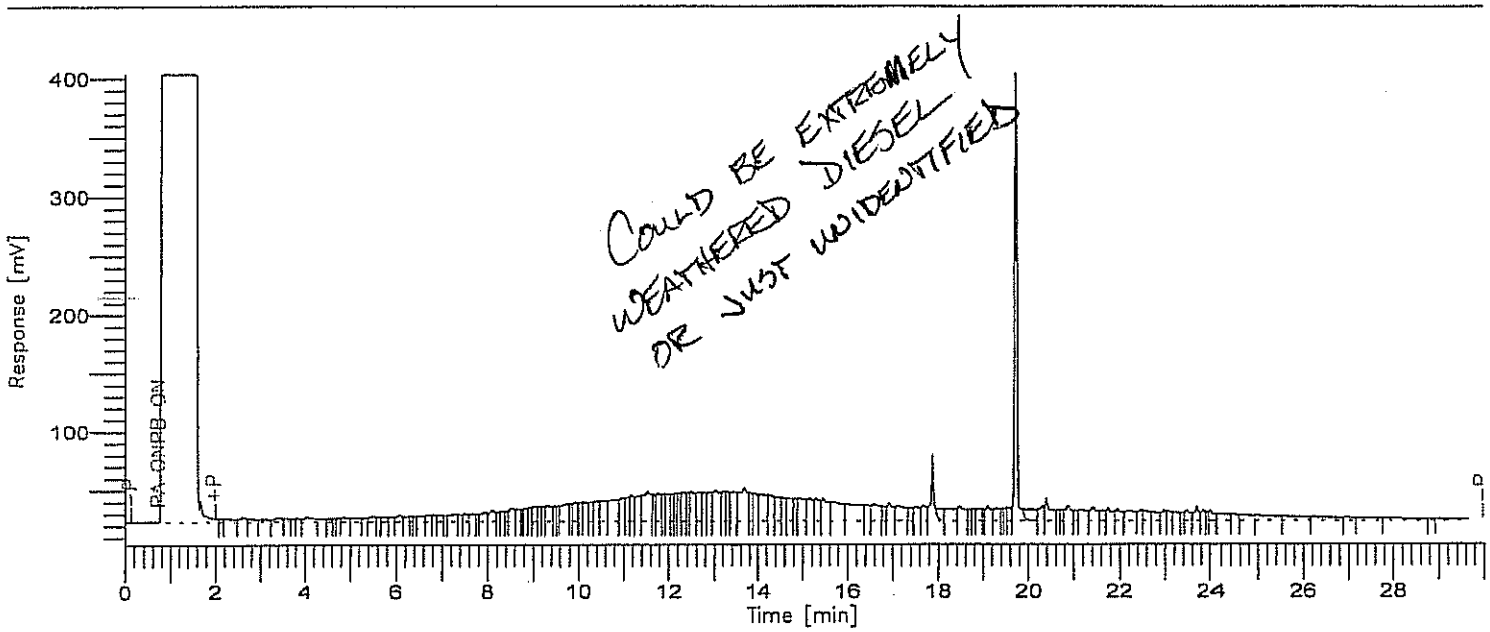
Software Version: 4.1<2F12>
Sample Name : MPL0020-01 Time : 12/8/06 10:42 AM
Sample Number: B1-J8W Study : ARCO
Operator : rv

Instrument : GCHP_05 Channel : B A/D mV Range : 1000
AutoSampler : HP7673A
Rack/Vial : 0/56

Interface Serial # : NONE Data Acquisition Time: 12/7/06 02:39 PM
Delay Time : 0.00 min.
End Time : 29.65 min.
Sampling Rate : 1.2500 pts/sec

Raw Data File : S:\GHP_05\120706\D07B006.RAW
Result File : S:\GHP_05\120706\D07B006.RST
Inst Method : S:\GHP_05\MET_SEQ\TPH05A from S:\GHP_05\120706\D07B006.RST
Proc Method : S:\GHP_05\MET_SEQ\TPH05B.mth
Calib Method : S:\GHP_05\MET_SEQ\TPH05B.mth
Sequence File : S:\GHP_05\MET_SEQ\H05_1207.SEQ

Sample Volume : 1.0000 uL Area Reject : 0.000000
Sample Amount : 1.0000 Dilution Factor : 1.00



Time [min]	Component Name	Area [µV*s]	Raw Amount [ng]	Soil [mg/kg]	Water [µg/L]
4.620	n-C9 to n-C13 Stoddard Solv	920112	0.920	0.010	0.307
4.620	n-C9 to n-C13 Paint Thinner	920112	0.920	0.010	0.307
4.620	n-C9 to n-C13 Mineral Spir	920112	0.920	0.010	0.307
5.782	n-C9 to n-C15 JP-4	2170177	2.170	0.024	0.726
6.800	n-C9 to n-C17 JP-5	4402397	4.402	0.049	1.467
6.800	n-C9 to n-C17 Jet A	4402397	335.507	3.720	111.836
7.277	n-C9 to n-C18 JP-8	5734845	5.735	0.064	1.912
7.277	n-C9 to n-C18 Kerosene	5734845	5.735	0.064	1.912
8.572	n-C9 to n-C24 TPH-D	10764741	851.552	9.462	283.851
9.831	LUFT DRO n-C10 to n-C23	10212673	853.167	9.480	284.389
10.329	n-C9 to n-C26 Heating Oil	11901046	11.902	0.132	3.967
11.232	B&C DIESEL C12 to C23	9750720	929.833	10.320	309.611
11.382	n-C10 to n-C28 8015 TOTAL	12341823	988.048	10.978	329.349
13.073	n-C9 to n-C36	16441662	16.442	0.183	5.481
13.510	n-C12 to n-C30 Transformer O	14450082	14.450	0.161	4.817
13.652	n-C10 to n-C36 DRO	16290331	1278.388	14.204	426.129
14.268	n-C9 to n-C40 Total	17040971	1136.065	12.623	378.688
14.677	n-C13 TO n-C32 8015	14638617	1205.712	13.397	401.904
15.590	n-C12 to n-C38 Fuel Oil #6	16206699	16.207	0.180	5.402
16.350	n-C15 to n-C34 Mineral Oil	13861236	13.861	0.154	4.620
16.889	n-C16 to n-C34 Transmiss Oil	12830114	12.830	0.143	4.277
17.377	n-C16 to n-C36 Motor Oil	13232363	1166.056	12.956	388.685
18.572	n-C16 to n-C40 Hydraulic Oil	13831672	13.832	0.154	4.611
19.722	n-C28	1800159	147.011	1.633	49.004
21.503	B&C MOTOR OIL C23 to C40	6676966	731.779	8.131	243.926
21.822	n-24 to n-40 Motor Oil	6276229	6.276	0.070	2.092
		2e+08	9748.728		

m/o $\frac{13232 - 1880}{3 \times 1134 \times 1.06} = 3148$

Report stored in ASCII file: S:\GHP_05\120706\D07B006.TX0

APPENDIX B

GEOTRACKER UPLOAD CONFIRMATIONS

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

SUCCESSFUL EDF CHECK - NO ERRORS

ORGANIZATION NAME:	TestAmerica Inc.-Morgan Hill
USER NAME:	LRACE
DATE CHECKED:	2/23/2007 3:00:45 PM
GLOBAL ID:	NOT SELECTED
FILE UPLOADED:	ARCO#0601-edf_rev_#2-MPL0018.zip

No errors were found in your EDF upload file.

If you want to submit this file to the SWRCB, choose the "Upload EDD" option in the above menu and follow the instructions.

When you complete the submittal process, you will be given a confirmation number for your submittal.

Because you have not chosen a facility, field point names have not been checked.

Logged in as LRACE (LABORATORY) CONTACT SITE ADMINISTRATOR.

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

SUCCESSFUL EDF CHECK - NO ERRORS

ORGANIZATION NAME:	TestAmerica Inc.-Morgan Hill
USER NAME:	LRACE
DATE CHECKED:	2/23/2007 3:07:17 PM
GLOBAL ID:	NOT SELECTED
FILE UPLOADED:	ARCO#0601-rev_edf-MPL0020.zip

No errors were found in your EDF upload file.

If you want to submit this file to the SWRCB, choose the "Upload EDD" option in the above menu and follow the instructions.

When you complete the submittal process, you will be given a confirmation number for your submittal.

Because you have not chosen a facility, field point names have not been checked.

Logged in as LRACE (LABORATORY) CONTACT SITE ADMINISTRATOR.

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

Your EDF file has been successfully uploaded!

Confirmation Number: 6309287369
Date/Time of Submittal: 3/22/2007 10:26:29 AM
Facility Global ID: T0600100108
Facility Name: ARCO #0601
Submittal Title: 1106 Soil Sample
Submittal Type: Miscellaneous Sample Results

Click here to view the detections report for this upload.

ARCO #0601 712 LEWELLING SAN LEANDRO, CA 94579	**Regional Board - Case #: 01-0116** SAN FRANCISCO BAY RWQCB (REGION 2) - **(CM)** **Local Agency (lead agency) - Case #: RO0000309** ALAMEDA COUNTY LOP - **(SP)**

CONF #	TITLE	QUARTER
6309287369	1106 Soil Sample	Q4 2006

SUBMITTED BY	SUBMIT DATE	STATUS
Broadbent & Associates, Inc.	3/22/2007	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	6
# FIELD POINTS WITH DETECTIONS	2
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	0
SAMPLE MATRIX TYPES	SOIL

METHOD QA/QC REPORT

METHODS USED	8260FA,8260TPH,SW8015B
TESTED FOR REQUIRED ANALYTES?	Y
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	6
METHOD HOLDING TIME VIOLATIONS	6
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	N
- MATRIX SPIKE DUPLICATE	N
- BLANK SPIKE	Y
- SURROGATE SPIKE - NON-STANDARD SURROGATE USED	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	N
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

Your EDF file has been successfully uploaded!

Confirmation Number: 7352264344
Date/Time of Submittal: 3/22/2007 10:17:02 AM
Facility Global ID: T0600100108
Facility Name: ARCO #0601
Submittal Title: 1106 Water Sample
Submittal Type: Miscellaneous Sample Results

Click here to view the detections report for this upload.

ARCO #0601 712 LEWELLING SAN LEANDRO, CA 94579	**Regional Board - Case #: 01-0116** SAN FRANCISCO BAY RWQCB (REGION 2) - **(CM)** **Local Agency (lead agency) - Case #: RO0000309** ALAMEDA COUNTY LOP - **(SP)**

CONF #	TITLE	QUARTER
7352264344	1106 Water Sample	Q4 2006

SUBMITTED BY	SUBMIT DATE	STATUS
Broadbent & Associates, Inc.	3/22/2007	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	1
# FIELD POINTS WITH DETECTIONS	1
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	1
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	8260FA,8260TPH,SW8015B
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED: - SW8015B REQUIRES DCA12 TO BE TESTED - SW8015B REQUIRES EDB TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	3
METHOD HOLDING TIME VIOLATIONS	3
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	N
- MATRIX SPIKE DUPLICATE	N
- BLANK SPIKE	Y
- SURROGATE SPIKE - NON-STANDARD SURROGATE USED	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y

SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	N
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a

FIELD QC SAMPLES

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0