Delta
Environmental Consultants, Inc.

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November 21, 2005

Mr. Jay Bento
City of Santa Ana Fire Department
1439 South Broadway
Santa Ana, California 92707

Sent via UPS

Subject: Confirmation Soil Borings Report
ARCO Facility No. 206
302 West First Street
Santa Ana, California

Dear Mr. Bento:

On behalf of Atlantic Richfield Company, Delta Environmental Consultants (Delta) has prepared this report summarizing the installation of three confirmation soil borings at former ARCO Facility No. 206, located at 302 West First Street in the City of Santa Ana, California (the site). The activities were conducted in accordance with the *Work Plan for Confirmation Soil Borings*, dated February 4, 2005, and the *Addendum to Work Plan for Confirmation Soil Borings*, dated June 2, 2005, which were approved by the Santa Ana Fire Department (SAFD) in a letter to Atlantic Richfield Company dated July 5, 2005. A copy of the SAFD letters are provided in Attachment A. The purpose of the assessment was to provide the SAFD with soil analytical data illustrating that petroleum hydrocarbon concentrations detected during previous assessments have been remediated and/or have attenuated. Presented herein is a brief site description, a summary of previous investigations and remedial history, a description of site geology and hydrogeology, and a summary of the drilling and sampling of three confirmation soil borings, and a recommendation for further remediation.

SITE DESCRIPTION

The site is an active retail gasoline station located on the southwest corner of the intersection of West First Street and Broadway Avenue in the City of Santa Ana, County of Orange, California (Figure 1). Station operations consist of self-serve gasoline dispensing along with an am/pm mini-mart. Four double-walled 10,000 gallon underground storage tanks (USTs) are located in the eastern portion of the site. The site is located at an elevation of approximately 110 feet above mean sea level, with surface topography sloping gently toward the southwest (USGS, 1981).

The site is located in a mixed business/residential area. The adjoining property to the south of the site is occupied by a paved parking area and an auto repair facility. The adjoining property to the west of the site is residential. Other retail stores are located to the north and east of the site, across West First Street and Broadway.

SITE HISTORY

A gasoline release was reported on June 9, 1992, to the SAFD, UST Division. The release was reported to have occurred from a leaking impact valve on the No. 6 dispenser. ARCO requested a site investigation be performed to determine the extent of the release.

On September 10, 1992, SEACOR supervised the drilling and sampling of one angled soil boring (B-1) to the east of the southern dispenser. Soil boring locations are presented in Figure 2. The angle boring was drilled at a 25 degree angle from vertical and was advanced to a total depth of 47 feet below ground surface (bgs) along the line of drilling. Soil samples were collected at five-foot depth intervals, and screened in the field for volatile organic compounds using an organic vapor analyzer. Field observations indicated that petroleum hydrocarbons were present in the soil from a depth of approximately 12 feet bgs to 32 feet bgs. Concentrations of total petroleum hydrocarbons as gasoline (TPHg) were detected from 4.9 to 6,100 milligrams per kilogram (mg/kg). Detectable benzene concentrations ranged from 0.029 to 100 mg/kg (SEACOR, 1992). Soil sample analytical results are presented in Table 1.

On February 18, 19, and 23, 1993, SEACOR supervised the drilling and sampling of eight soil borings (B-2 through B-9) to depths ranging from approximately 40 to 50 feet bgs. Soil borings B-5 and B-6 were converted into soil vapor extraction (SVE) wells VW-5 and VW-6, respectively. Well construction details are presented in Table 2. Detectable concentrations of TPHg above SAFD action levels (100 mg/kg) were noted in three of the eight soil borings (B-3, B-4, and B-6). The highest TPHg concentration of 6,500 mg/kg was noted in the soil sample collected from boring B-6 at 15 feet bgs. Detectable benzene concentrations ranged from 0.0068 to 84 mg/kg. The highest benzene concentration was indicated in the soil sample collected from boring B-6 at 30 feet bgs. Groundwater was not encountered in any of the soil borings (SEACOR, 1993a).

On June 6, 1993, SEACOR performed an SVE pilot study utilizing SVE wells VW-5 and VW-6. The purpose of the test was to evaluate the effectiveness of SVE as a remedial technology for hydrocarbon impacted soils at the site. The SVE pilot test results indicated that the minimum radius of influence was approximately 30 feet. The laboratory analytical data indicated that the influent vapor sample concentration from SVE well VW-5 was 12,000 milligrams per meter cubed (SEACOR, 1993b).

During September and October, 1993, SEACOR observed the removal of four 6,000 gallon, single-walled steel gasoline USTs from the southeast corner of the site. During UST, dispenser, and piping replacement activities, a SEACOR representative collected three soil samples beneath the former dispensers (PD01, PD02A, and PD02B), ten soil samples beneath the former product lines (TR01 through TR10), seven soil samples beneath the former gasoline USTs (TK01, TK02, S01, SW01, E01, NW01, and N01), and one soil sample beneath the former waste oil UST (WTS01). Laboratory analytical results for samples collected under the former USTs indicated TPHg concentrations ranging from less than the laboratory method detection limit (MDL) on the south-southwest side of the tank excavation to 510 mg/kg on the north side of the excavation. Soil samples collected along the dispenser product lines indicated a maximum TPHg concentration of 1.9 mg/kg in the soil sample located adjacent to the middle of the northern dispenser island. The laboratory analytical data indicated a total recoverable petroleum hydrocarbon (TRPH) concentration of 1,300 mg/kg in the soil sample collected from beneath the former waste oil UST. Soil samples collected along the vent line trenches indicated a maximum TPHg concentration of 76 mg/kg at the northeast corner of the station building. Approximately 200 cubic yards of soil were removed from the former tank pit during excavation activities. All excavated soil was stockpiled on-site, and subsequently used as backfill for the UST excavation (SEACOR, 1994a).

A new UST pit was excavated near the northeast corner of the Site. Approximately 756 cubic yards of native soil were removed from the new tank excavation and stockpiled along the southeast corner of the site. Four new 10,000 gallon, double-walled fiberglass USTs were installed within the new UST pit. Approximately 1,147 tons of stockpiled soil was transported off-site to TPS in Adelanto, California for thermal treatment (SEACOR, 1994a).

On November 2, 1993, SECOR submitted a Remedial Action Plan (RAP) to the SAFD. The RAP proposed the use of SVE technology as the remedial alternative to mitigate impacted soils at the site (SECOR, 1993c).

On May 2 and 3, 1994, SEACOR supervised the drilling and sampling of five SVE wells (VW-12, VW-13, VW-14, VW-15, and VW-16) within pre-set well boxes and conductor casing installed during the tank removal operation. All wells were advanced until two consecutive soil samples, collected at five foot depth intervals, indicated either no detectable concentrations of petroleum hydrocarbons or contained detectable concentrations of petroleum hydrocarbons less than SAFD action levels. Selected soil samples were submitted to a California Department of Health Services (CDHS) certified on-site mobile laboratory for analyses. Additionally, one soil sample from each well, which contained the highest TPHg concentration, was also analyzed for organic lead. Analyses of the soil

samples revealed that 27 of the 43 soil samples collected showed detectable concentrations of petroleum hydrocarbons. Detectable TPHg concentrations ranged from 11 to 4,413 mg/kg. The highest TPHg concentration was reported in soil sample VW-13 at 35 feet bgs. Detectable concentrations of benzene ranged from 0.102 to 22.033 mg/kg. The highest benzene concentration was reported in soil sample VW-13 at 35 feet bgs (SEACOR, 1994b).

On March 20, 1996, SECOR International Inc. (SECOR) commenced operation of a SVE system. The SVE system was connected to SVE wells VW-5, VW-6, and VW-12 through VW-16. Based on a significant reduction in influent hydrocarbon concentrations, the system was shut down on June 17, 1996. During the period from March 20 through June 17, 1996, the SVE system operated for 1,331 hours and removed approximately 4,747 pounds of hydrocarbons from the subsurface (SECOR, 1996).

On June 10, 1999, SECOR supervised the drilling and sampling of three confirmation soil borings (CSB-1, CSB-3, and CSB-4). The purpose of the borings was to confirm the effectiveness of SVE remedial efforts in reducing petroleum hydrocarbon concentrations at the site. Borings CSB-1 and CSB-4 were advanced vertically to depths of 60.5 and 50.5 feet bgs, respectively. Boring CSB-3 was advanced at an angle of 30 degrees from vertical to a depth of 60.5 feet bgs. The soil analytical data indicated that petroleum hydrocarbons exist primarily above the approximate depth of 40 feet bgs beneath the site. In the report summarizing the results of the confirmation soil borings, SECOR requested case closure be granted (SECOR, 1999).

On October 28, 1999, during fuel dispenser and piping replacement activities, a Delta representative collected soil samples beneath the former dispenser and piping locations under the direction of Inspector Jay Bento of the SAFD. Four dispenser samples were collected and identified as D1-2 through D4-2. Four piping samples were collected and identified as P1-2 through P4-2. The samples were collected at a depth of approximately two feet beneath the former dispenser and piping locations (Delta, 1999).

The SVE system was re-started on November 6, 2000. The SVE system is connected to seven wells (VW-5, VW-6, VW-12, VW-13, VW-14, VW-15, and VW-16). Laboratory analytical results indicated that influent vapors at startup contained 1,300 parts per million by volume (ppmv) volatile fuel hydrocarbons (VFH). The SVE system has been cycled on a monthly basis for over the past two years. No significant rebound in concentrations was observed following periods of temporary system shutdown. Influent vapor concentrations appear to have reached asymptotic levels. As of February 28, 2005, the SVE system has operated for 32,061 hours and has removed approximately 17,888 pounds of hydrocarbons from the subsurface. A summary of SVE system performance data is provided in Table 3, well source data in Table 4, and individual well analytical data in Table 5. A graph of VFH and benzene concentrations versus time is presented as Graph 1 and cumulative hydrocarbons removed versus time is presented as Graph 2.

SITE GEOLOGY AND PHYSIOGRAPHY

The site is located in the Santa Ana Gap, which lies between the Newport and Huntington Mesas (DWR, 1966). The Pacific Ocean is located approximately 8.5 miles southwest of the site. The concrete-lined Santa Ana River channel is located about 2.5 miles west of the site. The area is underlain by recent alluvium deposited by the Santa Ana River, by Santiago Creek from the Santa Ana Mountains, and by minor streams from hills to the north and northeast (DWR, 1959).

The lithology beneath the site is characterized by fine to coarse grained sands with interbedded silt and clay lenses. Subsurface materials are composed of fine to coarse grained sand to a depth of approximately 11 feet. A sandy silt/silty sand layer is present from approximately 11 to 30 feet bgs. The silty layer is underlain by a clay layer to about 40 feet bgs. Silty sand, sand, and gravel are present from approximately 40 to 60 feet bgs (maximum depth explored).

SITE HYDROGEOLOGY

The site is located within the pressure area of the Orange County Coastal Plain Groundwater Basin. A large synclinal groundwater basin underlies the Coast Plain of Orange County and is composed of a pressure and non-pressure area. The non-pressure, or forebay, area is located on the northeastern portion of the basin and supplies the recharge, both artificial and natural, to the aquifer systems. The southwestern area of the basin consists of a pressure area where

groundwater is confined in multiple aquifers (DWR, 1959). The northern boundary for the Forebay/Pressure Area is located north of Santa Ana, and runs approximately parallel to the Interstate 5 freeway.

Groundwater flow in the coastal plain is from the forebay to the pressure area, with subsurface discharge to the Pacific Ocean during periods when piezometric levels are above sea level. Subsurface outflow occurs primarily at the Santa Ana and Alamitos Gaps in aquifers not affected by faulting (DWR, 1959). Principal aquifers are the Talbert aquifer of Recent age in the Santa Ana Gap, and its correlative Bolsa Aquifer in the northwesterly portion of the basin, ranging from 50 feet to nearly 200 feet bgs (DWR, 1960).

Locally, near surface groundwater occurs in unconfined perched aquifers. Perched groundwater consists largely of irrigation return and infiltration of other surface waters above the confining sediments of the deeper aquifers (DWR, 1960). Groundwater has not been encountered during advancement of soil borings at the site to a total depth of 60 feet bgs.

According to the California State Water Resources Control Board's web site (GeoTracker; https://geotracker.swrcb.ca.gov) database there are seven groundwater production wells within a one-mile radius of the site. The closest well to the site is State Well No. 3010038-015, which is located approximately 1,600 feet west of the site. Well 3010038-015 is an active municipal supply well owned and operated by the City of Santa Ana. State Well No. 3010038-029 is an active municipal supply well owned and operated by the City of Santa Ana and is located approximately 1,600 feet west of the site. State Well No. 3010038-033 is an inactive municipal supply well owned and operated by the City of Santa Ana and is located approximately 2,000 feet west of the site. State Well No. 3010038-042 is an active municipal supply well owned and operated by the City of Santa Ana and is located approximately 1,800 feet northeast of the site. State Well No. 3010038-041 is an active municipal supply well owned and operated by the City of Santa Ana and is located approximately 1,800 feet northeast of the site. State Well No. 3010038-018 is an active municipal supply well owned and operated by the City of Santa Ana and is located approximately 2,500 feet northwest of the site. State Well No. 3010038-055 is an inactive municipal supply well owned and operated by the City of Santa Ana and is located approximately 4,200 feet northwest of the site.

CONFIRMATION SOIL BORING ADVANCEMENT

On October 13, 2005, a Delta geologist was on-site to oversee the advancement of three confirmation soil borings (CSB-5, CSB-6, and CSB-7). The locations of the confirmation soil borings are presented on Figure 2. Boring CSB-5 was drilled north of the existing UST locations. Analytical results of soil samples collected from borings CSB-1, CSB-3, and VW-6, located north of the existing USTs, indicated the highest concentrations of petroleum hydrocarbons beneath the site. Boring CSB-6 was drilled west of the existing UST locations in the vicinity of boring B-8 and SVE wells VW-14 and VW-15. Boring CSB-7 was drilled south of the existing UST locations in the vicinity of boring CSB-4 and SVE well VW-12.

The boring locations were marked and Underground Service Alert was notified prior to the initiation of the field investigation. Strongarm Environmental Field Services of Norwalk, California was contracted to provide the necessary equipment and personnel to advance the borings. A private utility locating company was contracted to locate underground utilities on site prior to the initiation of drilling. The initial ten feet of the soil borings were advanced using a truck-mounted VacMasters Air Vacuum Extraction System in order to reduce the possibility of damaging unidentified underground utilities. The soil borings were advanced past the initial ten feet using a truck-mounted, direct-push Geoprobe™ rig.

Soil borings CSB-5, CSB-6, and CSB-7 were each advanced to an approximate depth of 50 feet bgs. Groundwater was not encountered during the advancement of the borings. During advancement, Delta collected soil samples for chemical analysis at five-foot intervals from ten feet bgs to the terminal depth of each boring. To avoid cross contamination between samples, sampling equipment was washed with an aqueous solution of Alconox™ detergent and double rinsed with distilled water. Soil samples were collected using a 1¾-inch diameter piston sampler with 1⅛-inch diameter by 1.5-foot long acetate liner. The bottom-most 6-inches intact portion of the acetate liner from each sample collected was cut from the remaining acetate liner, lined with Teflon™ sheets, capped, labeled, placed in a resealable plastic bag, and stored in an ice-chilled container until delivered to the analytical laboratory.

Soil remaining in the acetate sampling liner was used for classification according to the Unified Soil Classification System and for field screening with a photo-ionization detector (PID). Soil classifications, PID readings, and other soil sampling data are presented on the boring logs in Attachment B. Following completion, each boring was backfilled with bentonite grout and resurfaced with concrete.

WASTE CONTAINMENT AND DISPOSAL

All soil cuttings and decontamination water generated during soil boring activities were placed in Department of Transportation-approved, 55-gallon, metal drums, labeled, and stored on-site pending analytical results. Upon receipt of soil analytical results, the drums were transported by Belshire Environmental Services to TPS Technologies located in Adelanto, California for disposal. The soil disposal documentation is included in Attachment C.

SAMPLE ANALYSIS

Soil samples were submitted to Del Mar Analytical, a CDHS approved analytical laboratory located in Irvine, California. Each sample was analyzed for TPHg according the Environmental Protection Agency (EPA) Method 8015 Modified and for benzene, toluene, ethylbenzene, xylenes (BTEX, collectively), methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butanol (TBA), and ethanol according to EPA Method 8260B.

CONFIRMATION BORING RESULTS

Laboratory analysis of soil samples collected during the installation of soil boring CSB-5 indicated no detectable concentrations of MTBE, DIPE, ETBE, TAME, TBA, or ethanol. Detectable concentrations of TPHg were observed in the 15- to 30-foot interval at concentrations ranging from 470 to 15,000 mg/kg. Detectable concentrations of benzene were observed in the 25-, 30-, and 35-foot samples collected from boring CSB-5 at 56, 24, and 1.4 mg/kg, respectively.

Laboratory analytical results of soil samples collected during the installation of soil boring CSB-6 indicated no detectable concentrations of TPHg, BTEX, DIPE, ETBE, TAME, TBA, or ethanol. Detectable concentrations of MTBE were observed in the 30-, 35-, and 40-foot samples at 0.041, 0.12, and 0.047 mg/kg, respectively.

Laboratory analytical results of soil samples collected during the installation of soil boring CSB-7 indicated detectable concentrations of TPHg and BTEX in the 25- and 30-foot samples. The 25-foot sample indicated TPHg and benzene concentrations of 1,600 and 0.97 mg/kg, respectively, and the 30-foot sample indicated TPHg and benzene concentrations of 1.0 and 0.10 mg/kg, respectively. Detectable concentrations of MTBE were observed in the 30-, 35, and 40-foot samples at 0.019, 0.061, and 0.045 mg/kg, respectively. A detectable concentration of TBA was observed in the 40-foot sample collected from CSB-7 at 0.14 mg/kg. Soil analytical results are presented in Table 1 and the laboratory report and chain of custody documentation are presented in Attachment D.

CONCLUSIONS AND RECOMMENDATIONS

Previous investigations conducted at this site indicated the presence of elevated concentrations of petroleum hydrocarbons (greater than 5,000 mg/kg TPHg) in the vicinity of the existing USTs and dispenser islands. Three confirmation soil borings (CSB-5, CSB-6, and CSB-7) were advanced in the areas previously identified as having the highest concentrations. Based upon the results of this investigation it appears that petroleum hydrocarbons detected during previous investigations have not been adequately remediated. Laboratory analysis of soil samples collected during the installation of soil borings CSB-5, CBS-6, and CSB-7 indicated elevated TPHg and BTEX concentrations in the 25- and 30-foot samples collected from borings CSB-5 and CSB-7. Below 30 feet bgs, these petroleum hydrocarbon concentrations are noted to decrease significantly to between slightly above and below the laboratory detection limits. This drastic decrease in concentrations is likely due to the clay/silty clay layer observed at approximately 31 feet bgs.

An SVE system connected to seven wells (VW-5, VW-6, VW-12, VW-13, VW-14, VW-15, and VW-16) has operated at the site for 32,061 hours and has removed approximately 17,888 pounds of hydrocarbons from the subsurface. No significant rebound in concentrations was observed following periods of temporary system shutdown and influent vapor

concentrations appear to have reached asymptotic levels (see Graph 2). However, this appears to be due to the screen intervals of the SVE wells and not the lack of hydrocarbon mass beneath the site.

The screen interval in SVE well VW-6 extends from 13 to 33 feet bgs. From 13 feet bgs to approximately 20 feet bgs sandy silt is observed and from 20 to 33 feet bgs clayey silt and silty clay are observed. Delta believes that the majority of the flow in the well is coming from the top seven feet of the screened interval which lies in the less dense sandy silt, and very little vacuum is being exerted in the clayey silt and silty clay. Similar conditions are observed in SVE well VW-15. The screen interval in well VW-15 extends from 10 to 30 feet bgs. From approximately 12 to 22 feet bgs silty sand and sand are observed and from 22 to 30 feet bgs sandy silt and silty clay are observed. Copies of the soil boring/well construction logs for wells VW-6 and VW-15 are presented in Attachment E. Delta believes that the majority of the flow in the well is coming from the 12- to 22-foot interval which lies in the less dense sand, and very little vacuum is being exerted in the sandy silt and silty clay. Therefore, Delta recommends to over-drill and remove the well casings of wells VW-6 and VW-15, and replace with new casings screened within the 25- to 30-foot zone, where elevated hydrocarbon concentrations were observed in confirmation soil borings CSB-5 and CSB-7. The wells will be constructed of 2-inch diameter, schedule 40, polyvinyl chloride (PVC) casing with a screened interval of 0.1-inch wide horizontal slotted casing. The remaining length of each well will be constructed of blank schedule 40 PVC casing. Pea gravel will be used as the filter pack from total depth to one foot above the screened interval. A minimum 3-foot bentonite seal will be constructed above the screened interval. The remaining annulus of each boring will be backfilled with bentonite chips. The new screen interval, location, and SVE radius of influence of extraction wells VW-6 and VW-15 should be sufficient to address the residual concentrations identified in confirmation soil borings CSB-5, CBS-6, and CSB-7.

Once the screen intervals of wells VW-6 and VW-15 have been reset the wells will be reconnected to the SVE system. Delta proposes to continue SVE activities with extraction efforts focused on re-installed wells VW-6 and VW-15. Upon review and approval of these recommendations by the SAFD, Delta will reset the well casing of wells VW-6 and VW-15 and restart the SVE system. The system will be monitored on a weekly basis. During weekly visits, field readings of soil vapor influent and effluent concentrations using a photo- or flame-ionization detector will be recorded. Influent and effluent vapor samples will be collected on a monthly basis for chemical analyses. SVE system operation data will continue to be presented in the on-going quarterly site status reports. The quarterly reports will include tables presenting operational data and graphs depicting hydrocarbon removal rates and volatile organic compound concentrations in vapor over time. The quarterly reports will also include information on remediation progress and a summary of system operation performance, and periodic maintenance and upgrades to the existing system.

When influent VFH and BTEX concentrations reach non-detectable levels in vapor samples, the system will be shut down for a period of approximately two weeks to allow concentrations to rebound. The system will then be restarted and influent vapor samples will be collected from each extraction well. If detectable VFH and BTEX concentrations are not observed in the influent vapor samples, the system will be shut down. If a significant rebound in VFH and BTEX concentrations is observed, cyclic operation (approximately 2 weeks on and 2 weeks off) of the SVE system will continue until an asymptotic reduction in concentrations is achieved. If no significant rebound in VFH and BTEX concentrations is observed, Delta will submit a report to the SAFD summarizing the results of system operation and rebound evaluations. Included in the report will be a request to the SAFD to discontinue SVE system operation and rationale for granting regulatory case closure for the site.

REMARKS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are determined in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

If you have questions or comments regarding this correspondence, please contact Aaron Baird at (949) 360-5795.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Aaron Baird
Project Manager

11/21/05
Date

Dean A. Richesin
California Professional Geologist No. 3587
Certified Engineering Geologist No. 1055

11/21/05
Date

PROFESSIONAL GEOLOGIST
DEAN A. RICHESIN
No. 1055
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Attachments:	Figure 1	Site Location Map
	Figure 2	Site Map
	Table 1	Historical Soil Analytical Results
	Table 2	Well Construction Details
	Table 3	SVE System Performance Data
	Table 4	Individual Well Field Concentration Data
	Table 5	Individual Well Vapor Analytical Data
	Graph 1	SVE System Performance
	Graph 2	Influent VFH and Benzene Concentrations vs. Time
	Attachment A	SAFD Letters Dated March 30 and July 5, 2005
	Attachment B	Soil Boring Logs
	Attachment C	Soil Disposal Documentation
	Attachment D	Laboratory Report and Chain-of-Custody Documentation
	Attachment E	Soil Boring/Well Construction Logs for Wells VW-6 and VW-15

Cc: Mr. Darrell Fah, Atlantic Richfield Company, La Palma, California
Ms. Valerie Jahn-Bull, CRWQCB-Santa Ana Region, Riverside, California

(q:\bpwest\socal\206\csbr.doc)

REFERENCES

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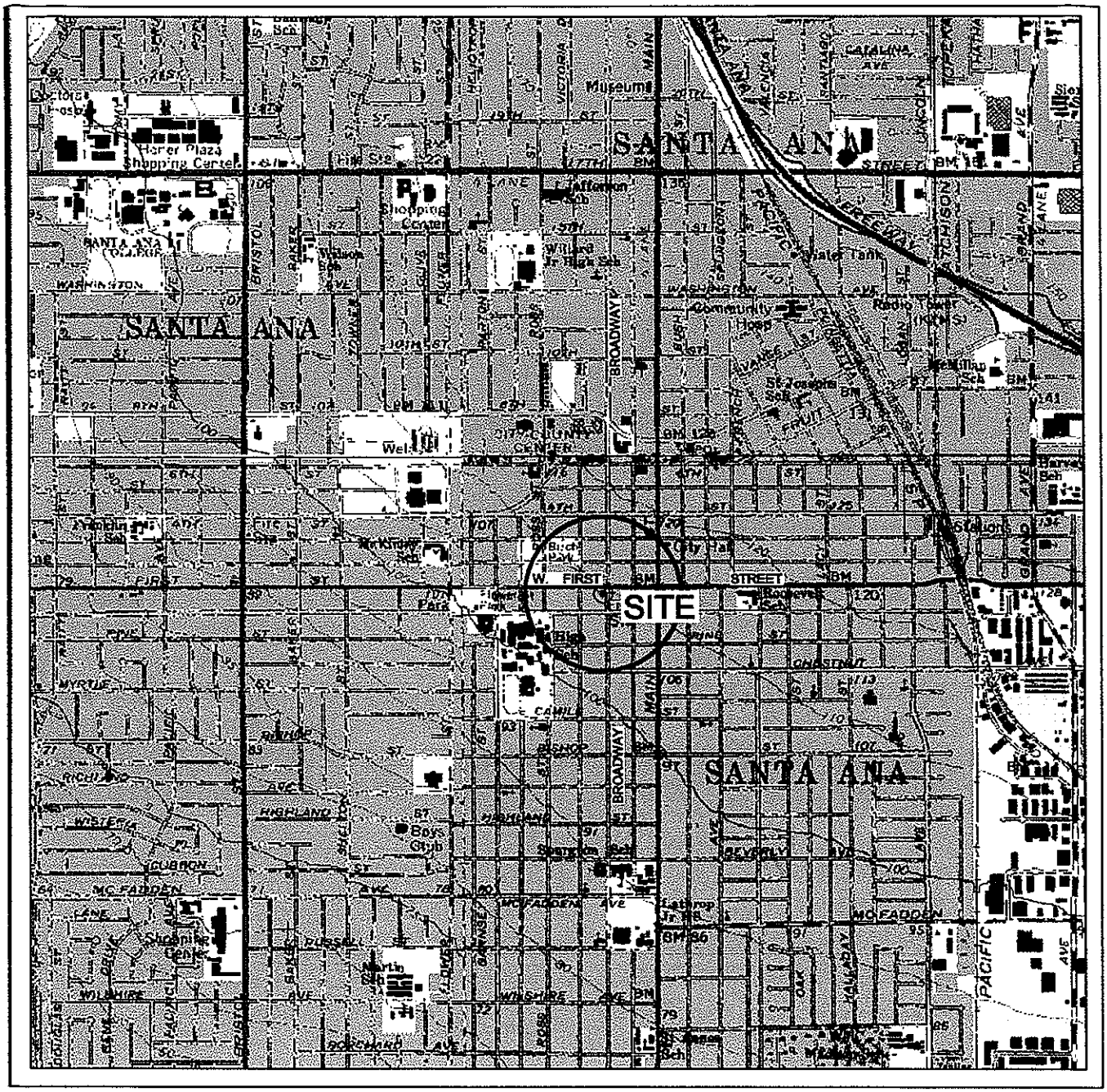


GENERAL NOTES:
BASE MAP FROM 3-D TOPO QUADS
TUSTIN AND NEWPORT BEACH, CA. QUADRANGLE
7.5 MINUTE TOPOGRAPHIC MAP
1965
PHOTOREVISED 1981

QUADRANGLE LOCATION

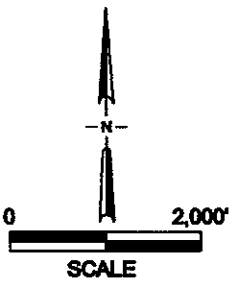
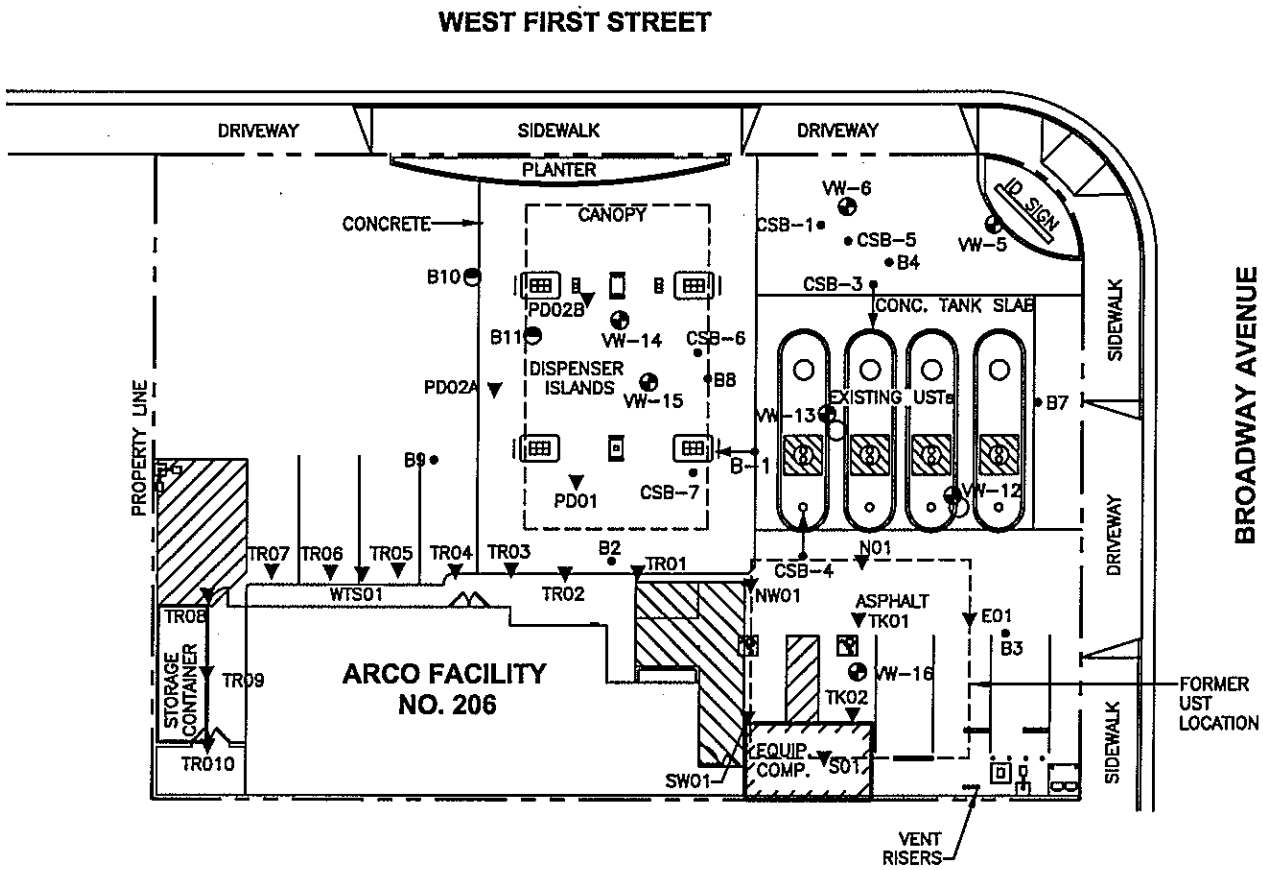


FIGURE 1

SITE LOCATION MAP
ARCO FACILITY NO. 206
302 W. FIRST STREET
SANTA ANA, CA.

PROJECT NO. 00725	DRAWN BY K. MARTIN	
FILE NO. A0-725-03	PREPARED BY A. BAIRD	
DATE 04 JAN 05 / REV. 0	REVIEWED BY	

Delta Environmental Consultants, Inc.



LEGEND

VW-5	⊕	VAPOR EXTRACTION WELL LOCATION
CSB-1	•	SOIL BORING LOCATION
B10	◓	HAND AUGER LOCATION
CSB-4	←•	ANGLED SOIL BORING LOCATION
PD01	▼	PRODUCT LINE SOIL SAMPLE LOCATION
TR09	▼	VENT LINE SOIL SAMPLE LOCATION
TK02	▼	UST SOIL SAMPLE LOCATION
SW01	▼	UST EXCAVATION SIDEWALL SOIL SAMPLE LOCATION
WTS01	▼	WASTE OIL UST SOIL SAMPLE LOCATION

FIGURE 2

SITE MAP
ARCO FACILITY NO. 206
302 W. FIRST STREET
SANTA ANA, CA.

PROJECT NO. GOB5M		DRAWN BY K. MARTIN
FILE NO. A0-725-04		PREPARED BY S. PEACHER
DATE 25 oct 05	REV. 0	REVIEWED BY

Delta Environmental Consultants, Inc.

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
ARCO Facility No. 0206
302 W. First Street
Santa Ana, CA

Sample I.D.	Date Sampled	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)
B-1	9/10/1992	12	3100	10	210	80	500	NA	NA	NA	NA	NA	NA
B-1	9/10/1992	27	6100	100	500	140	690	NA	NA	NA	NA	NA	NA
B-1	9/10/1992	37	4.9	1.2	0.046	0.12	0.19	NA	NA	NA	NA	NA	NA
B-1	9/10/1992	42	ND<0.50	0.029	0.038	ND<0.0050	0.020	NA	NA	NA	NA	NA	NA
B-2	2/18/1993	25	1.1	0.22	0.19	0.030	0.14	NA	NA	NA	NA	NA	NA
B-2	2/18/1993	40	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
B-3	2/18/1993	10	540	0.051	0.21	2.5	13	NA	NA	NA	NA	NA	NA
B-3	2/18/1993	20	5.8	0.39	0.75	0.16	0.84	NA	NA	NA	NA	NA	NA
B-3	2/18/1993	30	2.6	0.91	0.087	0.11	0.19	NA	NA	NA	NA	NA	NA
B-3	2/18/1993	40	ND<0.50	0.011	0.0081	ND<0.0050	0.009	NA	NA	NA	NA	NA	NA
B-4	2/18/1993	10	230	0.16	0.90	2.2	10.0	NA	NA	NA	NA	NA	NA
B-4	2/18/1993	30	17	1.0	0.48	0.14	0.71	NA	NA	NA	NA	NA	NA
B-4	2/18/1993	40	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
B-5 (VW-5)	2/19/1993	10	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
B-5 (VW-5)	2/19/1993	20	17	0.21	1.8	0.41	2.70	NA	NA	NA	NA	NA	NA
B-5 (VW-5)	2/19/1993	30	7.6	1.0	2.9	0.22	1.5	NA	NA	NA	NA	NA	NA
B-5 (VW-5)	2/19/1993	40	ND<0.50	ND<0.0050	0.018	ND<0.0050	0.007	NA	NA	NA	NA	NA	NA
B-5 (VW-5)	2/19/1993	50	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
B-6 (VW-6)	2/19/1993	10	14	ND<0.0050	ND<0.0050	0.015	0.31	NA	NA	NA	NA	NA	NA
B-6 (VW-6)	2/19/1993	15	6500	ND<14	120	160	1100	NA	NA	NA	NA	NA	NA
B-6 (VW-6)	2/19/1993	30	6300	84	610	150	860	NA	NA	NA	NA	NA	NA
B-6 (VW-6)	2/19/1993	40	ND<0.50	ND<0.0050	0.0059	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
B-6 (VW-6)	2/19/1993	50	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	0.005	NA	NA	NA	NA	NA	NA
B-7	2/19/1993	10	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	0.024	NA	NA	NA	NA	NA	NA
B-7	2/19/1993	30	8.6	0.41	2.0	0.19	1.3	NA	NA	NA	NA	NA	NA
B-7	2/19/1993	40	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
B-7	2/19/1993	50	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
B-8	2/23/1993	10	2.4	0.052	0.0073	0.011	0.33	NA	NA	NA	NA	NA	NA

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
ARCO Facility No. 0206
302 W. First Street
Santa Ana, CA

Sample I.D.	Date Sampled	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)
B-8	2/23/1993	20	53	3.7	2.4	0.70	9.3	NA	NA	NA	NA	NA	NA
B-8	2/23/1993	30	5.2	0.95	0.49	0.19	0.38	NA	NA	NA	NA	NA	NA
B-8	2/23/1993	35	21	2.0	4.6	0.56	3.4	NA	NA	NA	NA	NA	NA
B-8	2/23/1993	40	3.4	0.29	0.34	0.14	0.64	NA	NA	NA	NA	NA	NA
B-8	2/23/1993	50	0.98	ND<0.0050	0.012	0.0053	0.029	NA	NA	NA	NA	NA	NA
B-9	2/23/1993	10	ND<0.52	ND<0.0052	ND<0.0052	ND<0.0052	0.023	NA	NA	NA	NA	NA	NA
B-9	2/23/1993	30	1.8	0.44	0.088	0.071	0.22	NA	NA	NA	NA	NA	NA
B-9	2/23/1993	40	ND<0.51	0.0068	ND<0.0051	ND<0.0051	0.0096	NA	NA	NA	NA	NA	NA
E01	9/15/1993	NA	4.6	ND<0.012	ND<0.012	0.021	0.18	NA	NA	NA	NA	NA	NA
N01	9/15/1993	NA	38	ND<0.24	ND<0.24	ND<0.24	1.3	NA	NA	NA	NA	NA	NA
NW01	9/15/1993	NA	2.4	ND<0.012	ND<0.012	0.013	ND<0.012	NA	NA	NA	NA	NA	NA
S01	9/15/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
SW01	9/15/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	0.037	NA	NA	NA	NA	NA	NA
TK01	9/15/1993	NA	510	2.4	12	7.4	46	NA	NA	NA	NA	NA	NA
TK02	9/15/1993	NA	38	0.26	1.3	0.67	4.3	NA	NA	NA	NA	NA	NA
PD01	9/17/1993	NA	0.97	ND<0.0050	ND<0.0050	ND<0.0050	0.028	NA	NA	NA	NA	NA	NA
PD02A	9/17/1993	NA	1.5	ND<0.012	ND<0.012	ND<0.012	0.11	NA	NA	NA	NA	NA	NA
PD02B	9/17/1993	NA	1.9	ND<0.0050	ND<0.0050	0.0074	0.036	NA	NA	NA	NA	NA	NA
WTS01	9/17/1993	NA	1300*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR01	9/24/1993	NA	76	0.46	1.8	1.0	5.8	NA	NA	NA	NA	NA	NA
TR02	9/24/1993	NA	1.3	ND<0.0050	0.019	0.0082	0.098	NA	NA	NA	NA	NA	NA
TR03	9/24/1993	NA	0.60	ND<0.0050	ND<0.0050	ND<0.0050	0.018	NA	NA	NA	NA	NA	NA
TR04	9/24/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
TR05	9/24/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
TR06	9/24/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
TR07	9/24/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
TR08	9/24/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
TR09	9/24/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA
TR10	9/24/1993	NA	ND<0.50	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	NA	NA	NA	NA	NA	NA

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
ARCO Facility No. 0206
302 W. First Street
Santa Ana, CA

Sample I.D.	Date Sampled	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)
CSB1-55	6/10/1999	55	ND<0.1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
CSB1-60	6/10/1999	60	ND<0.1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
CSB3-5	6/10/1999	5	ND<0.1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
CSB3-10	6/10/1999	10	2300	ND<2.5	20	30	310	ND<5	NA	NA	NA	NA	NA
CSB3-15	6/10/1999	15	1700	ND<2.5	39	37	230	ND<5	NA	NA	NA	NA	NA
CSB3-20	6/10/1999	20	8000	26	520	150	870	ND<50	NA	NA	NA	NA	NA
CSB3-25	6/10/1999	25	9200	50	600	150	870	ND<50	NA	NA	NA	NA	NA
CSB3-30	6/10/1999	30	4500	33	300	74	420	22	ND<2	ND<2	ND<2	ND<40	NA
CSB3-35	6/10/1999	35	72	3.1	8.7	1.2	7.4	ND<0.5	NA	NA	NA	NA	NA
CSB3-40	6/10/1999	40	3100	20	200	54	310	ND<10	NA	NA	NA	NA	NA
CSB3-45	6/10/1999	45	0.6	0.010	0.051	0.006	0.058	ND<0.010	NA	NA	NA	NA	NA
CSB3-50	6/10/1999	50	0.6	0.008	0.053	0.010	0.059	ND<0.010	NA	NA	NA	NA	NA
CSB3-55	6/10/1999	55	0.4	ND<0.005	0.034	0.008	0.052	ND<0.010	NA	NA	NA	NA	NA
CSB3-60	6/10/1999	60	0.2	ND<0.005	0.014	ND<0.005	0.016	ND<0.010	NA	NA	NA	NA	NA
CSB4-5	6/10/1999	5	ND<0.1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
CSB4-10	6/10/1999	10	11	ND<0.005	ND<0.005	0.062	0.44	0.021	NA	NA	NA	NA	NA
CSB4-15	6/10/1999	15	56	ND<0.25	ND<0.25	ND<0.25	0.42	ND<0.5	NA	NA	NA	NA	NA
CSB4-20	6/10/1999	20	ND<0.1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
CSB4-25	6/10/1999	25	0.2	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
CSB4-30	6/10/1999	30	1.2	0.30	ND<0.005	0.087	ND<0.005	0.17	ND<0.005	ND<0.005	ND<0.005	ND<0.100	NA
CSB4-35	6/10/1999	35	0.2	ND<0.005	ND<0.005	0.011	ND<0.005	0.025	NA	NA	NA	NA	NA
CSB4-40	6/10/1999	40	ND<0.1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
CSB4-45	6/10/1999	45	ND<0.1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
CSB4-50	6/10/1999	50	ND<0.1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	NA	NA	NA	NA	NA
D1-2	10/28/1999	2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.015	ND<0.0050	NA	NA	NA	NA	NA
D2-2	10/28/1999	2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.015	ND<0.0050	NA	NA	NA	NA	NA
D3-2	10/28/1999	2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.015	ND<0.0050	NA	NA	NA	NA	NA
D4-2	10/28/1999	2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.015	ND<0.0050	NA	NA	NA	NA	NA
P1-2	10/28/1999	2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.015	ND<0.0050	NA	NA	NA	NA	NA

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
ARCO Facility No. 0206
302 W. First Street
Santa Ana, CA

Sample I.D.	Date Sampled	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)
P2-2	10/28/1999	2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.015	ND<0.0050	NA	NA	NA	NA	NA
P3-2	10/28/1999	2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.015	ND<0.0050	NA	NA	NA	NA	NA
P4-2	10/28/1999	2	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.015	ND<0.0050	NA	NA	NA	NA	NA
CSB-5-10	10/13/2005	10	ND<0.36	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0035	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.044	ND<0.26
CSB-5-15	10/13/2005	15	470	ND<0.45	ND<0.45	ND<0.45	6.2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<22	ND<67
CSB-5-20	10/13/2005	20	710	ND<0.89	25	21	360	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<45	ND<130
CSB-5-25	10/13/2005	25	15000	56	1500	380	2300	ND<43	ND<43	ND<43	ND<43	ND<850	ND<2600
CSB-5-30	10/13/2005	30	4000	24	210	55	320	ND<5.2	ND<5.2	ND<5.2	ND<5.2	ND<100	ND<310
CSB-5-35	10/13/2005	35	ND<16	1.4	3.2	0.27	1.7	ND<0.23	ND<0.23	ND<0.23	ND<0.23	ND<4.5	ND<14
CSB-5-40	10/13/2005	40	ND<0.40	ND<0.0035	0.018	ND<0.0035	0.015	ND<0.0088	ND<0.0088	ND<0.0088	ND<0.0088	ND<0.088	ND<0.53
CSB-5-45	10/13/2005	45	ND<0.40	ND<0.13	0.18	ND<0.13	ND<0.27	ND<0.34	ND<0.34	ND<0.34	ND<0.34	ND<6.7	ND<20
CSB-5-50	10/13/2005	50	ND<0.36	ND<0.0018	0.0030	ND<0.0018	0.0046	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.045	ND<0.27
CSB-6-10	10/13/2005	10	ND<0.40	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0033	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.041	ND<0.25
CSB-6-15	10/13/2005	15	ND<0.40	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0040	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.050	ND<0.30
CSB-6-20	10/13/2005	20	ND<0.40	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0036	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.045	ND<0.27
CSB-6-25	10/13/2005	25	ND<0.40	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0034	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.043	ND<0.26
CSB-6-30	10/13/2005	30	ND<0.33	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0033	0.041	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.041	ND<0.25
CSB-6-35	10/13/2005	35	ND<0.32	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0036	0.12	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.045	ND<0.27
CSB-6-40	10/13/2005	40	ND<0.40	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0040	0.047	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.050	ND<0.30
CSB-6-45	10/13/2005	45	ND<0.33	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0051	ND<0.0063	ND<0.0063	ND<0.0063	ND<0.0063	ND<0.063	ND<0.38
CSB-6-50	10/13/2005	50	ND<0.35	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0049	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.0061	ND<0.061	ND<0.37
CSB-7-10	10/13/2005	10	ND<0.40	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0036	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.044	ND<0.27
CSB-7-15	10/13/2005	15	ND<0.34	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0040	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.050	ND<0.30
CSB-7-20	10/13/2005	20	ND<0.32	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0036	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.045	ND<0.27
CSB-7-25	10/13/2005	25	1600	0.97	32	46	270	ND<2.2	ND<2.2	ND<2.2	ND<2.2	ND<45	ND<130
CSB-7-30	10/13/2005	30	1.0	0.10	0.15	0.064	0.18	0.019	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.045	ND<0.27
CSB-7-35	10/13/2005	35	ND<0.40	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0040	0.061	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.050	ND<0.30
CSB-7-40	10/13/2005	40	ND<0.40	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0040	0.045	ND<0.0050	ND<0.0050	ND<0.0050	0.14	ND<0.30
CSB-7-45	10/13/2005	45	ND<0.45	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0050	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.0062	ND<0.062	ND<0.37

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
ARCO Facility No. 0206
302 W. First Street
Santa Ana, CA

Sample I.D.	Date Sampled	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)
CSB-7-50	10/13/2005	50	ND<0.40	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0034	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.043	ND<0.26

Notes: EPA = Environmental Protection Agency

mg/kg = Milligrams per kilogram

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

TBA = Tertiary butanol

NA = Not analyzed

ND<Number = Analyte not detected at or above the stated laboratory reporting limit

TPHg analysis by EPA 8015 Modified. TRPH analysis by EPA 418.1.

Benzene, Toluene, Ethylbenzene, Xylenes, MTBE, DIPE, ETBE, TAME, TBA, and Ethanol analyses by EPA 8260B

* = Total recoverable petroleum hydrocarbons analysis by EPA 418.1.

TABLE 2

WELL CONSTRUCTION DETAILS

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

Well I.D.	Date Construction Completed	Well Type	Total Depth (feet bgs)	Screen Interval (feet bgs)	Casing Diameter (inches)
B-5 / VW-5	02/19/93	Vadose	33	13-33	4
B-6 / VW-6	02/19/93	Vadose	33	13-33	4
VW-12	05/03/94	Vadose	35	20-35	4
VW-13	05/03/94	Vadose	35	20-35	4
VW-14	05/02/94	Vadose	36	21-36	4
VW-15	05/02/94	Vadose	30	10-30	4
VW-16	05/03/94	Vadose	30	10-30	4

NOTES:

bgs = Below ground surface

TABLE 3

SVE SYSTEM PERFORMANCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

DATE	OPERATING HOURS	CUMULATIVE OPERATING HOURS	TOTAL VACUUM (IN H_2O)	FLOW RATE (SCFM)	INFLUENT VFH CONC. (FIELD-PPMV)	EFFLUENT VFH CONC. (FIELD-PPMV)	INFLUENT CONC. VFH (LAB-PPMV)	INFLUENT CONC. BENZENE (LAB-PPMV)	INFLUENT CONC. MTBE (LAB-PPMV)	EFFLUENT CONC. VFH (LAB-PPMV)	EFFLUENT CONC. BENZENE (LAB-PPMV)	STACK TEMP (DEG F)	VFH MASS DESTROYED (LBS)	CUMULATIVE VFH MASS DESTROYED	COMMENTS
11/06/00	4	12,900	50	250	450	7.2	1300	5.1	5.8	7.2	<1.6	1524	21	21	Wells VW-5, VW-6, VW-12, VW-13, VW-14, VW-15, and
11/07/00	46	12,946	42	231	271	3.4	NA	NA	NA	NA	NA	1568	46	67	VW-15 connected to system
11/08/00	7	12,953	39	233	250	5.6	NA	NA	NA	NA	NA	1587	6	73	
11/09/00	24	12,977	43	232	850	8.7	NA	NA	NA	NA	NA	1574	75	148	
11/10/00	20	12,997	40	233	540	4.7	NA	NA	NA	NA	NA	1590	40	188	
11/13/00	93	13,070	38	236	516	5.1	NA	NA	NA	NA	NA	1575	179	327	
11/15/00	121	13,118	38	229	560	3.9	NA	NA	NA	NA	NA	1582	246	433	
11/22/00	165	13,283	35	226	243	2.6	NA	NA	NA	NA	NA	1560	143	577	
11/27/00	123	13,406	38	222	520	3.1	NA	NA	NA	NA	NA	1573	225	802	
12/07/00	242	13,648	39	218	696	3.4	NA	NA	NA	NA	NA	1600	581	1,383	
12/11/00	93	13,741	39	218	549	1.7	530	1.8	2.9	7.9	<1.6	1523	170	1,553	
12/22/00	263	14,004	41	215	650	1.7	NA	NA	NA	NA	NA	1571	582	2,135	
12/27/00	119	14,123	44	211	345	1.6	NA	NA	NA	NA	NA	1541	137	2,272	
01/02/01	147	14,270	50	198	233	0.7	NA	NA	NA	NA	NA	1559	107	2,379	
01/10/01	52	14,322	80	211	350	0	620	2.7	3.3	<2.4	<1.6	1555	108	2,487	
01/15/01	119	14,441	80	205	649	0	NA	NA	NA	NA	NA	1605	251	2,738	
01/22/01	160	14,601	75	211	490	0.7	NA	NA	NA	NA	NA	1599	261	2,999	
01/29/01	171	14,772	60	224	636	0	NA	NA	NA	NA	NA	1553	387	3,386	
02/05/01	168	14,940	60	211	479	0	NA	NA	NA	NA	NA	1550	269	3,655	
02/12/01	168	15,108	40	240	645	0	270	<1.6	2.3	<2.4	<1.6	1524	172	3,827	
03/20/01	181	15,290	85	195	450	2.1	290	<1.6	2.3	<2.4	<1.6	1543	162	3,989	
03/27/01	152	15,442	64	207	562	0.2	NA	NA	NA	NA	NA	1671	280	4,270	
04/02/01	143	15,585	62	197	473	0	NA	NA	NA	NA	NA	1609	211	4,200	
04/09/01	152	15,737	60	198	499	0	320	<6.4	<5.6	12	<1.6	1521	152	4,352	
04/16/01	165	15,901	64	195	467	0	NA	NA	NA	NA	NA	1515	238	4,590	
04/23/01	163	16,064	61	196	594	0	NA	NA	NA	NA	NA	1521	300	4,890	
05/01/01	188	16,252	62	191	2251	0	NA	NA	NA	NA	NA	1521	1277	6,167	
05/07/01	135	16,387	60	190	1324	0	160	<3.2	<2.8	5.3	<1.6	1519	65	6,232	
05/14/01	161	16,548	60	189	447	0	NA	NA	NA	NA	NA	1496	215	6,447	
05/21/01	161	16,708	60	188	522	0	NA	NA	NA	NA	NA	1500	250	6,696	
06/05/01	2	16,710	70	190	882	0	250	<1.6	<1.4	<2.4	<1.6	1522	1	6,698	
06/12/01	148	16,858	64	194	2137	0	NA	NA	NA	NA	NA	1521	974	7,672	
06/19/01	168	17,026	64	192	630	0	NA	NA	NA	NA	NA	1523	321	7,992	
06/26/01	170	17,196	60	191	579	0	NA	NA	NA	NA	NA	1540	297	8,290	
07/03/01	144	17,340	62	191	364	0	NA	NA	NA	NA	NA	1395	159	8,449	
07/10/01	0	17,340	60	190	89.4	0	19	<1.6	<1.4	<2.4	<1.6	1368	0	8,449	
07/17/01	139	17,479	60	175	126	0	NA	NA	NA	NA	NA	1372	48	8,497	
07/30/01	196	17,675	55	226	207	0	NA	NA	NA	NA	NA	1408	145	8,642	
08/16/01	12	17,687	44	225	382	2.9	200	<1.6	<1.4	<2.4	<1.6	1369	9	8,651	
08/20/01	259	17,946	40	225	385	0	NA	NA	NA	NA	NA	1372	355	9,006	System shut down on 8/27 (temperature controller broken)
10/02/01	0	Hour meter broken	60	231	438	0	NA	NA	NA	NA	NA	1455	0	9,006	
10/09/01	168	Hour meter broken	70	202	525	1.4	390	<3.2	<2.8	<2.4	<1.6	1586	282	9,288	
10/18/01	216	Hour meter broken	79	200	477	1.2	NA	NA	NA	NA	NA	1489	326	9,614	
10/22/01	96	Hour meter broken	75	205	525	0	NA	NA	NA	NA	NA	1469	164	9,778	
10/30/01	192	17,915	60	205	611	0	NA	NA	NA	NA	NA	1446	381	10,159	Replaced hour meter

TABLE 3

SVE SYSTEM PERFORMANCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

DATE	OPERATING HOURS	CUMULATIVE OPERATING HOURS	TOTAL VACUUM (IN H_2O)	FLOW RATE (SCFM)	INFLUENT VFH CONC. (FIELD-PPMV)	EFFLUENT VFH CONC. (FIELD-PPMV)	INFLUENT CONC. (LAB-PPMV) VFH	INFLUENT CONC. (LAB-PPMV) BENZENE	INFLUENT CONC. (LAB-PPMV) MTBE	EFFLUENT CONC. (LAB-PPMV) VFH	EFFLUENT CONC. (LAB-PPMV) BENZENE	STACK TEMP (DEG F)	VFH MASS DESTROYED (LBS)	CUMULATIVE VFH MASS DESTROYED	COMMENTS
11/05/01	140	18,055	80	211	240	NA	240	<1.6	<1.4	13	<1.6	1414	112	10,271	
11/15/01	238	18,293	68	226	162	4.2	NA	NA	NA	NA	NA	1399	138	10,409	
11/27/01	291	18,584	100	205	674	11	NA	NA	NA	NA	NA	1488	637	11,045	System shut down on 12/3 (blower broken)
02/21/02	90	18,674	40	137	206	4.2	530	4.8	4.1	<2.4	<1.6	1679	40	11,085	Replaced blower, restarted system
02/25/02	32	18,705	30	140	199	3.1	NA	NA	NA	NA	NA	1636	14	11,099	
03/06/02	215	18,920	31	138	201	4.6	500	<1.6	1.8	<2.4	<1.6	1624	94	11,193	
03/15/02	214	19,133	26	143	226	3.4	NA	NA	NA	NA	NA	1686	109	11,303	
03/22/02	163	19,296	24	144	1028	4.6	NA	NA	NA	NA	NA	1597	382	11,685	
03/25/02	79	19,375	24	142	549	3.1	NA	NA	NA	NA	NA	1759	97	11,782	
04/04/02	233	19,608	30	142	2573	7.9	NA	NA	NA	NA	NA	1520	1346	13,128	
04/12/02	197	19,805	30	143	536	0	NA	NA	NA	NA	NA	1520	239	13,367	Optimized system for maximum output
04/17/02	117	19,922	40	136	2271	3.8	NA	NA	NA	NA	NA	1560	573	13,940	
04/22/02	121	20,043	42	135	1956	5.6	NA	NA	NA	NA	NA	1568	506	14,447	
04/30/02	0	20,044	54	132	2571	12.5	NA	NA	NA	NA	NA	1416	2	14,449	
05/10/02	246	20,289	5	143	84	0	NA	NA	NA	NA	NA	1528	47	14,495	Shut down system at departure for cycling
06/28/02	1	20,291	10	144	340	0	120	1.3	68	10	<1.2	1333	1	14,496	Restarted
07/06/02	188	20,479	40	142	800	8	NA	NA	NA	NA	NA	1524	339	14,835	
07/11/02	117	20,596	NA	142	256	0	NA	NA	NA	NA	NA	1532	68	14,903	
07/15/02	100	20,696	NA	140	214	0	NA	NA	NA	NA	NA	1510	47	14,950	
07/24/02	213	20,909	NA	141	255	0	20	<1.2	9.5	3.9	<1.2	1520	10	14,960	
08/02/02	215	21,124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	System running w/out vacuum; shut-off
09/20/02	7	21,132	20	141	237	0	NA	NA	NA	NA	NA	1451	4	14,963	Installed float switch, cleaned filter, restarted system
09/24/02	92	21,224	90	121	98.6	0	57	<1.6	<1.4	4.3	<1.6	1450	10	14,973	
10/04/02	236	21,460	110	118	101.4	0	NA	NA	NA	NA	NA	1452	45	15,018	
10/10/02	149	21,610	114	119	566	13.4	NA	NA	NA	NA	NA	1474	159	15,177	
10/15/02	116	21,725	110	117	574	12.7	NA	NA	NA	NA	NA	1448	123	15,300	
10/22/02	171	21,896	106	117	528	11.8	NA	NA	NA	NA	NA	1466	168	15,468	
10/31/02	217	22,113	98	98	241	6.8	41	<1.6	<1.4	<2.4	<1.6	1447	14	15,482	
11/07/02	163	22,276	120	113	562	12	NA	NA	NA	NA	NA	1423	164	15,646	
11/14/02	171	22,447	32	134	475	14	NA	NA	NA	NA	NA	1415	172	15,818	Shut down for cycling at departure.
01/21/03	2	22,449	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2	15,818	Restarted system; shut off for blower repair
02/13/03	0.4	22,449	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.03	15,818	Repaired electric motor on blower
02/20/03	0.4	22,450	106.7	80.5	1541	0.1	180	2.2	<1.4	<2.4	<1.6	1475	0.09	15,818	Restarted system
02/27/03	167.3	22,617	113	NA	1584	15.8	NA	NA	NA	NA	NA	1414	38	15,856	Flame inlet screen cleaned
03/06/03	163.5	22,781	118	57.7	1429	16.8	NA	NA	NA	NA	NA	1429	27	15,883	
03/12/03	150.6	22,931	120	62.5	246	0.3	33	<1.6	<1.4	<2.4	<1.6	1543	5	15,888	Flame temp below limits - adjusted flame actuator
03/19/03	166.8	23,098	120	71	159	7.7	NA	NA	NA	NA	NA	1456	6	15,894	VW-16 10% - 20% open
03/27/03	184.8	23,283	98	143	1535	0	NA	NA	NA	NA	NA	1418	14	15,908	
04/02/03	150.9	23,434	119	150	1211	4.9	NA	NA	NA	NA	NA	1480	12	15,920	Shut down for cycling at departure.
04/30/03	0.1	23,434	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15,920	Restarted system for maintenance; shut off at departure
07/15/03	5.7	23,440	34	143	2314	0	370	1.6	<1.4	10	<1.6	1340	5	15,925	Restarted system after cycling
07/22/03	168.9	23,608	30	144	1730	0	NA	NA	NA	NA	NA	1325	142	16,067	
07/29/03	158.0	23,766	120	143	117	0	130	<1.6	<1.4	3.7	<1.6	1303	46	16,114	
08/05/03	170.7	23,937	120	144	115	0	NA	NA	NA	NA	NA	1330	51	16,164	
08/12/03	169.5	24,107	120	145	111	0.1	NA	NA	NA	NA	NA	1341	51	16,215	

TABLE 3

SVE SYSTEM PERFORMANCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

DATE	OPERATING HOURS	CUMULATIVE OPERATING HOURS	TOTAL VACUUM (IN H_2O)	FLOW RATE (SCFM)	INFLUENT VFH CONC. (FIELD-PPMV)	EFFLUENT VFH CONC. (FIELD-PPMV)	INFLUENT CONC. (LAB-PPMV) VFH	INFLUENT CONC. (LAB-PPMV) BENZENE	INFLUENT CONC. (LAB-PPMV) MTBE	EFFLUENT CONC. (LAB-PPMV) VFH	EFFLUENT CONC. (LAB-PPMV) BENZENE	STACK TEMP (DEG F)	VFH MASS DESTROYED (LBS)	CUMULATIVE VFH MASS DESTROYED	COMMENTS
08/19/03	167.3	24,274	99	145	1872	18.9	73	<1.6	<1.4	<2.4	<1.6	1331	28	16,243	Laboratory data collected on 8/20/2003
08/26/03	169.3	24,443	98	144	1749	16.8	NA	NA	NA	NA	NA	1321	28	16,271	
09/04/03	215.3	24,659	110	145	439	19	NA	NA	NA	NA	NA	1335	36	16,307	
09/10/03	145.0	24,804	120	145	364	14.6	NA	NA	NA	NA	NA	1372	24	16,331	
09/17/03	168.6	24,972	118	146	475	26.3	120	<1.6	<1.4	<2.4	<0.059	1339	47	16,378	Fixed broken sample port at VW-15
09/24/03	166.3	25,138	20	181	126	13.2	NA	NA	NA	NA	NA	1337	57	16,435	Shut down system at departure for cycling
10/15/03	0.6	25,139	140	85.6	312.6	3.8	NA	NA	NA	NA	NA	1412	0.1	16,436	Restarted system after cycling
10/22/03	170.7	25,310	150	101	327.4	0.2	250	<6.4	<5.6	<2.4	0.21	1422	68	16,504	
10/28/03	148.3	25,458	147	132	309	2.1	NA	NA	NA	NA	NA	1419	77	16,581	
11/06/03	215.3	25,673	120	143	270	3	NA	NA	NA	NA	NA	1420	122	16,703	
11/13/03	169.0	25,842	125	146	242.6	1.8	NA	NA	NA	NA	NA	1422	98	16,801	
11/20/03	161.4	26,004	134	145	337.1	2.4	NA	NA	NA	NA	NA	1489	93	16,893	
11/26/03	143.8	26,148	140	145	314.1	0.5	NA	NA	NA	NA	NA	1435	83	16,976	
12/04/03	193.2	26,341	130	152	179.6	0	NA	NA	NA	NA	NA	1451	116	17,092	
12/09/03	124.8	26,466	135	143	167	0	NA	NA	NA	NA	NA	1468	71	17,163	
12/16/03	166.4	26,632	20	183	154	0	9.2	<1.6	<1.4	<2.4	<0.059	1451	4	17,167	Shut down system at departure for cycling
01/20/04	0.7	26,633	90	162	180	0	7.6	<1.6	<1.4	<2.4	<0.059	1303	0.01	17,167	Restarted system after cycling; collected samples on 1/22/04
01/27/04	165.7	26,798	88	160	165	0	NA	NA	NA	NA	NA	1466	3	17,170	
02/03/04	169.2	26,968	80	149	167	0	120	<1.6	<1.4	3.9	<0.059	1339	48	17,218	Adjusted dilution air; collected samples on 2/6/2004
02/10/04	170.9	27,138	80	154	161	0	NA	NA	NA	NA	NA	1445	50	17,268	
02/17/04	167.7	27,306	74	179	167	0	NA	NA	NA	NA	NA	1313	57	17,325	Adjusted alarm for dilution
02/24/04	167.7	27,474	76	165	171	0	NA	NA	NA	NA	NA	1315	53	17,378	
03/05/04	237.2	27,711	62	159	90	0	80	<1.6	<1.4	2.5	<0.059	1405	48	17,426	Shut down at departure for 1 month of cycling
04/07/04	3.0	27,714	65	152	160	0	NA	NA	NA	NA	NA	1379	1	17,426	Restarted system after cycling
04/15/04	192	27,906	70	151	80	0	100	<1.6	<1.4	2.6	<0.059	1409	46	17,472	
04/21/04	142	28,048	70	149	80	0	NA	NA	NA	NA	NA	1402	33	17,506	
04/26/04	124	28,172	72	149	85	8	NA	NA	NA	NA	NA	1402	29	17,535	
05/05/04	218	28,390	72	127	80	4	91	<1.6	<1.4	<2.4	<0.059	1419	40	17,575	Shut downat departure for 1 month of cycling
06/04/04	0	28,390	68	127	190	0	NA	NA	NA	NA	NA	1376	0	17,575	Restart system after cycling
06/09/04	124	28,514	72	127	150	0	74	<1.6	<1.4	<2.4	<0.059	1423	18	17,593	
06/16/04	164	28,678	78	128	80	0	NA	NA	NA	NA	NA	1398	25	17,618	
06/21/04	125	28,803	80	128	80	0	NA	NA	NA	NA	NA	1407	19	17,637	
06/28/04	168	28,971	82	126	90	0	NA	NA	NA	NA	NA	1410	25	17,661	
07/10/04	279	29,250	80	127	70	0	61	<1.6	<1.4	<2.4	<0.0022	1408	34	17,696	Shut down at departure for 1 month of cycling
08/10/04	2	29,252	74	125	150	6	NA	NA	NA	NA	NA	1430	0.2	17,696	Restart system after cycling, replaced combustion actuator
08/19/04	210	29,462	80	127	120	0	92	<1.6	<1.4	3.3	<0.010	1400	39	17,735	
08/24/04	123	29,585	82	125	110	5	NA	NA	NA	NA	NA	1399	22	17,757	
09/01/04	192	29,777	84	125	80	5	NA	NA	NA	NA	NA	1398	35	17,792	
09/08/04	168	29,945	84	125	80	7	43	<1.6	<1.4	NA	NA	1393	14	17,806	Shut down at departure for 1 month of cycling
10/04/04	4	29,949	16	144	26	2	24	<1.6	<1.4	3.3	<0.059	1408	0.2	17807	Restart system after cycling
10/11/04	162	30,111	99	122	55	2	NA	NA	NA	NA	NA	1397	7.5	17814	
10/18/04	174	30,285	98	121	53	2	NA	NA	NA	NA	NA	1392	8.0	17822	
10/25/04	161	30,446	100	123	46	2	NA	NA	NA	NA	NA	1412	7.5	17830	
11/01/04	168	30,614	20	145	2	0	9.5	<1.6	<1.4	5.6	<0.059	1412	3.7	17833	Shut down at departure for 1 month of cycling
12/01/04	3	30,617	16	145	71	0	<2.4	<1.6	<1.4	<2.4	<0.059	1410	0.01	17833	Restart system after cycling

TABLE 3

SVE SYSTEM PERFORMANCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

DATE	OPERATING HOURS	CUMULATIVE OPERATING HOURS	TOTAL VACUUM (IN H_2O)	FLOW RATE (SCFM)	INFLUENT VFH CONC. (FIELD-PPMV)	EFFLUENT VFH CONC. (FIELD-PPMV)	INFLUENT CONC. (LAB-PPMV) VFH	INFLUENT CONC. (LAB-PPMV) BENZENE	INFLUENT CONC. (LAB-PPMV) MTBE	EFFLUENT CONC. (LAB-PPMV) VFH	EFFLUENT CONC. (LAB-PPMV) BENZENE	STACK TEMP (DEG F)	VFH MASS DESTROYED (LBS)	CUMULATIVE VFH MASS DESTROYED	COMMENTS
12/07/04	144	30,761	95	122	20	0	NA	NA	NA	NA	NA	1418	0.7	17834	
12/14/04	169	30,930	92	125	47	0	NA	NA	NA	NA	NA	1400	0.8	17835	
12/20/04	143	31,073	92	125	52	0	NA	NA	NA	NA	NA	1399	0.7	17835	
12/28/04	191	31,264	88	126	44	0	NA	NA	NA	NA	NA	1403	0.9	17836	
01/03/05	145	31,409	20	146	6	0	4.7	<1.6	<1.4	<2.4	<0.059	1441	1.6	17838	Shut down at departure for 1 month of cycling
02/01/05	3	31,412	40	138	92	0	45	<1.6	<1.4	<2.4	<0.059	1410	0.3	17838	Restarted system after cycling
02/08/05	168	31,580	42	137	79	0	NA	NA	NA	NA	NA	NA	16.4	17855	
02/14/05	142	31,722	46	136	25	0	NA	NA	NA	NA	NA	NA	13.8	17868	
02/21/05	170	31,892	48	147	60	2	NA	NA	NA	NA	NA	NA	17.8	17886	
02/28/05	169	32,061	22	139	7	0	5.2	<1.6	<1.4	<2.4	<0.059	NA	1.9	17888	Shut down at departure

Notes:

SVE	= Soil vapor extraction	Deg F	= Degrees Fahrenheit
VFH	= Volatile fuel hydrocarbons	NA	= Not analyzed/available
PPMV	= Parts per million by volume	LBS	= Pounds
Conc.	= Concentration	Temp.	= Temperature
SCFM	= Standard cubic feet per minute	<1.6	= Not detected at or above stated laboratory reporting limit

Field data used in calculations except when laboratory results available until first quarter 2003. During first quarter 2003 and after, lab data only was used to calculate pounds removed.
When flow rate is not available previous recorded flow rate is used to calculate pounds removed.
AQMD permit requirement: Benzene effluent <0.691 ppmv; bold values are >0.691.

TABLE 4

WELL SOURCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

Date	WELL IDENTIFICATION NUMBER																				
	VW-5			VW-6			VW-12			VW-13			VW-14			VW-15			VW-16		
	Screen Interval 13-33			Screen Interval 13-33			Screen Interval 20-35			Screen Interval 20-35			Screen Interval 21-36			Screen Interval 10-30			Screen Interval 10-30		
	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)
11/06/00	100	50	(2100) 1248	100	50	(6500) 1924	100	50	(3900) 1250	100	50	(2000) 630	0	0	NM	100	50	(890) 266	100	50	(1200) 700
11/07/00	100	42	971	100	42	2017	100	42	1169	100	42	540	0	0	NM	100	42	367	100	42	891
11/08/00	100	39	693	100	39	1964	100	39	981	100	39	523	0	0	NM	100	39	302	100	39	260
11/09/00	100	43	1250	100	43	3567	100	43	2190	100	43	1330	0	0	NM	100	43	782	100	43	510
11/10/00	100	40	1176	100	40	3711	100	40	1075	100	40	1219	0	0	NM	100	40	961	100	40	864
11/13/00	100	38	12.3	100	38	41.8	100	38	11.6	100	38	12.1	0	0	NM	100	38	988	100	38	857
11/15/00	100	38	1236	100	38	2269	100	38	971	100	38	1246	0	0	NM	100	38	901	100	38	923
11/22/00	100	35	NM	100	35	NM	100	35	NM	100	35	NM	0	0	NM	100	38	NM	100	38	NM
11/27/00	100	38	NM	100	38	NM	100	38	NM	100	38	NM	0	0	NM	100	38	NM	100	38	NM
12/07/00	100	39	492	100	39	2861	100	39	1067	100	39	1612	0	0	NM	100	39	492	100	39	145
12/11/00	100	39	563	100	39	2546	100	39	971	100	39	1733	0	0	NM	100	39	550	100	39	259
12/22/00	100	41	479	100	41	2172	100	41	1027	100	41	1811	0	0	0	100	41	636	100	41	210
12/27/00	100	44	569	100	44	1580	100	44	1564	100	44	1581	0	0	0	100	44	333	100	44	426
01/02/01	100	50	681	100	50	1477	100	50	1611	100	50	1539	0	0	0	100	50	370	100	50	510
01/10/01	100	80	725	100	80	1450	100	80	1671	100	80	1297	0	0	0	100	80	494	100	50	381
01/15/01	100	80	NM	100	80	NM	100	80	NM	100	80	NM	100	80	NM	100	80	NM	100	80	NM
01/22/01	100	75	NM	100	75	NM	100	75	NM	100	75	NM	100	75	NM	100	75	NM	100	75	NM
01/29/01	100	60	(740) 659	100	60	(180) 1511	100	60	(1300) 1626	100	60	(3200) 1343	100	60	(370) 1176	100	60	(270) 581	100	60	(49) 467
02/05/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
02/12/01	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM
03/20/01	100	85	432	100	85	2575	100	85	2552	100	85	2278	100	85	230	100	85	110	100	85	127
03/27/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
04/02/01	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM
04/09/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
04/16/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
04/23/01	100	61	NM	100	61	NM	100	61	NM	100	61	NM	100	61	NM	100	61	NM	100	61	NM
05/01/01	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM
05/07/01	100	60	1264	100	60	857	100	60	3001	100	60	3431	100	60	280	100	60	276	100	60	100
05/14/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
05/21/01	100	60	1452	100	60	2211	100	60	1460	100	60	3755	100	60	601	100	60	148	100	60	66.5
06/05/01	100	70	2331	100	70	2839	100	70	2310	100	70	3910	100	70	1016	100	70	231	100	70	150
06/12/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
06/19/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
06/26/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
07/03/01	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	60	NM	100	60	NM
07/10/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
07/17/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
07/30/01	100	55	1964	100	55	2566	100	55	2119	100	55	3547	100	55	931	100	55	228	100	55	118
08/16/01	100	44	897	100	44	2850	100	44	17.5	100	44	2297	100	44	394	100	44	45.8	100	44	75.2
08/20/01	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM
10/02/01	100	60	407	100	60	4986	50	60	35.6	100	60	1611	100	60	352	50	60	46.8	50	60	68.5
10/09/01	100	70	NM	100	70	NM	50	70	NM	100	70	NM	100	70	NM	50	70	NM	50	70	NM
10/18/01	100	78	NM	100	78	NM	70	78	NM	100	78	NM	100	78	NM	70	78	NM	70	78	NM
10/22/01	100	75	NM	100	75	NM	50	75	NM	100	75	NM	100	75	NM	50	75	NM	50	75	NM
10/30/01	100	60	NM	100	60	NM	50	60	NM	100	60	NM	100	60	NM	50	60	NM	50	60	NM

TABLE 4

WELL SOURCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

Date	WELL IDENTIFICATION NUMBER																				
	VW-5			VW-6			VW-12			VW-13			VW-14			VW-15			VW-16		
	Screen Interval 13-33			Screen Interval 13-33			Screen Interval 20-35			Screen Interval 20-35			Screen Interval 21-36			Screen Interval 10-30			Screen Interval 10-30		
	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)
11/06/01	100	80	NM	100	80	NM	50	80	NM	100	80	NM	100	80	NM	50	80	NM	50	80	NM
11/15/01	100	68	NM	100	68	NM	100	68	NM	100	68	NM	100	68	NM	50	68	NM	50	68	NM
11/27/01	25	104	171	100	111	933	10	110	108	100	105	838	25	48	167	0	0	NM	0	0	NM
02/21/02	50	30	51.3	100	34	148	0	0	NM	100	36	345	50	34	74.6	0	0	NM	0	0	NM
02/25/02	50	26	NM	100	30	NM	0	0	NM	100	30	NM	50	24	NM	0	0	NM	0	0	NM
03/06/02	50	28	48.2	100	31	127	0	0	NM	100	31	352	50	28	70.8	0	0	NM	0	0	NM
03/15/02	50	15	37.9	100	26	116	0	0	NM	100	24	315	50	15	61.2	0	0	NM	0	0	NM
03/22/02	50	23	304	100	24	1240	0	0	NM	100	25	2512	50	12	771	0	0	NM	0	0	NM
03/25/02	50	15	269	100	24	984	0	0	NM	100	24	1167	50	15	589	0	0	NM	0	0	NM
04/04/02	50	15	246	100	24	1072	0	0	0	100	24	2551	50	15	766	0	0	0	0	0	0
04/12/02	0	NM	NM	100	28	4006	0	NM	NM	100	28	2463	0	NM	NM	0	NM	NM	0	NM	NM
04/17/02	0	0	0	100	40	3562	0	0	0	100	40	2189	0	0	0	0	0	0	0	0	0
04/22/02	0	0	0	100	40	3391	0	0	0	100	40	1996	0	0	0	0	0	0	0	0	0
04/30/02	0	0	0	100	54	3788	0	0	0	100	54	2134	0	0	0	0	0	0	0	0	0
05/10/02	0	NM	0	100	NM	74	0	NM	NM	100	NM	64	0	NM	NM	0	NM	0	0	NM	0
06/28/02	0	NM	(12) 52	100	NM	(180) 3804	0	NM	(13) 0	100	NM	(130) 1531	0	NM	NM	0	NM	(8.5) 22	0	NM	(9.9) 37
07/06/02	0	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
07/11/02	0	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
07/15/02	0	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
07/24/02	0	NM	NM	100	10	NM	0	NM	NM	100	10	NM	0	NM	NM	0	NM	NM	0	NM	NM
08/02/02	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
08/20/02	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
09/20/02	100	20	240	100	20	1726	0	0	17	100	20	215	100	20	235.4	0	0	18.6	0	0	35.7
09/24/02	100	80	408	100	80	(450) 921	0	NM	NM	50	10	16	--	--	--	0	NM	NM	0	NM	NM
10/04/02	100	NM	NM	100	NM	NM	100	NM	NM	5	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
10/10/02	100	NM	(230)	100	NM	(440)	100	NM	(1400)	0	NM	(4.0) NM	100	NM	NM	100	NM	(79)	100	NM	(12)
10/15/02	100	NM	NM	100	NM	NM	100	NM	(4.0)	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
10/22/02	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
10/31/02	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
11/07/02	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
11/14/02	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
01/21/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
02/13/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
02/20/03	100	104.5	>4,000	100	104.6	>4,000	100	104.9	>4,000	0	NM	NM	100	105.2	1224	100	104.4	141	100	104.5	226
02/27/03	100	NM	>4,000	100	NM	206	100	NM	2338	0	NM	NM	100	NM	144	100	NM	134.5	100	NM	140
03/06/03	100	109	>4,000	100	109.2	186	100	106.3	1967	0	NM	NM	100	107	129	100	109.3	108.3	100	109.4	118
03/12/03	100	NM	869	100	NM	436	100	NM	810	0	NM	NM	100	NM	NM	100	NM	103.1	100	NM	384
03/19/03	100	106	452	100	106.5	124	100	106.1	1371	0	NM	NM	100	NM	NM	10	66.6	10.5	10	80.4	59.6
03/27/03	100	96.1	2503	100	94.1	2528	100	95	>4,000	0	NM	NM	100	NM	NM	100	96.1	746	100	75.2	496
04/02/03	100	109	2431	100	108	2608	100	109	>4,000	0	NM	NM	100	107	NM	100	109	610	100	109	312
04/30/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM
07/15/03	100	NM	1750	100	NM	3200	100	NM	4320	0	NM	NM	100	NM	NM	100	NM	670	100	NM	290
07/22/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
07/29/03	100	92	(520) 412	100	>100	(1200) 1256	100	>100	(140) 1010	0	NM	NM	100	>100	(200) 122	100	>100	(61) 0	100	84	(51) 0

TABLE 4

WELL SOURCE DATA

ARCO Facility No. 206
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Date	WELL IDENTIFICATION NUMBER																				
	VW-5			VW-6			VW-12			VW-13			VW-14			VW-15			VW-16		
	Screen Interval 13-33			Screen Interval 13-33			Screen Interval 20-35			Screen Interval 20-35			Screen Interval 21-36			Screen Interval 10-30			Screen Interval 10-30		
	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)
08/05/03	100	NM	400	100	NM	1176	100	NM	979	0	NM	NM	100	NM	115	100	NM	0	100	NM	0
08/12/03	100	NM	350	100	NM	997	100	NM	960	0	NM	NM	100	NM	114	100	NM	0	100	NM	0
08/19/03	100	89.2	1197	100	90.1	>4,000	100	90	>4,000	0	NM	NM	100	88.4	>4,000	100	88.8	3482	100	79.2	2971
08/26/03	100	90	1042	100	90.2	>4,000	100	89.9	>4,000	0	NM	NM	100	87	>4,000	100	88.2	3605	100	80.2	3002
09/04/03	100	87	720	100	90	1202	100	87	1768	0	NM	NM	100	89	444	100	88	376	100	82	729
09/10/03	100	85	680	100	91	1215	100	85	1649	0	NM	NM	100	80	503	100	84	218	100	80	719
09/17/03	100	NM	734	100	NM	1348	100	NM	936	0	NM	NM	100	NM	80.1	100	NM	201	100	NM	163
09/24/03	100	19	NM	100	19	NM	100	19	NM	0	19	NM	100	19	NM	100	19	NM	100	19	NM
10/15/03	100	>100	(77) 125.6	100	>100	(280) 1407	100	>100	(12) 21.3	0	NM	(20) 82.5	100	>100	(9.5) 37	0	NM	(<2.4) 1.1	100	>100	(<2.4) 0.4
10/22/03	100	150	245.7	100	150	605.5	100	150	471.3	0	0	14.4	100	145	37.1	5-15	14	4.7	0	0	1.4
10/28/03	100	145	301.4	100	145	458.8	100	145	479.8	0	NM	4.5	100	130	42.7	0	NM	0.9	5-10	40	40.6
11/06/03	100	115	236	100	115	411	100	120	427	0	NM	7	100	105	27	0	NM	1	0	NM	2.2
11/13/03	100	110	(220) 245.6	100	116	(490) 386.1	100	110	(240) 240.3	0	NM	(16) 22	100	100	(26) 36.6	0	NM	(18) 16.5	0	NM	(<2.4) 0
11/20/03	100	120	268	100	120	382.6	100	120	234.7	0	NM	18.4	100	120	NM	0	NM	11.8	0	NM	0
11/26/03	100	130	276.6	100	130	328.1	100	130	109.2	0	NM	1.3	100	NM	NM	0	NM	0.4	0	NM	30
12/04/03	100	120	183.4	100	120	280.4	100	120	116.1	0	NM	2.3	100	120	82.4	0	NM	0	0	NM	29.6
12/09/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM
12/16/03	0	NM	(120) NM	0	NM	(290) NM	0	NM	(110) NM	0	NM	(32) NM	0	NM	(15) NM	0	NM	(21) NM	0	NM	(<2.4) NM
01/20/04	100	86	(7.8) 237	100	86	(6.8) 380	100	86	(5.3) 210	50	80	(5.1) 27	0	NM	(33) 54	0	NM	(<2.4) 0	0	NM	(4.1) 13.7
01/27/04	100	84	220	100	84	346	100	84	197	50	78	25	0	NM	56	0	NM	0	0	NM	15
02/03/04	100	76	(280) 211	100	76	(480) 341	100	76	(190) 186	50	73	(25) 17	0	NM	(46) 49	0	NM	(14) 0	0	NM	(<2.4) 13
02/10/04	100	76	197	100	76	331	100	78	174	50	74	15	0	NM	47	0	NM	0	0	NM	11
02/17/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
02/24/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
03/05/04	100	NM	(270) 140	100	NM	(430) 330	100	NM	(190) 210	50	NM	(7.5) 35	0	NM	NM	0	NM	NM	0	NM	NM
04/07/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
04/15/04	100	NM	180	100	NM	310	100	NM	220	50	NM	30	0	NM	NM	0	NM	NM	0	NM	NM
04/21/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
04/26/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
05/05/04	100	NM	(330) 140	100	NM	(360) 260	100	NM	(200) 200	50	NM	(<2.4) 40	0	NM	NM	0	NM	NM	0	NM	NM
06/04/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
06/09/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
06/16/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
06/21/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
06/28/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
07/10/04	100	74	(220) 150	100	74	(170) 240	100	74	(69) 230	50	5	(7.2) 40	0	NM	NM	0	NM	NM	0	NM	NM
08/10/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
08/19/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
08/24/04	100	74	180	100	74	300	100	74	270	50	4	40	0	NM	NM	0	NM	NM	0	NM	NM
09/01/04	100	75	190	100	75	250	100	75	260	50	4	40	0	NM	NM	0	NM	NM	0	NM	NM
09/08/04	100	75	(150) 170	100	75	(92) 220	100	75	(50)240	50	4	(5.1) 30	0	NM	NM	0	NM	NM	0	NM	NM
10/04/04	100	15	(120) 182	100	15	(66) 161	100	15	(53) 90	100	15	(29) 33	100	15	(27) 32	0	NM	(3.2) 0	0	NM	(2.5) 1
10/11/04	100	97	101	100	97	184	100	97	27	50	97	0	0	NM	0	0	NM	0	0	NM	0

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	VW-5			VW-6			VW-12			VW-13			VW-14			VW-15			VW-16		
	Screen Interval 13-33			Screen Interval 13-33			Screen Interval 20-35			Screen Interval 20-35			Screen Interval 21-36			Screen Interval 10-30			Screen Interval 10-30		
	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)
10/18/04	100	96	89	100	96	176	100	96	19	50	96	0	0	NM	0	0	NM	0	0	NM	0
10/25/04	100	98	144	100	98	130	100	98	70	50	98	0	0	NM	0	0	NM	0	0	NM	0
11/01/04	100	19	(120) 23	100	19	(37) 25	100	19	(36) 27	100	19	(13) 4	100	19	(9.6) 1	100	19	(4.8) 0	100	19	(5.4) 0
12/01/04	100	15	(5.6) 74	100	15	(<2.4) 905	100	15	(3.0) 82	100	15	(12) 70	100	15	(52) 69	0	NM	(<2.4) 0	0	NM	(<2.4) 0
12/07/04	100	93	19	100	93	509	100	93	5	0	NM	0	100	93	0	100	93	0	100	93	0
12/14/04	100	90	152	100	90	189	100	90	66	0	NM	0	100	90	0*	100	90	18	100	90	13
12/20/04	100	90	NM	100	90	NM	100	90	NM	0	NM	NM	100	90	NM	100	90	NM	100	90	NM
12/28/04	100	86	139	100	86	177	100	86	40	0	NM	0	100	86	*	100	86	20	100	86	15
01/03/05	100	20	(88) 70	100	20	(27) 21	100	20	(16) 10	100	20	(4.6) 5	100	20	(11) 11	100	20	(3.9) 0.5	100	20	(<2.4) 0
02/01/05	100	40	(70) 94	100	40	(15) 13	0	NM	(4.4) 1	50	6	(43) 70	0	NM	(<2.4) 3	100	40	(6.5) 29	0	NM	(3.2) 1
02/08/05	100	40	81	100	40	11	0	NM	0	50	8	68	0	NM	1	100	40	24	0	NM	0
02/14/05	100	44	15	100	44	4	0	NM	0	50	8	17	0	NM	2	100	44	1	0	NM	0
02/21/05	100	46	93	100	46	61	0	NM	0	100	8	72	0	NM	0	100	46	12	0	NM	0
02/28/05	100	NM	(9.7) 10	100	NM	(4.8) 70	100	NM	(<2.4) 2.8	100	NM	(12) 15	100	NM	(3.8) 4	100	NM	(<2.4) 0	100	NM	(<2.4) 1.3

Notes:
( ) = Laboratory result
VFH = Volatile Fuel Hydrocarbons
ppmv = Parts per million by volume
NM = Not Measured
* = moisture present

TABLE 5

INDIVIDUAL WELL ANALYTICAL DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

Sample ID	Date	VFH (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	MTBE (ppmv)
VW-5	06/28/02	12	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	230	<1.6	8.0	1.2	20	<1.4
	07/29/03	520	2.6	19	6.1	72	<1.4
	10/15/03	77	<1.6	6.8	<1.2	9.6	<1.4
	11/13/03	220	1.7	12	2.5	34	<1.4
	12/16/03	120	<1.6	2.0	<1.2	16	<1.4
	01/22/04	7.8	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	280	<1.6	6.9	1.6	38	<1.4
	03/05/04	270	<1.6	8.4	2.3	36	<1.4
	05/05/04	330	<1.6	7.1	1.9	24	<1.4
	07/10/04	220	<1.6	7.6	1.6	28	<1.4
	09/08/04	150	<1.6	6.3	<1.2	17	<1.4
	10/04/04	120	<1.6	2.1	<1.2	8.9	<1.4
	11/01/04	120	<1.6	4.3	<1.2	17	<1.4
	12/01/04	5.6	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	88	<1.6	1.9	<1.2	8.0	<1.4
	02/01/05	70	<1.6	1.6	<1.2	5.9	<1.4
	02/28/05	9.7	<1.6	<1.3	<1.2	<3.5	<1.4
VW-6	06/28/02	180	1.2	4.4	<0.92	4.3	54
	09/24/02	450	3.8	17	2.2	44	<1.4
	10/10/02	440	<1.6	10	1.7	45	<1.4
	07/29/03	1200	8.5	46	9.4	120	1.9
	10/15/03	280	9.9	16	1.9	21	4.5
	11/13/03	490	4.3	27	5.5	70	<1.4
	12/16/03	290	<1.6	7.7	3.2	44	<1.4
	01/22/04	6.8	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	480	3.1	13	4.3	79	<1.4
	03/05/04	430	4.6	19	3.0	48	2.6
	05/05/04	360	<1.6	7.2	1.9	27	<1.4
	07/10/04	170	<1.6	4.3	<1.2	20	<1.4
	09/08/04	92	<1.6	2.4	<1.2	11	<1.4
	10/04/04	66	<1.6	<1.3	<1.2	6.4	<1.4
	11/01/04	37	<1.6	<1.3	<1.2	4.9	<1.4
	12/01/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	27	<1.6	<1.3	<1.2	<3.5	<1.4
	02/01/05	15	<1.6	<1.3	<1.2	<3.5	<1.4
	02/28/05	4.8	<1.6	<1.3	<1.2	<3.5	<1.4
VW-12	06/28/02	13	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	1400	14	81	12	110	5.3
	07/29/03	140	<1.6	<1.3	<1.2	11	<1.4
	10/15/03	12	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	240	2.4	18	2.3	21	<1.4
	12/16/03	110	<1.6	1.5	<1.2	13	<1.4
	01/22/04	5.3	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	190	<1.6	4.8	1.3	29	4.4
	03/05/04	190	<1.6	5.0	1.4	19	<1.4
	05/05/04	200	<1.6	3.1	<1.2	11	<1.4
	07/10/04	69	<1.6	<1.3	<1.2	<3.5	<1.4
	09/08/04	50	<1.6	<1.3	<1.2	<3.5	<1.4
	10/04/04	53	<1.6	<1.3	<1.2	3.6	<1.4
	11/01/04	36	<1.6	<1.3	<1.2	4.9	<1.4
	12/01/04	3.0	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	16	<1.6	<1.3	<1.2	<3.5	<1.4

TABLE 5

INDIVIDUAL WELL ANALYTICAL DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

Sample ID	Date	VFH (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	MTBE (ppmv)
VW-12	02/01/05	4.4	<1.6	<1.3	<1.2	<3.5	<1.4
(cont.)	02/28/05	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
VW-13	06/28/02	130	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	4.0	<1.6	<1.3	<1.2	<1.2	<1.4
	10/15/03	20	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	16	<1.6	<1.3	<1.2	<3.5	<1.4
	12/16/03	32	<1.6	<1.3	<1.2	<3.5	<1.4
	01/22/04	5.1	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	25	<1.6	<1.3	<1.2	<3.5	<1.4
	03/05/04	7.5	<1.6	<1.3	<1.2	<3.5	<1.4
	05/05/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	07/10/04	7.2	<1.6	<1.3	<1.2	<3.5	<1.4
	09/08/04	5.1	<1.6	<1.3	<1.2	<3.5	<1.4
	10/04/04	29	<1.6	1.7	<1.2	<3.5	<1.4
	11/01/04	13	<1.6	<1.3	<1.2	<3.5	<1.4
	12/01/04	12	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	4.6	<1.6	<1.3	<1.2	<3.5	<1.4
	02/01/05	43	<1.6	2.9	<1.2	<3.5	<1.4
	02/28/05	12	<1.6	<1.3	<1.2	<3.5	<1.4
VW-14	07/29/03	200	<1.6	5.9	1.5	23	<1.4
	10/15/03	9.5	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	26	<1.6	1.3	<1.2	<3.5	<1.4
	12/16/03	15	<1.6	<1.3	<1.2	<3.5	<1.4
	01/22/04	33	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	46	<1.6	<1.3	<1.2	3.9	<1.4
	10/04/04	27	<1.6	1.4	<1.2	<3.5	<1.4
	11/01/04	9.6	<1.6	<1.3	<1.2	<3.5	<1.4
	12/01/04	52	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	11	<1.6	<1.3	<1.2	<3.5	<1.4
	02/01/05	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	02/28/05	3.8	<1.6	<1.3	<1.2	<3.5	<1.4
VW-15	06/28/02	8.5	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	79	<1.6	1.6	<1.2	6.5	<1.4
	07/29/03	61	<1.6	<1.3	<1.2	<3.5	<1.4
	10/15/03	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	18	<1.6	<1.3	<1.2	<3.5	<1.4
	12/16/03	21	<1.6	<1.3	<1.2	<3.5	<1.4
	01/22/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	14	<1.6	<1.3	<1.2	<3.5	<1.4
	10/04/04	3.2	<1.6	<1.3	<1.2	<3.5	<1.4
	11/01/04	4.8	<1.6	<1.3	<1.2	<3.5	<1.4
	12/01/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	3.9	<1.6	<1.3	<1.2	<3.5	<1.4
	02/01/05	6.5	<1.6	<1.3	<1.2	<3.5	<1.4
	02/28/05	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
VW-16	06/28/02	9.9	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	12	<1.6	<1.3	<1.2	<1.2	<1.4
	07/29/03	51	<1.6	<1.3	<1.2	3.8	<1.4
	10/15/03	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	12/16/03	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4

TABLE 5

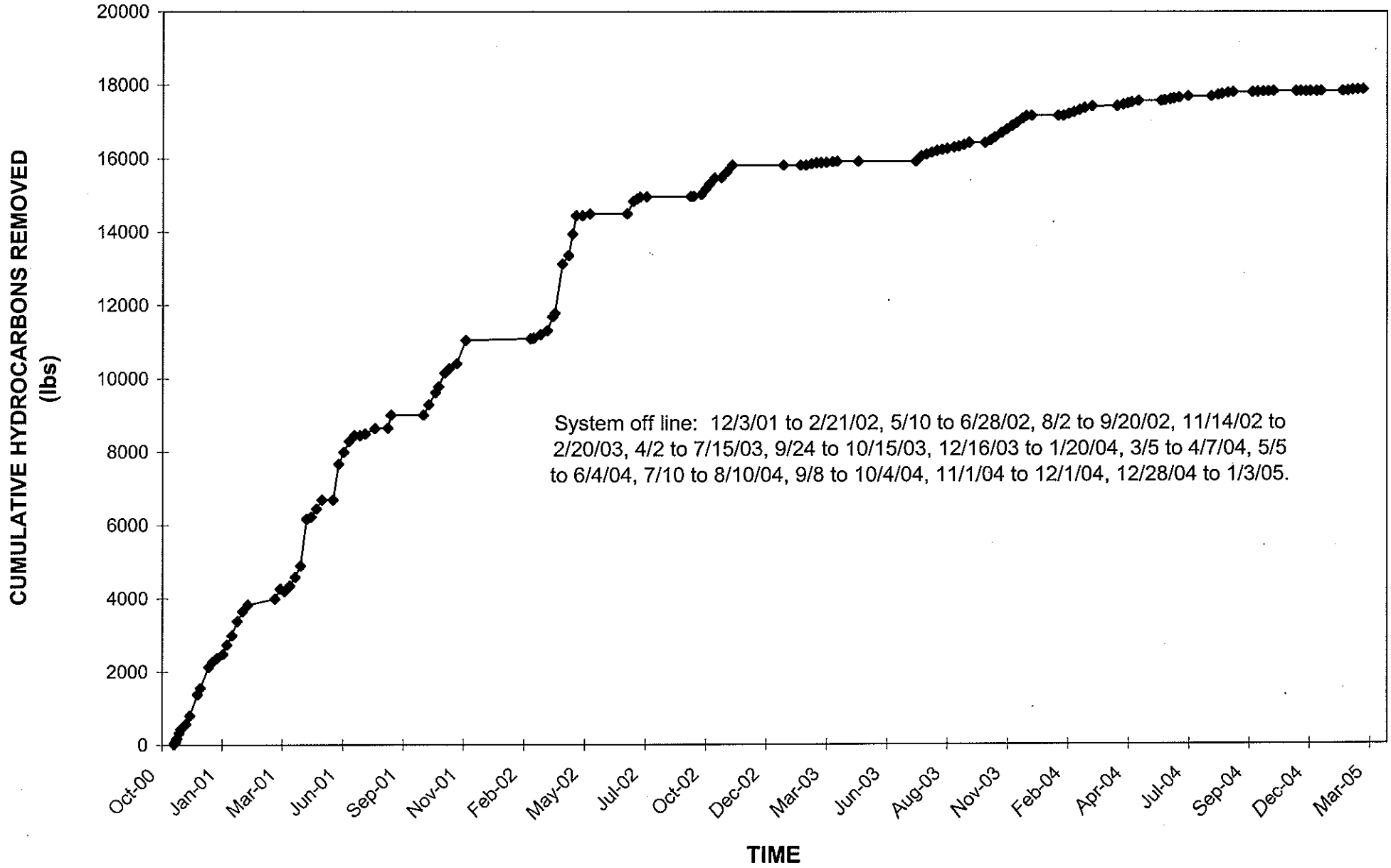
INDIVIDUAL WELL ANALYTICAL DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

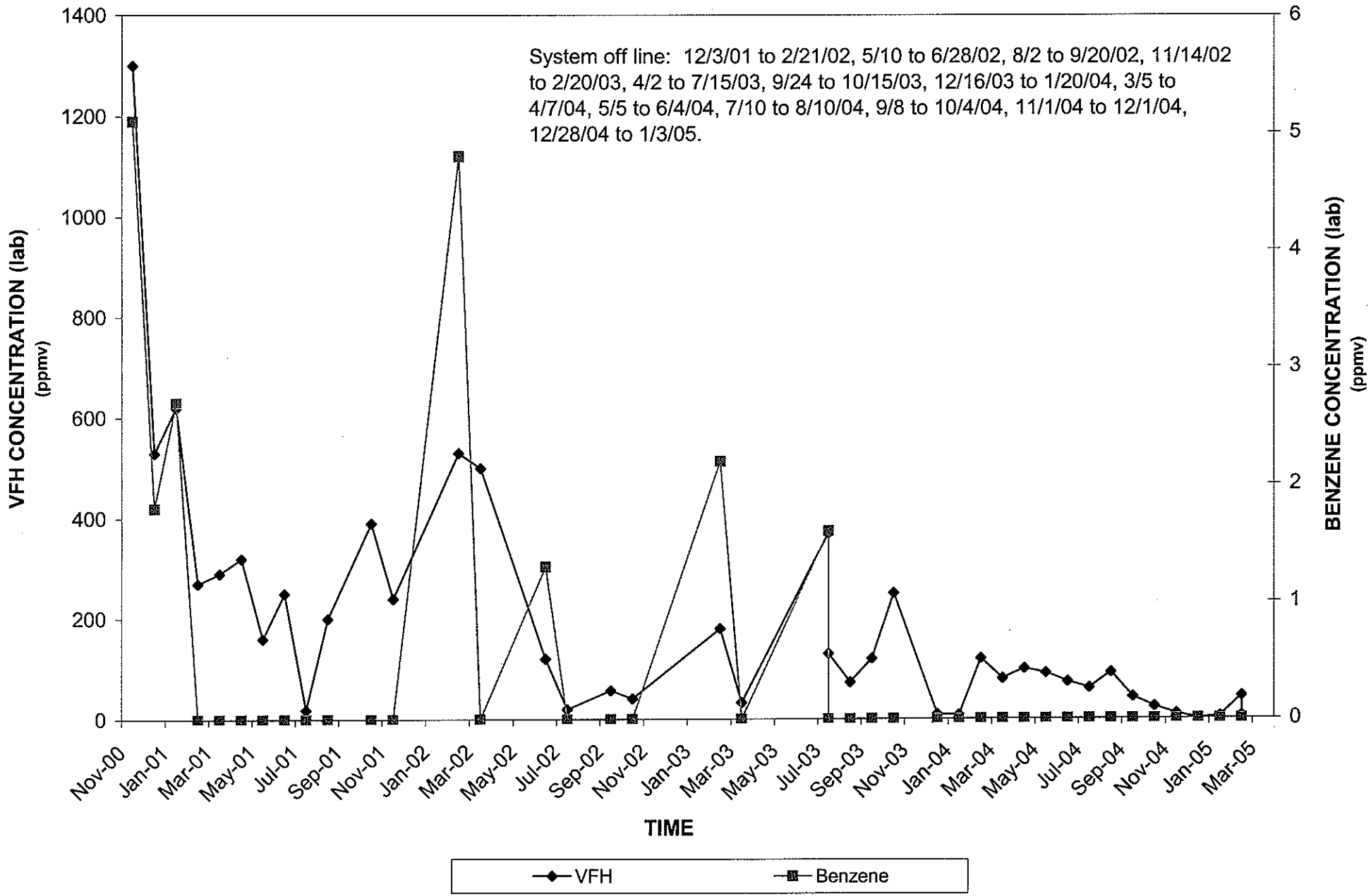
Sample ID	Date	VFH (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	MTBE (ppmv)
VW-16 (cont.)	01/22/04	4.1	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	10/04/04	2.5	<1.6	<1.3	<1.2	<3.5	<1.4
	11/01/04	5.4	<1.6	<1.3	<1.2	<3.5	<1.4
	12/01/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	02/01/05	3.2	<1.6	<1.3	<1.2	<3.5	<1.4
	02/28/05	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4

Notes:
VFH = Volatile Fuel Hydrocarbons
MTBE = Methyl Tertiary Butyl Ether
ppmv = parts per million volume
<1.2 = Not detect at listed laboratory reporting limit

GRAPH 1
SVE SYSTEM PERFORMANCE
ARCO Facility No. 206



GRAPH 2
INFLUENT VFH & BENZENE CONCENTRATIONS vs. TIME
ARCO Facility No. 206



ATTACHMENT A

SAFD Letters Dated March 30 and July 5, 2005

MAYOR
Miguel A. Pulido
MAYOR PRO TEM
Lisa Bist
COUNCIL MEMBERS
Claudia C. Alvarez
Carlos Bustamante
Alberta D. Christy
Mike Garcia
Jose Solorio

CITY OF SANTA ANA

FIRE DEPARTMENT
1439 SO. BROADWAY
SANTA ANA, CALIFORNIA 92707

CITY MANAGER
David N. Ream
CITY ATTORNEY
Joseph W. Fletcher
CLERK OF THE COUNCIL
Patricia E. Healy

APR 11 2005

March 30, 2005

Mr. Darrell Fah
BP West Coast Products LLC
4 Centrepointe Drive
La Palma, CA 90623

Re: Response to February 4, 2005 letter from Delta Environmental Consultants, Inc.
ARCO Facility # 206 302 W. First Street Santa Ana, CA

Dear Mr. Fah,

I have read the "Work Plan for Confirmation Soil Borings" prepared by your consultant, Delta Environmental Consultants, Inc., dated February 4, 2005. The Santa Ana Fire Department does not approve the work plan for the following reasons. Upon review of all the reports listed in the references section, the following conditions at this site are present. The location of confirmation soil boring CSB-4 is under the south end of the west tank, not the east tank as shown in the work plan. The main body of the petroleum hydrocarbon contamination is found in line with the northwest corner of dispenser #5 and boring VW-6 (formerly B-6) at depths between 10 and 40 feet below grade. Only one of the three proposed confirmation borings is located in the main body of the petroleum hydrocarbon contamination. The location of proposed boring CSB-7 is in a location that has already been confirmed clean (ND). The proposed location of boring CSB-6 is in an area already documented having less than 50 ppm TPH. Neither boring CSB-6 nor CSB-7 will identify a reduction of the petroleum hydrocarbon contamination in the main plume at the site.

If you have any questions, please feel free to call me at (714) 647-5761.

Sincerely,

Jay Bento

JAY BENTO, UST INSPECTOR
FIRE PREVENTION BUREAU

for PHILLIP GARCIA, FIRE CHIEF

JB/mc

Cc: Valerie Jahn-Bull, RWQCB 3737 Main Street, Ste. 500 Riverside, CA 92501-3339
Aaron Baird, Delta 27141 Aliso Creek Road, Suite 270 Aliso Viejo, CA 92656

MAYOR
Miguel A. Pulido
MAYOR PRO TEM
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CITY OF SANTA ANA

FIRE DEPARTMENT
1439 SO. BROADWAY
SANTA ANA, CALIFORNIA 92707

CITY MANAGER
David N. Ream
CITY ATTORNEY
Joseph W. Fletcher
CLERK OF THE COUNCIL
Patricia E. Healy

JUL 1 1 2005

July 5, 2005

Mr. Darrell Fah
BP West Coast Products LLC
4 Centrepointe Drive
La Palma, CA 90623

Re: **Response to June 2, 2005 "Addendum to Work Plan for Confirmation Soil Borings" from Delta Environmental Consultants, Inc.**
ARCO Facility # 206
302 W. First Street
Santa Ana, CA

Dear Mr. Fah,

I have read the "Addendum to Work Plan for Confirmation Soil Borings" prepared by your consultant, Delta Environmental Consultants, Inc., dated June 2, 2005. The Santa Ana Fire Department approves the Addendum.

If you have any questions, please feel free to call me at (714) 647-5761.

Sincerely,

Jay Bento

JAY BENTO, UST INSPECTOR
FIRE PREVENTION BUREAU

for PHILLIP GARCIA, FIRE CHIEF

JB: mc

C: Valerie Jahn-Bull, RWQCB 3737 Main Street, Ste. 500 Riverside, CA 92501-3339
Aaron Baird, Delta 27141 Aliso Creek Road, Suite 270 Aliso Viejo, CA 92656

ATTACHMENT B

Soil Boring Logs

Delta Environmental Consultants, Inc.

SOIL BORING LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO.	CSB-5
PROJECT NO./NAME	G0B5M/ARCO Facility No. 206
LOCATION	302 West First Street, Santa Ana, California
DRILLING CONTRACTOR/DRILLER	Strongarm/Rogelio
GEOLOGIST/OFFICE	Sean Peacher/Orange County
APPROVED BY	Dean A. Richesin, PG No. 3587
DRILLING EQUIPMENT/METHOD	Geoprobe/Direct Push
SIZE/TYPE OF BIT	1 1/2"/Soil
SAMPLING METHOD	Direct Push
START/FINISH DATE	8/22/05-8/22/05
TOTAL DEPTH	50.0'

LITHOLOGY / SAMPLING DATA

Depth, feet	Visual Description	Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Values (ppm)
	0 - 10 feet interval was excavated with an air vacuum extraction system and lithology was not recorded			
5				
10	SAND (SP): medium to dark brown, fine to medium grained, some silt, trace gravel, loose, moist	CSB-5-10		11.4
15	CLAYEY SAND (SC): medium brown, fine grained, some silt, trace gravel, medium dense, moist	CSB-5-15		561
20	SANDY SILT (ML): medium brown, fine grained sand, loose, moist	CSB-5-20		3,999+
25	SILTY SAND (SM): medium brown, fine to medium grained, loose, moist	CSB-5-25		3,999+
30	CLAY (CL): medium brown, dense, moist	CSB-5-30		3,999+
35	Trace sand	CSB-5-35		1,375
40	SAND (SP): medium brown, fine to medium grained, trace gravel, loose, dry	CSB-5-40		47.2
45		CSB-5-45		452
50	SILTY SAND (SM): medium brown, fine grained, trace gravel, trace clay, loose, dry Boring terminated at 50 feet below ground surface. Groundwater was not encountered during drilling.	CSB-5-50		4.3

Delta Environmental Consultants, Inc.

SOIL BORING LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO. CSB-6			
PROJECT NO./NAME G0B5M/ARCO Facility No. 206	LOCATION 302 West First Street Santa Ana, California		
DRILLING CONTRACTOR/DRILLER Strongarm/Rogelio			
GEOLOGIST/OFFICE Sean Peacher/Orange County	APPROVED BY Dean A. Richesin, PG No. 3587		
DRILLING EQUIPMENT/METHOD Geoprobe/Direct Push	SIZE/TYPE OF BIT 1 1/2"/Soil	SAMPLING METHOD Direct Push	START/FINISH DATE 8/22/05-8/22/05
			TOTAL DEPTH 50.0'

LITHOLOGY / SAMPLING DATA

Depth, feet	Graphic Log	Visual Description	Sample No. and Interval	Penetration Rate (Blows/ft.)	PID Values (ppm)
		0 - 10 feet interval was excavated with an air vacuum extraction system and lithology was not recorded			
5					
10		CLAYEY SILT (ML): medium brown, some fine grained sand, loose, moist	CSB-6-10		3.9
15		CLAYEY SAND (SC): medium brown, fine grained, loose, moist	CSB-6-15		10.4
20			CSB-6-20		0
25		SILTY SAND (SM): medium brown, fine grained, trace clay, loose, moist	CSB-6-25		1.9
30		CLAY (CL): medium to dark brown, dense, moist	CSB-6-30		8.6
35		Some sand	CSB-6-35		88.8
40			CSB-6-40		54.4
45		SAND (SP): medium brown, fine to medium grained, medium to coarse gravel, loose, dry	CSB-6-45		76.1
50		SILTY CLAY (CL): medium brown, soft, moist Boring terminated at 50 feet below ground surface. Groundwater was not encountered during drilling.	CSB-6-50		0

Delta Environmental Consultants, Inc.

SOIL BORING LOG

BORING/WELL LOCATION SKETCH MAP

N

BORING/WELL NO. CSB-7			
PROJECT NO./NAME: G0B5M/ARCO Facility No. 206	LOCATION: 302 West First Street, Santa Ana, California		
DRILLING CONTRACTOR/DRILLER: Strongarm/Rogelio			
GEOLOGIST/OFFICE: Sean Peacher/Orange County	APPROVED BY: Dean A. Richesin, PG No. 3587		
DRILLING EQUIPMENT/METHOD: Geoprobe/Direct Push	SIZE/TYPE OF BIT: 1 1/2"/Soil	SAMPLING METHOD: Direct Push	START/FINISH DATE: 8/22/05-8/22/05
			TOTAL DEPTH: 50.0'

Depth, feet	Graphic Log	LITHOLOGY: Visual Description	Sample No. and Interval	Penetration Rate (Blows/ft.)	SAMPLING DATA: PID Values (ppm)
		0 - 10 feet interval was excavated with an air vacuum extraction system and lithology was not recorded			
5					
10		CLAYEY SILT (ML): medium brown, loose, moist	CSB-7-10		3,999+
15		Trace fine to medium grained sand	CSB-7-15		3,999+
20		Decreasing sand	CSB-7-20		3,999+
25		SILTY SAND (SM): medium brown, fine grained, trace clay, loose, moist	CSB-7-25		3,999+
30		CLAY (CL): dark brown, dense, moist	CSB-7-30		92
35			CSB-7-35		0
40		Medium brown, trace silt	CSB-7-40		2.1
45		SAND (SP): medium brown, fine to medium grained, trace silt, trace fine gravel, losse, dry	CSB-7-45		2.6
50		SILTY CLAY (CL): medium brown, low plasticity, soft, moist Boring terminated at 50 feet below ground surface. Groundwater was not encountered during drilling.	CSB-7-50		70.8

ATTACHMENT C

Soil Disposal Documentation

Manifest

TPS Technologies Soil Recycling

Non-Hazardous Soils

Manifest #

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPS:	Load #
11 11/10/05	BESI	918 [illegible]	07	25942	001

Generator and/or Consultant

Generator's Name and Billing Address: BP WEST COAST PRODUCTS LLC P.O. BOX 80249 RANCHO SANTA MARGARITA, CA 92688	Generator's Phone #: Person to Contact: FAX#:	Generator's US EPA ID No. Customer Account Number with TPS:
Consultant's Name and Billing Address:	Consultant's Phone #: Person to Contact: FAX#:	 Customer Account Number with TPS:
Generation Site (Transport from): *(name & address)* ARCO #0206 302 W. FIRST STREET SANTA ANA, CA 92701	Site Phone #: Person to Contact: FAX#:	BTEX Levels TPH Levels AVG. Levels
Designated Facility (Transport to): *(name & address)* TPS TECHNOLOGIES, INC. 12328 HIBISCUS AVENUE ADELANTO, CA 92301	Facility Phone #: 800-862-8001 Person to Contact: DELLENE JEFFREY FAX#: 760-246-8004	Facility Permit Numbers
Transporter Name and Mailing Address: BELSHIRE ENVIRONMENTAL 25971 TOWNE CENTRE DRIVE LAKE FOREST, CA 92610 BESI# 118502.02	Transporter's Phone #: 949-460-5200 Person to Contact: Larry Moothart FAX#: 949-460-5210	Transporter's US EPA ID No.: CAR000165175 Transporter's DOT No.: 450647 Customer Account Number with TPS: 1000193

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	4 DMS		4600	2400	2200
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					110

List any exception to items listed above: 128863

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way

Print or Type Name: Generator ☐ Consultant ☐	Signature and date:	Month	Day	Year
Larry Moothart BESI on behalf of ARCO	[signature]	11	10	05

Transporter

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year
Ed Ramos (R18208ML)	[signature]	11	10	05

Recycling Facility

Discrepancies:

FAC# 2010

ID# 117943

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:
D. JEFFREY / J. PROVANSOL	[signature] 11-10-5

Please print or type

TRANSPORTER COPY

ATTACHMENT D

Laboratory Report and Chain-of-Custody Documentation

Del Mar Analytical

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LABORATORY REPORT

Prepared For: Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project: ARCO 0206, Santa Ana

Sampled: 10/13/05
Received: 10/13/05
Issued: 10/29/05 19:07

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within 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.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

Due to laboratory oversight, a site specific MS/MSD for EPA Method 5035B/CADHS Mod. 8015 was not performed on sample IOJ0882-25 (CSB-5-40); results are acceptable based on acceptable recoveries in the LCS/LCSD.

Due to the Ethanol result being lower than the reporting limit, the recovery in the MSD for EPA 5035/8260B QC batch 5J15019 does not appear in the report; this also affected the MS/MSD RPD for Ethanol. Manual calculation of the raw data yielded the following Ethanol results: MSD = 154%, and RPD = 4.

COMMENTS: Sample IOJ0882-24 (CSB-5-35) was analyzed by EPA Method 5035/CADHS Mod. 8015 directly from an EnCore sampler yielding a result for Volatile Fuel Hydrocarbons which exceeded the calibration range and was EY flagged. A methanol extract was performed on another EnCore yielding a result of ND (Not Detected) at or above the MDL.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IOJ0882-01	CSB-7-10	Soil

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

LABORATORY ID	CLIENT ID	MATRIX
IOJ0882-02	CSB-7-15	Soil
IOJ0882-03	CSB-7-20	Soil
IOJ0882-04	CSB-7-25	Soil
IOJ0882-05	CSB-7-30	Soil
IOJ0882-06	CSB-7-35	Soil
IOJ0882-07	CSB-7-40	Soil
IOJ0882-08	CSB-7-45	Soil
IOJ0882-09	CSB-7-50	Soil
IOJ0882-10	CSB-6-10	Soil
IOJ0882-11	CSB-6-15	Soil
IOJ0882-12	CSB-6-20	Soil
IOJ0882-13	CSB-6-25	Soil
IOJ0882-14	CSB-6-30	Soil
IOJ0882-15	CSB-6-35	Soil
IOJ0882-16	CSB-6-40	Soil
IOJ0882-17	CSB-6-45	Soil
IOJ0882-18	CSB-6-50	Soil
IOJ0882-19	CSB-5-10	Soil
IOJ0882-20	CSB-5-15	Soil
IOJ0882-21	CSB-5-20	Soil
IOJ0882-22	CSB-5-25	Soil
IOJ0882-23	CSB-5-30	Soil
IOJ0882-24	CSB-5-35	Soil
IOJ0882-25	CSB-5-40	Soil
IOJ0882-26	CSB-5-45	Soil
IOJ0882-27	CSB-5-50	Soil

Reviewed By:

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

VOLATILE FUEL HYDROCARBONS (EPA 5035B/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-01 (CSB-7-10 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J15021	0.40	ND	0.973	10/15/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*98 %*				
Sample ID: IOJ0882-02 (CSB-7-15 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J15021	0.34	ND	0.846	10/15/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*108 %*				
Sample ID: IOJ0882-03 (CSB-7-20 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J15021	0.32	ND	0.79	10/15/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*110 %*				
Sample ID: IOJ0882-04 (CSB-7-25 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J17059	200	**1600**	475	10/17/2005	10/18/2005	
Surrogate: 4-BFB (FID) (70-135%)				*356 %*				*AX*
Sample ID: IOJ0882-05 (CSB-7-30 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J14051	0.33	**1.0**	0.835	10/14/2005	10/14/2005	
Surrogate: 4-BFB (FID) (70-135%)				*109 %*				
Sample ID: IOJ0882-06 (CSB-7-35 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J14051	0.40	ND	0.988	10/14/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*113 %*				
Sample ID: IOJ0882-07 (CSB-7-40 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J14051	0.40	ND	0.988	10/14/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*111 %*				
Sample ID: IOJ0882-08 (CSB-7-45 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J14051	0.45	ND	1.13	10/14/2005	10/14/2005	
Surrogate: 4-BFB (FID) (70-135%)				*100 %*				

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Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

VOLATILE FUEL HYDROCARBONS (EPA 5035B/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-09 (CSB-7-50 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J14051	0.40	ND	0.951	10/14/2005	10/14/2005	
Surrogate: 4-BFB (FID) (70-135%)				*97 %*				
Sample ID: IOJ0882-10 (CSB-6-10 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J20039	0.40	ND	0.921	10/20/2005	10/20/2005	
Surrogate: 4-BFB (FID) (70-135%)				*96 %*				
Sample ID: IOJ0882-11 (CSB-6-15 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J19043	0.40	ND	1.08	10/19/2005	10/19/2005	
Surrogate: 4-BFB (FID) (70-135%)				*128 %*				
Sample ID: IOJ0882-12 (CSB-6-20 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J19043	0.40	ND	1.07	10/19/2005	10/19/2005	
Surrogate: 4-BFB (FID) (70-135%)				*120 %*				
Sample ID: IOJ0882-13 (CSB-6-25 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J19043	0.40	ND	0.958	10/19/2005	10/19/2005	
Surrogate: 4-BFB (FID) (70-135%)				*127 %*				
Sample ID: IOJ0882-14 (CSB-6-30 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J20039	0.33	ND	0.831	10/20/2005	10/20/2005	
Surrogate: 4-BFB (FID) (70-135%)				*110 %*				
Sample ID: IOJ0882-15 (CSB-6-35 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J14051	0.32	ND	0.806	10/14/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*20 %*				*LG,AY*
Sample ID: IOJ0882-16 (CSB-6-40 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J19043	0.40	ND	0.967	10/19/2005	10/19/2005	
Surrogate: 4-BFB (FID) (70-135%)				*106 %*				

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Report Number: IOJ0882

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Received: 10/13/05

VOLATILE FUEL HYDROCARBONS (EPA 5035B/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-17 (CSB-6-45 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J15021	0.33	ND	0.833	10/15/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*108 %*				
Sample ID: IOJ0882-18 (CSB-6-50 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J15021	0.35	ND	0.887	10/15/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*110 %*				
Sample ID: IOJ0882-19 (CSB-5-10 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J15021	0.36	ND	0.907	10/15/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*125 %*				
Sample ID: IOJ0882-20 (CSB-5-15 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J20110	170	**470**	419	10/20/2005	10/20/2005	
Surrogate: 4-BFB (FID) (70-135%)				*146 %*				*AX*
Sample ID: IOJ0882-21 (CSB-5-20 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J17059	170	**710**	424	10/17/2005	10/20/2005	
Surrogate: 4-BFB (FID) (70-135%)				*859 %*				*AX*
Sample ID: IOJ0882-22 (CSB-5-25 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J20110	1800	**15000**	4520	10/20/2005	10/20/2005	
Surrogate: 4-BFB (FID) (70-135%)				*1650 %*				*AX*
Sample ID: IOJ0882-23 (CSB-5-30 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J20110	850	**4000**	2130	10/20/2005	10/20/2005	
Surrogate: 4-BFB (FID) (70-135%)				*629 %*				*AX*
Sample ID: IOJ0882-24 (CSB-5-35 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J19043	0.35	**4.9**	0.867	10/19/2005	10/19/2005	EY
Surrogate: 4-BFB (FID) (70-135%)				*153 %*				*LH,AY*
Sample ID: IOJ0882-24RE1 (CSB-5-35 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J20110	16	ND	41.2	10/19/2005	10/20/2005	GS
Surrogate: 4-BFB (FID) (70-135%)				*94 %*				

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Project Manager

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
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VOLATILE FUEL HYDROCARBONS (EPA 5035B/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-25 (CSB-5-40 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J19043	0.40	ND	1.01	10/19/2005	10/19/2005	
Surrogate: 4-BFB (FID) (70-135%)				*111 %*				
Sample ID: IOJ0882-26 (CSB-5-45 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J20039	0.40	ND	0.984	10/20/2005	10/20/2005	
Surrogate: 4-BFB (FID) (70-135%)				*120 %*				
Sample ID: IOJ0882-27 (CSB-5-50 - Soil)								
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015B	5J15021	0.36	ND	0.896	10/15/2005	10/15/2005	
Surrogate: 4-BFB (FID) (70-135%)				*121 %*				

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-01 (CSB-7-10 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0018	ND	0.888	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0018	ND	0.888	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0018	ND	0.888	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0018	ND	0.888	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0018	ND	0.888	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0036	ND	0.888	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0044	ND	0.888	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0044	ND	0.888	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0044	ND	0.888	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0044	ND	0.888	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.044	ND	0.888	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.27	ND	0.888	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*109 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*97 %*				
Sample ID: IOJ0882-02 (CSB-7-15 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0040	ND	1.03	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0050	ND	1.03	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0050	ND	1.03	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0050	ND	1.03	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0050	ND	1.03	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.050	ND	1.03	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.30	ND	1.03	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*111 %*				
Surrogate: Toluene-d8 (80-120%)				*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*95 %*				

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-03 (CSB-7-20 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0018	ND	0.909	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0018	ND	0.909	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0018	ND	0.909	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0018	ND	0.909	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0018	ND	0.909	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0036	ND	0.909	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0045	ND	0.909	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0045	ND	0.909	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0045	ND	0.909	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0045	ND	0.909	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.045	ND	0.909	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.27	ND	0.909	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*106 %*				
Surrogate: Toluene-d8 (80-120%)				*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*96 %*				
Sample ID: IOJ0882-04 (CSB-7-25 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J15019	0.90	**0.97**	896	10/15/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J15019	0.90	**46**	896	10/15/2005	10/17/2005	
Toluene	EPA 8260B	5J15019	0.90	**32**	896	10/15/2005	10/17/2005	
o-Xylene	EPA 8260B	5J15019	0.90	**83**	896	10/15/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J15019	0.90	**180**	896	10/15/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J15019	1.8	**270**	896	10/15/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J15019	2.2	ND	896	10/15/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J15019	2.2	ND	896	10/15/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J15019	2.2	ND	896	10/15/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J15019	2.2	ND	896	10/15/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J15019	45	ND	896	10/15/2005	10/17/2005	
Ethanol	EPA 8260B	5J15019	130	ND	896	10/15/2005	10/17/2005	
Surrogate: Dibromofluoromethane (55-140%)				*86 %*				*AX*
Surrogate: Toluene-d8 (60-140%)				*99 %*				*AX*
Surrogate: 4-Bromofluorobenzene (65-140%)				*115 %*				*AX*

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Delta Env. Consultants - Aliso Viejo
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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-05 (CSB-7-30 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0018	**0.10**	0.899	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0018	**0.064**	0.899	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0018	**0.15**	0.899	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0018	**0.082**	0.899	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0018	**0.10**	0.899	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0036	**0.18**	0.899	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0045	ND	0.899	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0045	ND	0.899	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0045	ND	0.899	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0045	**0.019**	0.899	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.045	ND	0.899	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.27	ND	0.899	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*110 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*99 %*				
Sample ID: IOJ0882-06 (CSB-7-35 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0020	ND	1.03	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0040	ND	1.03	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0050	ND	1.03	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0050	ND	1.03	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0050	ND	1.03	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0050	**0.061**	1.03	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.050	ND	1.03	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.30	ND	1.03	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*109 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*97 %*				

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Delta Env. Consultants - Aliso Viejo
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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-07 (CSB-7-40 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0020	ND	0.969	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0020	ND	0.969	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0020	ND	0.969	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0020	ND	0.969	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0020	ND	0.969	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0040	ND	0.969	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0050	ND	0.969	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0050	ND	0.969	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0050	ND	0.969	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0050	**0.045**	0.969	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.050	**0.14**	0.969	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.30	ND	0.969	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*110 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*97 %*				
Sample ID: IOJ0882-08 (CSB-7-45 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0025	ND	1.24	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0025	ND	1.24	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0025	ND	1.24	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0025	ND	1.24	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0025	ND	1.24	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0050	ND	1.24	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0062	ND	1.24	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0062	ND	1.24	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0062	ND	1.24	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0062	ND	1.24	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.062	ND	1.24	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.37	ND	1.24	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*110 %*				
Surrogate: Toluene-d8 (80-120%)				*100 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*95 %*				

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Project Manager

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Delta Env. Consultants - Aliso Viejo
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Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-09 (CSB-7-50 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0017	ND	0.861	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0017	ND	0.861	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0017	ND	0.861	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0017	ND	0.861	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0017	ND	0.861	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0034	ND	0.861	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0043	ND	0.861	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0043	ND	0.861	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0043	ND	0.861	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0043	ND	0.861	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.043	ND	0.861	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.26	ND	0.861	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*110 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*94 %*				
Sample ID: IOJ0882-10 (CSB-6-10 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17006	0.0016	ND	0.824	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17006	0.0016	ND	0.824	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17006	0.0016	ND	0.824	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17006	0.0016	ND	0.824	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17006	0.0016	ND	0.824	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17006	0.0033	ND	0.824	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17006	0.0041	ND	0.824	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17006	0.0041	ND	0.824	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17006	0.0041	ND	0.824	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17006	0.0041	ND	0.824	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17006	0.041	ND	0.824	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17006	0.25	ND	0.824	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*107 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*99 %*				

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-11 (CSB-6-15 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J18018	0.0020	ND	0.917	10/18/2005	10/19/2005	
Ethylbenzene	EPA 8260B	5J18018	0.0020	ND	0.917	10/18/2005	10/19/2005	
Toluene	EPA 8260B	5J18018	0.0020	ND	0.917	10/18/2005	10/19/2005	
o-Xylene	EPA 8260B	5J18018	0.0020	ND	0.917	10/18/2005	10/19/2005	
m,p-Xylenes	EPA 8260B	5J18018	0.0020	ND	0.917	10/18/2005	10/19/2005	
Xylenes, Total	EPA 8260B	5J18018	0.0040	ND	0.917	10/18/2005	10/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J18018	0.0050	ND	0.917	10/18/2005	10/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J18018	0.0050	ND	0.917	10/18/2005	10/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J18018	0.0050	ND	0.917	10/18/2005	10/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J18018	0.0050	ND	0.917	10/18/2005	10/19/2005	
tert-Butanol (TBA)	EPA 8260B	5J18018	0.050	ND	0.917	10/18/2005	10/19/2005	
Ethanol	EPA 8260B	5J18018	0.30	ND	0.917	10/18/2005	10/19/2005	IO
Surrogate: Dibromofluoromethane (80-125%)				*113 %*				
Surrogate: Toluene-d8 (80-120%)				*100 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*93 %*				
Sample ID: IOJ0882-12 (CSB-6-20 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0018	ND	0.899	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0018	ND	0.899	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17019	0.0018	ND	0.899	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17019	0.0018	ND	0.899	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0018	ND	0.899	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0036	ND	0.899	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0045	ND	0.899	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0045	ND	0.899	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0045	ND	0.899	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0045	ND	0.899	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.045	ND	0.899	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17019	0.27	ND	0.899	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*112 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*100 %*				

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-13 (CSB-6-25 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0017	ND	0.853	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0017	ND	0.853	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17019	0.0017	ND	0.853	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17019	0.0017	ND	0.853	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0017	ND	0.853	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0034	ND	0.853	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0043	ND	0.853	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0043	ND	0.853	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0043	ND	0.853	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0043	ND	0.853	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.043	ND	0.853	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17019	0.26	ND	0.853	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*114 %*				
Surrogate: Toluene-d8 (80-120%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*100 %*				
Sample ID: IOJ0882-14 (CSB-6-30 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0017	ND	0.826	10/17/2005	10/18/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0017	ND	0.826	10/17/2005	10/18/2005	
Toluene	EPA 8260B	5J17019	0.0017	ND	0.826	10/17/2005	10/18/2005	
o-Xylene	EPA 8260B	5J17019	0.0017	ND	0.826	10/17/2005	10/18/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0017	ND	0.826	10/17/2005	10/18/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0033	ND	0.826	10/17/2005	10/18/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0041	ND	0.826	10/17/2005	10/18/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0041	ND	0.826	10/17/2005	10/18/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0041	ND	0.826	10/17/2005	10/18/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0041	**0.041**	0.826	10/17/2005	10/18/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.041	ND	0.826	10/17/2005	10/18/2005	
Ethanol	EPA 8260B	5J17019	0.25	ND	0.826	10/17/2005	10/18/2005	
Surrogate: Dibromofluoromethane (80-125%)				*115 %*				
Surrogate: Toluene-d8 (80-120%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*98 %*				

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Delta Env. Consultants - Aliso Viejo
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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-15 (CSB-6-35 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0018	ND	0.893	10/17/2005	10/18/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0018	ND	0.893	10/17/2005	10/18/2005	
Toluene	EPA 8260B	5J17019	0.0018	ND	0.893	10/17/2005	10/18/2005	
o-Xylene	EPA 8260B	5J17019	0.0018	ND	0.893	10/17/2005	10/18/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0018	ND	0.893	10/17/2005	10/18/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0036	ND	0.893	10/17/2005	10/18/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0045	ND	0.893	10/17/2005	10/18/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0045	ND	0.893	10/17/2005	10/18/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0045	ND	0.893	10/17/2005	10/18/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0045	**0.12**	0.893	10/17/2005	10/18/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.045	ND	0.893	10/17/2005	10/18/2005	
Ethanol	EPA 8260B	5J17019	0.27	ND	0.893	10/17/2005	10/18/2005	
Surrogate: Dibromofluoromethane (80-125%)				*115 %*				
Surrogate: Toluene-d8 (80-120%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*101 %*				
Sample ID: IOJ0882-16 (CSB-6-40 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0020	ND	0.935	10/17/2005	10/18/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0020	ND	0.935	10/17/2005	10/18/2005	
Toluene	EPA 8260B	5J17019	0.0020	ND	0.935	10/17/2005	10/18/2005	
o-Xylene	EPA 8260B	5J17019	0.0020	ND	0.935	10/17/2005	10/18/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0020	ND	0.935	10/17/2005	10/18/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0040	ND	0.935	10/17/2005	10/18/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0050	ND	0.935	10/17/2005	10/18/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0050	ND	0.935	10/17/2005	10/18/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0050	ND	0.935	10/17/2005	10/18/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0050	**0.047**	0.935	10/17/2005	10/18/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.050	ND	0.935	10/17/2005	10/18/2005	
Ethanol	EPA 8260B	5J17019	0.30	ND	0.935	10/17/2005	10/18/2005	
Surrogate: Dibromofluoromethane (80-125%)				*114 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*101 %*				

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Delta Env. Consultants - Aliso Viejo
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Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-17 (CSB-6-45 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0025	ND	1.26	10/17/2005	10/18/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0025	ND	1.26	10/17/2005	10/18/2005	
Toluene	EPA 8260B	5J17019	0.0025	ND	1.26	10/17/2005	10/18/2005	
o-Xylene	EPA 8260B	5J17019	0.0025	ND	1.26	10/17/2005	10/18/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0025	ND	1.26	10/17/2005	10/18/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0051	ND	1.26	10/17/2005	10/18/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0063	ND	1.26	10/17/2005	10/18/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0063	ND	1.26	10/17/2005	10/18/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0063	ND	1.26	10/17/2005	10/18/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0063	ND	1.26	10/17/2005	10/18/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.063	ND	1.26	10/17/2005	10/18/2005	
Ethanol	EPA 8260B	5J17019	0.38	ND	1.26	10/17/2005	10/18/2005	
Surrogate: Dibromofluoromethane (80-125%)				*113 %*				
Surrogate: Toluene-d8 (80-120%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*100 %*				
Sample ID: IOJ0882-18 (CSB-6-50 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0025	ND	1.23	10/17/2005	10/18/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0025	ND	1.23	10/17/2005	10/18/2005	
Toluene	EPA 8260B	5J17019	0.0025	ND	1.23	10/17/2005	10/18/2005	
o-Xylene	EPA 8260B	5J17019	0.0025	ND	1.23	10/17/2005	10/18/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0025	ND	1.23	10/17/2005	10/18/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0049	ND	1.23	10/17/2005	10/18/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0061	ND	1.23	10/17/2005	10/18/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0061	ND	1.23	10/17/2005	10/18/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0061	ND	1.23	10/17/2005	10/18/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0061	ND	1.23	10/17/2005	10/18/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.061	ND	1.23	10/17/2005	10/18/2005	
Ethanol	EPA 8260B	5J17019	0.37	ND	1.23	10/17/2005	10/18/2005	
Surrogate: Dibromofluoromethane (80-125%)				*118 %*				
Surrogate: Toluene-d8 (80-120%)				*103 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*99 %*				

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Delta Env. Consultants - Aliso Viejo
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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-19 (CSB-5-10 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0018	ND	0.882	10/17/2005	10/18/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0018	ND	0.882	10/17/2005	10/18/2005	
Toluene	EPA 8260B	5J17019	0.0018	ND	0.882	10/17/2005	10/18/2005	
o-Xylene	EPA 8260B	5J17019	0.0018	ND	0.882	10/17/2005	10/18/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0018	ND	0.882	10/17/2005	10/18/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0035	ND	0.882	10/17/2005	10/18/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0044	ND	0.882	10/17/2005	10/18/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0044	ND	0.882	10/17/2005	10/18/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0044	ND	0.882	10/17/2005	10/18/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0044	ND	0.882	10/17/2005	10/18/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.044	ND	0.882	10/17/2005	10/18/2005	
Ethanol	EPA 8260B	5J17019	0.26	ND	0.882	10/17/2005	10/18/2005	
Surrogate: Dibromofluoromethane (80-125%)				*115 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*99 %*				
Sample ID: IOJ0882-20 (CSB-5-15 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J15019	0.45	ND	448	10/15/2005	10/16/2005	
Ethylbenzene	EPA 8260B	5J15019	0.45	ND	448	10/15/2005	10/16/2005	
Toluene	EPA 8260B	5J15019	0.45	ND	448	10/15/2005	10/16/2005	
o-Xylene	EPA 8260B	5J15019	0.45	**3.5**	448	10/15/2005	10/16/2005	
m,p-Xylenes	EPA 8260B	5J15019	0.45	**2.7**	448	10/15/2005	10/16/2005	
Xylenes, Total	EPA 8260B	5J15019	0.90	**6.2**	448	10/15/2005	10/16/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J15019	1.1	ND	448	10/15/2005	10/16/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J15019	1.1	ND	448	10/15/2005	10/16/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J15019	1.1	ND	448	10/15/2005	10/16/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J15019	1.1	ND	448	10/15/2005	10/16/2005	
tert-Butanol (TBA)	EPA 8260B	5J15019	22	ND	448	10/15/2005	10/16/2005	
Ethanol	EPA 8260B	5J15019	67	ND	448	10/15/2005	10/16/2005	IO
Surrogate: Dibromofluoromethane (55-140%)				*99 %*				
Surrogate: Toluene-d8 (60-140%)				*100 %*				
Surrogate: 4-Bromofluorobenzene (65-140%)				*102 %*				

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Project Manager

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-21 (CSB-5-20 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J15019	0.89	ND	894	10/15/2005	10/19/2005	
Ethylbenzene	EPA 8260B	5J15019	0.89	**21**	894	10/15/2005	10/19/2005	
Toluene	EPA 8260B	5J15019	0.89	**25**	894	10/15/2005	10/19/2005	
o-Xylene	EPA 8260B	5J15019	0.89	**120**	894	10/15/2005	10/19/2005	
m,p-Xylenes	EPA 8260B	5J15019	0.89	**240**	894	10/15/2005	10/19/2005	
Xylenes, Total	EPA 8260B	5J15019	1.8	**360**	894	10/15/2005	10/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J15019	2.2	ND	894	10/15/2005	10/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J15019	2.2	ND	894	10/15/2005	10/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J15019	2.2	ND	894	10/15/2005	10/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J15019	2.2	ND	894	10/15/2005	10/19/2005	
tert-Butanol (TBA)	EPA 8260B	5J15019	45	ND	894	10/15/2005	10/19/2005	
Ethanol	EPA 8260B	5J15019	130	ND	894	10/15/2005	10/19/2005	
Surrogate: Dibromofluoromethane (55-140%)				*91 %*				*AX*
Surrogate: Toluene-d8 (60-140%)				*100 %*				*AX*
Surrogate: 4-Bromofluorobenzene (65-140%)				*109 %*				*AX*
Sample ID: IOJ0882-22 (CSB-5-25 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J15019	17	**56**	17100	10/15/2005	10/20/2005	
Ethylbenzene	EPA 8260B	5J15019	17	**380**	17100	10/15/2005	10/20/2005	
Toluene	EPA 8260B	5J15019	17	**1500**	17100	10/15/2005	10/20/2005	
o-Xylene	EPA 8260B	5J15019	17	**630**	17100	10/15/2005	10/20/2005	
m,p-Xylenes	EPA 8260B	5J15019	17	**1700**	17100	10/15/2005	10/20/2005	
Xylenes, Total	EPA 8260B	5J15019	34	**2300**	17100	10/15/2005	10/20/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J15019	43	ND	17100	10/15/2005	10/20/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J15019	43	ND	17100	10/15/2005	10/20/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J15019	43	ND	17100	10/15/2005	10/20/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J15019	43	ND	17100	10/15/2005	10/20/2005	
tert-Butanol (TBA)	EPA 8260B	5J15019	850	ND	17100	10/15/2005	10/20/2005	
Ethanol	EPA 8260B	5J15019	2600	ND	17100	10/15/2005	10/20/2005	
Surrogate: Dibromofluoromethane (55-140%)				*				*AX*
Surrogate: Toluene-d8 (60-140%)				*72 %*				*AX*
Surrogate: 4-Bromofluorobenzene (65-140%)				*				*AX*

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-23 (CSB-5-30 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J15019	2.1	**24**	2090	10/15/2005	10/20/2005	
Ethylbenzene	EPA 8260B	5J15019	2.1	**55**	2090	10/15/2005	10/20/2005	
Toluene	EPA 8260B	5J15019	2.1	**210**	2090	10/15/2005	10/20/2005	
o-Xylene	EPA 8260B	5J15019	2.1	**90**	2090	10/15/2005	10/20/2005	
m,p-Xylenes	EPA 8260B	5J15019	2.1	**230**	2090	10/15/2005	10/20/2005	
Xylenes, Total	EPA 8260B	5J15019	4.2	**320**	2090	10/15/2005	10/20/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J15019	5.2	ND	2090	10/15/2005	10/20/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J15019	5.2	ND	2090	10/15/2005	10/20/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J15019	5.2	ND	2090	10/15/2005	10/20/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J15019	5.2	ND	2090	10/15/2005	10/20/2005	
tert-Butanol (TBA)	EPA 8260B	5J15019	100	ND	2090	10/15/2005	10/20/2005	
Ethanol	EPA 8260B	5J15019	310	ND	2090	10/15/2005	10/20/2005	
Surrogate: Dibromofluoromethane (55-140%)				*75 %*				*AX*
Surrogate: Toluene-d8 (60-140%)				*92 %*				*AX*
Surrogate: 4-Bromofluorobenzene (65-140%)				*94 %*				*AX*
Sample ID: IOJ0882-24 (CSB-5-35 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J15019	0.090	**1.4**	90.3	10/15/2005	10/20/2005	
Ethylbenzene	EPA 8260B	5J15019	0.090	**0.27**	90.3	10/15/2005	10/20/2005	
Toluene	EPA 8260B	5J15019	0.090	**3.2**	90.3	10/15/2005	10/20/2005	
o-Xylene	EPA 8260B	5J15019	0.090	**0.52**	90.3	10/15/2005	10/20/2005	
m,p-Xylenes	EPA 8260B	5J15019	0.090	**1.2**	90.3	10/15/2005	10/20/2005	
Xylenes, Total	EPA 8260B	5J15019	0.18	**1.7**	90.3	10/15/2005	10/20/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J15019	0.23	ND	90.3	10/15/2005	10/20/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J15019	0.23	ND	90.3	10/15/2005	10/20/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J15019	0.23	ND	90.3	10/15/2005	10/20/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J15019	0.23	ND	90.3	10/15/2005	10/20/2005	
tert-Butanol (TBA)	EPA 8260B	5J15019	4.5	ND	90.3	10/15/2005	10/20/2005	
Ethanol	EPA 8260B	5J15019	14	ND	90.3	10/15/2005	10/20/2005	
Surrogate: Dibromofluoromethane (55-140%)				*96 %*				
Surrogate: Toluene-d8 (60-140%)				*99 %*				
Surrogate: 4-Bromofluorobenzene (65-140%)				*85 %*				

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Delta Env. Consultants - Aliso Viejo
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Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-25 (CSB-5-40 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J17019	0.0035	ND	1.76	10/17/2005	10/17/2005	
Ethylbenzene	EPA 8260B	5J17019	0.0035	ND	1.76	10/17/2005	10/17/2005	
Toluene	EPA 8260B	5J17019	0.0035	**0.018**	1.76	10/17/2005	10/17/2005	
o-Xylene	EPA 8260B	5J17019	0.0035	**0.0035**	1.76	10/17/2005	10/17/2005	
m,p-Xylenes	EPA 8260B	5J17019	0.0035	**0.011**	1.76	10/17/2005	10/17/2005	
Xylenes, Total	EPA 8260B	5J17019	0.0070	**0.015**	1.76	10/17/2005	10/17/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J17019	0.0088	ND	1.76	10/17/2005	10/17/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J17019	0.0088	ND	1.76	10/17/2005	10/17/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J17019	0.0088	ND	1.76	10/17/2005	10/17/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J17019	0.0088	ND	1.76	10/17/2005	10/17/2005	
tert-Butanol (TBA)	EPA 8260B	5J17019	0.088	ND	1.76	10/17/2005	10/17/2005	
Ethanol	EPA 8260B	5J17019	0.53	ND	1.76	10/17/2005	10/17/2005	
Surrogate: Dibromofluoromethane (80-125%)				*114 %*				
Surrogate: Toluene-d8 (80-120%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*101 %*				
Sample ID: IOJ0882-26 (CSB-5-45 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J15019	0.13	ND	134	10/15/2005	10/20/2005	
Ethylbenzene	EPA 8260B	5J15019	0.13	ND	134	10/15/2005	10/20/2005	
Toluene	EPA 8260B	5J15019	0.13	**0.18**	134	10/15/2005	10/20/2005	
o-Xylene	EPA 8260B	5J15019	0.13	ND	134	10/15/2005	10/20/2005	
m,p-Xylenes	EPA 8260B	5J15019	0.13	**0.15**	134	10/15/2005	10/20/2005	
Xylenes, Total	EPA 8260B	5J15019	0.27	ND	134	10/15/2005	10/20/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J15019	0.34	ND	134	10/15/2005	10/20/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J15019	0.34	ND	134	10/15/2005	10/20/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J15019	0.34	ND	134	10/15/2005	10/20/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J15019	0.34	ND	134	10/15/2005	10/20/2005	
tert-Butanol (TBA)	EPA 8260B	5J15019	6.7	ND	134	10/15/2005	10/20/2005	
Ethanol	EPA 8260B	5J15019	20	ND	134	10/15/2005	10/20/2005	
Surrogate: Dibromofluoromethane (55-140%)				*92 %*				
Surrogate: Toluene-d8 (60-140%)				*107 %*				
Surrogate: 4-Bromofluorobenzene (65-140%)				*96 %*				

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ0882-27 (CSB-5-50 - Soil)								
Reporting Units: mg/kg								
Benzene	EPA 8260B	5J18018	0.0018	ND	0.898	10/18/2005	10/19/2005	
Ethylbenzene	EPA 8260B	5J18018	0.0018	ND	0.898	10/18/2005	10/19/2005	
Toluene	EPA 8260B	5J18018	0.0018	**0.0030**	0.898	10/18/2005	10/19/2005	
o-Xylene	EPA 8260B	5J18018	0.0018	ND	0.898	10/18/2005	10/19/2005	
m,p-Xylenes	EPA 8260B	5J18018	0.0018	**0.0032**	0.898	10/18/2005	10/19/2005	
Xylenes, Total	EPA 8260B	5J18018	0.0036	**0.0046**	0.898	10/18/2005	10/19/2005	
Di-isopropyl Ether (DIPE)	EPA 8260B	5J18018	0.0045	ND	0.898	10/18/2005	10/19/2005	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	5J18018	0.0045	ND	0.898	10/18/2005	10/19/2005	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	5J18018	0.0045	ND	0.898	10/18/2005	10/19/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	5J18018	0.0045	ND	0.898	10/18/2005	10/19/2005	
tert-Butanol (TBA)	EPA 8260B	5J18018	0.045	ND	0.898	10/18/2005	10/19/2005	
Ethanol	EPA 8260B	5J18018	0.27	ND	0.898	10/18/2005	10/19/2005	IO
Surrogate: Dibromofluoromethane (80-125%)				*120 %*				
Surrogate: Toluene-d8 (80-120%)				*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*95 %*				

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Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5035B/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J14051 Extracted: 10/14/05										
Blank Analyzed: 10/14/2005 (5J14051-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	0.40	mg/kg							
Surrogate: 4-BFB (FID)	*0.0238*		*mg/kg*	*0.0200*		*119*	*70-135*			
LCS Analyzed: 10/14/2005 (5J14051-BS1)										**DU**
Volatile Fuel Hydrocarbons (C6-C12)	1.42	0.40	mg/kg	1.60		89	65-135			
Surrogate: 4-BFB (FID)	*0.0624*		*mg/kg*	*0.0600*		*104*	*70-135*			
LCS Dup Analyzed: 10/14/2005 (5J14051-BSD1)										
Volatile Fuel Hydrocarbons (C6-C12)	1.68	0.40	mg/kg	1.60		105	65-135	17	20	
Surrogate: 4-BFB (FID)	*0.0717*		*mg/kg*	*0.0600*		*120*	*70-135*			
Batch: 5J15021 Extracted: 10/15/05										
Blank Analyzed: 10/15/2005 (5J15021-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	0.40	mg/kg							
Surrogate: 4-BFB (FID)	*0.0237*		*mg/kg*	*0.0200*		*118*	*70-135*			
LCS Analyzed: 10/15/2005 (5J15021-BS1)										
Volatile Fuel Hydrocarbons (C6-C12)	1.67	0.40	mg/kg	1.60		104	65-135			
Surrogate: 4-BFB (FID)	*0.0679*		*mg/kg*	*0.0600*		*113*	*70-135*			
Matrix Spike Analyzed: 10/15/2005 (5J15021-MS1)					**Source: IOJ0882-03**					
Volatile Fuel Hydrocarbons (C6-C12)	0.407	0.33	mg/kg	0.364	ND	112	55-145			
Surrogate: 4-BFB (FID)	*0.0183*		*mg/kg*	*0.0166*		*110*	*70-135*			
Matrix Spike Dup Analyzed: 10/15/2005 (5J15021-MSD1)					**Source: IOJ0882-03**					
Volatile Fuel Hydrocarbons (C6-C12)	0.446	0.32	mg/kg	0.351	ND	127	55-145	9	35	
Surrogate: 4-BFB (FID)	*0.0202*		*mg/kg*	*0.0159*		*127*	*70-135*			

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VOLATILE FUEL HYDROCARBONS (EPA 5035B/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J17059 Extracted: 10/17/05										
Blank Analyzed: 10/17/2005 (5J17059-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	20	mg/kg							
Surrogate: 4-BFB (FID)	*2.07*		*mg/kg*	*2.00*		*104*	*70-135*			
LCS Analyzed: 10/17/2005 (5J17059-BS1)										
Volatile Fuel Hydrocarbons (C6-C12)	193	40	mg/kg	160		121	65-135			
Surrogate: 4-BFB (FID)	*6.38*		*mg/kg*	*6.00*		*106*	*70-135*			
Matrix Spike Analyzed: 10/17/2005 (5J17059-MS1)					**Source: IOJ0999-05RE1**					
Volatile Fuel Hydrocarbons (C6-C12)	223	80	mg/kg	48.4	150	151	55-145			*LM,AY*
Surrogate: 4-BFB (FID)	*3.08*		*mg/kg*	*2.20*		*140*	*70-135*			*LH,AY*
Matrix Spike Dup Analyzed: 10/17/2005 (5J17059-MSD1)					**Source: IOJ0999-05RE1**					
Volatile Fuel Hydrocarbons (C6-C12)	151	80	mg/kg	46.3	150	2	55-145	39	35	*LN,AY, LT*
Surrogate: 4-BFB (FID)	*2.70*		*mg/kg*	*2.11*		*128*	*70-135*			
Batch: 5J19043 Extracted: 10/19/05										
Blank Analyzed: 10/19/2005 (5J19043-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	0.40	mg/kg							
Surrogate: 4-BFB (FID)	*0.0214*		*mg/kg*	*0.0200*		*107*	*70-135*			
LCS Analyzed: 10/19/2005 (5J19043-BS1)										**CI**
Volatile Fuel Hydrocarbons (C6-C12)	1.78	0.40	mg/kg	1.60		111	65-135			
Surrogate: 4-BFB (FID)	*0.0788*		*mg/kg*	*0.0600*		*131*	*70-135*			
LCS Dup Analyzed: 10/19/2005 (5J19043-BSD1)										
Volatile Fuel Hydrocarbons (C6-C12)	1.77	0.40	mg/kg	1.60		111	65-135	1	20	
Surrogate: 4-BFB (FID)	*0.0787*		*mg/kg*	*0.0600*		*131*	*70-135*			

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METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5035B/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J20039 Extracted: 10/20/05										
Blank Analyzed: 10/20/2005 (5J20039-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	0.40	mg/kg							
Surrogate: 4-BFB (FID)	*0.0192*		*mg/kg*	*0.0200*		*96*	*70-135*			
LCS Analyzed: 10/20/2005 (5J20039-BS1)										**DU**
Volatile Fuel Hydrocarbons (C6-C12)	1.53	0.40	mg/kg	1.60		96	65-135			
Surrogate: 4-BFB (FID)	*0.0755*		*mg/kg*	*0.0600*		*126*	*70-135*			
LCS Dup Analyzed: 10/20/2005 (5J20039-BSD1)										
Volatile Fuel Hydrocarbons (C6-C12)	1.57	0.40	mg/kg	1.60		98	65-135	3	20	
Surrogate: 4-BFB (FID)	*0.0766*		*mg/kg*	*0.0600*		*128*	*70-135*			
Batch: 5J20110 Extracted: 10/20/05										
Blank Analyzed: 10/20/2005 (5J20110-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	20	mg/kg							
Surrogate: 4-BFB (FID)	*1.53*		*mg/kg*	*2.00*		*76*	*70-135*			
LCS Analyzed: 10/20/2005 (5J20110-BS1)										**DU**
Volatile Fuel Hydrocarbons (C6-C12)	140	40	mg/kg	160		88	65-135			
Surrogate: 4-BFB (FID)	*5.26*		*mg/kg*	*6.00*		*88*	*70-135*			
LCS Dup Analyzed: 10/20/2005 (5J20110-BSD1)										
Volatile Fuel Hydrocarbons (C6-C12)	160	40	mg/kg	160		100	65-135	13	20	
Surrogate: 4-BFB (FID)	*5.91*		*mg/kg*	*6.00*		*98*	*70-135*			

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J15019 Extracted: 10/15/05										
Blank Analyzed: 10/17/2005 (5J15019-BLK1)										
Benzene	ND	0.10	mg/kg							
Ethylbenzene	ND	0.10	mg/kg							
Toluene	ND	0.10	mg/kg							
o-Xylene	ND	0.10	mg/kg							
m,p-Xylenes	ND	0.10	mg/kg							
Xylenes, Total	ND	0.20	mg/kg							
Di-isopropyl Ether (DIPE)	ND	0.25	mg/kg							
Ethyl tert-Butyl Ether (ETBE)	ND	0.25	mg/kg							
tert-Amyl Methyl Ether (TAME)	ND	0.25	mg/kg							
Methyl-tert-butyl Ether (MTBE)	ND	0.25	mg/kg							
tert-Butanol (TBA)	ND	5.0	mg/kg							
Ethanol	ND	15	mg/kg							
Surrogate: Dibromofluoromethane	*2.66*		*mg/kg*	*2.50*		*106*	*55-140*			
Surrogate: Toluene-d8	*3.18*		*mg/kg*	*2.50*		*127*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*3.04*		*mg/kg*	*2.50*		*122*	*65-140*			
LCS Analyzed: 10/17/2005 (5J15019-BS1)										
Benzene	2.72	0.10	mg/kg	2.50		109	65-120			
Ethylbenzene	2.79	0.10	mg/kg	2.50		112	80-120			
Toluene	2.67	0.10	mg/kg	2.50		107	80-120			
o-Xylene	2.73	0.10	mg/kg	2.50		109	70-125			
m,p-Xylenes	5.71	0.10	mg/kg	5.00		114	70-125			
Xylenes, Total	8.44	0.20	mg/kg	7.50		113	70-125			
Di-isopropyl Ether (DIPE)	2.66	0.25	mg/kg	2.50		106	60-140			
Ethyl tert-Butyl Ether (ETBE)	2.58	0.25	mg/kg	2.50		103	60-140			
tert-Amyl Methyl Ether (TAME)	2.61	0.25	mg/kg	2.50		104	60-145			
Methyl-tert-butyl Ether (MTBE)	2.50	0.25	mg/kg	2.50		100	55-145			
tert-Butanol (TBA)	14.8	5.0	mg/kg	12.5		118	65-140			
Ethanol	36.6	15	mg/kg	25.0		146	35-160			
Surrogate: Dibromofluoromethane	*2.48*		*mg/kg*	*2.50*		*99*	*55-140*			
Surrogate: Toluene-d8	*2.71*		*mg/kg*	*2.50*		*108*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*2.89*		*mg/kg*	*2.50*		*116*	*65-140*			

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J15019 Extracted: 10/15/05										
LCS Dup Analyzed: 10/17/2005 (5J15019-BSD1)										
Benzene	2.66	0.10	mg/kg	2.50		106	65-120	2	20	
Ethylbenzene	2.76	0.10	mg/kg	2.50		110	80-120	1	20	
Toluene	2.60	0.10	mg/kg	2.50		104	80-120	3	20	
o-Xylene	2.69	0.10	mg/kg	2.50		108	70-125	1	20	
m,p-Xylenes	5.70	0.10	mg/kg	5.00		114	70-125	0	20	
Xylenes, Total	8.40	0.20	mg/kg	7.50		112	70-125	1	20	
Di-isopropyl Ether (DIPE)	2.45	0.25	mg/kg	2.50		98	60-140	8	20	
Ethyl tert-Butyl Ether (ETBE)	2.39	0.25	mg/kg	2.50		96	60-140	8	20	
tert-Amyl Methyl Ether (TAME)	2.47	0.25	mg/kg	2.50		99	60-145	6	25	
Methyl-tert-butyl Ether (MTBE)	2.40	0.25	mg/kg	2.50		96	55-145	4	25	
tert-Butanol (TBA)	14.7	5.0	mg/kg	12.5		118	65-140	1	20	
Ethanol	34.9	15	mg/kg	25.0		140	35-160	5	30	
Surrogate: Dibromofluoromethane	*2.33*		*mg/kg*	*2.50*		*93*	*55-140*			
Surrogate: Toluene-d8	*2.70*		*mg/kg*	*2.50*		*108*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*2.85*		*mg/kg*	*2.50*		*114*	*65-140*			
Matrix Spike Analyzed: 10/18/2005 (5J15019-MS1)					**Source: IOJ0568-07**					
Benzene	3.43	0.40	mg/kg	2.54	1.7	68	55-140			
Ethylbenzene	33.2	0.40	mg/kg	2.54	39	-228	50-150			*BB*
Toluene	8.90	0.40	mg/kg	2.54	9.3	-16	55-140			*LN,AY*
o-Xylene	51.1	0.40	mg/kg	2.54	61	-390	55-145			*BB*
m,p-Xylenes	113	0.40	mg/kg	5.08	130	-335	60-145			*BB*
Xylenes, Total	164	0.80	mg/kg	7.62	190	-341	55-145			*BB*
Di-isopropyl Ether (DIPE)	2.20	1.0	mg/kg	2.54	ND	87	60-150			
Ethyl tert-Butyl Ether (ETBE)	2.14	1.0	mg/kg	2.54	ND	84	60-150			
tert-Amyl Methyl Ether (TAME)	2.11	1.0	mg/kg	2.54	ND	83	60-150			
Methyl-tert-butyl Ether (MTBE)	1.98	1.0	mg/kg	2.54	ND	78	55-155			
tert-Butanol (TBA)	12.0	20	mg/kg	12.7	ND	94	60-155			
Ethanol	41.6	60	mg/kg	25.4	ND	164	30-160			*LM,AY*
Surrogate: Dibromofluoromethane	*2.08*		*mg/kg*	*2.54*		*82*	*55-140*			
Surrogate: Toluene-d8	*2.42*		*mg/kg*	*2.54*		*95*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*2.57*		*mg/kg*	*2.54*		*101*	*65-140*			

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J15019 Extracted: 10/15/05										
Matrix Spike Dup Analyzed: 10/18/2005 (5J15019-MSD1)					**Source: IOJ0568-07**					
Benzene	4.36	0.40	mg/kg	2.59	1.7	103	55-140	24	25	
Ethylbenzene	43.2	0.40	mg/kg	2.59	39	162	50-150	26	25	*BB, BA,AY*
Toluene	12.5	0.40	mg/kg	2.59	9.3	124	55-140	34	25	*BA,AY*
o-Xylene	67.8	0.40	mg/kg	2.59	61	263	55-145	28	25	*BB, BA,AY*
m,p-Xylenes	145	0.40	mg/kg	5.18	130	290	60-145	25	25	*BB*
Xylenes, Total	213	0.80	mg/kg	7.76	190	296	55-145	26	25	*BB, BA,AY*
Di-isopropyl Ether (DIPE)	2.27	1.0	mg/kg	2.59	ND	88	60-150	3	25	
Ethyl tert-Butyl Ether (ETBE)	2.23	1.0	mg/kg	2.59	ND	86	60-150	4	25	
tert-Amyl Methyl Ether (TAME)	2.24	1.0	mg/kg	2.59	ND	86	60-150	6	25	
Methyl-tert-butyl Ether (MTBE)	2.12	1.0	mg/kg	2.59	ND	82	55-155	7	30	
tert-Butanol (TBA)	12.4	20	mg/kg	12.9	ND	96	60-155	3	25	
Ethanol	ND	60	mg/kg	25.9	ND		30-160		40	
Surrogate: Dibromofluoromethane	*2.06*		*mg/kg*	*2.59*		*80*	*55-140*			
Surrogate: Toluene-d8	*2.53*		*mg/kg*	*2.59*		*98*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*2.82*		*mg/kg*	*2.59*		*109*	*65-140*			
Batch: 5J17006 Extracted: 10/17/05										
Blank Analyzed: 10/17/2005 (5J17006-BLK1)										
Benzene	ND	0.0020	mg/kg							
Ethylbenzene	ND	0.0020	mg/kg							
Toluene	ND	0.0020	mg/kg							
o-Xylene	ND	0.0020	mg/kg							
m,p-Xylenes	ND	0.0020	mg/kg							
Xylenes, Total	ND	0.0040	mg/kg							
Di-isopropyl Ether (DIPE)	ND	0.0050	mg/kg							
Ethyl tert-Butyl Ether (ETBE)	ND	0.0050	mg/kg							
tert-Amyl Methyl Ether (TAME)	ND	0.0050	mg/kg							
Methyl-tert-butyl Ether (MTBE)	ND	0.0050	mg/kg							
tert-Butanol (TBA)	ND	0.050	mg/kg							
Ethanol	ND	0.30	mg/kg							
Surrogate: Dibromofluoromethane	*0.0532*		*mg/kg*	*0.0500*		*106*	*80-125*			
Surrogate: Toluene-d8	*0.0508*		*mg/kg*	*0.0500*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0488*		*mg/kg*	*0.0500*		*98*	*80-120*			

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J17006 Extracted: 10/17/05										
LCS Analyzed: 10/17/2005 (5J17006-BS1)										
Benzene	0.0472	0.0020	mg/kg	0.0500		94	65-120			
Ethylbenzene	0.0477	0.0020	mg/kg	0.0500		95	70-125			
Toluene	0.0449	0.0020	mg/kg	0.0500		90	70-125			
o-Xylene	0.0448	0.0020	mg/kg	0.0500		90	70-125			
m,p-Xylenes	0.0916	0.0020	mg/kg	0.100		92	70-125			
Xylenes, Total	0.136	0.0040	mg/kg	0.150		91	70-125			
Di-isopropyl Ether (DIPE)	0.0529	0.0050	mg/kg	0.0500		106	60-135			
Ethyl tert-Butyl Ether (ETBE)	0.0512	0.0050	mg/kg	0.0500		102	60-135			
tert-Amyl Methyl Ether (TAME)	0.0511	0.0050	mg/kg	0.0500		102	60-140			
Methyl-tert-butyl Ether (MTBE)	0.0519	0.0050	mg/kg	0.0500		104	55-140			
tert-Butanol (TBA)	0.250	0.050	mg/kg	0.250		100	65-135			
Ethanol	0.634	0.30	mg/kg	0.500		127	35-160			
Surrogate: Dibromofluoromethane	*0.0535*		*mg/kg*	*0.0500*		*107*	*80-125*			
Surrogate: Toluene-d8	*0.0510*		*mg/kg*	*0.0500*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0496*		*mg/kg*	*0.0500*		*99*	*80-120*			
Matrix Spike Analyzed: 10/17/2005 (5J17006-MS1)					**Source: IOJ0882-03**					
Benzene	0.0394	0.0020	mg/kg	0.0468	ND	84	65-130			
Ethylbenzene	0.0410	0.0020	mg/kg	0.0468	ND	88	70-130			
Toluene	0.0375	0.0020	mg/kg	0.0468	ND	80	70-125			
o-Xylene	0.0380	0.0020	mg/kg	0.0468	ND	81	70-125			
m,p-Xylenes	0.0774	0.0020	mg/kg	0.0936	ND	83	70-125			
Xylenes, Total	0.115	0.0040	mg/kg	0.140	ND	82	70-125			
Di-isopropyl Ether (DIPE)	0.0413	0.0050	mg/kg	0.0468	ND	88	60-145			
Ethyl tert-Butyl Ether (ETBE)	0.0379	0.0050	mg/kg	0.0468	ND	81	60-140			
tert-Amyl Methyl Ether (TAME)	0.0356	0.0050	mg/kg	0.0468	ND	76	60-145			
Methyl-tert-butyl Ether (MTBE)	0.0344	0.0050	mg/kg	0.0468	ND	74	55-150			
tert-Butanol (TBA)	0.231	0.050	mg/kg	0.234	ND	99	65-140			
Ethanol	0.467	0.30	mg/kg	0.468	ND	100	25-160			
Surrogate: Dibromofluoromethane	*0.0491*		*mg/kg*	*0.0468*		*105*	*80-125*			
Surrogate: Toluene-d8	*0.0477*		*mg/kg*	*0.0468*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0455*		*mg/kg*	*0.0468*		*97*	*80-120*			

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J17006 Extracted: 10/17/05										
Matrix Spike Dup Analyzed: 10/17/2005 (5J17006-MSD1)					**Source: IOJ0882-03**					
Benzene	0.0416	0.0020	mg/kg	0.0481	ND	86	65-130	5	20	
Ethylbenzene	0.0419	0.0020	mg/kg	0.0481	ND	87	70-130	2	25	
Toluene	0.0395	0.0020	mg/kg	0.0481	ND	82	70-125	5	20	
o-Xylene	0.0396	0.0020	mg/kg	0.0481	ND	82	70-125	4	25	
m,p-Xylenes	0.0798	0.0020	mg/kg	0.0962	ND	83	70-125	3	25	
Xylenes, Total	0.119	0.0040	mg/kg	0.144	ND	83	70-125	3	25	
Di-isopropyl Ether (DIPE)	0.0458	0.0050	mg/kg	0.0481	ND	95	60-145	10	25	
Ethyl tert-Butyl Ether (ETBE)	0.0439	0.0050	mg/kg	0.0481	ND	91	60-140	15	30	
tert-Amyl Methyl Ether (TAME)	0.0435	0.0050	mg/kg	0.0481	ND	90	60-145	20	25	
Methyl-tert-butyl Ether (MTBE)	0.0441	0.0050	mg/kg	0.0481	ND	92	55-150	25	35	
tert-Butanol (TBA)	0.220	0.050	mg/kg	0.240	ND	92	65-140	5	30	
Ethanol	0.496	0.30	mg/kg	0.481	ND	103	25-160	6	40	
Surrogate: Dibromofluoromethane	*0.0511*		*mg/kg*	*0.0481*		*106*	*80-125*			
Surrogate: Toluene-d8	*0.0488*		*mg/kg*	*0.0481*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0468*		*mg/kg*	*0.0481*		*97*	*80-120*			
Batch: 5J17019 Extracted: 10/17/05										
Blank Analyzed: 10/17/2005 (5J17019-BLK1)										
Benzene	ND	0.0020	mg/kg							
Ethylbenzene	ND	0.0020	mg/kg							
Toluene	ND	0.0020	mg/kg							
o-Xylene	ND	0.0020	mg/kg							
m,p-Xylenes	ND	0.0020	mg/kg							
Xylenes, Total	ND	0.0040	mg/kg							
Di-isopropyl Ether (DIPE)	ND	0.0050	mg/kg							
Ethyl tert-Butyl Ether (ETBE)	ND	0.0050	mg/kg							
tert-Amyl Methyl Ether (TAME)	ND	0.0050	mg/kg							
Methyl-tert-butyl Ether (MTBE)	ND	0.0050	mg/kg							
tert-Butanol (TBA)	ND	0.050	mg/kg							
Ethanol	ND	0.30	mg/kg							
Surrogate: Dibromofluoromethane	*0.0542*		*mg/kg*	*0.0500*		*108*	*80-125*			
Surrogate: Toluene-d8	*0.0518*		*mg/kg*	*0.0500*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0489*		*mg/kg*	*0.0500*		*98*	*80-120*			

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Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J17019 Extracted: 10/17/05										
LCS Analyzed: 10/17/2005 (5J17019-BS1)										
Benzene	0.0520	0.0020	mg/kg	0.0500		104	65-120			
Ethylbenzene	0.0516	0.0020	mg/kg	0.0500		103	70-125			
Toluene	0.0486	0.0020	mg/kg	0.0500		97	70-125			
o-Xylene	0.0485	0.0020	mg/kg	0.0500		97	70-125			
m,p-Xylenes	0.0971	0.0020	mg/kg	0.100		97	70-125			
Xylenes, Total	0.146	0.0040	mg/kg	0.150		97	70-125			
Di-isopropyl Ether (DIPE)	0.0595	0.0050	mg/kg	0.0500		119	60-135			
Ethyl tert-Butyl Ether (ETBE)	0.0589	0.0050	mg/kg	0.0500		118	60-135			
tert-Amyl Methyl Ether (TAME)	0.0591	0.0050	mg/kg	0.0500		118	60-140			
Methyl-tert-butyl Ether (MTBE)	0.0606	0.0050	mg/kg	0.0500		121	55-140			
tert-Butanol (TBA)	0.245	0.050	mg/kg	0.250		98	65-135			
Ethanol	0.584	0.30	mg/kg	0.500		117	35-160			
Surrogate: Dibromofluoromethane	*0.0573*		*mg/kg*	*0.0500*		*115*	*80-125*			
Surrogate: Toluene-d8	*0.0515*		*mg/kg*	*0.0500*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0507*		*mg/kg*	*0.0500*		*101*	*80-120*			
Matrix Spike Analyzed: 10/17/2005 (5J17019-MS1)					**Source: IOJ0882-25**					
Benzene	0.0776	0.0029	mg/kg	0.0720	0.0027	104	65-130			
Ethylbenzene	0.0771	0.0029	mg/kg	0.0720	0.0026	103	70-130			
Toluene	0.0864	0.0029	mg/kg	0.0720	0.018	95	70-125			
o-Xylene	0.0744	0.0029	mg/kg	0.0720	0.0035	98	70-125			
m,p-Xylenes	0.151	0.0029	mg/kg	0.144	0.011	97	70-125			
Xylenes, Total	0.225	0.0058	mg/kg	0.216	0.015	97	70-125			
Di-isopropyl Ether (DIPE)	0.0822	0.0072	mg/kg	0.0720	ND	114	60-145			
Ethyl tert-Butyl Ether (ETBE)	0.0783	0.0072	mg/kg	0.0720	ND	109	60-140			
tert-Amyl Methyl Ether (TAME)	0.0766	0.0072	mg/kg	0.0720	ND	106	60-145			
Methyl-tert-butyl Ether (MTBE)	0.0776	0.0072	mg/kg	0.0720	ND	108	55-150			
tert-Butanol (TBA)	0.358	0.072	mg/kg	0.360	ND	99	65-140			
Ethanol	0.899	0.43	mg/kg	0.720	ND	125	25-160			
Surrogate: Dibromofluoromethane	*0.0801*		*mg/kg*	*0.0720*		*111*	*80-125*			
Surrogate: Toluene-d8	*0.0744*		*mg/kg*	*0.0720*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0724*		*mg/kg*	*0.0720*		*101*	*80-120*			

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J17019 Extracted: 10/17/05										
Matrix Spike Dup Analyzed: 10/17/2005 (5J17019-MSD1)					**Source: IOJ0882-25**					**LT**
Benzene	0.0521	0.0020	mg/kg	0.0493	0.0027	100	65-130	39	20	
Ethylbenzene	0.0516	0.0020	mg/kg	0.0493	0.0026	99	70-130	40	25	
Toluene	0.0644	0.0020	mg/kg	0.0493	0.018	94	70-125	29	20	
o-Xylene	0.0498	0.0020	mg/kg	0.0493	0.0035	94	70-125	40	25	
m,p-Xylenes	0.103	0.0020	mg/kg	0.0986	0.011	93	70-125	38	25	
Xylenes, Total	0.153	0.0040	mg/kg	0.148	0.015	93	70-125	38	25	
Di-isopropyl Ether (DIPE)	0.0544	0.0050	mg/kg	0.0493	ND	110	60-145	41	25	
Ethyl tert-Butyl Ether (ETBE)	0.0535	0.0050	mg/kg	0.0493	ND	109	60-140	38	30	
tert-Amyl Methyl Ether (TAME)	0.0537	0.0050	mg/kg	0.0493	ND	109	60-145	35	25	
Methyl-tert-butyl Ether (MTBE)	0.0565	0.0050	mg/kg	0.0493	ND	115	55-150	31	35	
tert-Butanol (TBA)	0.226	0.050	mg/kg	0.247	ND	91	65-140	45	30	
Ethanol	0.501	0.30	mg/kg	0.493	ND	102	25-160	57	40	
Surrogate: Dibromofluoromethane	*0.0554*		*mg/kg*	*0.0493*		*112*	*80-125*			
Surrogate: Toluene-d8	*0.0513*		*mg/kg*	*0.0493*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0494*		*mg/kg*	*0.0493*		*100*	*80-120*			
Batch: 5J18018 Extracted: 10/18/05										
Blank Analyzed: 10/18/2005 (5J18018-BLK1)										
Benzene	ND	0.0020	mg/kg							
Ethylbenzene	ND	0.0020	mg/kg							
Toluene	ND	0.0020	mg/kg							
o-Xylene	ND	0.0020	mg/kg							
m,p-Xylenes	ND	0.0020	mg/kg							
Xylenes, Total	ND	0.0040	mg/kg							
Di-isopropyl Ether (DIPE)	ND	0.0050	mg/kg							
Ethyl tert-Butyl Ether (ETBE)	ND	0.0050	mg/kg							
tert-Amyl Methyl Ether (TAME)	ND	0.0050	mg/kg							
Methyl-tert-butyl Ether (MTBE)	ND	0.0050	mg/kg							
tert-Butanol (TBA)	ND	0.050	mg/kg							
Ethanol	ND	0.30	mg/kg							
Surrogate: Dibromofluoromethane	*0.0562*		*mg/kg*	*0.0500*		*112*	*80-125*			
Surrogate: Toluene-d8	*0.0516*		*mg/kg*	*0.0500*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0489*		*mg/kg*	*0.0500*		*98*	*80-120*			

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5J18018 Extracted: 10/18/05										
LCS Analyzed: 10/18/2005 (5J18018-BS1)										**DU**
Benzene	0.0488	0.0020	mg/kg	0.0500		98	65-120			
Ethylbenzene	0.0507	0.0020	mg/kg	0.0500		101	70-125			
Toluene	0.0458	0.0020	mg/kg	0.0500		92	70-125			
o-Xylene	0.0477	0.0020	mg/kg	0.0500		95	70-125			
m,p-Xylenes	0.0947	0.0020	mg/kg	0.100		95	70-125			
Xylenes, Total	0.142	0.0040	mg/kg	0.150		95	70-125			
Di-isopropyl Ether (DIPE)	0.0510	0.0050	mg/kg	0.0500		102	60-135			
Ethyl tert-Butyl Ether (ETBE)	0.0464	0.0050	mg/kg	0.0500		93	60-135			
tert-Amyl Methyl Ether (TAME)	0.0437	0.0050	mg/kg	0.0500		87	60-140			
Methyl-tert-butyl Ether (MTBE)	0.0432	0.0050	mg/kg	0.0500		86	55-140			
tert-Butanol (TBA)	0.229	0.050	mg/kg	0.250		92	65-135			
Ethanol	0.586	0.30	mg/kg	0.500		117	35-160			
Surrogate: Dibromofluoromethane	*0.0537*		*mg/kg*	*0.0500*		*107*	*80-125*			
Surrogate: Toluene-d8	*0.0501*		*mg/kg*	*0.0500*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0487*		*mg/kg*	*0.0500*		*97*	*80-120*			
LCS Dup Analyzed: 10/18/2005 (5J18018-BSD1)										
Benzene	0.0483	0.0020	mg/kg	0.0500		97	65-120	1	20	
Ethylbenzene	0.0484	0.0020	mg/kg	0.0500		97	70-125	5	20	
Toluene	0.0454	0.0020	mg/kg	0.0500		91	70-125	1	20	
o-Xylene	0.0451	0.0020	mg/kg	0.0500		90	70-125	6	20	
m,p-Xylenes	0.0913	0.0020	mg/kg	0.100		91	70-125	4	20	
Xylenes, Total	0.136	0.0040	mg/kg	0.150		91	70-125	4	20	
Di-isopropyl Ether (DIPE)	0.0519	0.0050	mg/kg	0.0500		104	60-135	2	20	
Ethyl tert-Butyl Ether (ETBE)	0.0499	0.0050	mg/kg	0.0500		100	60-135	7	20	
tert-Amyl Methyl Ether (TAME)	0.0494	0.0050	mg/kg	0.0500		99	60-140	12	20	
Methyl-tert-butyl Ether (MTBE)	0.0510	0.0050	mg/kg	0.0500		102	55-140	17	25	
tert-Butanol (TBA)	0.255	0.050	mg/kg	0.250		102	65-135	11	20	
Ethanol	0.531	0.30	mg/kg	0.500		106	35-160	10	30	
Surrogate: Dibromofluoromethane	*0.0549*		*mg/kg*	*0.0500*		*110*	*80-125*			
Surrogate: Toluene-d8	*0.0508*		*mg/kg*	*0.0500*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.0497*		*mg/kg*	*0.0500*		*99*	*80-120*			

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Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo 27141 Aliso Creek Road, Suite 270 Aliso Viejo, CA 92656 Attention: Aaron Baird	Project ID: ARCO 0206, Santa Ana Report Number: IOJ0882	Sampled: 10/13/05 Received: 10/13/05

DATA QUALIFIERS AND DEFINITIONS

AX	Sample too dilute to quantify surrogate
BA,AY	The RPD exceeded the method control limit due to sample matrix effects
BB	Sample > 4x spike concentration
CI	See narrative
DU	Insufficient sample quantity for matrix spike/dup matrix spike
EY	Result exceeds normal dynamic range; reported as a min. est.
GS	Reporting limit(s) raised: high level target analyte in sample
IO	Contract limits originate from BP-GCLN Technical Requirements
LG,AY	Due to sample matrix effects, the surrogate recovery was below the acceptance limits
LH,AY	Due to sample matrix effects, the surrogate recovery was outside acceptance limits
LM,AY	The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
LN,AY	The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
LT	The RPD calculation does not provide useful information due to varying sample weights when Encore samplers are used
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

ADDITIONAL COMMENTS

For 8260 analyses:

Due to the high water solubility of alcohols and ketones, the calibration criteria for these compounds is <30% RSD. The average % RSD of all compounds in the calibration is 15%, in accordance with EPA methods.

For Volatile Fuel Hydrocarbons (C6-C12):

Volatile Fuel Hydrocarbons (C6-C12) are quantitated against a gasoline standard.

8015 Analysis EDF Parlabel Cross Reference

Analyte	EDF Parlabel
Volatile Fuel Hydrocarbons (C6-C12)	GROC6C12

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOJ0882

Sampled: 10/13/05
Received: 10/13/05

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EDD	Soil		
EPA 5035	Soil		
EPA 8015B	Soil	X	X
EPA 8015B	Soil-extr	X	X
EPA 8015B	Solid	X	X
EPA 8260B	Soil	X	X
EPA 8260B	Soil-extr	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Chain of Custody Record #357

Project Name: ARCO 206
BP BU/AR Region/Enfos Segment: ORANGE - Atlantic Richfield
State or Lead Regulatory Agency: SAFD
Requested Due Date (mm/dd/yy): Standard - 10 day

10/13/05

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

Lab Name:	Del Mar Analytical	BP/AR Facility No.:	ARCO 206	Consultant/Contractor:	Delta Environmental Consultants, Inc
Lab Address:	2852 Alton Avenue	BP/AR Facility Address:	302 W. First Street	Address:	27141 Aliso Creek Road
	Irvine, California 92606	Site Lat/Long:	Santa Ana, CA		Aliso Viejo, CA 92656
Lab PM:	Patricia Abe	California Global ID No.:	T0605900915	Consultant/Contractor Project No.:	G0B5M
Tele/Fax:	(949) 261-1022	Enfos Project No.:	G0B5M-0008	Consultant/Contractor PM:	Aaron Baird
BP/AR PM Contact:	Darrell Fah	Provision or RCOP (circle one)		Tele/Fax:	949-360-5789
Address:	4 Centerpointe Drive	Phase/WBS:	01-Assessment	Report Type & QC Level:	
	La Palma, CA	Sub Phase/Task:	13-Analytical	E-mail EDD To:	ckuhlmann@deltaenv.com
Tele/Fax:	(714) 378-5105	Cost Element:	01-Contractor Labor	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No: IOJ0882

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	Preservative: Ice	Requested Analysis: TPHg by 8015 Mod	Requested Analysis: EPA 8260B BTEX/OXYS/EtOH	Sample Point Lat/Long and Comments
1	CSB-7-10	8:50	10/13	X				1						X	X	X	PID = 3,999+
2	CSB-7-15	8:57	↓	↓				↓						↓	↓	↓	3,999+
3	CSB-7-20	9:04	↓	↓				↓						↓	↓	↓	3,999+
4	CSB-7-25	9:10	↓	↓				↓						↓	↓	↓	3,999+
5	CSB-7-30	9:17	↓	↓				↓						↓	↓	↓	92.0
6	CSB-7-35	9:25	↓	↓				↓						↓	↓	↓	0
7	CSB-7-40	9:37	↓	↓				↓						↓	↓	↓	2.1
8	CSB-7-45	9:47	↓	↓				↓						↓	↓	↓	2.6
9	CSB-7-50	10:00	↓	↓				↓						↓	↓	↓	70.8
10	CSB-6-~~5~~10	11:38	↓	↓				↓						↓	↓	↓	3.9

EK

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Sean Peacher						
Sampler's Company:	Delta Environmental		10/13	15:35		10/13	15:35
Shipment Date:	10/13/05		10/13	16:17			
Shipment Method:	Hand Delivery						
Shipment Tracking No:						10/13	1617

Special Instructions:

Custody Seals In Place Yes ___ No X Temp Blank Yes ___ No X Cooler Temperature on Receipt 2 °F/C Trip Blank Yes ___ No X

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

#258

Chain of Custody Record

Project Name: ARCO 206
BP BU/AR Region/Enfos Segment: ORANGE - Atlantic Richfield
State or Lead Regulatory Agency: SAFD
Requested Due Date (mm/dd/yy): Standard - 10 day

10/13/05

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

Lab Name:	Del Mar Analytical	BP/AR Facility No.:	ARCO 206	Consultant/Contractor:	Delta Environmental Consultants, Inc
Lab Address:	2852 Alton Avenue	BP/AR Facility Address:	302 W. First Street	Address:	27141 Aliso Creek Road
	Irvine, California 92606	Site Lat/Long:	Santa Ana, CA		Aliso Viejo, CA 92656
Lab PM:	Patricia Abe	California Global ID No.:	T0605900915	Consultant/Contractor Project No.:	G0B5M
Tele/Fax:	(949) 261-1022	Enfos Project No.:	G0B5M-0008	Consultant/Contractor PM:	Aaron Baird
BP/AR PM Contact:	Darrell Fah	Provision or RCOP (circle one)		Tele/Fax:	949-360-5789
Address:	4 Centerpointe Drive	Phase/WBS:	01-Assessment	Report Type & QC Level:	
	La Palma, CA	Sub Phase/Task:	13-Analytical	E-mail EDD To:	ckuhlmann@deltaenv.com
Tele/Fax:	(714) 378-5105	Cost Element:	01-Contractor Labor	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	Preservative: Ice	Requested Analysis: TPHg by 8015 Mod	Requested Analysis: EPA 8260B BTEX/OXYS/EtOH	Sample Point Lat/Long and Comments
1	CSB-6-~~10~~ 15	11:43	10/13	X			IOJ0882	1						X	X	X	PID = 10.4
2	CSB-6-~~15~~ 20	11:50															ϕ
3	CSB-6-25	11:55															1.9
4	CSB-6-30	12:02															8.6
5	CSB-6-35	12:10															88.8
6	CSB-6-40	12:20															54.4
7	CSB-6-45	12:31															76.1
8	CSB-6-50	12:44															ϕ
9	CSB-5-10	14:20															11.4
10	CSB-5-15	14:26															561

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Sean Peacher						
Sampler's Company:	Delta Environmental		10/13	15:35		10/13	15:35
Shipment Date:	10/13/05		10/13	16:17			
Shipment Method:	Hand Delivery						
Shipment Tracking No:						10-13	16:17

Special Instructions:

Custody Seals In Place Yes ___ No X Temp Blank Yes ___ No X Cooler Temperature on Receipt 2 °F/C Trip Blank Yes ___ No X

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

Chain of Custody Record

Project Name: ARCO 206
BP BU/AR Region/Enfos Segment: ORANGE - Atlantic Richfield
State or Lead Regulatory Agency: SAFD
Requested Due Date (mm/dd/yy): Standard - 10 day

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

10/13/05

Lab Name:	Del Mar Analytical	BP/AR Facility No.:	ARCO 206	Consultant/Contractor:	Delta Environmental Consultants, Inc
Lab Address:	2852 Alton Avenue	BP/AR Facility Address:	302 W. First Street	Address:	27141 Aliso Creek Road
	Irvine, California 92606	Site Lat/Long:	Santa Ana, CA		Aliso Viejo, CA 92656
Lab PM:	Patricia Abe	California Global ID No.:	T0605900915	Consultant/Contractor Project No.:	G0B5M
Tele/Fax:	(949) 261-1022	Enfos Project No.:	G0B5M-0008	Consultant/Contractor PM:	Aaron Baird
BP/AR PM Contact:	Darrell Fah	Provision or RCOP (circle one)		Tele/Fax:	949-360-5789
Address:	4 Centerpointe Drive	Phase/WBS:	01-Assessment	Report Type & QC Level:	
	La Palma, CA	Sub Phase/Task:	13-Analytical	E-mail EDD To:	ckuhlmann@deltaenv.com
Tele/Fax:	(714) 378-5105	Cost Element:	01-Contractor Labor	Invoice to:	Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No: IOJ0882

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	Preservative: Ice	Requested Analysis: TPHg by 8015 Mod	Requested Analysis: EPA 8260B BTEX/OXYS/EtOH	Sample Point Lat/Long and Comments
1	CSB-5-20	14:32	10/13	X				1						X	X	X	PID = 3,999+
2	CSB-5-25	14:38	↓	↓				↓						↓	↓	↓	3,999+
3	CSB-5-30	14:44	↓	↓				↓						↓	↓	↓	3,999+
4	CSB-5-35	14:52	↓	↓				↓						↓	↓	↓	1,375
5	CSB-5-40	15:03	↓	↓				↓						↓	↓	↓	47.2
6	CSB-5-45	15:15	↓	↓				↓						↓	↓	↓	452
7	CSB-5-50	15:27	↓	↓				↓						↓	↓	↓	4.3
8																	
9																	
10																	

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Sean Peacher		10/13	15:35		10/13	15:35
Sampler's Company:	Delta Environmental		10/13	16:1			
Shipment Date:	10/13/05						
Shipment Method:	Hand Delivery					10/13	16:7
Shipment Tracking No:							

Special Instructions:

Custody Seals In Place Yes ___ No X Temp Blank Yes ___ No X Cooler Temperature on Receipt 2 °F/C Trip Blank Yes ___ No X

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

BP COC Rev. 4 10/1/04

ATTACHMENT E

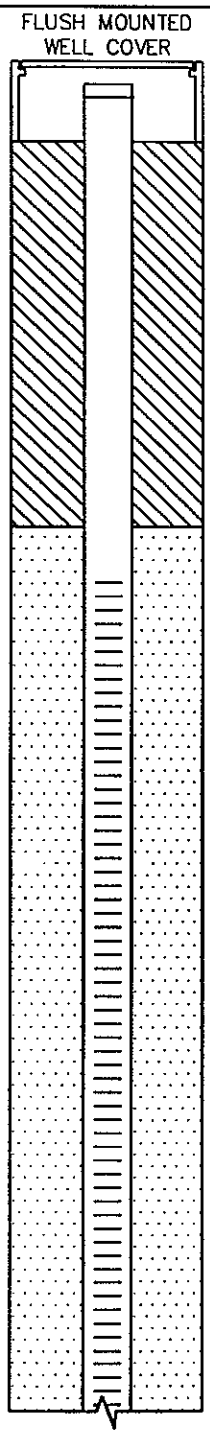
Soil Boring/Well Construction Logs for Wells VW-6 and VW-15

Project: ARCO STATION #206 302 W. FIRST ST. SANTA ANA, CALIFORNIA		Log of Boring: B-6	Page: 1 of 2
Boring Location:	PN: J0009-001-01		
Subcontractor/Equipment: J & H DRILLING COMPANY	Logged By: L. McDARGH		
Sampling Method: SPLIT SPOON	Monitoring Device: PID	Comments: Converted to Vadose well VW-6	
Start Date/Time:	Finish Date/Time:		
First Water: NOT ENCOUNTERED	Stabilized Water Level (BGS):		

Surface Elevation: NA | Top of Casing: NA

Sample Interval / Recovery Inches	Blows/Ft.	PID (ppm)	Depth (feet)	USCS Symbol	LITHOLOGIC DESCRIPTION (color, grain, size, consistency, moisture, other)
			0		
			1		Asphalt road base
			2		
			3		
			4		
	4		5		GW SAND AND GRAVEL
	4		7		Dark brown; coarse grained sand; well graded; moist; no odor
	5		8		
			9		
	1		10		ML SANDY SILT
	2		11		Light brown; fine grained; moist; slight odor at bottom ring.
	3		12		
			13		
			14		
	3		15		As above; strong odor.
	5		16		
	7		17		
			18		
			19		
	6	160	20		ML CLAYEY SILT
	8		21		Light brown; low plasticity; strong odor.
	10		22		Very strong odor at bottom ring.
			23		
			24		
	4	3600	25		As above; strong odor; bottom 6 inches increased
	6		26		moisture, higher plasticity
	8		27		As above; very strong odor (26.5' to 28').
			28		CL SILTY CLAY
			29		Light brown; soft; high plasticity; medium moisture.
			30		(continued)

Boring Abandonment/ Well Construction Details



SEACOR

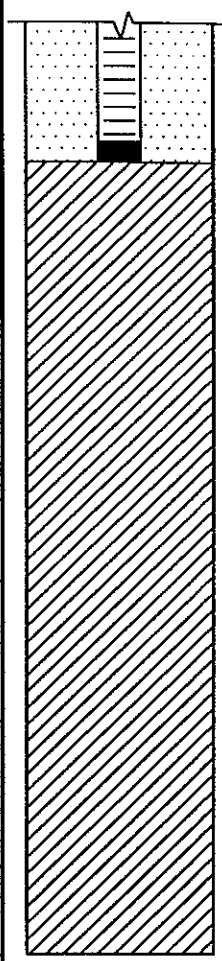
Project: ARCO STATION #206 302 W. FIRST ST. SANTA ANA, CALIFORNIA		Log of Boring: B-6	Page: 2 of 2
Boring Location:	PN: J0009-001-01		
Subcontractor/Equipment: J & H DRILLING COMPANY	Logged By: L. McDARGH		
Sampling Method: SPLIT SPOON	Monitoring Device: OVA	Comments:	
Start Date/Time:	Finish Date/Time:		
First Water: NOT ENCOUNTERED	Stabilized Water Level (BGS):		

Surface Elevation: NA | Top of Casing: NA

Sample Interval Recovery Inches	Blows/ft.	PID (ppm)	Depth (feet)	USCS Symbol	LITHOLOGIC DESCRIPTION (color, grain, size, consistency, moisture, other)
					continued from page 1
	3 5 7	4000	30 31		As above; strong odor (29 1/2' to 31')
			32 33 34		CL CLAY Light brown; high moisture; high plasticity; very strong odor (31' to 34'). SILTY CLAY Coarse grained; some rock fragments.
	3 10 17	360	35 36 37 38 39 40		Same as above; bottom 6 inches grades to SP SAND Light brown; coarse grained; poorly graded; slight odor
	12 28 21	200	41 42		SP SAND Light brown; coarse grained; well sorted; dry; slight odor; bottom 10-inches grades to
			43 44 45		GW SAND AND GRAVEL Gray; well graded; low moisture; assorted gravel sizes; slight odor
	21 40 2	1	46 47 48 49		GW SAND AND GRAVEL Brownish gray; coarse grained sand; well graded; no odor; assorted gravel/rocks. CL SILTY CLAY Light brown; low moisture; low plasticity; stiff; no odor; grades to sand .
	10 13 17	*20	50 51 52 53 54 55 56 57 58 59		TOTAL DEPTH 50 FEET

NOTE: *20ppm reading in clay at 50 feet.

Boring Abandonment/ Well Construction Details

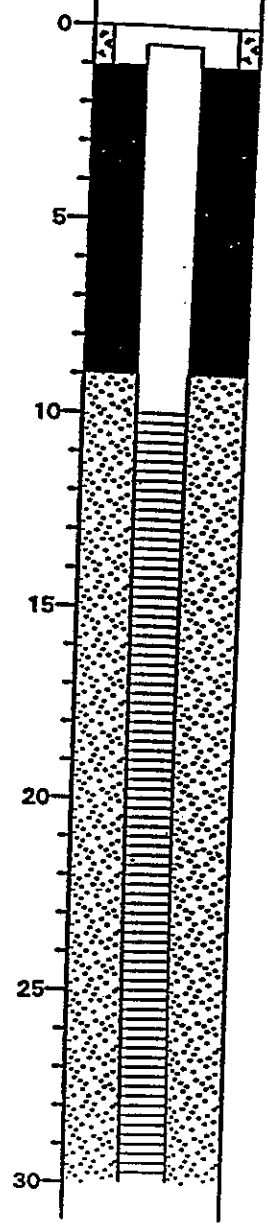


SEACOR

SEACOR 5702 Bolsa Ave. Huntington Beach, CA. 92649
Phone: (714)379-3366 Fax: (714)379-3375

Project: ARCO Station No. 206		PN#: J0009-001-06	Boring/Well: VW-15
Location: 302 West First Street		Well Construction Data	
Date Started: 2 MAY 94	Date Completed: 2 MAY 94	Screen: 0.020 Slot PVC	From: 10 - To: 30
Logged By: J. Bollier	Checked By: J. Bollier	Pack: No. 3 Sand	From: 9 - To: 30
Drilling Co.: West Hazmat	Driller:	Seal: Bentonite Chip	From: 1 - To: 9
Method: Hollow Stem Auger	Equipment: CME 75	Grout:	From: - To:
Boring Depth: 51.5	Ground Surface Elevation:	Inner Casing: 4-inch Dia. PVC	
Initial GW Level: N/A	GW Level: / Time/Date: N/A	Outer Casing/Stick Up: 24-inch Square Well Box	

Depth	Sample	Sample Number	Blows	PID (ppm)	Lithology	Description	Remarks
0							
5	X		8, 11, 13	0.3		SW SAND Red brown, damp, loose, fine to medium grained, subrounded, to subangular, moderate silt, well graded, no odor.	
10	X		8, 8, 11	78.4		ML SILT Olive brown, moist, soft, low plasticity, micaceous, no odor.	
15	X		3, 5, 10	1176		SM SILTY SAND Olive brown, moist, medium dense, fine to medium grained, subrounded, well graded, rare clay, slight odor.	
20	X		18, 18, 20	135		SW SAND Olive brown, moist, medium dense, fine grained, subrounded, well graded, rare silt, moderate odor.	
25	X		18, 18, 15	1261		ML SANDY SILT Brown, moist, medium stiff, low plasticity, rare clay, slight odor.	
0						CL SILTY CLAY	



Well Construction

Continued Next Page

SEACOR 5702 Bolsa Ave. Huntington Beach, CA. 92649
Phone: (714)379-3366 Fax: (714)379-3375

Project:	PN#:	Boring/Well:
ARCO Station No. 206	J0009-001-06	VW-15
Location: 302 West First Street		

Depth	Sample	Sample Number	Blows	PID (ppm)	Lithology	Description	Remarks	Well Construction
			7 15 18	76.5		CL SILTY CLAY Brown, moist, medium stiff, low plasticity, rare sand, no odor.		
35			8 13 20	0.7		As above, No odor.	35	
40			17 18 20	0.3			40	
						SW SAND Red brown, moist, medium dense, medium to coarse grained, subrounded to subangular, well graded, rare pebble (to 5cm diameter), no odor.		
45			33 50			As above, no odor.	45	
50			32 50			ML CLAYEY SILT Brown, moist, medium stiff, low plasticity, rare sand, no odor.	50	

Total depth of boring 51.5 feet.