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April 19, 2006
Project C10-03791-041

Mr. Don Hwang
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Air Sparge/Soil Vapor Extraction Test Report and Interim Remedial Action Plan
76 Service Station No. 3791
391 West A Street
Hayward, California

Dear Mr. Hwang:

Delta Environmental Consultants, Inc. (Delta), on behalf of ConocoPhillips Company (COP), has prepared this report to present the results of a recent soil vapor extraction (SVE) and air sparge (AS) feasibility test performed at the site referenced above and to present an interim remedial action plan (IRAP) for the site. The feasibility test was conducted at the request of COP to evaluate the potential effectiveness of restarting the existing SVE and AS remediation systems at the site and to determine if system modifications are needed to improve performance.

If comments or requested revisions are not received to this submittal within 60 days of submittal (no later than June 15, 2006) concurrence by the Alameda County Department of Environmental Health will be assumed, and the proposed changes to the site remediation process will be initiated, in accordance with State of California environmental regulations.

SITE HISTORY/BACKGROUND

The site is located at the intersection of West A Street and Arbor Avenue in Hayward, California. A petroleum service station has operated at the site since 1954 and is currently operating. The site location is shown in Figure 1. The site service station facilities currently include three 15,000-gallon gasoline underground storage tanks (USTs), three dispenser islands, and a station building (Figure 2). The site is relatively level at an elevation of 55 feet above mean sea level (msl). The topography in the vicinity of the site is also relatively level and slopes gently to the west toward San Francisco Bay, located approximately seven miles west of the site.

Between January 1987 and August 1990, RESNA observed the installation of five vadose-zone monitoring wells (VW-1 through VW-5) and ten groundwater monitoring wells (MW-6 through MW-15) at the site. Laboratory analytical results from soil samples collected during the well installations showed petroleum hydrocarbons in the subsurface. Based on this information, a groundwater monitoring program was initiated at the site. Laboratory analytical results from groundwater samples collected at the site showed dissolved-phase petroleum hydrocarbons. Additionally, free-phase product was observed in groundwater monitoring wells MW-6 and MW-10 from October 1990 through March 1991.

Following the discovery of free-phase product in monitoring wells MW-6 and MW-10, two borings were installed in an attempt to delineate the lateral extent of the product. During the installation of one of

these borings, a product line was encountered and subsequently damaged. During the repair of the product line, an additional leak was discovered along the product line at a piping elbow location. This leak was inferred to be the source of the product present in monitoring wells MW-6 and MW-10.

Groundwater monitoring well MW-6 was properly destroyed in June 1991 since it was suggested that the construction of this well may have facilitated the downward migration of petroleum hydrocarbons.

In October 1992, three additional groundwater monitoring wells (MW-16 through MW-18) were installed west and south of the site. Laboratory analytical results from soil and groundwater samples collected during the installation of these monitoring wells revealed sorbed and dissolved-phase petroleum hydrocarbons outside of the site property boundaries.

One 500-gallon waste oil UST was removed in September 1993. Additionally, three 10,000-gallon USTs were removed and replaced with 15,000-gallon tanks in April 1996. During the removal activities, associated product islands, dispensers and product piping were removed and replaced. Prior to the removal of the UST system, soil vapor extraction wells VW-1, VW-2 and VW-3 were properly abandoned due to their close proximity to the UST basin. Additionally, groundwater monitoring wells MW-8, MW-14, and MW-15 were damaged during the construction activities and were subsequently destroyed.

Laboratory analytical results from soil samples collected during the removal of the USTs and associated equipment showed a maximum concentration of 7,000 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPH-G) in soil samples collected from beneath the dispenser islands. Additionally, laboratory analytical results from soil samples collected from the base of the UST excavation showed a maximum concentration of 6,800 mg/kg TPH-G and 1,500 mg/kg total petroleum hydrocarbons as diesel (TPH-D). During the UST and product line replacement activities, approximately 330 cubic yards of soil were removed and disposed of properly.

Following the removal and replacement of the UST system in April 1996, a soil vapor extraction (SVE) system was installed in the vicinity of the UST system. Three SVE wells (VW-1 through VW-3) were installed on June 18, 1996, to replace the wells destroyed during excavation activities. The SVE portion of the wells is screened from 15 to 20 feet below ground surface (bgs), and the air sparge portion of the wells is screened from 30 to 33 feet bgs. Continuous operation of the SVE system commenced on September 5, 1996, using SVE wells VW-1 through VW-3. However, based on decreased influent concentrations of vapor-phase petroleum hydrocarbons, the SVE system was operated intermittently (pulsed) between December 24, 1996 and March 21, 1997.

Following pulsed operation of the SVE system influent vapor concentrations were non-detectable. Therefore, the SVE system was permanently shut down on March 21, 1997, and oxygen releasing compound (ORC) modules were installed in downgradient groundwater monitoring wells MW-11, MW-12, and MW-13. Subsequent analytical results from groundwater samples collected from the referenced monitoring wells showed a significant decrease in petroleum hydrocarbon concentrations.

From 1997 through 2000, groundwater monitoring continued at the site on a semi-annual basis and replacement of the ORC modules was conducted on an "as-needed" basis.

In August 2001, IT Corporation installed six air sparge points (SP-1 through SP-6, screened from 25 to 30 feet bgs) adjacent to the western edge of the UST basin along Arbor Avenue, and an air sparging system was subsequently installed at the site. SECOR International Incorporated (SECOR) initiated operation of the air sparge system in June 2004 and the system operated for approximately 30 days; however, no operation data are available from the operation of the system. Operation of the air sparge system was terminated after approximately 30 days when benzene and methyl tert-butyl ether (MTBE) were detected in offsite downgradient groundwater monitoring well MW-12. The air sparge system has remained non-operational pending evaluation of more comprehensive remediation measures.

GEOLOGY AND HYDROGEOLOGY

The site is located within the flatlands of the San Francisco Bay Region at an elevation of approximately 55 feet. Geologically, this region is characterized by northwest-trending mountain ranges, broad basins, and narrow valleys that generally lie parallel to major structural trends. The site is situated on the Bay Plain on the eastern side of the San Francisco Bay depression. The Bay Plain is composed of deposits of the San Lorenzo Cone (Maslonkowski, 1984) which consists of interbedded gravel, sand, and clay of Quaternary Age. These strata are discontinuous and slope gently westward toward San Francisco Bay.

Five primary aquifer zones are identified in strata of the San Lorenzo Cone (Maslonkowski, 1984). These aquifer zones may be discontinuous. A shallow aquifer zone generally extends from the ground surface to a depth of approximately 50 feet and consists of interbedded permeable and semi-permeable lenses. The second aquifer zone generally extends from approximately 30 feet to 100 feet below the surface and is "equivalent" to the Newark aquifer of the Niles Cone (Maslonkowski, 1984). Aquifers found between approximately 130 feet to 220 feet below the surface are "equivalent" to the Centerville aquifer of the Niles Cone. Aquifers found between 250 and 400 feet below the surface are "equivalent" to the Fremont aquifer of the Niles cone. Aquifers found at a depth greater than 400 feet below the surface are referred to as deeper aquifers. The Newark equivalent and deeper aquifers are used for industrial, irrigation and domestic purposes in some areas of the San Lorenzo Cone. The regional ground-water gradient within these aquifer zones is generally toward the southwest *(Source: Subsurface Environmental Investigation, Applied Geosystems, January 8, 1990).*

Subsurface lithology at the site is primarily composed of silty clay and clayey silt with small stringers of silty sand, clayey sand, and gravelly sand to the total depth explored of approximately 40 feet bgs (see Figures 2 through 4).

Semi-annual groundwater monitoring of monitoring wells MW-7, MW-9, MW-10 through MW-13 and MW-17 has been conducted at the site since July 1997. Based upon the most recent monitoring event, conducted July 1, 2005, the groundwater flow direction at the site is radially outward from the center of the site. Historically, the groundwater flow direction at the site trends southwest with the regional groundwater flow direction toward San Francisco Bay.

SENSITIVE RECEPTOR STUDY

A current and complete sensitive receptor survey is not available for the site. However, a survey of the Alameda County Public Works Agency files conducted in November 1995 showed the closest water-supply well to the site is located 1,500 feet northwest of the site, cross-gradient of the groundwater flow direction.

DISCUSSION OF PLUME STABILITY

Residual dissolved-phase petroleum hydrocarbons and MTBE are limited to the southwestern portion of the site adjacent to the USTs and extending across Arbor Avenue to off-site groundwater well MW-12. Concentrations have generally shown a downward trend since the commencement of groundwater monitoring and sampling in 1987.

During operation of the on-site SVE and air sparge remediation systems between September 6, 1996, and March 21, 1997, approximately 2.11 pounds of TPH and 0.016 pounds of benzene were removed from beneath the site. Subsequent use of ORC also contributed to remediation at the site. No confirmation soil borings have been drilled since operation of the SVE and air sparge systems was discontinued. Historical soil data indicate that petroleum hydrocarbon-impacted soil in the vadose zone is located primarily in the area of the existing USTs and dispensers.

AIR SPARGE/SOIL VAPOR EXTRACTION PILOT TEST PROCEDURE

During the week of June 20, 2005, Delta, on behalf of COP, conducted a pilot test of the soil vapor extraction and air sparge systems at the site using the existing vapor wells and sparge points. The existing SVE system utilizes a 1.5 horsepower (hp) EG&G Rotron regenerative blower capable of producing a vacuum of up to 59 inches of water (inH_2O). Wells VW-1 through VW-3, located near the existing UST pit and screened from 15 to 20 feet bgs, are connected to a common line with valves at the wellheads and piped back to the system compound. Wells SP-1 through SP-6 are located along the southwest property line and screened from 25 to 30 feet bgs, and the air sparge portion of well VW-2 is screened from 30 to 33 feet bgs. These wells are currently connected to the air sparge system; however, only the air sparge portion of well VW-2 was verified to be connected because the flow gauges at the wellheads for SP-1 through SP-6 did not function. The existing air sparge system utilizes a 5 hp Ingersoll Rand T30 air compressor. The pilot test was conducted as described in the following paragraphs.

Soil Vapor Extraction Alone

Prior to commencing operation of the remediation equipment, ambient pressure, depth to groundwater, and dissolved oxygen (DO) concentrations were measured in each accessible well (VW-1 through VW-3, MW-7, MW-9, MW-10, MW-11, MW-12, MW-13, MW-16, and MW-17).

On June 22, 2005, Delta began the SVE pilot test by extracting from well VW-1. A step test was conducted on the well by extracting at the maximum vacuum achievable by the system, followed by extraction at two-thirds the maximum achievable vacuum, and then extraction at one-third the maximum achievable vacuum. Each step in the test lasted for approximately 0.5 hours. Measurements of wellhead vacuum, blower vacuum, influent flow rate, and influent volatile organic compound (VOC) concentration, measured with a photoionization detector (PID), were recorded approximately every fifteen minutes. After completion of the step test, a constant flow rate test was conducted using the vacuum which achieved the maximum flow rate. The constant flow rate test lasted for approximately 2.5 hours with the system parameters, depth to groundwater, and induced vacuum measurements from nearby observation wells recorded approximately every thirty minutes. At the end of the constant flow rate test, vapor samples were collected for laboratory analysis of TPH-G, benzene, toluene, ethylbenzene, total xylenes (BTEX compounds), and MTBE. The procedure was repeated for wells VW-2 and VW-3 on June 23, 2004.

After each of the three SVE wells was tested individually, simultaneous extraction from all three wells was conducted overnight between June 23 and 24, 2005. While extraction was being conducted on all three wells simultaneously, system parameters (including influent oxygen concentration) and observation well measurements were collected before leaving the site. An influent vapor sample was also collected for laboratory analysis of TPH-G, BTEX Compounds, and MTBE. In the morning of June 24, 2005, system parameters were recorded and wellhead VOC and oxygen concentrations were measured from the individual extraction wells; vapor samples were also collected for laboratory analysis. An influent sample was collected for laboratory analysis but the sample container (Tedlar bag) deflated before reaching the laboratory.

Air Sparge and Soil Vapor Extraction

Prior to initiating air sparging, induced vacuum, depth to groundwater, and DO concentration measurements were collected from accessible wells with the SVE system operating. Air sparging was initiated on June 24, 2005, by sparging air into the existing air sparge wells connected to the system simultaneously as soil vapor was extracted from three SVE wells. This portion of the test lasted for approximately 7.5 hours with SVE system, AS system pressure and flow rate, and observation well measurements collected approximately every 30 minutes. The pressure and flow rate from each individual sparge well were not able to be recorded due to non-functioning flow gauges, absent pressure gauges, and no access ports. Samples were collected for laboratory analysis from each individual SVE well and the system influent at the end of the test.

After termination of the pilot test, ambient pressure, depth to groundwater, and DO concentrations were collected from accessible wells with no equipment operating.

AIR SPARGE/SOIL VAPOR EXTRACTION PILOT TEST RESULTS

- The flow rate from individual extraction wells ranged from 4.4 standard cubic feet per minute (scfm) to 15.7 scfm during the constant flow rate tests.
- The flow rate from the three wells extracted simultaneously ranged from 5.7 scfm to 15.7 scfm.
- The maximum sustainable vacuum was 50 inH_2O.
- VOC concentrations from individual extraction wells without air sparging ranged from 0.0 parts per million by volume (ppmv) to 43.0 ppmv.
- Influent VOC concentrations with air sparging ranged from 0.0 ppmv to 5.3 ppmv.
- Wellhead vacuums were between 0.60 and 0.68 inH_2O.
- AS system flow rate ranged from 16.0 scfm to 18.5 scfm.
- AS system pressure was approximately 10 pounds per square inch (psi).
- Laboratory analytical results reported MTBE at a concentration of 0.35 ppmv in well VW-2 at the end of the individual well extraction, and in the influent sample at 0.41 ppmv just after commencing extraction from all three wells simultaneously.
- Induced vacuums were not observed in any observation wells.
- Insignificant groundwater elevation changes were observed in the observation wells.
- Air sparging appears to have increased DO concentrations in the observation wells.
- Hydrocarbon volatilization was observed in well MW-10 during AS system operation.

Tables summarizing the pilot test operation data, observation well data, and laboratory analytical results are presented in Table 1, Table 2, and Table 3, respectively. The California State-Certified Laboratory Analytical Reports and Chain-of-Custody Documentation is included as Appendix A.

AIR SPARGE/SOIL VAPOR EXTRACTION PILOT TEST CONCLUSION

The air sparge system appears able to volatilize petroleum hydrocarbons in the groundwater beneath the site and to increase DO concentrations across the site, thus enhancing microbial degradation. However, the SVE system does not appear able to capture the vapor phase hydrocarbons. The absence of induced vacuum from the SVE wells, as measured in the observation wells, indicates the current SVE system is not capable of producing an adequate radius of influence (ROI) to effectively remove petroleum hydrocarbons from the soil. Figures 3 and 4 show geologic cross sections of the site. The underlying soil at the site consists primarily of silty clay and clayey silt with small stringers of silty sand, clayey sand, and gravelly sand. The fine-grained soils that predominate in the subsurface at the site preclude ease of vapor extraction. Therefore, soil vapor extraction is not an amenable alternative for remediating hydrocarbons present in the vadose zone.

In addition, the wellhead vacuums of approximately 0.62 inH_2O, which were consistent despite the applied vacuum, indicate a substantial vacuum loss between the blower and the wellhead. The vacuum loss can likely be attributed to impaired SVE lines and also possibly the use of a common line rather than individual extraction lines connecting the wells to a manifold in the compound.

INTERIM REMEDIAL ACTION PLAN

Based on the results of the feasibility tests, the current soil vapor extraction and air sparge remediation system at the site cannot be used in its present state of operation and configuration. Delta recommends that oxygen injection, utilizing the air sparge portion of wells VW-1 to VW-3, be tested as a remediation method at the site. Each of these wells is of dual construction with screens at 15-20 feet bgs and 30-33 feet bgs. Depth to groundwater at the site is approximately 20 feet bgs; therefore, oxygen can be injected into the more deeply screened well. Monitoring well MW-10, located adjacent to VW-2, is screened from 20-40 feet bgs and can be used as an observation well for measuring dissolved oxygen concentrations prior to and after oxygen injection. Oxygen injection is proven an

effective means for stimulating growth of hydrocarbon-metabolizing microbes. In addition, oxygen injection is safe, economical, and an efficient method of remediation.
It is recommended that a four-week test be conducted with oxygen injection occurring once a week. One bottle of oxygen, containing 150 cubic feet of O_2, would be injected into each of the wells VW-1, VW-2, and VW-3. Dissolved oxygen concentrations would be measured in monitoring wells MW-10, MW-11, and MW-12 before injection and after injection of oxygen. Following completion of the four-week test, groundwater samples would be collected from the monitoring wells that are regularly sampled during scheduled semi-annual monitoring events. Comparison of dissolved oxygen concentrations in groundwater at the site measured over the four-week period of the test, coupled with comparison of concentrations of petroleum hydrocarbons from samples collected after oxygen injection to concentrations prior to oxygen injection will reveal the remedial impact of this approach. Some plumbing changes to the well heads of wells VW-1 to VW-3 will be necessary to set up for oxygen injection.

REMARKS

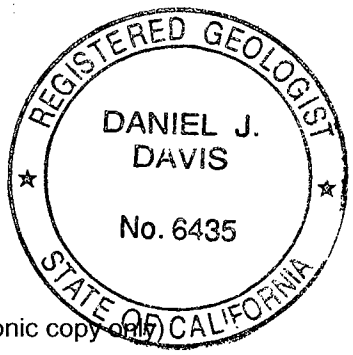
The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work. The Contract between Delta and its 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.

Please call if you have questions regarding this report.

Sincerely,
Delta Environmental Consultants, Inc.

Eric Hetrick
Senior Project Manager

Daniel J. Davis, R.G.
Senior Project Manager



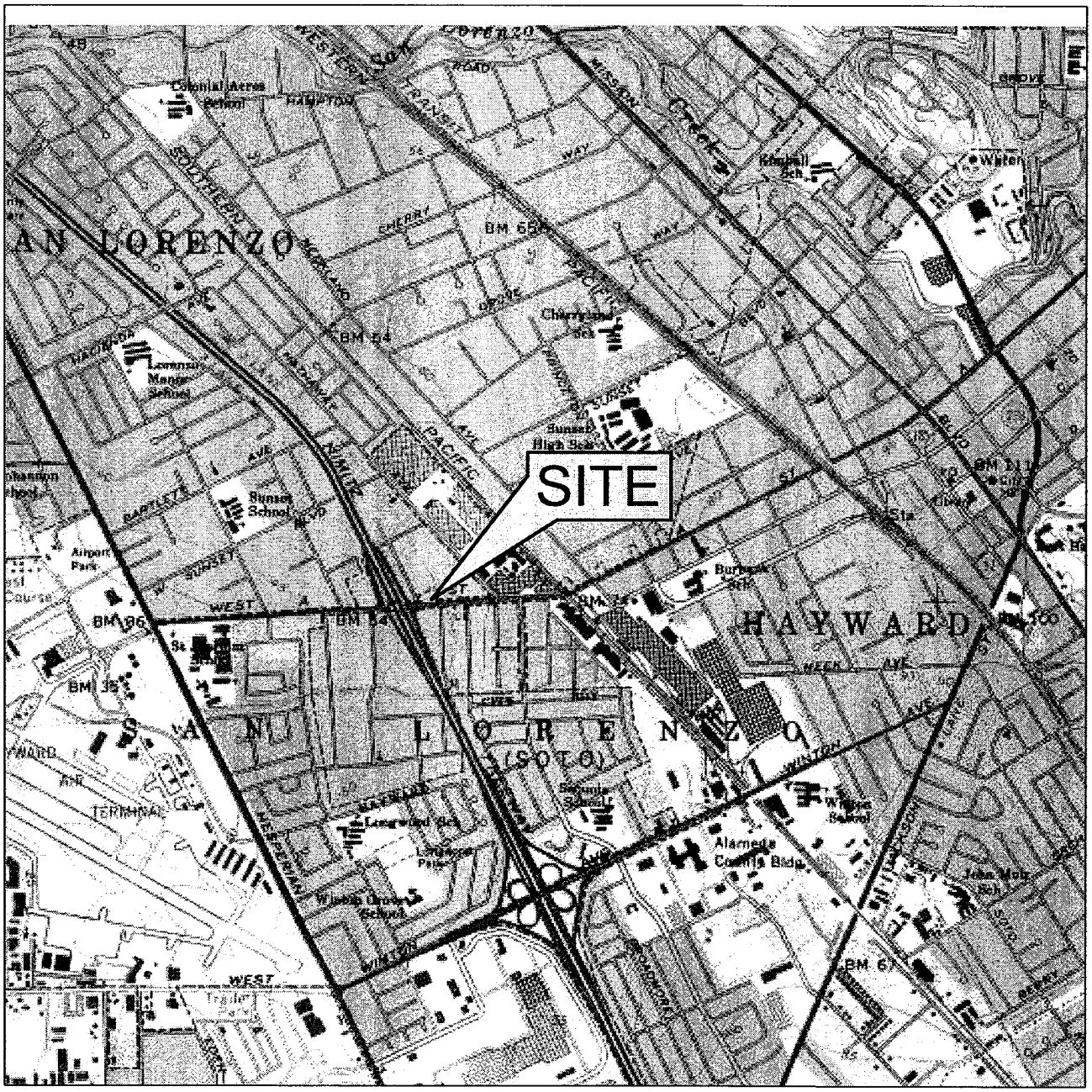
cc: Shelby Lathrop, ConocoPhillips (electronic copy only)

Attachments:
Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – Geologic Cross Section A-A'
Figure 4 – Geologic Cross Section B-B'

Table 1 – Soil Vapor Extraction and Air Sparge Feasibility Test Operating Data
Table 2 – Soil Vapor Extraction and Air Sparge Feasibility Test Observation Well Data
Table 3 – Soil Vapor Extraction and Air Sparge Feasibility Test Analytical Data

Appendix A – Field Data Sheets
Appendix B – Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

FIGURES



0 1000 FT 2000 FT

SCALE: 1 : 24,000

North

FIGURE 1

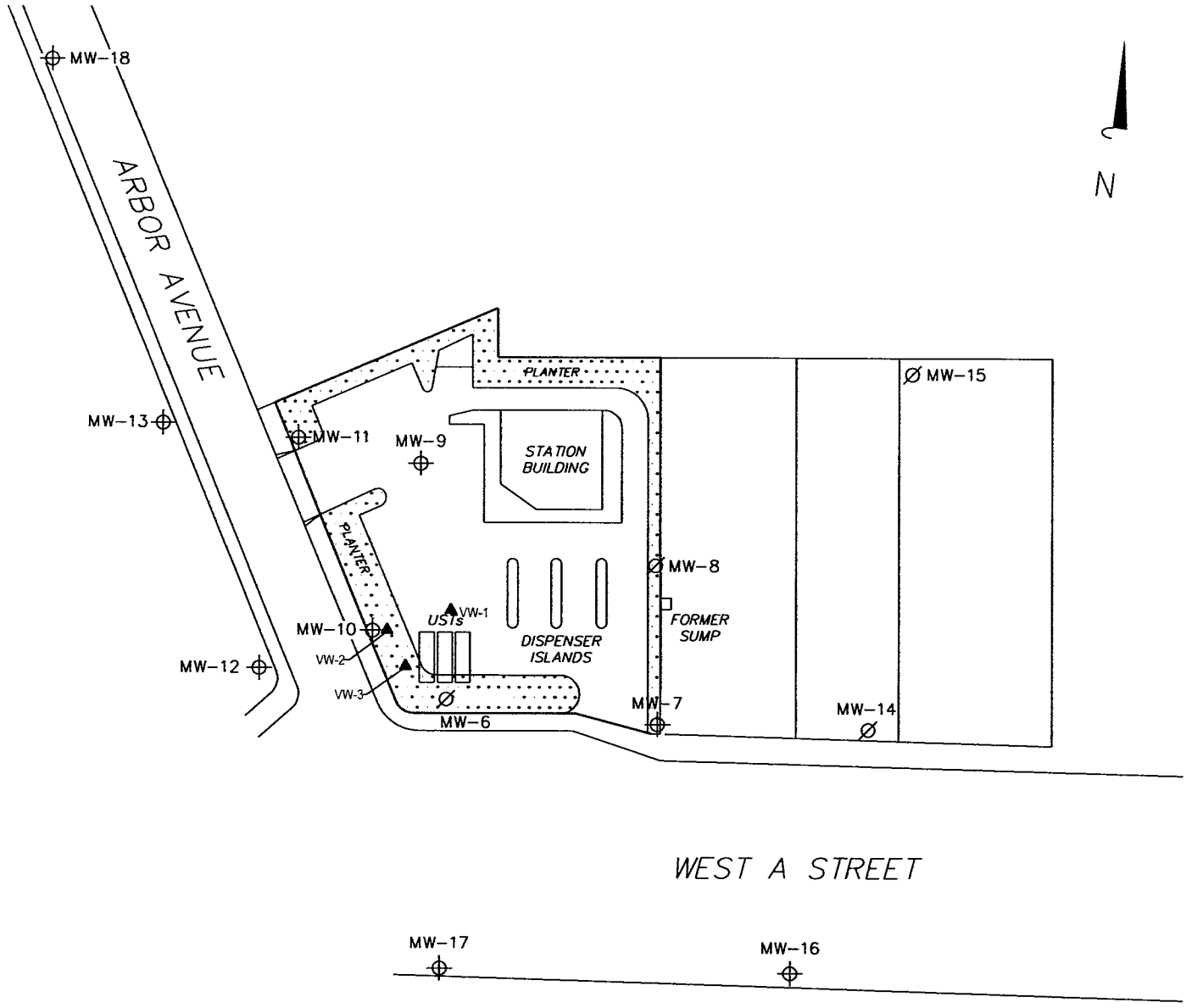
SITE LOCATION MAP

76 STATION NO. 3791
391 WEST A STREET
HAYWARD, CA

PROJECT NO. C103-791	DRAWN BY MOC 8/18/05
FILE NO. COP-3791	PREPARED BY MC
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, PASADENA QUADRANGLE, 1967



LEGEND

MW-18 ⊕ Monitoring Well

MW-15 Ø Destroyed Well

VW-2 ▲ Vapor Extraction Well

SCALE (FEET)

0 80

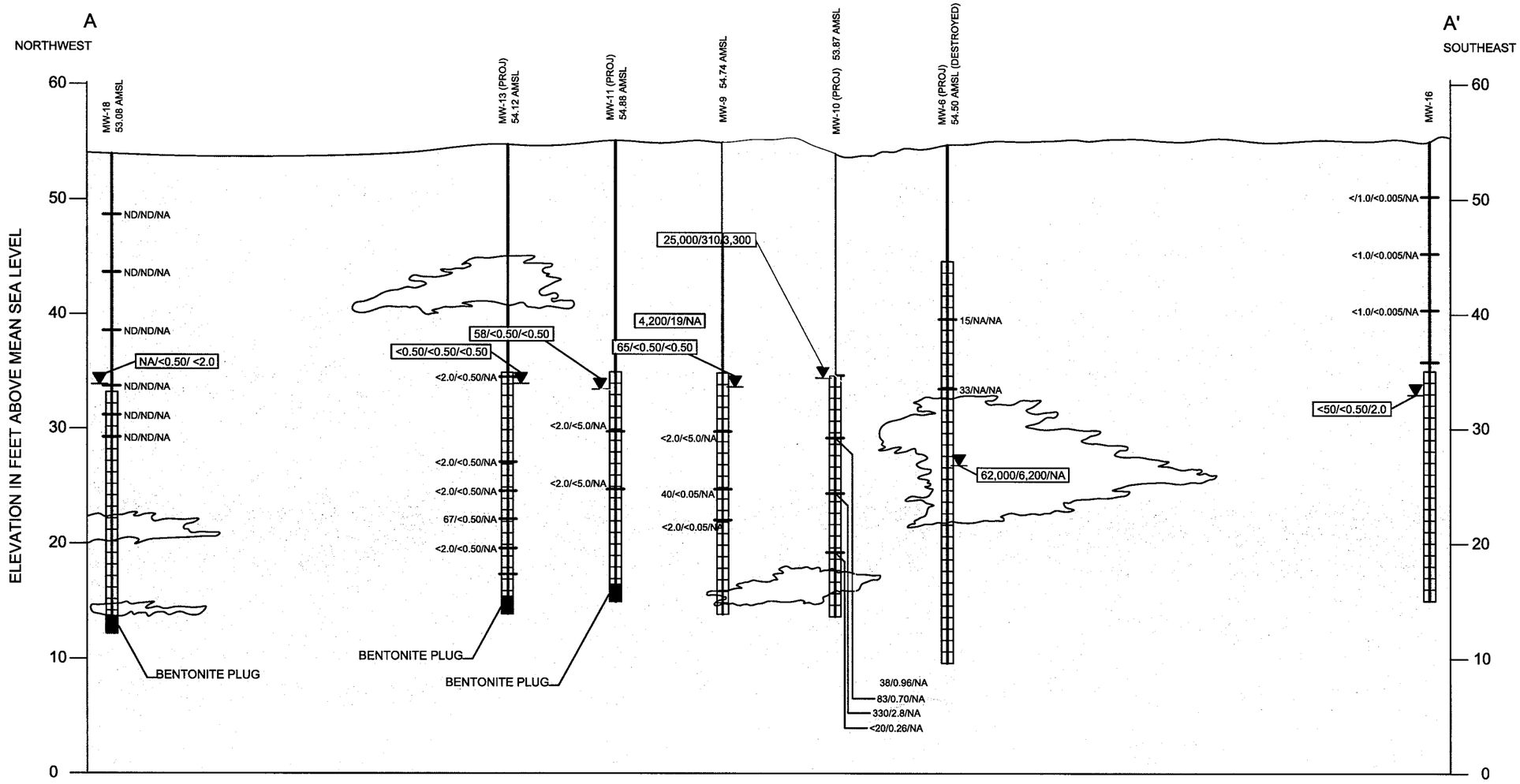
FIGURE 2

SITE MAP

76 STATION NO. 3791
391 WEST A STREET
HAYWARD, CA

PROJECT NO. C103-791	DRAWN BY MC 4/7/06
FILE NO. COP-3791	PREPARED BY DD
REVISION NO. 1	REVIEWED BY

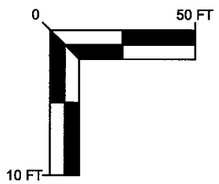
Delta Environmental Consultants, Inc.



NOTES:

1) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

2) TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE, MTBE = METHYL TERTIARY BUTYL ETHER; ug/L = MICROGRAMS PER LITER, mg/kg = MILLIGRAMS PER KILOGRAM, <0.5 = NOT DETECTED AT OR ABOVE LIMIT INDICATED ON OFFICIAL LABORATORY REPORT, NA = NOT ANALYZED, ND = NOT DETECTED



LEGEND

MW-15 55.64 AMSL (DESTROYED)	GROUNDWATER MONITORING WELL NAME AND ELEVATION ABOVE MEAN SEA LEVEL
	WELL CASING
	SOIL SAMPLE LOCATION
	WELL SCREEN
	DEPTH TO GROUNDWATER
<2.0/<0.50/NA	SOIL TPH-G, BENZENE, MTBE CONCENTRATIONS (mg/kg)
ND/ND/ND	GROUNDWATER TPH-G BENZENE, MTBE CONCENTRATIONS (ug/L)
(10/28/96)	LAST DATE SAMPLED BEFORE DESTRUCTION
	SILTY CLAY/ CLAYEY SILT
	SILTY SAND, CLAYEY SAND, GRAVELLY SAND

FIGURE 3

GEOLOGIC CROSS SECTION A-A'

76 STATION NO. 3791
391 WEST A STREET
HAYWARD, CA

PROJECT NO. C103-791	DRAWN BY MC 10/18/05
FILE NO. 76-3791-XS	PREPARED BY EH
REVISION NO. 1	REVIEWED BY

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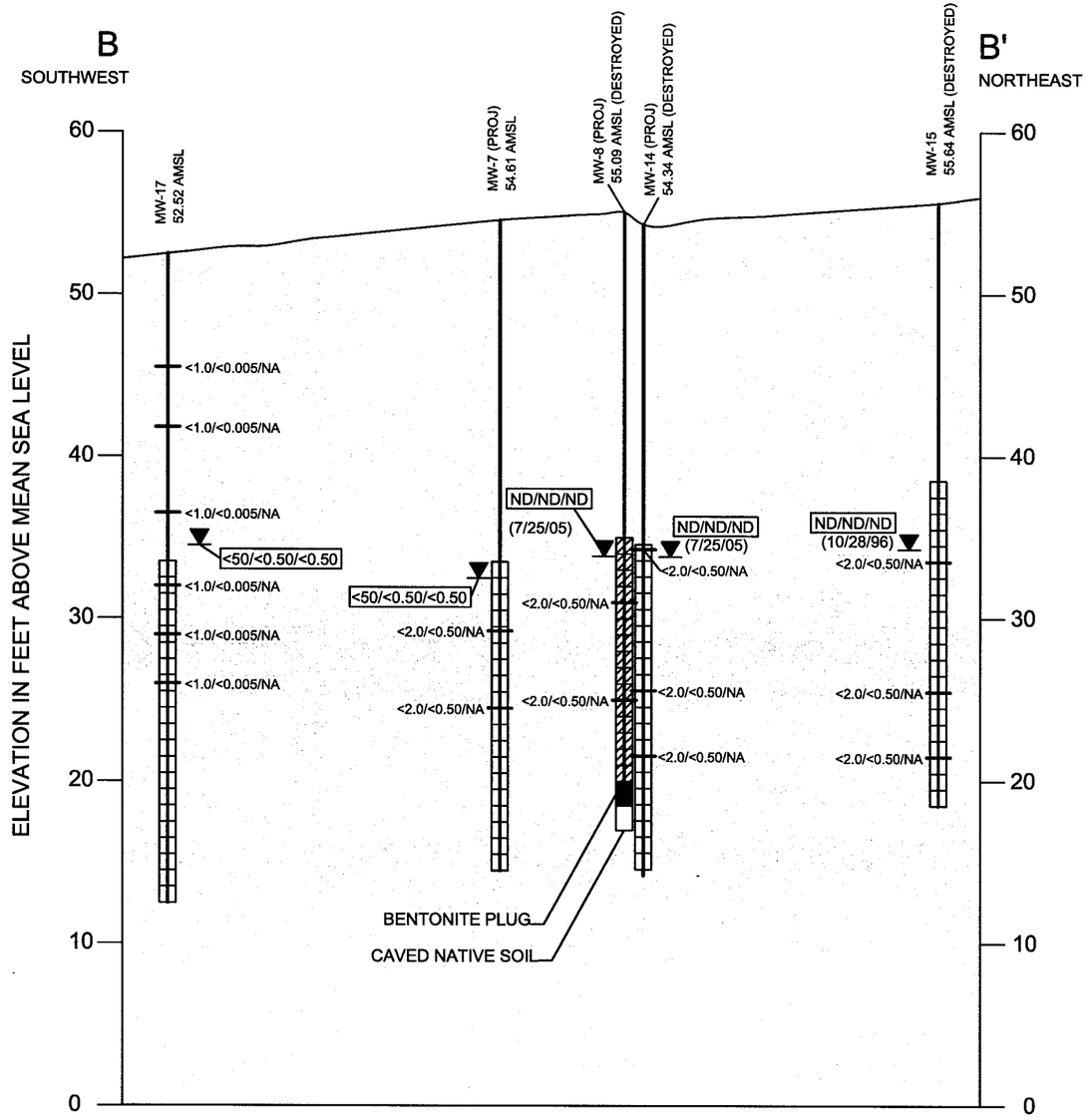

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LEGEND

MW-15 55.64 AMSL (DESTROYED)	GROUNDWATER MONITORING WELL NAME AND ELEVATION ABOVE MEAN SEA LEVEL
	WELL CASING
	SOIL SAMPLE LOCATION
	WELL SCREEN
	DEPTH TO GROUNDWATER
<2.0/<0.50/NA	SOIL TPH-G, BENZENE, MTBE CONCENTRATIONS (mg/kg)
ND/ND/ND	GROUNDWATER TPH-G, BENZENE, MTBE CONCENTRATIONS (ug/L)
(10/28/96)	LAST DATE SAMPLED BEFORE DESTRUCTION
	SILTY CLAY/CLAYEY SILT

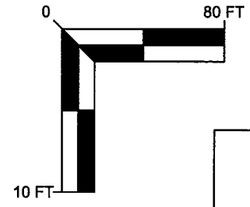

FIGURE 4

GEOLOGIC CROSS SECTION B-B'

76 STATION NO. 3791
391 WEST A STREET
HAYWARD, CA

PROJECT NO. C103-791	DRAWN BY MC 10/18/05
FILE NO. 76-3791-XS	PREPARED BY EH
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

TABLES

Table 1
Soil Vapor Extraction and Air Sparge Feasibility Test
Operating Data

76 Service Station Number 3791
391 West A Street, Hayward, CA

Date and Time	Notes	Blower Vacuum (inH_2O)	Influent					Wellhead Vacuums (inH_2O)			Wellhead VOCs (ppmv)			Wellhead O_2 Concentration (%)			Air Sparge	
			O_2 Concentration (%)	VOCs (ppmv)	Flow Rate (acfm)	Vacuum (in H_2O)	Calculated Flow Rate (scfm)[1]	VW-1	VW-2	VW-3	VW-1	VW-2	VW-3	VW-1	VW-2	VW-3	Flow Rate (scfm)	Pressure (psi)
VW-1 Step One (Maximum Achievable Vacuum)																		
6/22/05 14:55		56	NM	16.9	10	52	8.7	0.61	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 15:30		21	NM	16.7	8	51	7.0	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-1 Step Two (2/3 Maximum Achievable Vacuum)																		
6/22/05 15:35		40	NM	8.7	5	40	4.5	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 15:50		40	NM	5.5	10	40	9.0	0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 16:05		40	NM	5.5	6	40	5.4	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-1 Step Three (1/3 Maximum Achievable Vacuum)																		
6/22/05 16:05		20	NM	2.0	8.3	20	7.9	0.60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 16:20		20	NM	1.9	1.2	20	1.1	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 16:35		20	NM	1.6	1.2	20	1.1	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-1 Constant Flow Rate																		
6/22/05 16:45		55	20.9	5.8	7.5	55	6.5	0.66	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 17:15		50	NM	2.7	10	50	8.8	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 17:45		50	NM	3.2	6.8	50	6.0	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 18:15		50	NM	6.2	15	50	13.2	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 18:45		50	NM	2.5	10	50	8.8	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/22/05 19:15	a	50	21.1	2.0	16	50	14.0	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-2 Step One (Maximum Achievable Vacuum)																		
6/23/05 7:15		58	NM	7.0	24.5	58	21.0	NA	0.63	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 7:30		54	NM	4.5	4.9	54	4.2	NA	0.63	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 7:45		52	NM	6.6	9.7	52	8.5	NA	0.63	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-2 Step Two (2/3 Maximum Achievable Vacuum)																		
6/23/05 7:45		39	NM	7.5	2.8	39	2.5	NA	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 8:00		39	NM	10.9	6.35	39	5.7	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 8:15		39	NM	12.3	5.0	39	4.5	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-2 Step Three (1/3 Maximum Achievable Vacuum)																		
6/23/05 8:15		20	NM	10.0	3.5	20	3.3	NA	0.63	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 8:30		20	NM	20.1	2.2	20	2.1	NA	0.64	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 8:45		20	NM	20.3	3.65	20	3.5	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-2 Constant Flow Rate																		
6/23/05 8:45		55	19.4	19.1	7.1	55	6.1	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 9:15		51	NM	24.2	18.0	51	15.7	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 9:45		49	NM	21.3	15.9	49	14.0	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 10:15		50	20.3	9.7	5.0	50	4.4	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 10:45		50	19.8	8.0	9.2	50	8.1	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 11:15	b	50	NM	4.4	10.15	50	8.9	NA	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-3 Step One (Maximum Achievable Vacuum)																		
6/23/05 11:30		50	NM	8.8	11.6	50	10.2	NA	NA	0.68	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 11:45		50	NM	4.4	17.0	50	14.9	NA	NA	0.63	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 12:00		50	NM	43.0	12.1	50	10.6	NA	NA	0.66	NA	NA	NA	NA	NA	NA	NA	NA
VW-3 Step Two (2/3 Maximum Achievable Vacuum)																		
6/23/05 12:00		39	NM	5.2	3.5	39	3.2	NA	NA	0.64	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 12:15		39	NM	1.2	7.55	39	6.8	NA	NA	0.64	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 12:30		40	NM	0.5	6.65	40	6.0	NA	NA	0.64	NA	NA	NA	NA	NA	NA	NA	NA
VW-3 Step Three (1/3 Maximum Achievable Vacuum)																		
6/23/05 12:30		20	NM	0.0	3.9	20	3.7	NA	NA	0.64	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 12:45		20	NM	0.0	2.7	20	2.6	NA	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 13:00		20	NM	0.8	3.75	20	3.6	NA	NA	0.64	NA	NA	NA	NA	NA	NA	NA	NA

Table 1
Soil Vapor Extraction and Air Sparge Feasibility Test
Operating Data

76 Service Station Number 3791
391 West A Street, Hayward, CA

Date and Time	Notes	Blower Vacuum (inH_2O)	Influent					Wellhead Vacuums (inH_2O)			Wellhead VOCs (ppmv)			Wellhead O_2 Concentration (%)			Air Sparge	
			O_2 Concentration (%)	VOCs (ppmv)	Flow Rate (acfm)	Vacuum (in H_2O)	Calculated Flow Rate (scfm)[1]	VW-1	VW-2	VW-3	VW-1	VW-2	VW-3	VW-1	VW-2	VW-3	Flow Rate (scfm)	Pressure (psi)
VW-3 Constant Flow Rate																		
6/23/05 13:00		55	20.9	0.4	16.1	55	13.9	NA	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 13:30		50	NM	0.0	13.6	50	11.9	NA	NA	0.62	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 14:05		50	NM	0.0	13.4	50	11.8	NA	NA	0.64	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 14:30		50	NM	0.0	12.6	50	11.1	NA	NA	NM	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 15:00		50	NM	0.3	8.15	50	7.1	NA	NA	0.66	NA	NA	NA	NA	NA	NA	NA	NA
6/23/05 15:30	c	50	NM	0.5	9.2	50	8.1	NA	NA	NM	NA	NA	NA	NA	NA	NA	NA	NA
VW-1, VW-2, and VW-3 Simultaneous Extraction																		
6/23/05 15:45		50	NM	0.0	14.9	50	13.1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NA	NA
6/23/05 16:15		50	20.9	1.2	16.5	50	14.5	0.62	0.62	0.62	NM	NM	NM	NM	NM	NM	NA	NA
6/24/05 7:30	d	50	NM	0.9	13.5	50	11.8	NM	NM	NM	0.8	0.7	1.1	0.8	0.7	1.1	NA	NA
VW-1, VW-2, and VW-3 Simultaneous Extraction with Air Sparging																		
6/24/05 8:45		50	20.9	1.2	14	50	12.3	0.62	0.62	0.62	NM	NM	NM	NM	NM	NM	18.5	10
6/24/05 9:15		50	20.9	0.3	15.3	50	13.4	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/24/05 9:45		51	20.5	0.0	17.9	51	15.7	0.62	0.62	0.62	NM	NM	NM	NM	NM	NM	NM	NM
6/24/05 10:15		51	21.4	0.0	14.0	51	12.2	NM	NM	NM	NM	NM	NM	NM	NM	NM	17.0	10
6/24/05 10:45		50	20.9	2.2	10.2	50	8.9	0.62	0.62	0.62	NM	NM	NM	NM	NM	NM	17.0	10
6/24/05 11:00		NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	20.9	21.4	21.4	NM	NM
6/24/05 11:15		50	20.9	3.4	15.10	50	13.2	NM	NM	NM	NM	NM	NM	NM	NM	NM	16.0	10
6/24/05 12:00		50	20.9	5.3	13.10	50	11.5	0.62	0.62	0.62	NM	NM	NM	NM	NM	NM	17.0	10
6/24/05 12:30		50	20.3	2.0	14.9	50	13.1	NM	NM	NM	NM	NM	NM	NM	NM	NM	17.0	10
6/24/05 13:00		50	20.9	4.9	6.80	50	6.0	NM	NM	NM	NM	NM	NM	NM	NM	NM	16.5	10
6/24/05 13:30		50	21.3	4.2	11.0	50	9.6	NM	NM	NM	NM	NM	NM	NM	NM	NM	17.0	10
6/24/05 14:00	e	50	NM	3.9	6.50	50	5.7	0.62	0.62	0.62	0.0	0.6	0.2	NM	NM	NM	17.0	10

Definitions:

%	Percent
acfm	Actual cubic feet per minute
inH_2O	Inches of water
O_2	Oxygen
ppmv	Parts per million by volume
psi	Pounds per square inch
scfm	Standard cubic feet per minute
VOCs	Volatile Organic Compounds

Notes:

1	Calculation: [Qa·(407-V)]/(407) where Qa is the flow rate in acfm, V is the vacuum in inH2O, assuming 407 inH2O represents standard conditions.
a	System shut down at 19:25.
b	Extraction switched to VW-3 at 11:30.
c	Extraction switch to wells VW-1, VW-2, and VW-3 at 15:45.
d	Air sparge system started at 8:15.
e	Test ended at 14:15.

Comments:
SVE system hourmeter is not functional.
Vacuum was adjusted with recirculation of blower.
VOCs were monitored with a photoionization detector calibrated to 100 ppmv isobutylene.
Flow rate was monitored with a hot wire anemometer.
Temperature of the air stream was unable to be collected; the anemometer probe must be inserted 3 inches into the air stream in order to measure temperature, system piping is only two inches.
System is not equiped with SVE manifold in the compound. The SVE wells are connected to a common line with ball valves in the well boxes.
Three unmarked sparge lines leave compound. The sparge portion of well VW-2 was still operational; valve open 50 percent during test. Unable to determine which of the two other lines control the six other sparge wells. Flow gauges at the well head do not function.

Table 2
Soil Vapor Extraction and Air Sparge Feasibility Test
Observation Well Data

76 Service Station Number 3791
391 West A Street, Hayward, CA

	Well ID											
	VW-1				VW-2				VW-3			
Date	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH_2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)
Background												
6/22/2005	12:45	17.94	0.8	0	14:45	18.61	0.5	0	12:55	18.60	0.4	0
VW-1 Extraction												
6/22/2005	NA	NA	NA	NA	16:45	18.65	NM	0	16:45	18.61	NM	0
6/22/2005	NA	NA	NA	NA	17:15	18.65	NM	0	17:15	18.60	NM	0
6/22/2005	NA	NA	NA	NA	17:45	18.65	NM	0	17:45	18.60	NM	0
6/22/2005	NA	NA	NA	NA	18:15	18.65	NM	0	18:15	18.60	NM	0
6/22/2005	NA	NA	NA	NA	18:45	18.65	NM	0	18:45	18.60	NM	0
6/22/2005	NA	NA	NA	NA	19:15	18.65	NM	0	19:15	18.60	NM	0
VW-2 Extraction												
6/23/2005	8:45	17.93	NM	0	NA	NA	NA	NA	8:45	18.61	NM	0
6/23/2005	9:15	17.94	NM	0	NA	NA	NA	NA	9:15	18.62	NM	0
6/23/2005	9:45	17.97	NM	0	NA	NA	NA	NA	9:45	18.62	NM	0
6/23/2005	10:15	17.96	NM	0	NA	NA	NA	NA	10:15	18.62	NM	0
6/23/2005	10:45	NM	NM	NM	NA	NA	NA	NA	10:45	18.62	NM	0
6/23/2005	11:15	17.97	NM	0	NA	NA	NA	NA	11:15	18.61	NM	0
VW-3 Extraction												
6/23/2005	13:00	18.00	NM	0	13:00	17.88	NM	-0.20	NA	NA	NA	NA
6/23/2005	13:30	17.99	NM	0	13:30	18.39	NM	-0.14	NA	NA	NA	NA
6/23/2005	14:00	17.98	NM	0	14:00	18.57	NM	0	NA	NA	NA	NA
6/23/2005	14:30	17.99	NM	0	14:30	18.59	NM	0	NA	NA	NA	NA
6/23/2005	15:00	17.99	NM	0	15:00	18.60	NM	0	NA	NA	NA	NA
6/23/2005	15:30	17.99	NM	0	15:30	18.59	NM	0	NA	NA	NA	NA
VW-1, VW-2, and VW-3 Simultaneous Extraction												
6/24/2005	NA	NA	NA	NA	8:02	18.92[a]	NA	NA	8:00	19.00[a]	NA	NA
VW-1, VW-2, and VW-3 Simultaneous Extraction with Air Sparging												
NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Test End-No Equipment Operating												
6/24/2005	15:06	17.06	1.0	0	15:00	16.12	1.2	0	14:50	18.50	1.1	0

	Well ID															
	MW-7				MW-9				MW-10				MW-11			
Date	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)
Background																
6/22/2005	13:20	19.02	1.5	0	12:30	19.37	0.4	0	13:05	18.20	0.5	0	12:20	19.21	0.5	0
VW-1 Extraction																
6/22/2005	NM	NM	NM	NM	16:45	19.39	NM	0	NM	NM	NM	NM	NM	NM	NM	NM
6/22/2005	NM	NM	NM	NM	17:15	19.37	NM	0	NM	NM	NM	NM	NM	NM	NM	NM
6/22/2005	NM	NM	NM	NM	17:45	19.39	NM	0	NM	NM	NM	NM	NM	NM	NM	NM
6/22/2005	NM	NM	NM	NM	18:15	19.39	NM	0	NM	NM	NM	NM	NM	NM	NM	NM
6/22/2005	NM	NM	NM	NM	18:45	19.39	NM	0	NM	NM	NM	NM	NM	NM	NM	NM
6/22/2005	NM	NM	NM	NM	19:15	19.39	NM	0	NM	NM	NM	NM	NM	NM	NM	NM
VW-2 Extraction																
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	8:45	18.17	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	9:15	18.20	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	9:45	18.20	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	10:15	18.20	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	10:45	18.20	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	11:15	18.22	NM	0	NM	NM	NM	NM
VW-3 Extraction																
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	13:00	18.20	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	13:30	18.20	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	14:00	18.22	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	14:30	18.22	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	15:00	18.21	NM	0	NM	NM	NM	NM
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	15:30	18.22	NM	0	NM	NM	NM	NM
VW-1, VW-2, and VW-3 Simultaneous Extraction																
6/23/2005	NM	NM	NM	NM	16:15	19.41	NM	0	16:15	18.22	NM	0	NM	NM	NM	NM
6/24/2005	8:07	19.06	1.7	0	8:12	19.45	0.8	0	8:04	18.22	0.8	0	8:15	19.27	0.7	0
VW-1, VW-2, and VW-3 Simultaneous Extraction with Air Sparging																
6/24/2005	NM	NM	NM	NM	9:15	19.43	0.7	0	9:15	18.30	2.5	0	NM	NM	NM	NM
6/24/2005	NM	NM	NM	NM	10:15	19.43	0.6	0	10:15	18.27	2.1	0	NM	NM	NM	NM
6/24/2005	NM	NM	NM	NM	11:15	19.43	0.7	0	11:15	18.30	1.8	0	NM	NM	NM	NM
6/24/2005	NM	NM	NM	NM	12:30	19.43	0.8	NM	12:30	18.30	1.3	NM	NM	NM	NM	NM
6/24/2005	NM	NM	NM	NM	13:30	19.42	0.8	NM	13:30	18.29	1.5	NM	NM	NM	NM	NM

Table 2
Soil Vapor Extraction and Air Sparge Feasibility Test
Observation Well Data

76 Service Station Number 3791
391 West A Street, Hayward, CA

	Well ID															
	MW-7				MW-9				MW-10				MW-11			
Date	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)
Test End-No Equipment Operating																
6/24/2005	15:11	19.17	1.7	0	15:16	19.43	1.5	0	14:56	18.25	1.2	0	14:20	19.26	0.9	0

	Well ID															
	MW-12				MW-13				MW-16				MW-17			
Date	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)	Time	Depth to Groundwater (ft bTOC)	Dissolved Oxygen (mg/L)	Pressure (inH2O)
Background																
6/22/2005	13:45	18.28	1.9	0	13:50	19.02	2.4	0	13:35	18.59	0.6	0	13:30	17.06	0.4	0
VW-1 Extraction																
NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
VW-2 Extraction																
NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
VW-3 Extraction																
6/23/2005	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	14:45	17.12	NM	0
VW-1, VW-2, and VW-3 Simultaneous Extraction																
6/23/2005	16:15	18.35	NM	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/24/2005	7:47	18.33	2.1	0	7:45	19.07	2.5	0	7:55	18.63	0.9	0	7:50	17.12	0.8	0
VW-1, VW-2, and VW-3 Simultaneous Extraction with Air Sparging																
6/24/2005	9:15	18.33	2.6	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/24/2005	10:15	18.33	2.4	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/24/2005	11:15	18.34	2.7	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/24/2005	12:30	18.34	2.8	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
6/24/2005	13:30	18.35	2.7	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Test End-No Equipment Operating																
6/24/2005	14:32	18.33	3.0	0	14:27	19.08	3.4	0	14:43	18.65	1.3	0	14:38	17.13	1.0	0

Definitions:

ft bTOC	Feet below top of casing
inH_2O	Inches of water
mg/L	Milligrams per liter
NA	Not applicable or not available
NM	Not measured

Notes:

a Measured in air sparge portion of dual completion well.

Comments:

The air sparge wells were not accessible for groundwater monitoring.
A car was parked on well MW-18; the well was not monitored.

Table 3
Soil Vapor Extraction and Air Sparge Feasibility Test
Analytical Data

76 Service Station Number 3791
391 West A Street, Hayward, CA

Date and Time Sampled	Sample ID	Notes	Concentrations (ppmv)					
			TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MtBE
Individual well extractions								
6/22/05 19:15	VW-1 (A)		ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14
6/23/05 11:15	VW-2 (A)		ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	**0.35**
6/23/05 15:30	VW-3 (A)		ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14
Simultaneous well extractions								
6/23/05 16:05	INF (B)		ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	**0.41**
6/24/05 7:15	VW-1 (C)	a	ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14
6/24/05 7:15	VW-2 (C)	a	ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14
6/24/05 7:15	VW-3 (C)	a	ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14
6/24/05 7:30	INF (C)	Sample deflated before reaching laboratory.						
Air Sparge system operating								
6/24/05 13:55	INF (D)		ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14
6/24/05 14:00	VW-1 (D)	a	ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14
6/24/05 14:00	VW-2 (D)	a	ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14
6/24/05 14:00	VW-3 (D)	a	ND<14	ND<0.31	ND<0.26	ND<0.23	ND<0.23	ND<0.14

Definitions:

MtBE	Methyl tert-butyl ether
ND<	Not detected above the laboratory reporting limit
ppmv	Parts per million by volume
TPHg	Total petroleum hydrocarbons as gasoline

Notes:

a	Sample collected from wellhead, system not equipment with well manifold in compound.

Comments:
All samples collected using vacuum pump. Blower not capable of producing enough positive pressure to collect sample without dilution.

APPENDIX A
CERTIFIED LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

SEVERN TRENT STL

Submission#: 2005-06-0658

Delta Env. Consultants Rancho Cordova

June 30, 2005

3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Attn.: Thomas Gilman

Project#: C103791
Project: Conoco Philips Site #3791
Site: 391 West A Street, Hayward, CA

Attached is our report for your samples received on 06/24/2005 16:00
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 08/08/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: dsharma@stl-inc.com

Sincerely,

Dimple Sharma
Project Manager

SEVERN TRENT STL

Submission: 2005-06-0658

Gas/BTEX/MTBE by 8260B

Delta Env. Consultants Rancho Cordova
Attn.: Thomas Gilman

3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670
Phone: (916) 503-1278 Fax: (916) 638-8385

Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
VW-3 (C)	06/24/2005 07:15	Air	1
INF (D)	06/24/2005 13:55	Air	2
VW-1 (D)	06/24/2005 14:00	Air	3
VW-2 (D)	06/24/2005 14:00	Air	4
VW-3 (D)	06/24/2005 14:00	Air	5
VW-1 (C)	06/24/2005 07:15	Air	7
VW-2 (C)	06/24/2005 07:15	Air	8

Gas/BTEX/MTBE by 8260B

Delta Env. Consultants Rancho Cordova
Attn.: Thomas Gilman

3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670
Phone: (916) 503-1278 Fax: (916) 638-8385

Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-3 (C)**	Lab ID:	2005-06-0658 - 1
Sampled:	06/24/2005 07:15	Extracted:	6/26/2005 16:36
Matrix:	Air	QC Batch#:	2005/06/26-1C.69
pH: <2			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/26/2005 16:36	
Benzene	ND	0.31	ppmv	1.00	06/26/2005 16:36	
Toluene	ND	0.26	ppmv	1.00	06/26/2005 16:36	
Ethylbenzene	ND	0.23	ppmv	1.00	06/26/2005 16:36	
Total xylenes	ND	0.23	ppmv	1.00	06/26/2005 16:36	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/26/2005 16:36	
Surrogate(s)						
1,2-Dichloroethane-d4	111.2	72-128	%	1.00	06/26/2005 16:36	
Toluene-d8	100.0	80-113	%	1.00	06/26/2005 16:36	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**INF (D)**	Lab ID:	2005-06-0658 - 2
Sampled:	06/24/2005 13:55	Extracted:	6/26/2005 20:45
Matrix:	Air	QC Batch#:	2005/06/26-2C.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/26/2005 20:45	
Benzene	ND	0.31	ppmv	1.00	06/26/2005 20:45	
Toluene	ND	0.26	ppmv	1.00	06/26/2005 20:45	
Ethylbenzene	ND	0.23	ppmv	1.00	06/26/2005 20:45	
Total xylenes	ND	0.23	ppmv	1.00	06/26/2005 20:45	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/26/2005 20:45	
Surrogate(s)						
1,2-Dichloroethane-d4	103.5	72-128	%	1.00	06/26/2005 20:45	
Toluene-d8	99.3	80-113	%	1.00	06/26/2005 20:45	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-1 (D)**	Lab ID:	2005-06-0658 - 3
Sampled:	06/24/2005 14:00	Extracted:	6/26/2005 21:03
Matrix:	Air	QC Batch#:	2005/06/26-2C.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/26/2005 21:03	
Benzene	ND	0.31	ppmv	1.00	06/26/2005 21:03	
Toluene	ND	0.26	ppmv	1.00	06/26/2005 21:03	
Ethylbenzene	ND	0.23	ppmv	1.00	06/26/2005 21:03	
Total xylenes	ND	0.23	ppmv	1.00	06/26/2005 21:03	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/26/2005 21:03	
Surrogate(s)						
1,2-Dichloroethane-d4	108.4	72-128	%	1.00	06/26/2005 21:03	
Toluene-d8	100.5	80-113	%	1.00	06/26/2005 21:03	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-2 (D)**	Lab ID:	2005-06-0658 - 4
Sampled:	06/24/2005 14:00	Extracted:	6/26/2005 21:21
Matrix:	Air	QC Batch#:	2005/06/26-2C.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/26/2005 21:21	
Benzene	ND	0.31	ppmv	1.00	06/26/2005 21:21	
Toluene	ND	0.26	ppmv	1.00	06/26/2005 21:21	
Ethylbenzene	ND	0.23	ppmv	1.00	06/26/2005 21:21	
Total xylenes	ND	0.23	ppmv	1.00	06/26/2005 21:21	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/26/2005 21:21	
Surrogate(s)						
1,2-Dichloroethane-d4	107.4	72-128	%	1.00	06/26/2005 21:21	
Toluene-d8	101.3	80-113	%	1.00	06/26/2005 21:21	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-3 (D)**	Lab ID:	2005-06-0658 - 5
Sampled:	06/24/2005 14:00	Extracted:	6/26/2005 21:39
Matrix:	Air	QC Batch#:	2005/06/26-2C.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/26/2005 21:39	
Benzene	ND	0.31	ppmv	1.00	06/26/2005 21:39	
Toluene	ND	0.26	ppmv	1.00	06/26/2005 21:39	
Ethylbenzene	ND	0.23	ppmv	1.00	06/26/2005 21:39	
Total xylenes	ND	0.23	ppmv	1.00	06/26/2005 21:39	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/26/2005 21:39	
Surrogate(s)						
1,2-Dichloroethane-d4	105.6	72-128	%	1.00	06/26/2005 21:39	
Toluene-d8	97.9	80-113	%	1.00	06/26/2005 21:39	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-1 (C)**	Lab ID:	2005-06-0658 - 7
Sampled:	06/24/2005 07:15	Extracted:	6/26/2005 16:55
Matrix:	Air	QC Batch#:	2005/06/26-1C.69
pH: <2			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/26/2005 16:55	
Benzene	ND	0.31	ppmv	1.00	06/26/2005 16:55	
Toluene	ND	0.26	ppmv	1.00	06/26/2005 16:55	
Ethylbenzene	ND	0.23	ppmv	1.00	06/26/2005 16:55	
Total xylenes	ND	0.23	ppmv	1.00	06/26/2005 16:55	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/26/2005 16:55	
Surrogate(s)						
1,2-Dichloroethane-d4	113.8	72-128	%	1.00	06/26/2005 16:55	
Toluene-d8	99.6	80-113	%	1.00	06/26/2005 16:55	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-2 (C)**	Lab ID:	2005-06-0658 - 8
Sampled:	06/24/2005 07:15	Extracted:	6/26/2005 17:13
Matrix:	Air	QC Batch#:	2005/06/26-1C.69
pH: <2			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/26/2005 17:13	
Benzene	ND	0.31	ppmv	1.00	06/26/2005 17:13	
Toluene	ND	0.26	ppmv	1.00	06/26/2005 17:13	
Ethylbenzene	ND	0.23	ppmv	1.00	06/26/2005 17:13	
Total xylenes	ND	0.23	ppmv	1.00	06/26/2005 17:13	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/26/2005 17:13	
Surrogate(s)						
1,2-Dichloroethane-d4	112.1	72-128	%	1.00	06/26/2005 17:13	
Toluene-d8	101.7	80-113	%	1.00	06/26/2005 17:13	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2005/06/26-1C.69**

MB: 2005/06/26-1C.69-025 — Date Extracted: 06/26/2005 11:25

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	06/26/2005 11:25	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/26/2005 11:25	
Benzene	ND	0.5	ug/L	06/26/2005 11:25	
Toluene	ND	0.5	ug/L	06/26/2005 11:25	
Ethylbenzene	ND	0.5	ug/L	06/26/2005 11:25	
Total xylenes	ND	1.0	ug/L	06/26/2005 11:25	
Surrogates(s)					
1,2-Dichloroethane-d4	107.4	73-130	%	06/26/2005 11:25	
Toluene-d8	100.4	81-114	%	06/26/2005 11:25	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2005/06/26-2C.69**

MB: 2005/06/26-2C.69-022 — Date Extracted: 06/26/2005 19:22

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	06/26/2005 19:22	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/26/2005 19:22	
Benzene	ND	0.5	ug/L	06/26/2005 19:22	
Toluene	ND	0.5	ug/L	06/26/2005 19:22	
Ethylbenzene	ND	0.5	ug/L	06/26/2005 19:22	
Total xylenes	ND	1.0	ug/L	06/26/2005 19:22	
Surrogates(s)					
1,2-Dichloroethane-d4	99.2	73-130	%	06/26/2005 19:22	
Toluene-d8	102.4	81-114	%	06/26/2005 19:22	

Gas/BTEX/MTBE by 8260B

Delta Env. Consultants Rancho Cordova
Attn.: Thomas Gilman

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Rancho Cordova, CA 95670
Phone: (916) 503-1278 Fax: (916) 638-8385

Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/06/26-1C.69**

LCS 2005/06/26-1C.69-007 Extracted: 06/26/2005 Analyzed: 06/26/2005 11:07

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	28.1		25	112.4			65-165	20		
Benzene	24.2		25	96.8			69-129	20		
Toluene	26.8		25	107.2			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	541		500	108.2			73-130			
Toluene-d8	527		500	105.4			81-114			

Gas/BTEX/MTBE by 8260B

Delta Env. Consultants Rancho Cordova

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Rancho Cordova, CA 95670
Phone: (916) 503-1278 Fax: (916) 638-8385

Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/06/26-2C.69**

LCS 2005/06/26-2C.69-003 Extracted: 06/26/2005 Analyzed: 06/26/2005 19:03

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	25.2		25	100.8			65-165	20		
Benzene	27.5		25	110.0			69-129	20		
Toluene	29.2		25	116.8			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	488		500	97.6			73-130			
Toluene-d8	520		500	104.0			81-114			

Gas/BTEX/MTBE by 8260B

Delta Env. Consultants Rancho Cordova
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Phone: (916) 503-1278 Fax: (916) 638-8385

Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/06/26-1C.69**

MS/MSD

Lab ID: 2005-06-0465 - 003

MS: 2005/06/26-1C.69-016 Extracted: 06/26/2005

Analyzed: 06/26/2005 12:16

Dilution: 1.00

MSD: 2005/06/26-1C.69-035 Extracted: 06/26/2005

Analyzed: 06/26/2005 12:35

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	23.5	25.1	1.71	25	87.2	93.6	7.1	65-165	20		
Benzene	21.9	22.2	ND	25	87.6	88.8	1.4	69-129	20		
Toluene	25.2	24.7	ND	25	100.8	98.8	2.0	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	466	486		500	93.2	97.2		73-130			
Toluene-d8	508	491		500	101.6	98.2		81-114			

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Philips Site #3791

Received: 06/24/2005 16:00

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/06/26-2C.69**

MS/MSD

Lab ID: 2005-06-0497 - 001

MS: 2005/06/26-2C.69-008 Extracted: 06/26/2005 Analyzed: 06/26/2005 20:08

Dilution: 1.00

MSD: 2005/06/26-2C.69-026 Extracted: 06/26/2005 Analyzed: 06/26/2005 20:26

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	24.7	25.0	0.657	25	96.2	97.4	1.2	65-165	20		
Benzene	27.3	27.7	ND	25	109.2	110.8	1.5	69-129	20		
Toluene	29.1	30.1	ND	25	116.4	120.4	3.4	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	463	456		500	92.6	91.2		73-130			
Toluene-d8	499	507		500	99.8	101.4		81-114			

STL-San Francisco

1220 Quarry Lane
Pleasanton, CA 94566
(925) 484-1919 (925) 484-1096 fax

ConocoPhillips Chain Of Custody Record

116866

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA. 92704

2005-06-0658

ConocoPhillips Work Order Number: 1205DEL004

ConocoPhillips Cost Object: WNO 1205

DATE: 6/24/05

PAGE: 1 of 1

SAMPLING COMPANY: Delta Environmental Consultanct, Inc	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: 76 Service Station #3791	GLOBAL ID NO.: T0600101470
ADDRESS: 3164 Gold Camp Drive, Suite 200, Rancho Cordova, CA 95670		SITE ADDRESS (Street and City): 391 West A Street, Hayward, CA	CONOCOPHILLIPS SITE MANAGER: Shelby Lathrop
PROJECT CONTACT (Hardcopy or PDF Report to): Thomas Gilman		EDF DELIVERABLE TO (RP or Designee): Eric Hetrick	PHONE NO.: 916-503-1272
TELEPHONE: 916-503-1278	FAX: 916-638-8385	E-MAIL: tgilman@deltaenv.com	E-MAIL: ehetrick@deltaenv.com
SAMPLER NAME(S) (Print): Tom Gilman	CONSULTANT PROJECT NUMBER: C103791	LAB USE ONLY	

TURNAROUND TIME (CALENDAR DAYS): ☑ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015m - TPHd Extractable	8260B - TPHg/BTEX/MtBE	8260B - TPHg / BTEX / 8 Oxygenates	8260B - TPHg / BTEX / 8 oxygenates + methanol (8015M)	8260B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MtBE	Lead ☐Total ☐STLC ☐TCLP												FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	VW-3 (C)	6/24/05	715	A	1							X													TEMPERATURE ON RECEIPT C° 24
	INF (D)	6/24/05	1355	A	1							X													
	VW-1 (D)	6/24/05	1400	A	1							X													
	VW-2 (D)	6/24/05	1400	A	1							X													
	VW-3 (D)	6/24/05	1400	A	1							X													
	~~INF (C)~~	~~6/24/05~~	[illegible]	A	1							X													
	VW-1 (C)	6/24/05	715	A	1							X													
	VW-2 (C)	6/24/05	715	A	1							X													
	INF (C)	6/24/05	730	A	1							X													

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	6-24-05	1400
[signature]	[signature]	6-24-05	1600

9/19/03 Revision

SEVERN TRENT STL

Submission#: 2005-06-0610

Delta Env. Consultants Rancho Cordova

July 06, 2005

3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

Attn.: Thomas Gilman

Project#: C103791
Project: Conoco Phillips # 3791
Site: 391 West A Street, Hayward, CA

Attached is our report for your samples received on 06/23/2005 17:25
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 08/07/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: dsharma@stl-inc.com

Sincerely,

Dimple Sharma
Project Manager

SEVERN TRENT STL

Submission: 2005-06-0610

Gas/BTEX/MTBE by 8260B

Delta Env. Consultants Rancho Cordova
Attn.: Thomas Gilman

3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670
Phone: (916) 503-1278 Fax: (916) 638-8385

Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
VW-1 (A)	06/22/2005 19:15	Air	1
VW-2 (A)	06/23/2005 11:15	Air	2
VW-3 (A)	06/23/2005 15:30	Air	3
INF (B)	06/23/2005 16:05	Air	4

Gas/BTEX/MTBE by 8260B

Delta Env. Consultants Rancho Cordova

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Phone: (916) 503-1278 Fax: (916) 638-8385

Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-1 (A)**	Lab ID:	2005-06-0610 - 1
Sampled:	06/22/2005 19:15	Extracted:	6/25/2005 08:50
Matrix:	Air	QC Batch#:	2005/06/25-1C.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/25/2005 08:50	
Benzene	ND	0.31	ppmv	1.00	06/25/2005 08:50	
Toluene	ND	0.26	ppmv	1.00	06/25/2005 08:50	
Ethylbenzene	ND	0.23	ppmv	1.00	06/25/2005 08:50	
Total xylenes	ND	0.23	ppmv	1.00	06/25/2005 08:50	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/25/2005 08:50	
Surrogate(s)						
1,2-Dichloroethane-d4	88.7	72-128	%	1.00	06/25/2005 08:50	
Toluene-d8	85.3	80-113	%	1.00	06/25/2005 08:50	

Gas/BTEX/MTBE by 8260B

Delta Env. Consultants Rancho Cordova

Attn.: Thomas Gilman

3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670
Phone: (916) 503-1278 Fax: (916) 638-8385

Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-2 (A)**	Lab ID:	2005-06-0610 - 2
Sampled:	06/23/2005 11:15	Extracted:	6/25/2005 00:27
Matrix:	Air	QC Batch#:	2005/06/24-2A.64
pH: <2			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/25/2005 00:27	
Benzene	ND	0.31	ppmv	1.00	06/25/2005 00:27	
Toluene	ND	0.26	ppmv	1.00	06/25/2005 00:27	
Ethylbenzene	ND	0.23	ppmv	1.00	06/25/2005 00:27	
Total xylenes	ND	0.23	ppmv	1.00	06/25/2005 00:27	
Methyl tert-butyl ether (MTBE)	0.35	0.14	ppmv	1.00	06/25/2005 00:27	
Surrogate(s)						
1,2-Dichloroethane-d4	108.2	72-128	%	1.00	06/25/2005 00:27	
Toluene-d8	89.1	80-113	%	1.00	06/25/2005 00:27	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**VW-3 (A)**	Lab ID:	2005-06-0610 - 3
Sampled:	06/23/2005 15:30	Extracted:	6/25/2005 00:51
Matrix:	Air	QC Batch#:	2005/06/24-2A.64
pH: <2			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/25/2005 00:51	
Benzene	ND	0.31	ppmv	1.00	06/25/2005 00:51	
Toluene	ND	0.26	ppmv	1.00	06/25/2005 00:51	
Ethylbenzene	ND	0.23	ppmv	1.00	06/25/2005 00:51	
Total xylenes	ND	0.23	ppmv	1.00	06/25/2005 00:51	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	06/25/2005 00:51	
Surrogate(s)						
1,2-Dichloroethane-d4	104.4	72-128	%	1.00	06/25/2005 00:51	
Toluene-d8	93.0	80-113	%	1.00	06/25/2005 00:51	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**INF (B)**	Lab ID:	2005-06-0610 - 4
Sampled:	06/23/2005 16:05	Extracted:	6/25/2005 01:15
Matrix:	Air	QC Batch#:	2005/06/24-2A.64
pH: <2			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	14	ppmv	1.00	06/25/2005 01:15	
Benzene	ND	0.31	ppmv	1.00	06/25/2005 01:15	
Toluene	ND	0.26	ppmv	1.00	06/25/2005 01:15	
Ethylbenzene	ND	0.23	ppmv	1.00	06/25/2005 01:15	
Total xylenes	ND	0.23	ppmv	1.00	06/25/2005 01:15	
Methyl tert-butyl ether (MTBE)	0.41	0.14	ppmv	1.00	06/25/2005 01:15	
Surrogate(s)						
1,2-Dichloroethane-d4	96.3	72-128	%	1.00	06/25/2005 01:15	
Toluene-d8	85.2	80-113	%	1.00	06/25/2005 01:15	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2005/06/24-2A.64**

MB: 2005/06/24-2A.64-050 — Date Extracted: 06/24/2005 19:49

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	06/24/2005 19:49	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/24/2005 19:49	
Benzene	ND	0.5	ug/L	06/24/2005 19:49	
Toluene	ND	0.5	ug/L	06/24/2005 19:49	
Ethylbenzene	ND	0.5	ug/L	06/24/2005 19:49	
Total xylenes	ND	1.0	ug/L	06/24/2005 19:49	
Surrogates(s)					
1,2-Dichloroethane-d4	90.8	73-130	%	06/24/2005 19:49	
Toluene-d8	86.4	81-114	%	06/24/2005 19:49	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2005/06/25-1C.64**

MB: 2005/06/25-1C.64-049 — Date Extracted: 06/25/2005 06:49

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	06/25/2005 06:49	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/25/2005 06:49	
Benzene	ND	0.5	ug/L	06/25/2005 06:49	
Toluene	ND	0.5	ug/L	06/25/2005 06:49	
Ethylbenzene	ND	0.5	ug/L	06/25/2005 06:49	
Total xylenes	ND	1.0	ug/L	06/25/2005 06:49	
Surrogates(s)					
1,2-Dichloroethane-d4	90.6	73-130	%	06/25/2005 06:49	
Toluene-d8	97.8	81-114	%	06/25/2005 06:49	

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/06/24-2A.64**

LCS 2005/06/24-2A.64-025 Extracted: 06/24/2005 Analyzed: 06/24/2005 19:25

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	25.5		25	102.0			65-165	20		
Benzene	21.3		25	85.2			69-129	20		
Toluene	26.2		25	104.8			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	448		500	89.6			73-130			
Toluene-d8	483		500	96.6			81-114			

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/06/25-1C.64**

LCS 2005/06/25-1C.64-025 Extracted: 06/25/2005 Analyzed: 06/25/2005 06:25

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	25.8		25	103.2			65-165	20		
Benzene	20.3		25	81.2			69-129	20		
Toluene	24.9		25	99.6			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	420		500	84.0			73-130			
Toluene-d8	422		500	84.4			81-114			

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/06/24-2A.64**

MS/MSD

Lab ID: 2005-06-0427 - 003

MS: 2005/06/24-2A.64-049 Extracted: 06/24/2005 Analyzed: 06/24/2005 20:49

Dilution: 1.00

MSD: 2005/06/24-2A.64-013 Extracted: 06/24/2005 Analyzed: 06/24/2005 21:13

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	24.8	22.0	ND	25	99.2	88.0	12.0	65-165	20		
Benzene	21.5	19.0	ND	25	86.0	76.0	12.3	69-129	20		
Toluene	24.3	21.6	ND	25	97.2	86.4	11.8	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	449	453		500	89.9	90.5		73-130			
Toluene-d8	433	436		500	86.6	87.2		81-114			

Gas/BTEX/MTBE by 8260B

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Project: C103791
Conoco Phillips # 3791

Received: 06/23/2005 17:25

Site: 391 West A Street, Hayward, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/06/25-1C.64**

MS/MSD

Lab ID: 2005-06-0429 - 001

MS: 2005/06/25-1C.64-002 Extracted: 06/25/2005 Analyzed: 06/25/2005 08:02

Dilution: 1.00

MSD: 2005/06/25-1C.64-026 Extracted: 06/25/2005 Analyzed: 06/25/2005 08:26

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	22.6	21.9	ND	25	90.4	87.6	3.1	65-165	20		
Benzene	17.8	19.6	ND	25	71.2	78.4	9.6	69-129	20		
Toluene	21.8	23.9	ND	25	87.2	95.6	9.2	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	431	450		500	86.2	90.0		73-130			
Toluene-d8	412	481		500	82.5	96.2		81-114			

ConocoPhillips Chain Of Custody Record

116840

STL-San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 484-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS:

2005-06-0610

CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA. 92704

ConocoPhillips Work Order Number: 1205DEL004

ConocoPhillips Cost Object: WNO.1205

DATE: 6/23/2005

PAGE: 1 of 1

SAMPLING COMPANY: Delta Environmental Consultanct, Inc	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: 76 Service Station #3791	GLOBAL ID NO.: T0600101470
ADDRESS: 3164 Gold Camp Drive, Suite 200, Rancho Cordova, CA 95670		SITE ADDRESS (Street and City): 391 West A Street, Hayward, CA	CONOCOPHILLIPS SITE MANAGER: Shelby Lathrop
PROJECT CONTACT (Hardcopy or PDF Report to): Thomas Gilman		EDF DELIVERABLE TO (RP or Designee): Eric Hetrick	PHONE NO.: 916-503-1272
TELEPHONE: 916-503-1278	FAX: 916-638-8385	E-MAIL: tgilman@deltaenv.com	E-MAIL: ehetrick@deltaenv.com
SAMPLER NAME(S) (Print): Thomas Gilman	CONSULTANT PROJECT NUMBER: C103791		LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☑ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015m - TPHd Extractable	8260B - TPHg/BTEX/MtBE	8260B - TPHg / BTEX / 8 Oxygenates	8260B - TPHg / BTEX / 8 oxygenates + methanol (8015M)	8260B - Full Scan VOCs (does not include oxygenates)	8270C - Semi-Volatiles	8015M / 8021B - TPHg/BTEX/MtBE	Lead ☐Total ☐STLC ☐TCLP
	VW-1 (A)	6/22/05	1915	A	1							X	
	VW-2 (A)	6/23/05	1115	A	1							X	
	VW-3 (A)	6/23/05	1530	A	1							X	
	INF (B)	6/23/05	1605	A	1							X	
	VW-1 (B)			A	1							X	
	VW-2 (B)			A	1							X	
	VW-3 (B)			A	1							X	
	INF (C)			A	1							X	
	VW-1 (C)			A	1							X	
	VW-2 (C)			A	1							X	

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

TEMPERATURE ON RECEIPT C°: 23

* Field Point name only required if different from Sample ID

Relinquished by: (Signature) Thomas Gilman	Received by: (Signature)	Date: 6/23/2005	Time: 1610
Relinquished by: (Signature)	Received by: (Signature)	Date: 6/23/05	Time: 1725
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

8/10/03 Revision