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Alameda County Environmental Health



Sacramento, California 95818

February 16, 2010

Mr. Paresh C. Khatri Hazardous Materials Specialist Alameda County Health Care Services Agency Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

Re: Site Assessment Report

76 Service Station Facility No. 2611270 3255 Mecartney Road Alameda, California

Dear Mr. Khatri:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please call me at (916) 558-7604.

Sincerely,

Eric G. Hetrick Site Manager

Risk Management & Remediation

February 22, 2010

Mr. Paresh C. Khatri Hazardous Materials Specialist Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502

RE: Site Assessment Report 76 Service Station No. 11270 3255 Mecartney Road Alameda, California Fuel Leak Case No. R00000511



Dear Mr. Khatri:

Delta Consultants (Delta) has prepared this report presenting the results of the advancement of five borings and the installation of five soil vapor wells (SV-1 through SV-5) at the above-referenced site (**Figure 1**). The work was performed as proposed in Delta's *Soil Vapor Survey - Work Plan Addendum* dated September 8, 2009 and *Work Plan - Soil Vapor Survey* dated June 8, 2009.

The additional work performed was directed by the Alameda County Health Care Services Agency (ACHCSA) in a letter dated October 22, 2009. The ACHCSA letter is presented as **Attachment A**.

The purpose of this assessment was to collect soil and soil vapor samples to assess the overall site conditions. The location of soil vapor points (SV-1 through SV-5) is shown on **Figure 2**.

- SV-1 and SV-2 was installed to assess the extent of the potential for vapor intrusion into the station building.
- SV-3 was installed to assess the extent of the potential for vapor migration off-site. Groundwater previously collected in the vicinity of (SV-3) was observed at 1,500 parts per billion (ppb).
- (SV-4) was installed to assess the potential for vapor intrusion in the vicinity of the fuel underground storage tanks (USTs). Liquid phase hydrocarbons were previously observed in the groundwater, in August 1992, at wells MW-1 and MW-2.
- SV-5 was installed to assess the potential for vapor intrusion in the vicinity of the fuel dispenser islands.



SITE DESCRIPTION

The site is an operational 76 service station located within a developed shopping center located on the northwest corner of the intersection of Mecartney Road and Island Drive in Alameda, California. The site is located in a mixed commercial and residential neighborhood.

Site features include three (3) gasoline underground storage tanks (USTs), two fuel dispenser islands, and a station building with a service bay containing two hoists. The on-site USTs include one 12,000-gallon, one 10,000-gallon, and one 6,000-gallon fiberglass USTs installed in 1981. Site features are shown on **Figure 2**.

PREVIOUS SITE ACTIVITY

May 1990 - Two soil samples (P1 and P2) were collected from beneath the product dispensers at a depth of approximately 4.5 feet below ground surface (bgs). After additional excavation in the vicinity of sample location P1, one additional soil sample P1(8) was collected at a depth of approximately 8 feet bgs. Two sidewall samples (SW1 and SW2) were collected from the sidewalls of the product line trench in the vicinity of sample point P1 at a depth of approximately 4.5 feet bgs. Based on the petroleum hydrocarbon concentrations reported in sample SW1, an additional soil sample was collected a depth of 8 feet bgs in the vicinity of sample location SW1. Historical soil analytical results are summarized in **Table 1**. Soil sample locations are shown on **Figure 2A**.

During over-excavation, water was encountered at approximately 8 feet bgs. Three soil samples (SW3, SW4, and SW5) were subsequently collected at depths of 8 feet bgs, 4.5 feet bgs, and 4.5 feet bgs, respectively. Four soil samples (SW6 through SW9) were collected at a depth of approximately 4.5 feet bgs. A total of approximately 195 cubic yards of soil was excavated, aerated on-site and appropriately disposed of off-site. Soil sample locations are shown on **Figure 2A**.

<u>August 1992</u> - A preliminary site assessment was conducted at the site including the sampling of two pre-existing Mobil groundwater monitoring wells MW-2 and MW-4. Samples could not be collected from monitoring wells MW-1 and MW-3 due to insufficient recharge. Product sheen was observed in the purge water in all of the monitoring wells. The monitoring well locations are shown on **Figure 2**.

October 1994 - Two exploratory borings (TB-1 and TB-2) were advanced to a depth of 11.5 feet bgs. Analytical results from the borings indicated that petroleum hydrocarbons were not present above the laboratory's indicated reporting limits. Groundwater samples collected from borings, TB-1 and TB-2, contained 1,500 parts per billion (ppb) and 310 ppb total petroleum hydrocarbons as gasoline (TPH-G), respectively. Historical groundwater analytical results are summarized in **Table 2**. Soil sample locations are shown on **Figure 2A**.

<u>June 1993</u> - A 4-inch diameter groundwater monitoring well, MW-5, was installed offsite, near the western corner of the site to a depth of 15 feet bgs. The monitoring well location is shown on **Figure 2**. <u>January 1995</u> - One 4-inch diameter monitoring well, MW-6, was installed on-site and one 2-inch diameter monitoring well, MW-7, was installed off-site. Monitoring well MW-6 was constructed to a depth of 15 feet bgs and MW-7 was constructed to a depth of 16.5 feet bgs. The monitoring well locations are shown on **Figure 2.**

Groundwater was encountered in the monitoring wells at depths ranging from 5 to 7.5 feet bgs. Monitoring wells, MW-1 through MW-4, were subsequently destroyed in January 1995.

November 1996 - A Tier 2 risk-based corrective action (RBCA) evaluation was conducted to assess the potential exposure risk of residual benzene concentrations in on-site soils. The results of the evaluation indicated that the levels of benzene in soil 8 feet bgs should not pose a risk to on-site workers. Risks to potential hypothetical future residents reportedly exceeded the lower, more protective end of the Environmental Protection Agency (EPA) acceptable risk range. The evaluation also concluded that ongoing natural attenuation was likely to reduce residual benzene concentrations to below the acceptable risk range prior to the unlikely scenario of the site being converted to residential use.

<u>December 1996</u> - The oil/water separator located on the floor of the vehicle service bay at the west side of the service station building was cleaned and removed. Two soil samples (OWS-1, 0.5' and OWS-1, 2') were subsequently collected from beneath the former oil/water separator location. Analytical results indicated that total recoverable petroleum hydrocarbons (TRPH) were present in the soil with a maximum concentration of 49 parts per million (ppm). All other constituents tested were below the laboratory's indicated reporting limits.

<u>August 1997</u> - Samples of pea gravel base material (S-1, through S-4) were collected from below each fuel dispenser. Historical soil analytical results are summarized in **Table 1.**

July 1998 - One 1,000-gallon single-walled fiberglass used-oil UST was removed from the site. The removed UST was noted to be intact with no visible holes or cracks. One native soil sample (S-6-T1E) was collected from the eastern sidewall of the UST cavity at a depth of approximately 7 feet bgs. Historical soil analytical results are summarized in **Table 1.** Soil sample locations are shown on **Figure 2A.**

<u>August 2000</u> - Site fuel dispensers and product lines were removed and replaced. A total of four pea gravel samples (PD-1-2', PD-2-1.5', PD-3-1.5', and PD-4-1.5') were collected from beneath each of the four fuel dispensers, and four pea gravel samples (PL-3-1.5', PL-4-1.5', PL-6-1.5', and PL-7-1.5') were collected from beneath the product lines. Three pea gravel samples were also collected at each of the ends of the fuel USTs (F-1-4', F-2-4', and F-5-3'). Historical soil analytical results are summarized in **Table 1.** Soil sample locations are shown on **Figure 2A**.

In February 2009, Stratus attempted to advance soil boring B-4, but they stopped field activities after encountering pea gravel. According to the manager who has operated the facility for 24 years, during original construction, a large area of the subsurface soil was excavated from the site and backfilled with pea gravel. The approximate extent of the pea gravel is shown on **Figure 2**.

SENSITIVE RECEPTORS

November 1992 - A sensitive receptor survey and existing well search were conducted. No public water supply wells were identified within approximately 2,500 feet of the site. No private water supply wells were identified within 1,000 feet of the site. Additionally, no subways, basements, and schools were identified within 1,000 feet of the site.

The survey identified a surface water body located approximately 500 feet from the site, but did not name it. As observed during a site visit by URS, this surface water body is a channel excavated as part of a residential development. The channel appears to connect to the San Francisco Bay which is located, at its closest, approximately 3,500 feet southwest of the site.

SITE GEOLOGY AND HYDROGEOLOGY

The site is situated approximately 4,500 feet south of San Leandro Bay, and approximately 3,500 feet northeast of the present shoreline of San Francisco Bay. Sediments encountered at the site generally consisted of silty to gravelly sand and sandy gravel to the maximum explored depth of 16.5 feet bgs. Lean clay was encountered in boring MW-5 from 13 to 15 feet bgs, and gravelly clay (possibly fill) from 3.5 to 5 feet bgs in boring MW-7. Groundwater was encountered during drilling at a depths ranging from 5 to 7.5 feet bgs.

Groundwater Monitoring

October 1992 - Groundwater monitoring was initiated using monitoring wells MW-1 through MW-4 and was continued until September 2001, incorporating wells MW-5 through MW-7, and off-site wells XW-I through XW-3 that are not associated with the site. The monitoring program was discontinued in September 2001, while awaiting ACHCSA assessment if the site was qualified for case closure.

Groundwater monitoring and sampling was re-initiated on an annual basis at the site following a directive letter from Mr. Paresh Khatri of ACHCSA, dated 21 August 2008. Well development activities took place on September 5, 2008, two weeks prior to restarting the sampling program. Analytical results from the groundwater samples collected in September 2008 indicated the following:

- TPH-G was above the laboratory's indicated reporting limit in one of the six wells sampled at a concentration of 83 micrograms per liter (μ g/L) in monitoring well MW-6.
- Toluene, ethylbenzene, and total xylenes were above the laboratory's indicated reporting limits in the groundwater sample collected from monitoring well MW-6 at concentrations of 4.1 μ g/L, 2.0 μ g/L, and 17 μ g/L, respectively
- Methyl tertiary-butyl ether (MTBE) was above the laboratory's indicated reporting limit in the groundwater samples collected from three of the six wells. MTBE was reported at concentrations of 3.4 μ g/L in monitoring in monitoring well MW-6, 1.6 μ g/L in monitoring well MW-7, and 1.3 μ g/L in well XW-3.

The remaining fuel oxygenates were below the laboratory's indicated reporting limits in each of the six wells sampled.

SOIL INVESTIGATION

Pre-field Activities

Delta prepared a site-specific Health and Safety Plan (HASP) in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP contained a list of emergency contacts, as well as a hospital route map to the nearest emergency facility.

A drilling permit was obtained from the Alameda County Public Works Agency for the six exploratory borings. Copies of the drilling permits are presented as **Attachment B**.

A utility survey was conducted prior to the field investigation. The proposed boring locations were marked prior to drilling and Delta contacted Underground Service Alert (USA ticket number 201-806) to locate and mark all underground utilities in the vicinity of the proposed boring locations. Delta also employed a private utility locator to investigate possible private underground utilities in the vicinity of the proposed boring locations.

Borings and Vapor Well Installation

On December 10, 2009, Gregg Drilling and Testing (Gregg), under supervision of a Delta field geologist, advanced five borings for soil characterization and for the installation of soil vapor wells SV-1 through SV-5.

The borings were advanced to a depth of approximately 5 feet bgs using a hand auger. The soils encountered in the boring were logged using the Unified Soil Classification System (USCS) for lithologic interpretation and field screened using a pre-calibrated (PID).

Soil samples were collected for lithologic interpretation, field screening, and analytical testing, at a depth of approximately 5 feet bgs in each boring location. Groundwater was not observed in each of the borings. Boring logs are included as **Attachment C**.

The soil samples were collected in clean brass liners, capped with Teflon® sheets and tight-fitting plastic end caps, labeled, and placed in an ice-chilled cooler pending transportation to the laboratory. A chain-of-custody accompanied the soil samples to Pace Analytical Services, Inc. (PACE) in Seattle, Washington, a California-certified laboratory.

The soil samples were analyzed for TPH as diesel (TPH-D) [silica gel treated] and TPH-G by EPA Method 8015B, benzene, toluene, ethyl-benzene, and total xylenes (BTEX), MTBE, di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), tertiary-butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), and ethanol by EPA Method 8260.

A copy of the laboratory report and chain-of-custody documentation is presented as **Attachment D**.

The following constituents were reported in the soil samples:

- All TPH-G, TPH-D, BTEX, and fuel oxygenate constituents were below the laboratory's indicated reporting limits in the soil samples collected from soil vapor wells SV-1 through SV-4.
- In boring SV-5, TPH-D was reported at a concentration of 50.9 milligrams per kilogram (mg/kg), MTBE was reported at a concentration of 0.022 mg/kg, and TBA was reported at a concentration of 0.032 mg/kg.

The soil analytical results are shown in Table 3 and Table 4.

Soil Vapor Well Details

The soil vapor wells were completed to 5 feet bgs. A ¼-inch Nylaflow tubing was connected to a vapor tip (which was 6 inches in length and 1-inch in diameter) at a depth of 4 feet bgs and run to ground surface. A Swagelok connector was attached to the ¼ inch tubing at the ground surface.

A sand pack consisting of RMC Lonestar #2/12 sand was placed in the annular space from 3.5 feet bgs to 5 feet bgs to allow vapor extraction in this interval. A 1-foot thick bentonite seal was placed on top of the sand pack. The remainder of the annular space was filled with neat cement and the wells encased in a traffic-rated protective 7-inch diameter vault placed at existing ground level. Well construction details are shown on the boring logs presented as **Attachment C**.

COLLECTION OF SOIL VAPOR SAMPLES

On January 8, 2010 soil vapor wells SV-1 through SV-5 were sampled by Blaine Tech, under the supervision of Delta. The soil vapor wells were allowed to stabilize a minimum of two weeks in the absence of significant measurable precipitation at the site. The soil vapor wells were sampled in accordance with the Department of Toxic Substance Control (DTSC) Advisory-Active Soil Gas Investigations guidelines, dated January 28, 2003.

A new and clean soil vapor sampling apparatus was constructed for each well by Blaine Tech using brass Swagelok union crosses and $\frac{1}{4}$ -inch outside diameter (OD) Teflon tubing. This sampling apparatus was then connected to the previously installed brass Swagelok valves at each soil vapor well. The other end of the sampling apparatus was connected to one 6-liter summa canister with an in-line 100 milliliter per minute (ml/min) flow regulator. Additionally, a Lantec Gem 2000 multimeter was connected inline on the sampling train in order to provide real-time measurements of oxygen (O₂), nitrogen (N₂), methane (CH₄), and carbon dioxide (CO₂) during the purge cycles. Blaine Tech field logs are included as **Attachment E.**

Following sampling apparatus construction and summa canister connection, a three to five minute vacuum test was performed at each soil gas well using one 6-liter summa canister. Following a successful vacuum test, each soil vapor well was then purged a total of 126 ml (3 line volumes) using a 60ml syringe while recording fixed gases with a multimeter. A sampling shroud constructed of plastic was wrapped with a liquid leak check tracer compound (isopropanol) and placed over the sampling train.

Subsequent to construction of the sampling train, vacuum test, purging, and placing to the shroud, a soil vapor sample was collected into a 6-liter summa canister at approximately 100 ml/min. Field notes from the purge activities and sample collection are included in **Attachment E**.

The soil gas samples were submitted to Pace Laboratories with chain-of-custody documentation. Soil vapor samples were analyzed for TPH-G, BTEX, MTBE, 1,2-DCA, EDB, ethanol, isopropanol, TBA, isopropyl ether, tertiary-butyl ethyl ether, and TAME by EPA Method TO-15. Fixed gases O₂/AR, N₂, CH₄, CO₂, and CO were analyzed by EPA Method 3C. The analytical results for the soil vapor samples are presented in **Table 5** and **Table 5A**. A copy of the soil gas laboratory analytical report and chain-of-custody documentation is presented as **Attachment D**.

SOIL VAPOR LABORATORY ANALYTICAL RESULTS

The following concentrations were reported for the soil vapor analyses by EPA Method TO-15:

- TPH-G was reported at concentrations of 1,400 μg/m³ (micrograms per cubic meter) (SV-2), 35,000 μg/m³ (SV-4), and 16,000 μg/m³ (SV-5). TPH-G was below the laboratory reporting limit (LRL) in wells SV-1 and SV-3.
- MTBE was reported at concentrations of 60 μ g/m³ (SV-2), 92 μ g/m³ (SV-4), and 4,700 μ g/m³ (SV-5). MTBE was below the LRL in wells SV-1 and SV-3.
- Benzene was reported at concentrations of 9.9 μ g/m³ (SV-1), 33 μ g/m³ (SV-2), 12 μ g/m³ (SV-3), 13 μ g/m³ (SV-4), and 14 μ g/m³ (SV-5).
- Toluene was reported at concentrations of 40 μ g/m³ (SV-1), 60 μ g/m³ (SV-2), 49 μ g/m³ (SV-3), 54 μ g/m³ (SV-4), and 45 μ g/m³ (SV-5).
- P,m-xylenes were reported at a concentration of 8.2 μg/m³ in well SV-4. P,m-xylenes were below the LRL in wells SV-1, SV-3, SV-3, SV-5.
- O-xylenes were reported at concentrations of 10 $\mu g/m^3$ (SV-2), 11 $\mu g/m^3$ (SV-3), 12 $\mu g/m^3$ (SV-4), and 13 $\mu g/m^3$ (SV-5). O-xylenes were below the LRL in well SV-1.
- Ethylbenzene, 1,2-DCA, EDB, ethanol, TBA, isopropyl ether, tertiary-butyl ethyl ether, and TAME were below the laboratory's indicated reporting limits in each of the soil vapor samples submitted for analysis.
- Isopropanol (tracer compound) was reported at concentrations of 1,200 μ g/m³ (SV-1), 60 μ g/m³ (SV-2), 6,200 μ g/m³ (SV-4), and 3,800 μ g/m³ (SV-5). Isopropanol was not reported in well SV-3.

The following concentrations were reported for the soil vapor analyses by EPA Method C3:

- Fixed gases oxygen/argon were reported at concentrations ranging from 1.6% volume of gas per volume of air (% v/v) (SV-2) and 16% v/v (SV-1).
- Fixed gas nitrogen was reported at concentrations ranging from 35% v/v (SV-2) and 87% v/v (SV-4).
- Fixed gas methane was reported at concentrations ranging from 0.89% v/v (SV-4) and 55% v/v (SV-2).
- Fixed gas CO_2 was reported at concentrations ranging from 4% v/v (SV-1) and 10% v/v (SV-2).

• Fixed gas CO was below the laboratory's indicated reporting limit in each of the soil vapor samples submitted for analysis.

Disposal of Drill Cuttings

Two 55-gallon Department of Transportation (DOT)-approved steel drums were generated and stored on-site during this site investigation. One drum was used for soil cuttings and the additional drum contained construction debris. The soil cutting drum was profiled for proper waste disposal.

Samples of the drill cuttings were collected, labeled, placed on ice, and transported to PACE with chain-of-custody documentation. The samples were analyzed for TPH-G, BTEX, and MTBE by EPA Method 8260, total lead by EPA Method 6010, and total petroleum hydrocarbons as diesel range organics (TPH-DRO) by EPA Method 8015B.

All analyzed constituents were below the laboratory reporting limits, with the exception of total lead which was reported at 9.9 mg/kg. The laboratory report for the composite sample is presented as **Attachment D**.

The drums were transported off-site by Belshire Environmental Services, Inc. (BESI) and disposed of at a ConocoPhillips-approved disposal facility on January 21, 2010.

CONCLUSIONS AND RECOMMENDATIONS

In the May 8, 2009 letter, the ACHCSA expressed concerns that the potential contaminant volatilization of hydrocarbons to the indoor air exposure pathway needed to be assessed. In response to this letter, Delta conducted a soil vapor survey of the five on-site soil vapor wells.

Analytical results from the soil vapor samples collected in a summa canister from SV-1, SV-2, SV-4, and SV-5 indicated the leak detection compound isopropanol was reported between 60 $\mu g/m^3$ to 6,200 $\mu g/m^3$. According to Air Toxic's report, *Evaluating Leaks in a Soil Gas Sampling Train*, Delta's highest reported leak detection compound concentration (6,200 $\mu g/m^3$ or 6.2 $\mu g/L$) corresponds to a less than 0.005% leak rate. In general, a leak rate of 10% or less is considered to be insignificant. Therefore, the reported concentrations of isopropanol in the samples collected during the sampling event are insignificant, and the analytical results should be considered valid.

The reported soil vapor concentrations in wells SV-1 through SV-5 were well below the San Francisco Bay Regional Water Quality Control Board's (SFBRWQCB) Environmental Screening Levels (ESLs) for commercial land use for benzene (380 $\mu g/m^3$), MTBE (31,000 $\mu g/m^3$), toluene (180,000 $\mu g/m^3$), and ethylbenzene (3,300 $\mu g/m^3$). An ESL for xylenes has not been established. The remaining analyzed fuel oxygenates were not reported above the laboratory LRL.

The reported soil vapor TPHg concentration in soil vapor wells SV-2 (1,400 μ g/m³) and SV-5 (16,000 μ g/m³) are both well below the ESL of 29,000 μ g/m³ for commercial land use. However, the soil vapor sample collected from SV-4 (35,000 μ g/m³) is above the ESL. Soil vapor well SV-4 is located on the western portion of the property, approximately 50 feet northwest of the station building (**Figure 2**).

Based on the distance from the station building and the soil vapor TPHg concentrations in wells SV-1 (<920 μ g/m³) and SV-2 (1,400 μ g/m³) adjacent to the station building, it does not appear intrusion of soil vapor into the service station building is a concern at the site. Additionally, the site is capped with asphalt and concrete, impeding the upward movement of soil vapor towards potential receptors. Therefore, Delta recommends suspension of additional soil vapor sampling events.

The previous groundwater sampling event was conducted by Delta on July 22, 2009. TPH-G was below the laboratory's indicated reporting limits in each of the groundwater samples collected for the six wells associated with the site. The highest benzene concentration was reported at 1.5 μ g/L in well XW-2, northeast of the pump islands. The highest MTBE concentration was reported at 2.6 μ g/L in monitoring well MW-6, in the southwestern portion of the fuel UST basin.

In January 1995, soil samples were collected at the boring for well MW-6. TPH-G was reported 89,000 mg/kg and TPH-D was reported at 480,000 mg/kg at a depth of 5 feet bgs. During the December 2009 investigation in soil gas well SV-4, which is in the vicinity of monitoring well MW-6, at a depth of 4.5 feet bgs, both TPH-G and TPH-D were below the laboratory's indicated reporting limits in the soil sample collected at this location.

The groundwater and soil have been assessed. No potential risk by vapor intrusion is expected at this time. Therefore, Delta recommends that the site be considered as a "Low Risk Site", and considered for a "No Further Action" status based on the January 1996 RWQCB criteria. The following items for site closure are listed below.

- The leak has been stopped and ongoing sources, including free product, removed or remediated.
- The site has been adequately characterized.
- The dissolved hydrocarbon plume is stable and decreasing.
- No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.
- The site presents no significant risk to human health; and
- The site presents no significant risk to the environment

GEO

DENNIS SHANNON DETTLOFF

REMARKS/SIGNATURES

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 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 will be 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 expressed or implied warranty as to the contents of this report.

If you have any questions regarding this project, please contact Tony Perini at (408) 826-1867.

Sincerely,

DELTA CONSULTANTS

Tony Perini

Senior Project Engineer

Dennis S. Dettloff, P.G.

California Registered Professional Geologist No. 7480

Tables:

Table 1 - Historical Soil Analytical Results

Table 2 - Historical Grab Groundwater Analytical Results

Table 3 - Soil Analytical Results (TPH-G, TPH-D, BTEX, MTBE)

Table 4 - Soil Analytical Results (Fuel Oxygenates)

Table 5 - Soil Gas Sampling Results (TPH-G, BTEX, MTBE, Fuel Oxygenates)

Table 5A - Soil Gas Sampling Results (Expanded List & Fixed Gases)

Figures:

Figure 1 - Site Location Map

Figure 2 - Site Plan

Figure 2A - Site Plan with Historical Sample Locations

Attachments:

Attachment A - Agency letter

Attachment B - Drilling Permits

Attachment C - Boring Logs

Attachment D - Laboratory Reports and Chain-of-Custody Documentation

Attachment E - Blaine Tech Soil Gas Sampling Field Logs

cc: Mr. Eric Hetrick, ConocoPhillips (electronic copy only)

Tables

Table 1 HISTORICAL SOIL ANALYTICAL RESULTS 76 Station No.11270

Alameda, California

									Camornia									
Sample ID	Date	Sample	TPH-G	TPH-D	Oil &	Benzene	Toluene	Ethyl-	Total	MTBE	ТВА	ETBE	TAME	DIPE	1,2-DCA	EDB	Ethanol	Total Lead
		Denth			Grease			henzene	Xvlenes						'			
		(feet)	(ma/ka)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SW1		4.5	2,000			18	56	39	270							'		6.5
SW2		4.5	8.0			0.31	0.084	0.26	1.2	'								1.7
SW3		8	860			5	2.8	7.5	13									5.7
SW4		4.5	1.0			0.009	0.017	0.0099	0.03									0.071
SW5		4.5	15			0.035	0.26	0.14	0.49									2.1
SW6		4.5	1.5			0.0079	0.0052	0.023	0.069				·		·			2.9
SW7		4.5	<1.0			0.034	0.0073	0.042	0.076									36
SW8		4.5	<1.0			0.01	0.0098	0.016	0.035									5.8
SW9		4.5	<1.0			0.024	< 0.005	0.02	0.026									11
P1		4.5	6,900			70	260	120	700									0.91
P1(8)		8	7.0			1.0	0.025	0.19	0.47									1.7
P2		4.5	<1.0			0.0058	0.005	0.01	0.023									1.6
TB1-S, 2.5-3	10/26/94	ND	ND	ND	ND	0	ND	ND	ND	~								
TB1-S, 5.5-6	10/26/94	ND	ND	ND	ND	ND	ND	ND	ND									
TB2-S, 2.5-3	10/26/94	ND	ND ND	ND	ND	ND	ND	ND	ND									
TB2-S, 6.5-7	10/26/94	ND	ND	ND	ND	ND	ND	ND	ND									
MW-5-5	6/17/93	5	<1,000	11,000		< 5.0	<5.0	<5.0	< 5.0		·	·						
MW-6-5	1/19/95	5	89,000	480,000		<50	210	630	4,800									
MW-7-5	1/18/95	5	<50	111,000		< 0.5	<0.5	< 0.5	<1.0									
OWS-1-0.5	12/12/96	0.5	ND			ND	ND	ND	ND			~-						
OWS-1-2	12/12/96	2	ND ND			ND	ND	ND	ND									
S-1	8/15/97	0.5-1	<0.1			< 0.001	0.085	< 0.002	0.0047	< 0.1								
S-2	8/15/97	0.5-1	<0.1			< 0.001	0.047	<0.002	<0.002	< 0.1								·
S-3	8/15/97	0.5-1	<0.1			< 0.001	0.058	< 0.002	< 0.002	< 0.1								
S-4	8/15/97	0.5-1	<0.1			< 0.001	0.049	< 0.002	< 0.002	<0.1								
S-6-T1E	7/9/98	6	ND	ND		ND	ND	ND	ND									ND
PD-1-2	8/7/00	2	<1.0			< 0.005	<0.005	< 0.005	<0.005	<0.005				* *				<10
PD-2-1.5	8/7/00	1.5	<1.0			< 0.005	< 0.005	< 0.005	< 0.005	< 0.005			·					<10
PD-3-1.5	8/7/00	1.5	<1.0			<0.005	<0.005	< 0.005	< 0.005	< 0.005								<10
PD-4-1.5	8/7/00	1.5	<1.0			< 0.005	< 0.005	< 0.005	< 0.005	0.0582								<10
PL-3-1.5	8/7/00	1.5	<1.0			< 0.005	<0.005	< 0.005	<0.005	< 0.005								<10
PL-615	8/7/00	1.5	<1.0			<0.005	<0.005	<0.005	< 0.005	< 0.005								<10
PL-7-1.5	8/7/00	1.5	<1.0			<0.005	<0.005	< 0.005	< 0.005	< 0.005								<10
F-1-4	8/7/00	4	<1.0			< 0.005	<0.005	< 0.005	<0.005	< 0.005							 	<10
F-2-4	8/7/00	4	<1.0		~=	< 0.005	< 0.005	< 0.005	< 0.005	<0.005								<10
F-5-3	8/7/00	4	<1.0			< 0.005	<0.005	< 0.005	<0.005	< 0.005								<10
	• • • • •						1	-0.000		.0.000	1	<u> </u>	L		L			T /10

TPH-G = total purgeable petroleum hydrocarbons as gasoline by EPA Method 8260B

TPH-D = total purgeable petroleum hydrocarbons as diesel by EPA Method 8015 TPH-O = total purgeable petroleum hydrocarbons as oil by EPA Method 8015

BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8020 or 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8020 or 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B

DIBE = di isopropyl ether by EPA Method 8260B

DIPE = di-isopropyl ether by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B

EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B Ethanol was analyzed by EPA Method 8260B

mg/kg = milligrams per kilogram

ND = not detected above the laboratory detection limit (reporting limit unknown)

-- = not analyzed

Bold = detected compound concentration

EPA = US Environmental Protection Agency

Table 2

HISTORICAL GRAB GROUNDWATER ANALYTICAL RESULTS

.76 Station No. 1270 Alameda, California

Sample ID	Date	Sample	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl-	Total	MTBE	ТВА	ETBE	TAME	DIPE	1.2-DCA	EDB	Ethanol
		Depth						benzene	Xvlenes					01, 2	T/L DOM	200	Luidilo
		(feet)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ua/L)	(ua/L)	(va/L)	(µg/L)
TB1-W-11.5	10/26/94	11.5	1,500	ND .	ND	ND	ND	ND	ND								(15.97.57)
TB-2-W-11.5	10/26/94	11.5	310	ND	ND	ND	1.0	ND .	1.0								**

TPH-D = total purgeable petroleum hydrocarbons as diesel by EPA Method 8015

TPH-O = total purgeable petroleum hydrocarbons as oil by EPA Method 8015

BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8020 or 8260B

MTBE = methyl tertiary butyl ether by EPA Method 8260B

TBA = tertiary butyl alcohol by EPA Method 8260B

ETBE = ethyl tertiary butyl ether by EPA Method 8260B TAME = tertiary amyl methyl ether by EPA Method 8260B

DIPE = di-isopropyl ether by EPA Method 8260B

TPH-G = total purgeable petroleum hydrocarbons as gasoline by EPA Method 8260B 1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B

Ethanol was analyzed by EPA Method 8260B

mg/kg = milligrams per kilogram

ND = not detected above the laboratory detection limit (no reporting limit available)

-- = not analyzed

Bold = detected compound concentration

EPA = US Environmental Protection Agency

Table 3 Soil Analytical Results (TPH-G, TPH-D, BTEX, MTBE) 76 Service Station No. 11270 3255 Mecartney Road, Alameda, CA

Sample ID	Date	TPH-G (mg/kg)	TPH-D (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	Total Lead (mg/kg)
SV-1 @4.5 feet	12/10/2010	<0.23	<5.9	<0.0027	<0.0027	<0.0027	<0.0055	<0.0027	NA
							医动脉体系统		医链接性 医神经炎
SV-2 @4.5 feet	12/10/2010	<0.22	<5.8	<0.0027	<0.0027	<0.0027	<0.0054	<0.0027	NA
						医复数性毒素性	And the Colon		gan in an in the
SV-3 @4.5 feet	12/11/2010	<0.23	<5.8	<0.0028	<0.0028	<0.0028	<0.0055	<0.0028	NA
		die State Arts		dentri de gana	gallen in de de				
SV-4 @4.5 feet	12/11/2010	<0.24	<6.0	<0.0028	<0.0028	<0.0028	<0.0056	<0.0028	NA
SV-5 @4.5 feet	12/10/2010	<0.24	50.9	<0.0029	<0.0029	<0.0029	<0.0058	0.022	NA NA
	电电影电影电影电影		经销售帐间间的	and a mark of					
comp ABCD	12/11/2009	<0.25	<5.9	<0.0030	<0.0030	<0.0030	<0.0059	<0.0030	9.9

Notes:

TPH-G: Total petroleum hydrocarbons as gasoline (C5-C12) TPH-D: Total petroleum hydrocarbons as diesel (C10-C24) MtBE: Methyl tertiary butyl ether

mg/Kg: milligrams per kilogram <: Below the laboratory NA: Not Analyzed

Table 4 Soil Analytical Results (Fuel Oxygenates) 76 Service Station No.11270 3255 Mecartney Road, Alameda, CA

Sample ID	Date	TAME (mg/kg)	TBA (mg/kg)	EDB (mar/lea)	1,2-DCA	DIPE	Ethanol	ETBE
SV-1 @4.5 feet	12/10/2010	<0.0027	<0.014	(mg/kg) <0.0027	(mg/kg) <0.0027	(mg/kg)	(mg/kg)	(mg/kg)
			0.01	10.0021	<0.0027	<0.0027	<0.37	<0.0027
SV-2 @4.5 feet	12/10/2010	<0.0027	<0.013	<0.0027	<0.0027	<0.0027	<0.36	<0.0027
SV-3 @4.5 feet	12/11/2010	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.37	<0.0028
SV-4 @4.5 feet	12/11/2010	<0.0028	<0.014	<0.0028	<0.0028	<0.0028	<0.38	<0.0028
SV-5 @4.5 feet	12/10/2010	<0.0029	0.032	<0.0029	<0.0029	<0.0029	<0.38	<0.0029
omp ABCD	12/11/2010	<0.0030	<0.015	<0.0030	<0.0030	<0.0030	<0.39	<0.0030

Notes

TBA: Tertiary butyl alcohol
ETBE: Ethyl tertiary butyl ether
TAME: Tertiary amyl methyl ether
DIPE: Di-isopropyl ether
ETBE: Ethyl tertiary butyl ether

EDB:

1,2-Dibromoethane 1,2-DCA: 1,2-dichloroethane

mg/Kg:

milligrams per kilogram Below the laboratory indicated

Table 5 Soil Gas Analytical Results (TPH-G, BTEX, MTBE, Fuel Oxygenates) 76 Service Station No.11270 3255 Mecartney Road, Alameda, CA

Sample ID	Date	ΤΡΗ-G (μg/m³)	MTBE (μg/m³)	Benzene (µg/m³)	Toluene (µg/m³)	Ethyl- benzene (µg/m³)	M,P-Xylenes (μg/m³)	O-Xylenes (µg/m³)	1,2-DCA (µg/m³)	EDB (µg/m³)	Ethanol (μg/m³)	TAME (µg/m³)
SV-1	1/8/2010	<920	<8.1	9.9	40	<9.7	<9.7	<9.7	<9.0	<17	<21	<47
												Programme and
SV-2	1/8/2010	1,400	60	33	60	<8.7	<8.7	10	<8.1	<16	<19	<42
duquia as a										1,0	119	<u> </u>
SV-3	1/8/2010	<770	<6.7	12	49	<8.0	<8.0	11	<7.5	<14	<18	<39
Soft Wall for						O Server of Server		•	,,,0	- 17	<u> </u>	<39
5V-4	1/8/2010	35,000	92	13	54	<7.7	8.2	12	<7.2	-44	-47	
							0.2		<u> </u>	<14	<17	<38
SV-5	1/8/2010	16000	4,700	14	45	<8.5	<8.5	13	<7.9	<15	<19	<42

notes:

<: below the laboratory reporting limit μg/m³: micrograms per cubic meter

MTBE: Methyl tertiary butyl ether 1,2-DCA: 1,2-dichloroethane

EDB: 1,2-dibromoethane TAME: tertiary amyl methyl ether TPH-G: total petroleum hydrocarbons as gasoline

Table 5A Soil Gas Analytical Results (Expanded List & Fixed Gases) 76 Service Station No. 11270 3255 Mecartney Road, Alameda, CA

Sample ID	Date	lso- propanol (µg/m³)	t-butanol (µg/m³)	isopropyl ether (µg/m³)	ΤΒΕΕ (μg/m³)	Oxygen/ Argon (% v/v)	Nitrogen (% v/v)	Methane (% v/v)	CO ₂ (% v/v)	CO (% v/v)
SV-1	1/8/2010	1,200	<34	<47	<47	16	82	<0.0022	4.0	<0.0022
SV-2	1/8/2010	60	<30	<42	<42	1.6	35	55	10	<0.0020
SV-3	1/8/2010	<22	<28	<39	<39	12	78	<0.0019	8.6	<0.0019
SV-4	1/8/2010	6,200	<27	<38	<38	2.9	87	0.89	9.3	<0.0018
SV-5	1/8/2010	3,800	<30	<42	<42	5.1	76	10	9.0	<0.0020

notes:

<: below the laboratory reporting limit

μg/m³: micrograms per cubic meter

MTBE: Methyl tertiary butyl ether

1,2-DCA: 1,2-dichloroethane

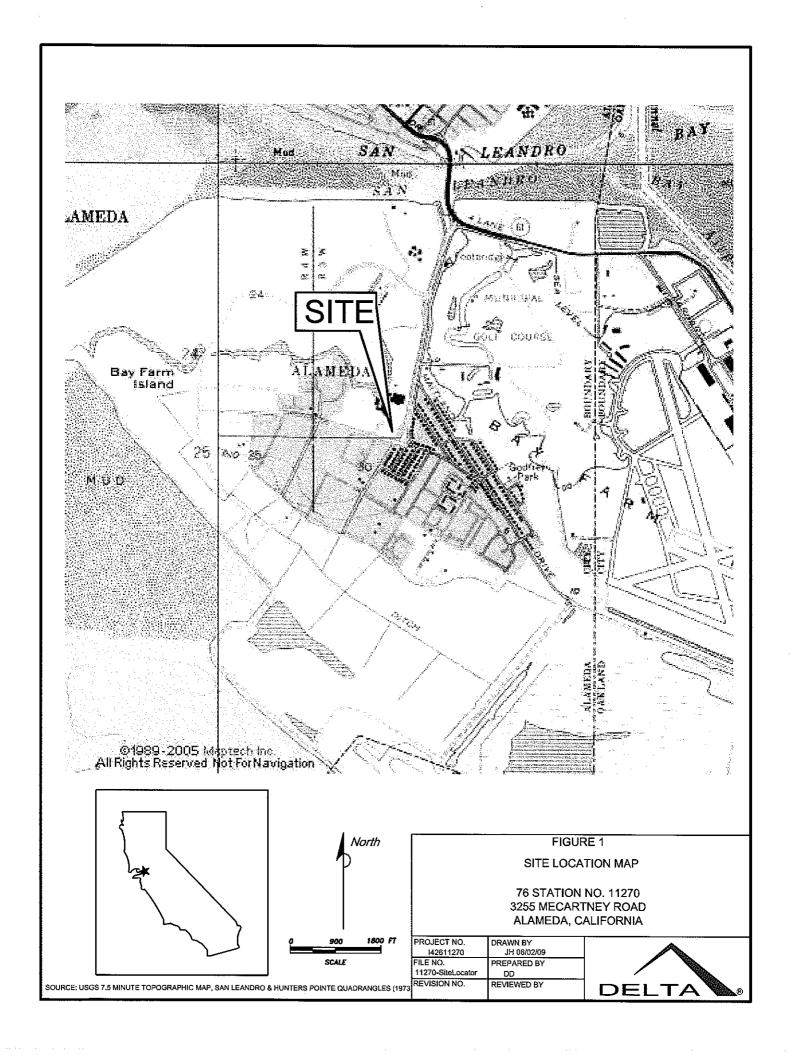
(%) v/v: percent volume of gas per volume of air

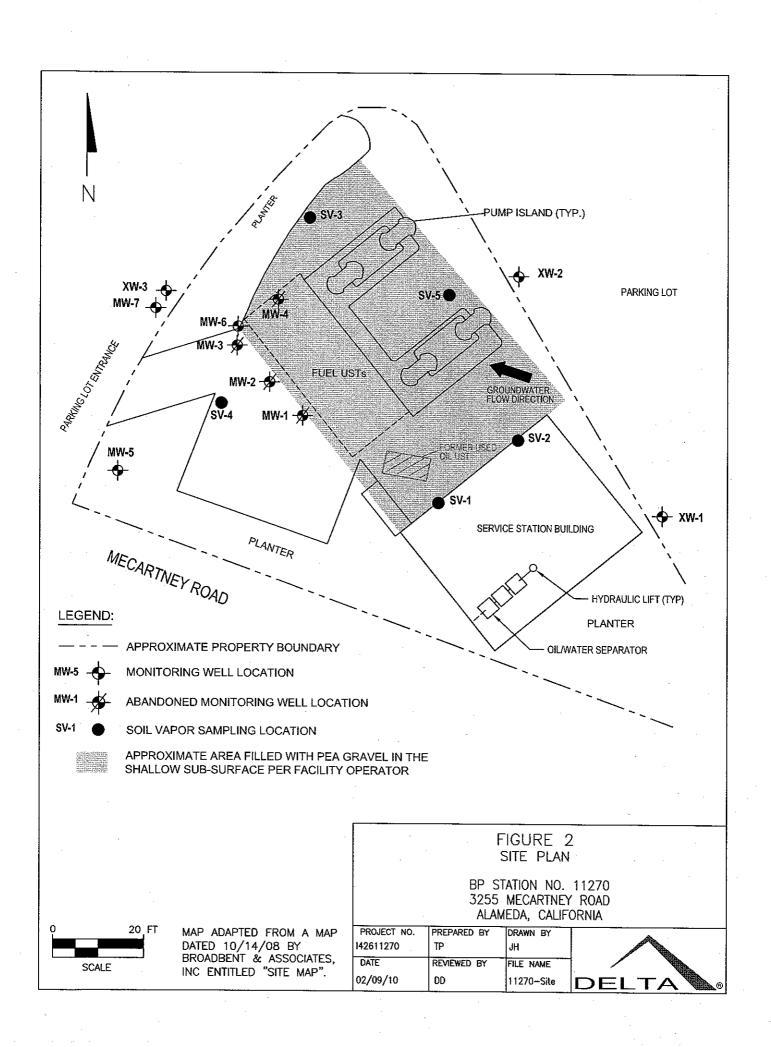
TBEE: tertiary butyl ethyl ether

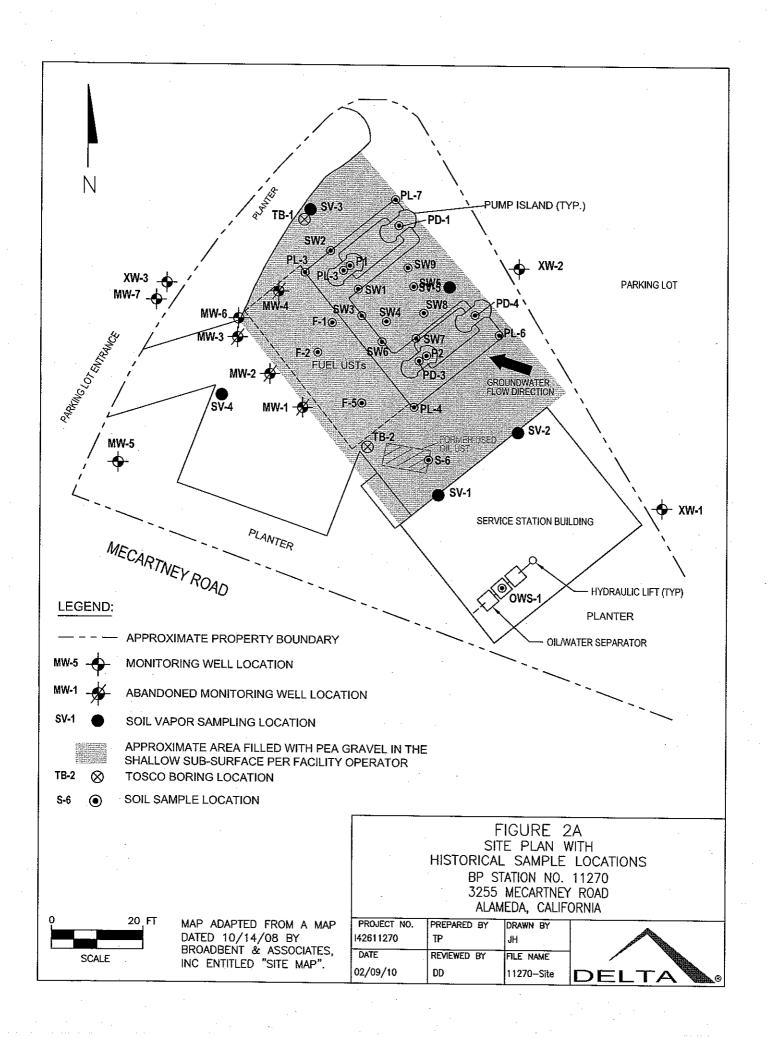
CO₂: Carbon Dioxide

CO: Carbon Monoxide

Figures







Attachment A

Agency Letter

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY



RECEIVED

-007 5 G 2869

DAVID J. KEARS, Agency Director

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

October 22, 2009

Paul Supple (Sent via E-mail to: paul.supple@bp.com)
Atlantic Richfield Company
(A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583

Terry Grayson (Sent via E-mail to: <u>Terry.L.Grayson@contractor.conocophillips.com</u>)
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Ping Liu Chien (Sent via E-mail to: <u>JamesLiu2000@aol.com</u>)
Harbor Bay Landing, LLC.
P.O. Box 117610
Burlingame, CA 94011

Subject: Work Plan Addendum for Fuel Leak Case No. RO0000511 and GeoTracker Global ID T0600101198, BP #11270, 3255 Mecartney Road, Alameda, CA 94501

Dear Messrs. Supple, Grayson, and Chien:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Soil Vapor Survey-Work Plan Addendum," dated September 14, 2009, which was prepared by Delta Consultants for the subject site. In response to concerns stated in our August 13, 2009 correspondence, Delta proposes to collect three additional soil vapor (five total) to characterize the site. Also, Delta proposes to install vapor monitoring points into borings excavated by a two-inch diameter hand-auger and use isopropyl alcohol as a tracer gas.

ACEH generally concurs with the proposed scope of work and request that you perform the proposed work, and send us the technical reports requested below.

TECHNICAL REPORT REQUEST

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

January 20, 2010 – Soil and Water Investigation Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the

Messrs. Supple, Grayson, and Chien RO0000511 October 22, 2009, Page 2

responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

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

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

Messrs. Supple, Grayson, and Chien RO0000511 October 22, 2009, Page 3

AGENCY OVERSIGHT

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

Thank you for your cooperation. Should you have any questions regarding this letter, please call me at (510) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely.

DN Cou

orgitariy signeo by Paresh Nhatri DN: Ch=Paresh Khatri, o=Alameda County Environmental Health, ou=Local Oversight Program, email=Paresh Khatri@acgov.org, c=US Date: 2009 10: 22 17:24:33.07:00;

Paresh C. Khatri Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Dennis S. Dettloff, Delta, 11050 White Rock Road, Suite 110, Rancho Cordova, CA 95670 Tony Perini, Delta, 11050 White Rock Road, Suite 110, Rancho Cordova, CA 95670 Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org) Paresh Khatri, ACEH (Sent via E-mail to: paresh.khatri@acgov.org) GeoTracker File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)

ISSUE DATE: July 5, 2005

REVISION DATE: March 27, 2009

PREVIOUS REVISIONS: December 16, 2005,

October 31, 2005

SECTION: Miscellaneous Administrative Topics & Procedures

SUBJECT: Electronic Report Upload (ftp) Instructions

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

REQUIREMENTS

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

RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

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

Submission Instructions

- 1) Obtain User Name and Password:
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to dehloptoxic@acgov.org

Or

- ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
- b) In the subject line of your request, be sure to include "ftp PASSWORD REQUEST" and in the body of your request, include the Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
 - (i) Note: Netscape and Firefox browsers will not open the FTP site.
 - b) Click on File, then on Login As.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by Report Upload. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

Attachment B

Drilling Permits

Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 12/01/2009 By jamesy

Permit Numbers: W2009-1057 to W2009-1061 Permits Valid from 12/10/2009 to 12/10/2009

Application Id:

Property Owner:

1259178022272

Site Location:

3255 MeCartney Rd, Alameda, CA

Project Start Date: Assigned Inspector: 12/10/2009

Completion Date: 12/10/2009 Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Receipt Number: WR2009-0425

Applicant:

Delta - Jonathan Fillingame

11050 White Rock Rd, Ste 110, Rancho Cordova, CA 95670

RP-Ping Liu Chien

PO Box 117610, Burlingame, CA 94011

Phone: 916-288-0150

Phone: --

City of Project Site: Alameda

Client:

same as Property Owner *

Total Due:

Total Amount Paid: Payer Name: Delta Paid By: CHECK

\$1985.00

PAID IN FULL

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 5 Wells

Driller: Gregg Drilling - Lic #: 485165 - Method: Hand

Work Total: \$1985.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009- 1057	12/01/2009	03/10/2010	SV-1	2.00 in.	0.25 in.	2.00 ft	5.00 ft
W2009- 1058	12/01/2009	03/10/2010	SV-2	2.00 in.	0.25 in.	2.00 ft	5.00 ft
W2009- 1059	12/01/2009	03/10/2010	SV-3	2.00 in.	0.25 in.	2.00 ft	5.00 ft
W2009- 1060	12/01/2009	03/10/2010	SV-4	2.00 in.	0.25 in.	2.00 ft	5.00 ft
W2009- 1061	12/01/2009	03/10/2010	SV-5	2.00 in.	0.25 in.	2.00 ft	5.00 ft

Specific Work Permit Conditions

- 1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
- 3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities

Alameda County Public Works Agency - Water Resources Well Permit

or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

- 4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.
- 5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
- 8. Minimum surface seal thickness is two inches of cement grout placed by tremie
- 9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
- 10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

Attachment C

Boring Logs

			Te : ();		14001110		- OI:		5.5		
			Project No: Logged By:		Joe Dum		Client Locat		ELT 3255 Mecartney	Rd, Alameda, CA	Well No: SV-1 Page 1 of 1
_			Driller:		Gregg D			on. Drilled:			Page 1 of 1
- 1 74	elta		Drilling Met	had:	Hand Au					Location Map - See Site Map for Location	
	TILA	:						Diameter:		·	
			Sampling M		Hand Au	_		Depth:	5' 2"		
Const	ıltants, Inc.		Casing Typ	e:		.17"ID Nylaflow		Diameter:			
			Slot Size:	ı	Vapor Ti	р		Depth:	5'		
			Gravel Pack			N N		g Stickup			
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Well		l			T						
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		11		Logged By Driller:	•	Joe Dun Gregg D			Loca			y Rd, Alameda, CA	Page 1 of 1
	1)	elta	l	Drilling Me	thod:	Hand Au				Drilled: Diamete	12/10/2009 r: 3"	Location Map - See Site Map for	Location
		Cita	l.	Sampling I		Hand Au				Depth:	6. 5' 2"		
	Consi	ultants, Inc.		Casing Typ				aflow		Diamete			
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				Logged By:		Joe Dun			tion:		y Rd, Alameda, CA	Page 1 of 1
		_ 11 _		Driller:		Gregg D	rilling	Date	Drilled:	12/11/2009	Location Map - See Site Map for Locatio	
	1)(elta		Drilling Met	hod:	Hand Au	ger	Hole	Diameter:	3"		
	•		l .	Sampling M	lethod:	Hand Au	ger	Hole	Depth:	5' 2"		
	Consu	ıltants, Inc.		Casing Typ	e.	1/4"OD, 0	.17"ID Nylaflo	w Well	Diameter:	1/4"		
				Slot Size:		Vapor Ti	р	Well	Depth:	5'		
				Gravel Pac	k:	-		Casi	ng Stickup:	•		
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1		Well Details	Static Water		PID Reading (ppm)	Penetration (blows/6")	1 .30	Sample	Soil Type		LITUOLOGY (DEGODIN	STICK
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		7" diam				1				4" Concrete	; 2" Pea Gravel	
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		1/4"Nylaflow							1		nedium dense	otorioy or olay),
		tubing				•	2-		1		d Sand: light brown, <5%	fines loose
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ī					Project No:		14261127	70	Clien	t:	ELT		Well No: SV-4
l					Logged By:		Joe Dum		Local			Rd, Alameda, CA	Page 1 of 1
ĺ		_			Driller:		Gregg D			Drilled:		Location Map - See Site Map for Location	l. ege
	- 1	1	コけつ		Drilling Meth		Hand Au			Diameter:	3"	Location Map - Gee Gite Map for Location	
		ノ	elta							Depth:	5' 2"		
					Sampling M		Hand Au	-		•			
	(onsu	Itants, Inc.		Casing Type	e:		.17"ID Nylaflov		Diameter:	1/4"		
					Slot Size:		Vapor Ti	þ		Depth:	5'		
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	_	etion		Static		<u> </u>	atio 'e'')	[4 <u>.</u>]	Sample	Soil Type			
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Backfill	Casing	Backfill		Level	ğΟ	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	တိ	-		
	Ť		7" diam						<u> </u>		Concrete		
			vault							sw		d Sand: tan, 85% fine sand	l,
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			tubing	1				2-		CL	Lean Clav:	brown, 10% fine sand, med	lium plastic.
			bentonite	1			[-			moist	7	,
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			Project No:		14261127	70	Client	:	ELT		Well No: SV-5
			Logged By:		Joe Dum		Locati		3255 Mecartney	Rd, Alameda, CA	Page 1 of 1
	16		Driller:		Gregg D	rilling	Date I	Drilled:	12/10/2009	Location Map - See Site Map for Locat	
1)4	elta		Drilling Meth	hođ:	Hand Au			Diameter:			
		i	Sampling M		Hand Au		Hole [Depth:	5' 2"		
Const	ıltants, inc.	,	Casing Type			.17"ID Nylaflow		Diameter:	1/4"		
	•		Slot Size:		Vapor Ti	р	Well [Depth:	5'		
			Gravel Paci	k:	-		Casin	g Stickup	: -		
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Well Completion		Static	o *≍	PID Reading (ppm)	Penetration (blows/6")	(fag Sa	mple	g l			
	Well Details		stur	eac pm)	trat vs/6	ر ة (چ	1	¥		LITHOLOGY / DESCR	IPTION
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	7" diam								Concrete		
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	grout								Pea Gravel		
	1/4"Nylaflow					2	9	CL		dark brown, 10% fine gra	
	tubing								plastic, med	ium stiff, moist, trace sa	nd
	bentonite					3		L			
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	vapor tip		MOIST	_	1						
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Attachment D

Laboratory Reports and Chain-of-Custody Documentation





December 23, 2009

Tony Perini ELT_Delta Consultants San Jose 312 Percy Rd. San Jose, CA 95138

RE: Project: I42611270 3255 McCarthy Rd.

Pace Project No.: 252653

Dear Tony Perini:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Regina Ste. Marie Regina SteMarie

regina.stemarie@pacelabs.com Project Manager

Enclosures

cc: Tara Bosch, ELT_Delta Consultants Sacramento
Dennis Dettloff, ELT_Delta Consultants Sacramen
Jonathon Fillingame, ELT_Delta Consultants Sacramento
Meghann Hurt, ELT_Delta Consultants Sacramento
Josh Mahoney, ELT_Delta Consultants San Jose
Don Pinkerton, ELT_Delta Consultants Sacramento
David Sowle, ELT_Delta Consultants Sacramento
Doug Umland, ELT_Delta Consultants San Jose
Ed Weyrens, ELT_Delta Consultants San Jose



CERTIFICATIONS

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Washington Certification IDs
940 South Harney Street Seattle, WA 98108
Washington Certification #: C1229
Oregon Certification #: WA200007
Alaska CS Certification #: UST-025

California Certification #: 01153CA Alaska Drinking Water Micro Certification #: WA01230 Alaska Drinking Water VOC Certification #: WA01-09 Florida/NELAP Certification #: E87617

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
252653001	SV-1@ 4.5 _20021210	EPA 8015B	DMT	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CALUFT	LPM	2	PASI-S
252653002	SV-2@4.5_20091210	EPA 8015B	DMT	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CALUFT	LPM	2	PASI-S
52653003	SV-3@4.5_20091211	EPA 8015B	DMT	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CALUFT	LPM	2	PASI-S
52653004	SV-4@4.5_20091211	EPA 8015B	DMT	3	PASI-S
		EPA 8260	LPM	16	PASI-S
		CALUFT	LPM	2	PASI-S
52653005	SV-5@4.5_20091210	EPA 8015B	DMT	3	PASI-S
	•	EPA 8260	LPM	. 16	PASI-S
		CALUFT	LNH	2	PASI-S





PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Method:

EPA 8015B

Description: 8015B CA Diesel Range Organics

Client:

ELT_Delta San Jose, CA

Date:

December 23, 2009

General Information:

5 samples were analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: OEXT/1735

2n: Result was obtained from silica gel treated extract.

- BLANK (Lab ID: 17270)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - · o-Terphenyl (S)
- LCS (Lab ID: 17271)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - · o-Terphenyl (S)

REPORT OF LABORATORY ANALYSIS

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(206)767-5060



PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Method:

EPA 8015B

Description: 8015B CA Dieset Range Organics December 23, 2009

Client: Date:

ELT_Delta San Jose, CA

Analyte Comments:

QC Batch: OEXT/1735

2n: Result was obtained from silica gel treated extract.

- MS (Lab ID: 17274)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - o-Terphenyl (S)
- MSD (Lab ID: 17275)
 - TPH-DRO (C10-C24)
 - · n-Octacosane (S)
 - · o-Terphenyl (S)
- SV-1@ 4.5 _20021210 (Lab ID: 252653001)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - · o-Terphenyi (S)
- · SV-2@4.5_20091210 (Lab ID: 252653002)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - · o-Terphenyl (S)
- SV-3@4.5_20091211 (Lab ID: 252653003)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - o-Terphenyl (S)
- SV-4@4.5_20091211 (Lab ID: 252653004)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - o-Terphenyl (S)
- SV-5@4.5_20091210 (Lab ID: 252653005)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - · o-Terphenyl (S)







PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Method:

EPA 8260

Description: 8260/5035A Volatile Organics Client: ELT_Delta San Jose, CA Date:

December 23, 2009

General Information:

5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/1794

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 252653001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS. (Lab ID: 17532)
 - 1,2-Dichloroethane

QC Batch: MSV/1795

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 252653005

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 17445)
 - 1,2-Dichloroethane
 - · Methyl-tert-butyl ether
- MSD (Lab ID: 17446)
 - 1,2-Dibromoethane (EDB)
 - 1,2-Dichloroethane
 - Ethyl-tert-butyl ether
 - Ethylbenzene

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Method:

EPA 8260

Client:

Description: 8260/5035A Volatile Organics ELT_Delta San Jose, CA

Date: December 23, 2009

QC Batch: MSV/1795

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 252653005

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

· Methyl-tert-butyl ether

· Xylene (Total)

· tert-Amylmethyl ether

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:





PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No .:

252653

Method:

CALUFT

Description: CALUFT MSV GRO Client:

ELT Delta San Jose, CA

Date:

December 23, 2009

General Information:

5 samples were analyzed for CA LUFT. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

QC Batch: MSV/1797

IS: The internal standard response is below criteria. Results may be biased high.

- MS (Lab ID: 17521)
 - TPH-Gasoline (C05-C12)
- MSD (Lab ID: 17522)
 - TPH-Gasoline (C05-C12)

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Method:

CALUFT

Description: CALUFT MSV GRO

ELT_Delta San Jose, CA

Client: Date:

December 23, 2009

Analyte Comments:

QC Batch: MSV/1797

1n: Matrix spike recovery and/or matrix spike duplicate recovery exceeded laboratory control limits due to low internal standard

• MS (Lab ID: 17521)

• TPH-Gasoline (C05-C12)

• MSD (Lab ID: 17522)

• TPH-Gasoline (C05-C12)

This data package has been reviewed for quality and completeness and is approved for release.





Project:

142611270 3255 McCarthy Rd.

Sample: SV-1@ 4.5 _20021210	Lab ID: 2526	53001	Collect	ed: 12/10/0)9 14:55	Received: 12	2/12/09 10:30 N	/latrix: Solid	
Results reported on a "wet-weight" i	basis								
Parameters	Results	Units	Re	port Limit	DF	Prepared	Analyzed	CAS No.	Qua
015B CA Diesel Range Organics	Analytical Meth	od: EPA 80	15B Pre	paration Me	ethod: EF	PA 3546			
FPH-DRO (C10-C24)	ND mg	/kg		5.9	1	12/14/09 16:05	12/16/09 17:48		2n
p-Terphenyl (S)	103 %	•		50-150	1		12/16/09 17:48		2n
-Octacosane (S)	107 %			50-150	1		12/16/09 17:48	· •	2n
260/5035A Volatile Organics	Analytical Meth	od: EPA 82	60			-			
ert-Amylmethyl ether	ND mg.	/ka		0.0027	1		12/16/09 16:29	004-05.9	
Benzene	ND mg.	_		0.0027	1				
ert-Butyl Alcohol	_	_					12/16/09 16:29		
•	ND mg.	-		0.014	1		12/16/09 16:29		
1,2-Dibromoethane (EDB)	ND mg.			0.0027	1		12/16/09 16:29		
1,2-Dichloroethane	ND mg.	_		0.0027	1		12/16/09 16:29	107-06-2	M0 ·
Diisopropyl ether	ND mg.	/kg		0.0027	1		12/16/09 16:29	108-20-3	
Ethanol	ND mg	/kg		0.37	1		12/16/09 16:29	64-17-5	
Ethylbenzene	ND mg.	/kg		0.0027	. 1		12/16/09 16:29	100-41-4	
Ethyl-tert-butyl ether	ND mg.	/ka		0.0027	1		12/16/09 16:29		
Methyl-tert-butyl ether	ND mg	_		0.0027	1		12/16/09 16:29		
oluene	ND mg	-		0.0027	1				
(ylene (Total)	_	~					12/16/09 16:29		
- , ,	ND mg.	ĸg		0.0055	1		12/16/09 16:29		
Dibromofluoromethane (S)	89 %			80-136	1		12/16/09 16:29	1868-53-7	
oluene-d8 (S)	102 %			80-120	. 1		12/16/09 16:29	2037-26-5	
-Bromofluorobenzene (S)	99 %		•	72-122	• 1		12/16/09 16:29	460-00-4	
,2-Dichloroethane-d4 (S)	91 %			80-143	1		12/16/09 16:29	17060-07-0	
CA LUFT MSV GRO	Analytical Meth-	od: CA LUF	- T						
PH-Gasoline (C05-C12)	ND mg.	/ka		0.23	1	•	12/16/09 16:29		MO
	99 %	•		72-122	1		12/16/09 16:29		
I-Bromofluorobenzene (S)									
I-Bromofluorobenzene (S)									
Sample: SV-2@4.5_20091210	Lab ID: 2526	53002	Collect	ed: 12/10/0	9 14:30	Received: 12	2/12/09 10:30 N	latrix: Solid	
I-Bromofluorobenzene (S) Gample: SV-2@4.5_20091210 Results reported on a "wet-weight" l	basis								
sample: SV-2@4.5_20091210		53002 Units		ed: 12/10/0	09 14:30 DF	Received: 12	2/12/09 10:30 M Analyzed	Matrix: Solid CAS No.	Qua
Sample: SV-2@4.5_20091210 Results reported on a "wet-weight" l Parameters	basis	Units	Re	port Limit	DF .	Prepared			Qua
Sample: SV-2@4.5_20091210 Results reported on a "wet-weight" l Parameters 015B CA Diesel Range Organics	Results	Units od: EPA 80	Re	port Limit	DF .	Prepared PA 3546			Qua 2n
iample: SV-2@4.5_20091210 Results reported on a "wet-weight" I Parameters 015B CA Diesel Range Organics PH-DRO (C10-C24)	Results Analytical Meth	Units od: EPA 80	Re	port Limit paration Me	DF _	Prepared PA 3546 12/14/09 16:05	Analyzed 12/16/09 18:07	CAS No.	2n
ample: SV-2@4.5_20091210 lesults reported on a "wet-weight" lesults reported on a "wet	hasis Results Analytical Methors ND mg.	Units od: EPA 80	Re	port Limit paration Me 5.8	DF .ethod: EF	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07 12/16/09 18:07	CAS No.	2n 2n
Gample: SV-2@4.5_20091210 Results reported on a "wet-weight" It Parameters 015B CA Diesel Range Organics PH-DRO (C10-C24) -Terphenyl (S) -Octacosane (S)	hasis Results Analytical Methon ND mg 102 %	Units od: EPA 80 /kg	Re 15B Pre	port Limit paration Me 5.8 50-150	DF ethod: EF 1	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07	CAS No.	2n
Sample: SV-2@4.5_20091210 Results reported on a "wet-weight" learn parameters 8015B CA Diesel Range Organics FPH-DRO (C10-C24) 9-Terphenyl (S) 1-Octacosane (S)	Analytical Methodology Analytical Methodology ND mg 102 % 107 % Analytical Methodology	Units od: EPA 80 /kg od: EPA 82	Re 15B Pre	port Limit paration Me 5.8 50-150 50-150	DF	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07 12/16/09 18:07 12/16/09 18:07	CAS No. 84-15-1 630-02-4	2n 2n
Sample: SV-2@4.5_20091210 Results reported on a "wet-weight" & Parameters 1015B CA Diesel Range Organics 1PH-DRO (C10-C24) 1-Terphenyl (S) 1-Octacosane (S) 1260/5035A Volatile Organics 1ert-Amylmethyl ether	Analytical Methon ND mg. 102 % Analytical Methon ND mg. ND mg. ND mg. ND mg.	Units od: EPA 80 /kg od: EPA 82	Re 15B Pre	port Limit paration Me 5.8 50-150 50-150	DF	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07 12/16/09 18:07 12/16/09 18:07	CAS No. 84-15-1 630-02-4	2n 2n
Gample: SV-2@4.5_20091210 Results reported on a "wet-weight" & Parameters 015B CA Diesel Range Organics PH-DRO (C10-C24) -Terphenyl (S) -Octacosane (S) 260/5035A Volatile Organics ert-Amylmethyl ether Benzene	Analytical Methon ND mg. 102 % Analytical Methon ND mg. ND mg. ND mg. ND mg. ND mg.	Units od: EPA 80 /kg od: EPA 82 /kg	Re 15B Pre	port Limit paration Me 5.8 50-150 50-150 0.0027 0.0027	DF 1 1 1 1 1 1 1	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07 12/16/09 18:07 12/16/09 18:07 12/16/09 16:49 12/16/09 16:49	CAS No. 84-15-1 630-02-4 994-05-8 71-43-2	2n 2n
Sample: SV-2@4.5_20091210 Results reported on a "wet-weight" & Parameters 1015B CA Diesel Range Organics 1PH-DRO (C10-C24) 1-Terphenyl (S) 1-Octacosane (S) 1260/5035A Volatile Organics 121-Amylmethyl ether 122-Benzene 123-Benzene 124-Butyl Alcohol	Analytical Methon ND mg. 102 % Analytical Methon ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg.	Units od: EPA 80 /kg od: EPA 82 /kg /kg	Re 15B Pre	port Limit paration Me 5.8 50-150 50-150 0.0027 0.0027 0.013	DF 1 1 1 1 1 1 1 1 1 1 1	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07 12/16/09 18:07 12/16/09 18:07	CAS No. 84-15-1 630-02-4 994-05-8 71-43-2	2n 2n
Fample: SV-2@4.5_20091210 Results reported on a "wet-weight" is Parameters 015B CA Diesel Range Organics PH-DRO (C10-C24) -Terphenyl (S) -Octacosane (S) 260/5035A Volatile Organics ert-Amylmethyl ether senzene ert-Butyl Alcohol ,2-Dibromoethane (EDB)	Analytical Methon ND mg. 102 % 107 % Analytical Methon ND mg. ND	Units od: EPA 80 /kg od: EPA 82 /kg /kg	Re 15B Pre	port Limit paration Me 5.8 50-150 50-150 0.0027 0.0027 0.013 0.0027	DF 1 1 1 1 1 1 1	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07 12/16/09 18:07 12/16/09 18:07 12/16/09 16:49 12/16/09 16:49	CAS No. 84-15-1 630-02-4 994-05-8 71-43-2 75-65-0	2n 2n
Gample: SV-2@4.5_20091210 Results reported on a "wet-weight" & Parameters 1015B CA Diesel Range Organics 1PH-DRO (C10-C24) 1-Terphenyl (S) 1-Octacosane (S) 1260/5035A Volatile Organics 1261-Amylmethyl ether 1361-1361-1361-1361-1361-1361-1361-1361	Analytical Methon ND mg. 102 % Analytical Methon ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg. ND mg.	Units od: EPA 80 /kg od: EPA 82 /kg /kg	Re 15B Pre	port Limit paration Me 5.8 50-150 50-150 0.0027 0.0027 0.013	DF 1 1 1 1 1 1 1 1 1 1 1	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07 12/16/09 18:07 12/16/09 18:07 12/16/09 16:49 12/16/09 16:49 12/16/09 16:49	CAS No. 84-15-1 630-02-4 994-05-8 71-43-2 75-65-0 106-93-4	2n 2n
Fample: SV-2@4.5_20091210 Results reported on a "wet-weight" is Parameters 015B CA Diesel Range Organics PH-DRO (C10-C24) -Terphenyl (S) -Octacosane (S) 260/5035A Volatile Organics ert-Amylmethyl ether senzene ert-Butyl Alcohol ,2-Dibromoethane (EDB)	Analytical Methon ND mg. 102 % 107 % Analytical Methon ND mg. ND	Units od: EPA 80 /kg od: EPA 82 /kg /kg /kg	Re 15B Pre	port Limit paration Me 5.8 50-150 50-150 0.0027 0.0027 0.013 0.0027	DF	Prepared PA 3546 12/14/09 16:05 12/14/09 16:05	Analyzed 12/16/09 18:07 12/16/09 18:07 12/16/09 18:07 12/16/09 16:49 12/16/09 16:49 12/16/09 16:49 12/16/09 16:49	CAS No. 84-15-1 630-02-4 994-05-8 71-43-2 75-65-0 106-93-4 107-06-2	2n 2n

Date: 12/23/2009 07:59 AM

REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Sample: SV-2@4.5 20091210 Lab ID: 252653002 Collected: 12/10/09 14:30 Received: 12/12/09 10:30 Matrix: Solid Results reported on a "wet-weight" basis Parameters Results Units Report Limit DF Prepared Analyzed CAS No. Qual 8260/5035A Volatile Organics Analytical Method: EPA 8260 Ethylbenzene ND mg/kg 0.0027 1 12/16/09 16:49 100-41-4 Ethyl-tert-butyl ether ND mg/kg 0.0027 1 12/16/09 16:49 637-92-3 Methyl-tert-butyl ether ND mg/kg 0.0027 12/16/09 16:49 1634-04-4 Toluene ND mg/kg 0.0027 12/16/09 16:49 108-88-3 Xylene (Total) ND mg/kg 0.0054 1 12/16/09 16:49 1330-20-7 Dibromofluoromethane (S) 92 % 80-136 1 12/16/09 16:49 1868-53-7 Toluene-d8 (S) 103 % 80-120 1 12/16/09 16:49 2037-26-5 4-Bromofluorobenzene (S) 99 % 72-122 12/16/09 16:49 460-00-4 1 1,2-Dichloroethane-d4 (S) 90 % 80-143 12/16/09 16:49 17060-07-0 **CA LUFT MSV GRO** Analytical Method: CA LUFT TPH-Gasoline (C05-C12) ND mg/kg 0.22 1 12/16/09 16:49 4-Bromofluorobenzene (S) 99 % 72-122 12/16/09 16:49 460-00-4 1 Sample: SV-3@4.5_20091211 Lab ID: 252653003 Collected: 12/11/09 09:25 Received: 12/12/09 10:30 Matrix: Solid Results reported on a "wet-weight" basis **Parameters** Results Units Report Limit Prepared Analyzed CAS No. Qual 8015B CA Diesel Range Organics Analytical Method: EPA 8015B Preparation Method: EPA 3546 TPH-DRO (C10-C24) ND mg/kg 12/14/09 16:05 12/16/09 18:26 5.8 2n o-Terphenyl (S) 101 % 50-150 12/14/09 16:05 12/16/09 18:26 84-15-1 2n n-Octacosane (S) 107 % 50-150 12/14/09 16:05 12/16/09 18:26 630-02-4 2n 8260/5035A Volatile Organics Analytical Method: EPA 8260 tert-Amylmethyl ether ND mg/kg 0.0028 1 12/16/09 17:10 994-05-8 Benzene ND mg/kg 0.0028 1 12/16/09 17:10 71-43-2 tert-Butyl Alcohol ND mg/kg 0.014 1 12/16/09 17:10 75-65-0 1,2-Dibromoethane (EDB) ND mg/kg 0.0028 12/16/09 17:10 106-93-4 1,2-Dichloroethane ND mg/kg 0.0028 12/16/09 17:10 107-06-2 Diisopropyl ether ND mg/kg 0.0028 12/16/09 17:10 108-20-3 Ethanol ND mg/kg 0.37 12/16/09 17:10 64-17-5 Ethylbenzene ND mg/kg 0.0028 12/16/09 17:10 100-41-4 Ethyl-tert-butyl ether ND mg/kg 0.0028 12/16/09 17:10 637-92-3 Methyl-tert-butyl ether ND mg/kg 0.0028 12/16/09 17:10 1634-04-4 Toluene ND mg/kg 0.0028 12/16/09 17:10 108-88-3 Xylene (Total) ND mg/kg 0.0055 1 12/16/09 17:10 1330-20-7 Dibromofluoromethane (S) 91 % 80-136 1 12/16/09 17:10 1868-53-7 Toluene-d8 (S) 103 % 80-120 1 12/16/09 17:10 2037-26-5 4-Bromofluorobenzene (S) 100 % 72-122 1 12/16/09 17:10 460-00-4 1,2-Dichloroethane-d4 (S) 87 % 80-143 12/16/09 17:10 17060-07-0 **CA LUFT MSV GRO** Analytical Method: CA LUFT TPH-Gasoline (C05-C12) ND mg/kg

Date: 12/23/2009 07:59 AM

REPORT OF LABORATORY ANALYSIS

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12/16/09 17:10

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Results reported on a "wet-weight" basis Parameters

Lab ID: 252653003

Results

Collected: 12/11/09 09:25

Report Limit

Prepared

Received: 12/12/09 10:30

Analyzed

CAS No.

Qual

CA LUFT MSV GRO

Analytical Method: CALUFT

Units

4-Bromofluorobenzene (S)

100 %

72-122

DF

12/16/09 17:10 460-00-4

Sample: SV-4@4.5_20091211

Sample: SV-3@4.5 20091211

Lab ID: 252653004

Collected: 12/11/09 08:05

Received: 12/12/09 10:30

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B CA Diesel Range Organics	Analytical Met	hod: EPA 8015E	Preparation Me	thod: E	PA 3546			
TPH-DRO (C10-C24)	ND m	g/kg	6.0	1	12/14/09 16:05	12/16/09 19:23		2
o-Terphenyl (S)	105 %		50-150	1		12/16/09 19:23	94 45 4	2n
n-Octacosane (S)	111 %		50-150	1		12/16/09 19:23		2n 2n
8260/5035A Volatile Organics	Analytical Meti	nod: EPA 8260					,	
ert-Amylmethyl ether	ND mg	a/ka	0.0028	1		12/16/09 17:30	004.05.0	
Benzene	ND mg		0.0028	1		12/16/09 17:30		
ert-Butyl Alcohol	ND m		0.014	1		12/16/09 17:30		
,2-Dibromoethane (EDB)	ND m		0.0028	1		12/16/09 17:30		
,2-Dichloroethane	ND mg		0.0028	1		12/16/09 17:30		
Diisopropyl ether	ND mg	-	0.0028	1				
Ethanol	ND mg		0.38	1		12/16/09 17:30		
Ethylbenzene	ND mg		0.0028	1		12/16/09 17:30		
Ethyl-tert-butyl ether	ND mg		0.0028	1		12/16/09 17:30		
Methyl-tert-butyl ether	ND mg		0.0028	1		12/16/09 17:30		
Toluene Toluene	ND mg		0.0028	1		12/16/09 17:30		
(ylene (Total)	ND mg		0.0056	1		12/16/09 17:30		
Dibromofluoromethane (S)	92 %	, ng	80-136	1		12/16/09 17:30		
Foluene-d8 (S)	102 %		80-120	1 .		12/16/09 17:30		
-Bromofluorobenzene (S)	99 %		72-122	•		12/16/09 17:30		
,2-Dichloroethane-d4 (S)	92 %			1.		12/16/09 17:30		
• •	32 70		80-143	1		12/16/09 17:30	17060-07-0	
CA LUFT MSV GRO	Analytical Meth	od: CA LUFT				-		
TPH-Gasoline (C05-C12)	ND mg	ı/kg .	0.24	1		12/16/09 17:30		
4-Bromofluorobenzene (S)	99 %	. •	72-122	1		12/16/09 17:30	460.00.4	
			. ~	•		12/10/08 17:30	4 0U-UU-4	

Sample: SV-5@4.5_20091210 Results reported on a "wet-weight" basis

Lab ID: 252653005

Collected: 12/10/09 14:05

Received: 12/12/09 10:30

Parameters

Results

Units

Report Limit

Prepared

Analyzed

CAS No.

Qual

8015B CA Diesel Range Organics

Analytical Method: EPA 8015B Preparation Method: EPA 3546

TPH-DRO (C10-C24)

50.9 mg/kg 90 %

12/14/09 16:05 12/16/09 19:42

2n

o-Terphenyl (S) n-Octacosane (S)

97 %

50-150 50-150 12/14/09 16:05 12/16/09 19:42 84-15-1

12/14/09 16:05 12/16/09 19:42 630-02-4

2n

Date: 12/23/2009 07:59 AM

REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

Sample: SV-5@4.5_20091210 Lab ID: 252653005 Collected: 12/10/09 14:05 Received: 12/12/09 10:30 Matrix: Solid

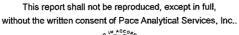
Results reported on a "wet-weight" basis

Parameters	Results Units	Report Limit	DF ·	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260						
tert-Amylmethyl ether	ND mg/kg	0.0029	1		12/17/09 11:55	994-05-8	МО
Benzene	ND mg/kg	0.0029	1		12/17/09 11:55	71-43-2	
tert-Butyl Alcohol	0.032 mg/kg	0.014	1		12/17/09 11:55	75-65-0	
1,2-Dibromoethane (EDB)	ND mg/kg	0.0029	1		12/17/09 11:55	106-93-4	MO
1,2-Dichloroethane	ND mg/kg	0.0029	1		12/17/09 11:55	107-06-2	MO
Diisopropyl ether	ND mg/kg	0.0029	1.		12/17/09 11:55	108-20-3	
Ethanol	ND mg/kg	0.38	1		12/17/09 11:55	64-17-5	
Ethylbenzene	ND mg/kg	0.0029	1		12/17/09 11:55	100-41-4	MO
Ethyl-tert-butyl ether	ND mg/kg	0.0029	1		12/17/09 11:55	637-92-3	MO
Methyl-tert-butyl ether	0.022 mg/kg	0.0029	1	•	12/17/09 11:55	1634-04-4	MO
Toluene	ND mg/kg	0.0029	1		12/17/09 11:55	108-88-3	
Xylene (Total)	ND mg/kg	0.0058	1		12/17/09 11:55	1330-20-7	M0
Dibromofluoromethane (S)	93 %	80-136	1		12/17/09 11:55	1868-53-7	
Toluene-d8 (S)	99 %	80-120	1.		12/17/09 11:55	2037-26-5	
4-Bromofluorobenzene (S)	102 %	72-122	1		12/17/09 11:55	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %	80-143	1		12/17/09 11:55	17060-07-0	
CA LUFT MSV GRO	Analytical Method: CA LUFT						
TPH-Gasoline (C05-C12)	ND mg/kg	0.24	1		12/17/09 11:55		
4-Bromofluorobenzene (S)	102 %	72-122	1		12/17/09 11:55	460-00-4	

Date: 12/23/2009 07:59 AM

REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

QC Batch:

OEXT/1735

Analysis Method:

EPA 8015B

QC Batch Method:

EPA 3546

Analysis Description:

EPA 8015B CA TPH

Associated Lab Samples:

252653001, 252653002, 252653003, 252653004, 252653005

METHOD BLANK: 17270

Matrix: Solid

Associated Lab Samples:

252653001, 252653002, 252653003, 252653004, 252653005

Blank

Parameter	Units	Result	Limit	Analyzed	Qualifiers
TPH-DRO (C10-C24)	mg/kg	ND	6.0	12/16/09 17:09	2n
n-Octacosane (S)	%	108	50-150	12/16/09 17:09	2n
o-Terphenyl (S)	%	103	50-150	12/16/09 17:09	2n

LABORATORY CONTROL SAM	PLE:	17271
------------------------	------	-------

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C24)	mg/kg	250	212	85	56-124	2n
n-Octacosane (S)	%			108	50-150	2n
o-Terphenyl (S)	%			95	50-150	2n

MATRIX SPIKE & MATRIX S	SPIKE DUPLICA	ΓΕ: 1 7 274			17275		-	•			
Parameter	Units	252653003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH-DRO (C10-C24)	mg/kg	ND	231	248	191	201	82	80	56-124	5 2n	
n-Octacosane (S)	%						105	104	50-150	2n-	
o-Terphenyl (S)	%						93	92	50-150	2n	





Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

QC Batch:

MSV/1794

Analysis Method:

EPA 8260

QC Batch Method:

EPA 8260

Analysis Description:

8260 MSV 5035A Volatile Organics

Associated Lab Samples:

252653001, 252653002, 252653003, 252653004

METHOD BLANK: 17395

Matrix: Solid

Associated Lab Samples:

252653001, 252653002, 252653003, 252653004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
,2-Dibromoethane (EDB)	mg/kg	ND -	0.0030	12/16/09 11:14	
,2-Dichloroethane	mg/kg	ND	0.0030	12/16/09 11:14	
nzene	mg/kg	ND	0.0030	12/16/09 11:14	4
sopropyl ether	mg/kg	ND	0.0030	12/16/09 11:14	
anol	mg/kg	ND	0.40	12/16/09 11:14	
yl-tert-butyl ether	mg/kg	ND	0.0030	12/16/09 11:14	
lbenzene	mg/kg	ND	0.0030	12/16/09 11:14	-
hyl-tert-butyl ether	mg/kg	ND	0.0030	12/16/09 11:14	
Amylmethyl ether	mg/kg	ND	0.0030	12/16/09 11:14	
Butyl Alcohol	mg/kg	ND	0.015	12/16/09 11:14	
ene	mg/kg	ND	0.0030	12/16/09 11:14	
ene (Total)	mg/kg	ND	0.0060	12/16/09 11:14	÷
Dichloroethane-d4 (S)	%	87	80-143	12/16/09 11:14	
romofluorobenzene (S)	%	97	72-122	12/16/09 11:14	
omofluoromethane (S)	%	91	80-136	12/16/09 11:14	
uene-d8 (S)	%	100	80-120	12/16/09 11:14	

LABORATORY CONTROL SAME	PLE: 17396					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	mg/kg	.04	0.041	103	71-123	
1,2-Dichloroethane	mg/kg	.04	0.038	96	71-124	
Benzene	mg/kg	.04	0.045	114	68-124	
Diisopropyl ether	mg/kg	.04	0.042	106	20-160	
Ethanol	mg/kg	.8	0.67	84	60-140	
Ethyl-tert-butyl ether	mg/kg	.04	0.044	110	70-140	
Ethylbenzene	mg/kg	.04	0.042	105	63-131	
Methyl-tert-butyl ether	mg/kg	.04	0.040	100	68-139	
tert-Amylmethyl ether	mg/kg	.04	0.045	112	74-125	
tert-Butyl Alcohol	mg/kg	.2	0.20	100	49-122	
Toluene	mg/kg	.04	0.041	103	61-126	
Xylene (Total)	mg/kg	.12	0.13	108	68-129	
1,2-Dichloroethane-d4 (S)	%			87	80-143	
4-Bromofluorobenzene (S)	%			96	72-122	
Dibromofluoromethane (S)	%			100	80-136	
Toluene-d8 (S)	%			91	80-120	

Date: 12/23/2009 07;59 AM

REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

lo.: 252653

MATRIX SPIKE & MATRIX SP	IKE DUPLICAT	E: 17532			17533						
			MS	MSD							
	:	252653001	Spike	Spike	MS	MSD	MS	MSD	% Rec		
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	Qual
,2-Dibromoethane (EDB)	mg/kg	ND	.038	.043	0.027	0.033	71	77	71-123	20	
,2-Dichloroethane	mg/kg	ИD	.038	.043	0.026	0.031	67	73	71-124	19 MO	
enzene	mg/kg	ND	.038	.043	0.029	0.035	75	81	68-124	19	
iisopropyl ether	mg/kg	ND	.038	.043	0.027	0.033	72	77	20-160		
thanol	mg/kg	ND	.76	.86	0.48	0.63	62	74	60-140	28	
thyl-tert-butyl ether	mg/kg	ND	.038	.043	0.027	0.033	72	78	70-140	19	
thylbenzene	mg/kg	ND	.038	.043	0.026	0.031	69	73	63-131	16	
fethyl-tert-butyl ether	mg/kg	ND	.038	.043	0.027	0.032	71	75	68-139	17	
ert-Amylmethyl ether	mg/kg	ND	.038	.043	0.029	0.035	76	82	74-125	19	
ert-Butyl Alcohol	mg/kg	ND	.19	.21	0.14	0.17	73	81	49-122	22	
oluene	mg/kg	ND	.038	.043	0.026	0.031	68	72	61-126	17	
ylene (Total)	mg/kg	ND	.11	.13	0.082	0.097	71	75	68-129	17	
,2-Dichloroethane-d4 (S)	%						95	92	80-143	•	
-Bromofluorobenzene (S)	%						93	98	72-122		
ibromofluoromethane (S)	%						99	99	80-136		
oluene-d8 (S)	%						94	93	80-120		

Date: 12/23/2009 07:59 AM





Project:

I42611270 3255 McCarthy Rd.

Pace Project No.:

252653

QC Batch:

MSV/1795

Analysis Method:

EPA 8260

QC Batch Method:

EPA 8260

Analysis Description:

8260 MSV 5035A Volatile Organics

Associated Lab Samples:

Matrix: Solid

METHOD BLANK: 17443 Associated Lab Samples:

252653005

252653005

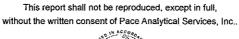
•	20200000	Blank	Reporting			
Parameter	Units	Result	Limit	Analyzed	Qualifiers	
2-Dibromoethane (EDB)	mg/kg	ND ND	0.0030	12/17/09 11:19		
2-Dichloroethane	mg/kg	ND	0.0030	12/17/09 11:19		
enzene	mg/kg	ND	0.0030	12/17/09 11:19		
sopropyl ether	mg/kg	ND	0.0030	12/17/09 11:19		
anol	mg/kg	ND	0.40	12/17/09 11:19		
yl-tert-butyl ether	mg/kg	ND	0.0030	12/17/09 11:19		
ylbenzene	mg/kg	ND	0.0030	12/17/09 11:19		
hyl-tert-butyl ether	mg/kg	ND	0.0030	12/17/09 11:19		
Amylmethyl ether	mg/kg	ND	0.0030	12/17/09 11:19		
-Butyl Alcohol	mg/kg	ND	0.015	12/17/09 11:19		
iene	mg/kg	ND	0.0030	12/17/09 11:19		
ene (Total)	mg/kg	ND	0.0060	12/17/09 11:19		
-Dichloroethane-d4 (S)	%	90	80-143	12/17/09 11:19		
Bromofluorobenzene (S)	%	99	72-122	12/17/09 11:19		
romofluoromethane (S)	%	89	80-136	12/17/09 11:19		
luene-d8 (S)	%	103	80-120	12/17/09 11:19		

LABORATORY CONTROL SAMPLE	17444						
·		Spike	LCS	LCS	% Rec		-
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
1,2-Dibromoethane (EDB)	mg/kg	.04	0.038	96	71-123		
1,2-Dichloroethane	mg/kg	.04	0.037	93	71-124		
Benzene	mg/kg	.04	0.043	107	68-124		
Diisopropyl ether	mg/kg	.04	0.040	100	20-160		
Ethanol	mg/kg	.8	0.72	90	60-140		
Ethyl-tert-butyl ether	mg/kg	.04	0.040	99 .	70-140	+,	
Ethylbenzene	mg/kg	.04	0.040	101	63-131		
Methyl-tert-butyl ether	mg/kg	.04	0.037	93	68-139		
tert-Amylmethyl ether	mg/kg	.04	0.041	103	74-125		
tert-Butyl Alcohol	mg/kg	.2	0.18	88	49-122		
Toluene	mg/kg	.04	0.039	98	61-126		
Xylene (Total)	mg/kg	.12	0.13	105	68-129		
1,2-Dichloroethane-d4 (S)	%			93	80-143		
4-Bromofluorobenzene (S)	%		-	93	72-122		
Dibromofluoromethane (S)	%	·		101	80-136		
Toluene-d8 (S)	%			92	80-120		
· ·							

Date: 12/23/2009 07:59 AM

REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

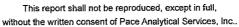
252653

MATRIX SPIKE & MATRIX SPI	IKE DUPLICA	TE: 17445	-		17446						
Parameter	Units	252653005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qua
1,2-Dibromoethane (EDB)	mg/kg	ND ND	.04	.04	0.028	0.025	71	64	71-123	1.1 MC)
1,2-Dichloroethane	mg/kg	ND .	.04	.04	0.027	0.025	69	- 63	71-124	10 M)
Benzene	mg/kg	ND	.04	.04	0.032	0.029	81	74	68-124	10	
Diisopropyl ether	mg/kg	ND	.04	.04	0.031	0.028	78	71	20-160	9	
Ethanol	mg/kg	ND	.8	.8	0.69	0.66	. 86	83	60-140	5	
Ethyl-tert-butyl ether	mg/kg	ND	.04	.04	0.030	0.027	76	69	70-140	10 M)
Ethylbenzene	mg/kg	ND	.04	.04	0.027	0.023	67	57	63-131	16 M)
Methyl-tert-butyl ether	mg/kg	0.022	.04	.04	0.041	0.039	49	44	68-139	5 M)
tert-Amylmethyl ether	mg/kg	ND	.04	.04	0.032	0.029	79	72	74-125	9 M)
tert-Butyl Alcohol	mg/kg	0.032	.2	.2	0.16	0.16	63	66	49-122	4	
Toluene	mg/kg	· ND	.04	.04	0.029	0.026	71	64	61-126	11	
Xylene (Total)	mg/kg	ND	.12	.12	0.081	0.069	68	58	68-129	16 M	0
1,2-Dichloroethane-d4 (S)	%	•				•	93	93	80-143		
4-Bromofluorobenzene (S)	%						98	101	72-122		
Dibromofluoromethane (S)	%						100	98	80-136		
Toluene-d8 (S)	%						96	97	80-120		

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REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

QC Batch:

MSV/1797

Analysis Method:

CALUFT

QC Batch Method:

CALUFT

Analysis Description:

CALUFT MSV GRO

Analyzed

91

101

Associated Lab Samples:

252653001, 252653002, 252653003, 252653004

METHOD BLANK: 17519

Matrix: Solid

Associated Lab Samples:

252653001, 252653002, 252653003, 252653004

Blank Result

Parameter

Units

Reporting Limit

Qualifiers

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S)

mg/kg

ND 97

0.25 12/16/09 11:14 72-122 12/16/09 11:14

LABORATORY CONTROL SAMPLE:

Parameter

17520

Units

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S)

mg/kg %

.5

0.46

60-140 72-122

MS

644

100

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

17521

17522

252653001 Parameter Units Result

MS Spike Conc.

MSD Spike Conc.

MSD Result

MSD % Rec % Rec Limits

RPD Qual 14 1n,IS

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S)

%

mg/kg

ND

48

Result 3.1 .44

MS

% Rec 2.7

99

60-140

72-122

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REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

QC Batch:

MSV/1802

QC Batch Method:

CALUFT

Analysis Method:

CALUFT

Analysis Description:

CALUFT MSV GRO

METHOD BLANK: 17687

Matrix: Solid

Associated Lab Samples:

Associated Lab Samples:

252653005

252653005

Blank Result

Reporting Limit

Analyzed

Qualifiers

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S) mg/kg %

Units

Units

ND 99

0.25 12/17/09 11:19 72-122 12/17/09 11:19

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

17688

Spike Conc.

MS

LCS Result

LCS % Rec

88

104

% Rec Limits

Qualifiers

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S)

mg/kg %

.5

0.44

60-140 72-122

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

17689

17690

MS MSD Result

MS % Rec

MSD % Rec

% Rec Limits

RPD

Qual

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S)

Parameter

%

mg/kg

Units Result Conc. ND

252653005

Spike Spike Conc. .2 .2

MSD

Result :18J .2J

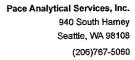
68 106

60-140 75 107

72-122

Date: 12/23/2009 07:59 AM

"nelac"





QUALIFIERS

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252653

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-S Pace Analytical Services - Seattle

ANALYTE QUALIFIERS

1n Matrix spike recovery and/or matrix spike duplicate recovery exceeded laboratory control limits due to low internal standard areas.

2n Result was obtained from silica gel treated extract.

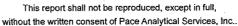
1S The internal standard response is below criteria. Results may be biased high.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Date: 12/23/2009 07:59 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

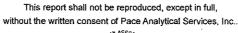
252653

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
252653001	SV-1@ 4.5 _20021210	EPA 3546	OEXT/1735	EPA 8015B	GCSV/1382
252653002	SV-2@4.5_20091210	EPA 3546	OEXT/1735	EPA 8015B	GCSV/1382
252653003	SV-3@4.5_20091211	EPA 3546	OEXT/1735	EPA 8015B	GCSV/1382
252653004	SV-4@4.5_20091211	EPA 3546	OEXT/1735	EPA 8015B	GCSV/1382
252653005	SV-5@4.5_20091210	EPA 3546	OEXT/1735	EPA 8015B	GCSV/1382
252653001	SV-1@ 4.5 _20021210	EPA 8260	MSV/1794		
252653002	SV-2@4.5 20091210	EPA 8260	MSV/1794		
252653003	SV-3@4.5_20091211	EPA 8260	MSV/1794		•
252653004	SV-4@4.5_20091211	EPA 8260	MSV/1794		
252653005	SV-5@4.5_20091210	EPA 8260	MSV/1795		
252653001	SV-1@ 4.5 _20021210	CALUFT	MSV/1797		
252653002	SV-2@4.5_20091210	· CA LUFT	MSV/1797		
252653003	SV-3@4.5_20091211	CALUFT	MSV/1797		
252653004	SV-4@4.5_20091211	CALUFT	MSV/1797		
252653005	SV-5@4.5_20091210	CALUFT	MSV/1802		

Date: 12/23/2009 07:59 AM

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CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A	Section B								ion C															11.		1. 1.747	1
Required Client Information:	Required Pro									omati	_												P	age :	- 4	Of.	1
Company: Delta Consultants:	Report To:	penn	i@deitae	nv.com				Atton				erin															
Address: 312 Piercy Rd				env.com,						lamo:	Del	ta Co	insul	iants								: .			1000	5, 6, 6,	11.
San Jose, CA 95138 Email To: Inerini@deltaenv.com	jdumas@d		iv.com		م . خه			Áddr					Rd∵S	an Jo	se.	CA 95	138		Maine		and the	ie is pi	Regu	atory A	gency.		agustinis).
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ADDITIONAL COMMENTS	REL	INQUI	SHED BY	AFFILIATIO	ורייאכ	DATE		Ήī	ME			ACC	EPTE	D BY	AFF	ЦΑПО	N)	MAR	T IN	DAT		TIMI	Ĕ		SAMPLE	CONDITION	VS.
Global ID: T0607500430				- contract c	7155500000			W. C. C. C. C. C. C. C. C. C. C. C. C. C.		7	<u>.</u>	. 4		1	0	d and a second	1346 St.1849	Seneral C	3-7	-112	CZESILIESZ	103	********	i d	SCHOOL STATE	11231912490149019	5,42,004,2,17,644,4,044,3
* Project ID & Sample IDS			·				-			16				7	+	a Chu				7110	<u>1</u>	103	0	1.4	1	1	1
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.				SAMPLER	NAME AN	D SIGNAT	URE																			ě	뛶
				PRINT	Name of	SAMPLE	R:	Je	oe Dui	nas		A XIA CA XX			en Mile	- CARDON BANK	- January 1		erzazu ere	1. ELECTRICAL PROPERTY.	10.002.81863.9	rsets un taxtoù	m42.50701	ပ	Received on Ice (Y/N)	Custody Staled Cooler (Y/N)	Samples Intact (Y/N)
				SIGN	ATURE of	SAMPLE	R:	7.	1	25		ar a i			1	DATE	Slgŕ	ed:		11	<u> </u>	a		FEMP in C	aceiv e (Y/A	ustod Baled (N)	d X
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Sample Condition Upon Receipt

Face Analytical Client Name	Detta (msultants Project# 252653
	· · · · · · · · · · · · · · · · ·	
Courier: Fed Ex UPS USPS Clear		Procedure Date: 1/2 2/2 2/2 2/2 2/2 2/2 2/2 2/2 2/2 2/2
Custody Seal on Cooler/Box Present Yes	no Seals	Inlact: Tyes no state.
Packing Material: Bubble Wrap Bubble		Other Samples on Ice, cooling process has begun
Thermometer Used Horiba 132013	Type of ice: Wel	Date and Initials of person examining
Cooler Temperature 19	Biological Tissue	is Frozen: Yes No contents: 12/12/49 AP
Temp should be above freezing to 5°C	. BYes □No □NA	
Chain of Custody Present	- DYES DNO DNIA	
Chain of Custody Filled Out:	Dyes Ens Diva	
Chain of Custody Relinquished:	PYES DNO DNIA	
Sampler Name & Signature on COC:	ADYES □NO □N/A	
Samples Arrived within Hold Time:	□Y85 ØÑo □NIA	
Short Hold Time Analysis (<72hr):	□Yes ØNo □NA	
Rush Jurn Around Time Requested: Sufficient Volume:	rage This This	8.
Correct Containers Used:	Pres DNo DNA	9. Sampus reciousd in Shows-transferd
-Pace Containers Used:	DYES DNO DNA	to 802 jury in Tab.
Containers Intact:	DYES DNO DNA	10.
Fillered volume received for Dissolved tests	DYES ONG DAIA	11.
Sample Labels match COC:	DYES OND ONA	12.
	so'ale	
All containers needing preservation have been checked.	DYes DNo ÆÑIA	13.
All containers needing preservation are found to be in	OYES ONO ADMA	
compliance with EPA recommendation.		Initial when Lot # of added
exceptions: (VO) coliform, TOC, OS.G. WI-DRO (water)	ØŶes □No	complèted preservative
Samples checked for dechlorination:	DYES OND DAVA	14.
Headspace in VOA Vials (>6mm):	DYES DNO ZONA	· ·
Trip Blank Present	DYDS OND DNA	
Trip Blank Cusledy Seals Present	□Yes □No -□NIA	
Pace Trip Blank Lot # (if purchased):	<u> </u>	
Client Notification/ Resolution:		Fleid Data Required? Y / N
Person Conlacted:	Date/	Cime:
Comments/ Resolution:		
	<u> </u>	
<u> </u>		Dafe:
Project Manager Review:		

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)





January 28, 2010

Mr. Tony Perini Delta Consultants 312 Piercy Road San Jose, CA 95138

RE: Project: 2611270 Alameda SoilGas Survey

Pace Project No.: 10121316

Dear Mr. Perini:

Enclosed are the analytical results for sample(s) received by the laboratory on January 14, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Colin Schuft

colin.schuft@pacelabs.com Project Manager

Colin Jehoft

Enclosures







SAMPLE SUMMARY

Project:

2611270 Alameda SoilGas Survey

Pace Project No.:

10121316

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10121316001	SV-1	Air	01/08/10 10:24	01/14/10 10:55
10121316002	SV-2	. Air	01/08/10 09:38	01/14/10 10:55
10121316003	SV-3	Air	01/08/10 09:14	01/14/10 10:55
10121316004	SV-4	Air	01/08/10 08:45	01/14/10 10:55
10121316005	SV-5	Air	01/08/10 10:45	01/14/10 10:55





Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

PROJECT NARRATIVE

Project:	
Pace Project No.:	
Method: Description: Client: Date:	
This data package has been reviewed for quality and completeness and is approved for release.	

REPORT OF LABORATORY ANALYSIS

Page 3 of 3

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..





February 10, 2010

EL Cert #E87847/i EPA Methods TO3, TO14A, TO15, 25C/3C

> TX Cert #T104704450-09-TX EPA Methods TO14A,TO15

Pace Analytical ATTN: Colin Schuft 1700 Elm St. SE, Suite 200 Minneapolis, MN 55414

LABORATORY TEST RESULTS

Project Reference: 2611270; Alameda Soil Gas Survey

Lab Number:

B011401-01/05

Enclosed are revised results for sample(s) received 1/14/10 by Air Technology Laboratories. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Report revised to include results for TO15 reported in ug/m³, per client's request.
- Sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- All results are reported without qualifications.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson

Operations Manager

MJohnson@AirTechLabs.com

Enclosures

Note: The cover letter is an integral part of this analytical report.

Client: Pace Analytical Attn: Colin Schuft

Client's Project:

2611270

Date Received:

01/14/10

Matrix: Units:

Air

ppbv

B011401b

Page 2 of 8

EPA Method TO15

Lab No:		B01140	1-01	B01140	1-02	B01140	1-03	B01140)1-04	B01140	1-05
Client Sample I.D.:		SV-	1	SV-	2	sv-	3	SV-	-4	SV-	-5
Date Sampled:		01/08	/10	01/08	/10	01/08	/10	01/08	3/10	01/08	/10
Date Analyzed:		01/26	/10	01/26	/10	01/26	/10	01/26	5/10	01/26	/10
QC Batch No:		100126M	IS2A1	100126N	IS2A1	100126N	IS2A1	100126N	/IS2A1	100126N	AS2A1
Analyst Initials:		MJ.	J	MJ	J	MJ	J	MJ	IJ	MJ	J
Dilution Factor:		2.3		2.0) -	1.9)	1.5	3	2.0)
ANALYTE	PQL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
t-Butyl Methyl Ether (MTBE)	1.0	ND	2.3	17	2.0	ND	1.9	25	1.8	1,300	2.0
Benzene	1.0	3.1	2.3	10	2.0	3.7	1.9	3.9	1.8	4.4	2.0
1,2-Dichloroethane	1.0	ND	2.3	ND	2.0	ND	1.9	ND	1.8	ND	2.0
Toluene	1.0	11	2.3	16	2.0	13	1.9	14	1.8	12	2.0
1,2-Dibromoethane	1.0	ND	2.3	ND	2.0	ND	1.9	ND	1.8	ND	2.0
Ethylbenzene	4.3	ND	9.7	ND	8.7	ND	8.0	ND	7.7	ND	8.5
p,&m-Xylene	4.3	ND	9.7	ND -	8.7	ND	8.0	8.2	7.7	ND	8.5
o-Xylene	4.3	ND	9.7	10	8.7	11	8.0	12	7.7	13	8.5
Ethanot	5.0	ND	. 11	ND	10	ND	9.4	ND	9.0	ND	9.9
Isopropanol	5.0	480	- 11	24	10	ND	9.4	2,500	9.0	1,500	9.9
t-Butanol	5.0	ND	11	ND	10	ND	9.4	ND	90	ND	9.9
Isopropyl ether	5.0	ND	11	ND	10	ND	9.4	ND	9.0	ND	9.9
t-Butyl ethyl ether	5.0	ND	11	ND	10	ND	9.4	ND .	9.0	ND	9.9
t-Amyl methyl ether	5.0	ND	11	ND	10	ND	9.4	ND	9.0	ND	9.9
TPH as Gasoline	100	NĐ	230	350	200	ND	190	8,700	180	3,900	200

PQL = Practical Quantitation Limit

ND= Not Detected (below RL)

RL = PQL X Dilution Factor

Reviewed/Approved By:

Operations Manager

The cover letter is an integral part of this analytical report

page 1 of 1

Client: Pace Analytical Attn: Colin Schuft

Client's Project:

2611270

Date Received:

01/14/10

Matrix:

Air

Units:

ug/m3

EPA Method TO15

Lab No:		B01140	1-01	B01140	1-02	B01140	1-03	B01140	01-04	B01140	1-05
Client Sample I.D.:		SV-	1	SV-	2	SV-	-3	sv	-4	sv-	-5
Date Sampled:		01/08	/10	01/08/	/10	01/08	/10	01/08	3/10	01/08	3/10
Date Analyzed:		01/26	/10	01/26	/10	01/26	/10	01/20	5/10	01/26	710
QC Batch No:		100126M	IS2A1	100126M	IS2A1	100126N	1S2A1	1001261	MS2A1	100126N	IS2A1
Analyst Initials:		MJ.	J	MJ.	J	МЈ	J	MJ	IJ	MJ	J
Dilution Factor:		2.3		2.0	1	1.9)	1.	8	2.0)
ANALYTE	PQL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
t-Butyl Methyl Ether (MTBE)	3.6	ND	8.1	60	7.3	ND	6.7	92	6.5	4,700	7.1
Benzene	3.2	9.9	7.2	33	6.5	12	6.0	13	5.8	14	6.3
1,2-Dichloroethane	4.0	ND	9.0	ND	8.1	ND	7.5	ND	7.2	ND	7.9
Toluene	3.8	40	8.6	60	7.7	49	7.1	54	6.8	45	7.5
1,2-Dibromoethane	7.7	ND	17	ND	16	ND	14	ND	14	ND	15
Ethylbenzene	4.3	ND	9.7	ND	8.7	ND	8.0	ND	7.7	ND	8.5
p,&m-Xylene	4.3	ND	9.7	ND	8.7	ND	8.0	8.2	7.7	ND	8.5
o-Xylene	4.3	ND	9.7	10	8.7	11	8.0	12	7.7	13	8.5
Ethanol	9.4	ND	21	ND	19	ND	18	ND	17	ND	19
Isopropanol	12	1,200	27	60	24	ND	22	6,200	22	3,800	24
t-Butanol	15	ND	34	ND	30	ND	28	NĐ	27	ND	30
Isopropyl ether	21	ND	47	ND	42	ND	39	NĐ	38	ND	42
t-Butyl ethyl ether	21	ND	47	ND	42	ND	39	ND	38	ND	42
t-Amyl methyl ether	21	ND	47	ND	42	ND	39	ND	38	ND	42
TPH as Gasoline	410	ND	920	1,400	830	ND	770	35,000	740	16,000	810

PQL = Practical Quantitation Limit ND= Not Detected (below RL) RL = PQL X Dilution Factor

Reviewed/Approved By:

Mark Johnson

Operations Manager

The cover letter is an integral part of this analytical report

Page 3 of 8 В011401ь

page 1 of 1

QC Batch #: 100126MS2A1

Matrix: Air

		EPA :	Method	l TO-14	4/TO-1:	5	'				
Lab No:	Method Blank		L	CS	LC	SD.					<u> </u>
Date Analyzed:	01/26/10		01/2	6/10	01/26/10						
Data File 1D:	26JAN007.D		26JAN004.D		26JAN005.D						
Analyst Initials:	DT		D	T	D	T					
Dilution Factor:	1.0	<u> </u>	1	.0	1	.0			Limits		
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/ Fail
1,1-Dichloroethene	0.0	10.0	10.5	105	9.9	99	5.8	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.2	102	9.8	98	3.6	70	130	30	Pass
Trichloroethene	0.0	10.0	10.1	101	9.8	98	3.0	70	130	30	Pass
Toluene	0.8	10.0	10.2	94	9.9	91	2.5	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	10.3	103	10. I	101	1.5	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By:	MARC-	1	Date: 2/10/10
	Mark Johnson	Y	
•	Operations Manager		

The cover letter is an integral part of this analytical report

QC Batch #: 100127MS2A1

Matrix: Air

		EPA	Metho	d TO-1	4/TO-1	5					
Lab No:	Method Blank	1	L	CS	LC	SD					-
Date Analyzed:	01/27/10	01/27/10			01/2	27/10					
Data File ID:	27JAN007.D		27JAN004.D			27JAN005.D					
Analyst Initials:	DT	}	D	T	D	T					
Dilution Factor:	0.2		1	.0	1	.0			Limits		
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/ Fail
1,1-Dichloroethene	0.0	10.0	10.0	100	9.6	96	4.3	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.2	102	9.9	99	3.1	70	130	30	Pass
Trichloroethene	0.0	10.0	9.9	- 99	9.3	93	6.3	70	130	30	Pass
Toluene	9.0	10.0	9.8	98	9.3	93	4.8	70	130	30.	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	10.2	102	9.8	98	3.9	70	130	30	Pass

RPD = Relative Percent Difference

Keylewed/Approved Ry:	iewed/Approved	Bv:
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Mark Johnson V

Operations Manager

The cover letter is an integral part of this analytical report

Date: $z/{\sqrt{U}}$

Client: Pace Analytical Attn: Colin Schuft

Page 6 of 8 B011401b

Client's Project: Date Received: 2611270 1/14/2010

Matrix: Air Units: % v/v

Fixed Gases by EPA Method 3C

L	ab No.:	B0111401-01		B0111401-02		B0111401-03		B0111401-04		B0111401-05	
Client Samp	ole I.D.:	SV-1		SV-2		SV-3		SV-4		SV-5	
Date Sampled: 1/8/2010		1/8/2010		1/8/2010		1/8/2010		1/8/2010			
Date An	alyzed:	1/19	/2010	2010 1/19/2010		1/25/2010		1/19/2010		1/19/2010	
Analyst	Initials:	ZK		ZK		ZK		2	K	ZK	
Da	Data File:		024 / 025 19jan(26 / 027	25jan009 / 010 / 011		19jan031 / 032		19jan034 / 035	
QC Batch:		100119GC8A1		100119GC8A1		100125GC8A1		100119GC8A1		100119GC8A1	
Dilution	Factor:	2	2.2	2	2.0]	1.9	1	.8	2	0
ANALYTE	PQL	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results
Oxygen/Argon	0.50	1.1	16	1.0	1.6	0.94	12	0.90	2.9	0.99	5.1
Nitrogen	1.0	2.2	82	2.0	35	1.9	78	1.8	87	2.0	76
Methane	0.0010	0.0022	ND	0.0020	55	0.0019	ND	0.0018	0.89	0.0020	10
Carbon Dioxide	0.010	0.022	4.0	0.020	10	0.019	8.6	0.018	9.3	0.020	9.0
Carbon Monoxide	0.001	0.0022	ND	0.0020	ND	0.0019	ND	0.0018	ND	0.0020	ND

PQL = Practical Quantitation Limit
ND = Not Detected (Below PQL)
RL = PQL X Dilution Factor

Reviewed/Approved By:	MARC	,	4
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Mark J. Johnson	V	
	Operations Manager		

Date: 2/10/10

The cover letter is an integral part of this analytical report

QC Batch No.:

100119GC8A1

Matrix: Units:

Air % v/v Page 7 of 8 B011401b

QC for Fixed Gases by EPA Method 3C

	Lab No.:	ab No.: Method Blank		LCS		LCSD					
Date .	Date Analyzed: Analyst Initials:		01/19/10		01/19/10		01/19/10		01/19/10		
Analy			ZK	K ZK		ZK					
Datafile:		19jan005		19jan002		29jul002					
Dilutio	n Factor:	1	.0		1.0		1.0				
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria		
Oxygen/Argon	0.50	0.50	ND	105	70-130%	100	70-130%	4.6	<30		
Nitrogen	1.0	1.0	ND	102	70-130%	100	70-130%	2.0	<30		
Methane	0.0010	0.0010	ND	102	70-130%	102	70-130%	0.2	<30		
Carbon Dioxide	0.010	0.010	ND	98	70-130%	101	70-130%	2.7.	<30		
Carbon Monoxide	0.0010	0.0010	ND	97	70-130%	97	70-130%	0.0	<30		

PQL = Pratical Quantitation Limit
ND = Not Detected (Below RL).
RL = PQL X Dilution Factor

Reviewed/Approved By:	Mell-	4	Date: 2	lidio
·	Mark J. Johnson	7		 -
•	Operations Manager			

The cover letter is an integral part of this analytical report.

QC Batch No.:

100125GC8A1

Matrix: Units:

Air

% v/v

Page 8 of 8 B011401b

QC for Fixed Gases by EPA Method 3C

			Method Blank 01/25/10		LCS 01/25/10		LCSD 01/25/10		
Date									
Analyst Initials: Datafile: Dilution Factor:		ZK 25jan008 1.0		ZK 25jan006 1.0		ZK 25jan007 1.0			
									·
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Oxygen/Argon	0.50	0.50	ND	107	70-130%	98	70-130%	8.8	<30
Nitrogen	1.0	1.0	ND	103	70-130%	99	70-130%	4.0	<30
Methane	0.0010	0.0010	ND	103	70-130%	100	70-130%	2.8	<30
Carbon Dioxide	0.010	0.010	ND	95	70-130%	107	70-130%	11.4	<30
Carbon Monoxide	0.0010	0.0010	ND	96	70-130%	95	70-130%	0.3	<30

PQL = Pratical Quantitation Limit
ND = Not Detected (Below RL).
RL = PQL X Dilution Factor

Reviewed/Approved By:	MAM. A	Date: 2/18/10	
	Mark J. Johnson		
	Operations Manager		

The cover letter is an integral part of this analytical report





December 23, 2009

Tony Perini ELT_Delta Consultants San Jose 312 Percy Rd. San Jose, CA 95138

RE: Project: I42611270 3255 McCarthy Rd.

Pace Project No.: 252654

Dear Tony Perini:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Regina Se. Marie

Regina SteMarie

regina.stemarie@pacelabs.com Project Manager

Enclosures

cc: Tara Bosch, ELT_Delta Consultants Sacramento
Dennis Dettloff, ELT_Delta Consultants Sacramen
Jonathon Fillingame, ELT_Delta Consultants Sacramento
Meghann Hurt, ELT_Delta Consultants Sacramento
Josh Mahoney, ELT_Delta Consultants San Jose
Don Pinkerton, ELT_Delta Consultants Sacramento
David Sowle, ELT_Delta Consultants Sacramento
Doug Umland, ELT_Delta Consultants San Jose
Ed Weyrens, ELT_Delta Consultants San Jose





CERTIFICATIONS

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Washington Certification IDs
940 South Harney Street Seattle, WA 98108
Washington Certification #: C1229
Oregon Certification #: WA200007
Alaska CS Certification #: UST-025

California Certification #: 01153CA Alaska Drinking Water Micro Certification #: WA01230 Alaska Drinking Water VOC Certification #: WA01-09 Florida/NELAP Certification #: E87617







SAMPLE ANALYTE COUNT

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
252654001	COMP-ABCD_20091211	EPA 8015B		3	PASI-S
		EPA 6010	BGA	1	PASI-S
		EPA 8260	LPM	16	PASI-S
		CA LUFT	LNH	2	PASI-S







PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Method:

EPA 8015B

Description: 8015B CA Diesel Range Organics

Client:

ELT_Delta San Jose, CA

Date:

December 23, 2009

General Information:

1 sample was analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

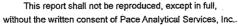
QC Batch: OEXT/1735

1n: Result was obtained from silica gel treated extract.

- BLANK (Lab ID: 17270)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - o-Terphenyl (S)
- . COMP-ABCD_20091211 (Lab ID: 252654001)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - · o-Terphenyl (S)

REPORT OF LABORATORY ANALYSIS

Page 4 of 17







PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Method:

EPA 8015B

Description: 8015B CA Diesel Range Organics

ELT_Delta San Jose, CA

Date:

December 23, 2009

Analyte Comments:

QC Batch: OEXT/1735

1n: Result was obtained from silica gel treated extract.

- LCS (Lab ID: 17271)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - o-Terphenyl (S)
- MS (Lab ID: 17274)

 - TPH-DRO (C10-C24) • n-Octacosane (S)
 - · o-Terphenyl (S)
- MSD (Lab ID: 17275)
 - TPH-DRO (C10-C24)
 - n-Octacosane (S)
 - · o-Terphenyl (S)





PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Method:

EPA 6010

Client:

Description: 6010 MET ICP

ELT_Delta San Jose, CA

Date:

December 23, 2009

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:





PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Method:

EPA 8260

Client: Date:

Description: 8260/5035A Volatile Organics ELT_Delta San Jose, CA

December 23, 2009

General Information:

1 sample was analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/1795

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 252653005

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 17445)
 - 1,2-Dichloroethane
 - · Methyl-tert-butyl ether
- MSD (Lab ID: 17446)
 - 1,2-Dibromoethane (EDB)
 - 1,2-Dichloroethane
 - · Ethyl-tert-butyl ether
 - Ethylbenzene
 - · Methyl-tert-butyl ether
 - · Xylene (Total)
 - · tert-Amylmethyl ether

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Method:

Date:

EPA 8260

Client:

Description: 8260/5035A Volatile Organics ELT_Delta San Jose, CA

December 23, 2009

Additional Comments:







PROJECT NARRATIVE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Method:

CA LUFT

Description: CA LUFT MSV GRO **Client:** ELT_Delta San Jose, CA

Date:

December 23, 2009

General Information:

1 sample was analyzed for CA LUFT. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All taboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.





ANALYTICAL RESULTS

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

Sample: COMP-ABCD_20091211 Lab ID: 252654001 Collected: 12/11/09 09:25 Received: 12/12/09 10:30 Matrix: Solid Results reported on a "wet-weight" basis Parameters Results Units Report Limit Prepared Analyzed CAS No. Qual 8015B CA Diesel Range Organics Analytical Method: EPA 8015B Preparation Method: EPA 3546 TPH-DRO (C10-C24) ND mg/kg 5.9 12/14/09 16:05 12/16/09 20:02 1n o-Terphenyl (S) 97 % 50-150 12/14/09 16:05 12/16/09 20:02 84-15-1 1 1n n-Octacosane (S) 103 % 50-150 12/14/09 16:05 12/16/09 20:02 630-02-4 1n **6010 MET ICP** Analytical Method: EPA 6010 Preparation Method: EPA 3050 Lead 9.9 mg/kg 0.99 12/15/09 08:23 12/16/09 11:25 7439-92-1 8260/5035A Volatile Organics Analytical Method: EPA 8260 tert-Amylmethyl ether ND mg/kg 0.0030 12/17/09 12:16 994-05-8 Benzene ND mg/kg 0.0030 1 12/17/09 12:16 71-43-2 tert-Butyl Alcohol ND mg/kg 0.015 1 12/17/09 12:16 75-65-0 1,2-Dibromoethane (EDB) ND mg/kg 0.0030 12/17/09 12:16 106-93-4 1,2-Dichloroethane ND mg/kg 0.0030 12/17/09 12:16 107-06-2 Diisopropyl ether ND mg/kg 0.0030 12/17/09 12:16 108-20-3 **Ethanol** ND mg/kg 0.39 12/17/09 12:16 64-17-5 Ethylbenzene ND mg/kg 0.0030 12/17/09 12:16 100-41-4 Ethyl-tert-butyl ether ND mg/kg 0.0030 12/17/09 12:16 637-92-3 Methyl-tert-butyl ether ND mg/kg 0.0030 12/17/09 12:16 1634-04-4 Toluene ND mg/kg 0.0030 12/17/09 12:16 108-88-3 Xylene (Total) ND mg/kg 0.0059 12/17/09 12:16 1330-20-7 Dibromofluoromethane (S) 94 % 80-136 12/17/09 12:16 1868-53-7 Toluene-d8 (S) 102 % 80-120 12/17/09 12:16 2037-26-5 4-Bromofluorobenzene (S) 99 % 72-122 12/17/09 12:16 460-00-4 1,2-Dichloroethane-d4 (S) 96 % 80-143 12/17/09 12:16 17060-07-0 **CALUFT MSV GRO** Analytical Method: CA LUFT TPH-Gasoline (C05-C12) ND mg/kg 0.25 1 12/17/09 12:16 4-Bromofluorobenzene (S)

99 %

Date: 12/23/2009 07:43 AM

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Page 10 of 17

12/17/09 12:16 460-00-4



72-122





Project:

I42611270 3255 McCarthy Rd.

Pace Project No.:

252654

QC Batch:

OEXT/1735

QC Batch Method:

EPA 3546

Analysis Method:

EPA 8015B

Associated Lab Samples:

252654001

Analysis Description:

EPA 8015B CA TPH

METHOD BLANK: 17270

TPH-DRO (C10-C24)

n-Octacosane (S)

o-Terphenyl (S)

Parameter

Matrix: Solid

Associated Lab Samples:

252654001

Units

mg/kg

%

%

Blank Result	Reporting Limit	Analyzed	Qualifiers
ND	6.0	12/16/09 17:09	1n
108	50-150	12/16/09 17:09	1n
103	50-150	12/16/09 17:09	1n

LABORATORY CONTROL SAMPLE: 17271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C24)	mg/kg	250	212	85	56-124	1n
n-Octacosane (S)	%			108	50-150	1n
o-Terphenyl (S)	%			95	50-150	1n

MATRIX SPIKE & MATRIX S	PIKE DUPLICA	TE: 17274			17275						
Parameter	Units	252653003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH-DRO (C10-C24) n-Octacosane (S) o-Terphenyl (S)	mg/kg % %	ND	231	248	191	201	82 105 93	80 104 92	56-124 50-150 50-150	1n	

Date: 12/23/2009 07:43 AM





Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

QC Batch:

MPRP/1382

Analysis Method:

EPA 6010

QC Batch Method:

EPA 3050

Analysis Description:

6010 MET

Associated Lab Samples:

Matrix: Solid

METHOD BLANK: 17287 Associated Lab Samples:

252654001

252654001

Blank

Parameter

Parameter

Units

Result

Reporting Limit

Analyzed

Qualifiers

Lead

mg/kg

ND

1.0 12/16/09 11:04

LABORATORY CONTROL SAMPLE:

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

Lead

Lead

mg/kg

mg/kg

25

22.6

90

80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

17289

Units

17290

24

MSD

MS

MS

MSD

% Rec

Parameter

252655001 Units

MS Result

10.4

Spike Spike Conc. Conc. 24.5

Result 33.2

33.9

MSD

Result

% Rec

% Rec

Limits 75-125

RPD Qual

Date: 12/23/2009 07:43 AM

REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

QC Batch:

MSV/1795

Analysis Method:

EPA 8260

QC Batch Method:

EPA 8260

Analysis Description:

Matrix: Solid

8260 MSV 5035A Volatile Organics

Associated Lab Samples:

METHOD BLANK: 17443 Associated Lab Samples:

252654001

252654001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	mg/kg	ND ND	0.0030	12/17/09 11:19	
1,2-Dichloroethane	mg/kg	ND	0.0030	12/17/09 11:19	
Benzene	mg/kg	ND	0.0030	12/17/09 11:19	
Diisopropyl ether	mg/kg	ND	0.0030	12/17/09 11:19	
Ethanol	mg/kg	ND	0.40	12/17/09 11:19	
Ethyl-tert-butyl ether	mg/kg	ŅD	0.0030	12/17/09 11:19	
Ethylbenzene	mg/kg	ND	0.0030	12/17/09 11:19	
Methyl-tert-butyl ether	mg/kg	ND	0.0030	12/17/09 11:19	
tert-Amylmethyl ether	mg/kg	ND	0.0030	12/17/09 11:19	
tert-Butyl Alcohol	mg/kg	ND	0.015	12/17/09 11:19	
Toluene	mg/kg	ND	0.0030	12/17/09 11:19	
Xylene (Total)	mg/kg	ND	0.0060	12/17/09 11:19	
1,2-Dichloroethane-d4 (S)	%	90	80-143	12/17/09 11:19	
4-Bromofluorobenzene (S)	%	99	72-122	12/17/09 11:19	
Dibromofluoromethane (S)	%	89	80-136	12/17/09 11:19	
Toluene-d8 (S)	%	103	80-120	12/17/09 11:19	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	mg/kg	.04	0.038	96	71-123	
1,2-Dichloroethane	mg/kg	.04	0.037	93	71-124	
Benzene	mg/kg	.04	0.043	107	68-124	
Diisopropyl ether	mg/kg	.04	0.040	100	20-160	• •
Ethanol	mg/kg	.8	0.72	90	60-140	
Ethyl-tert-butyl ether	mg/kg	.04	0.040	99	70-140	
Ethylbenzene	mg/kg	.04	0.040	101	63-131	
Methyl-tert-butyl ether	mg/kg	.04	0.037	93	68-139	
tert-Amylmethyl ether	mg/kg	.04	0.041	103	74-125	
tert-Butyl Alcohol	mg/kg	.2	0.18	88	49-122	
Toluene	mg/kg	.04	0.039	98	61-126	
Xylene (Total)	mg/kg	.12	0.13	105	68-129	
1,2-Dichloroethane-d4 (S)	%			93	80-143	
4-Bromofluorobenzene (S)	%			93	72-122	
Dibromofluoromethane (S)	%			101	80-136	
Toluene-d8 (S)	%			92	80-120	

Date: 12/23/2009 07:43 AM







Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

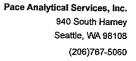
Parameter	Units	252653005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
,2-Dibromoethane (EDB)	mg/kg	ND	.04	.04	0.028	0.025	71	64	71-123	11 MO	
,2-Dichloroethane	mg/kg	ND	.04	.04	0.027	0.025	69	63	71-124	10 MO	
Benzene	mg/kg	ND	.04	.04	0.032	0.029	81	74	68-124	10	
Dilsopropyl ether	mg/kg	ND	.04	.04	0.031	0.028	78	71	20-160	9	
Ethanol	mg/kg	ND	.8	.8	0.69	0.66	86	83	60-140	5	
thyl-tert-butyl ether	mg/kg	ND	.04	.04	0.030	0.027	76	69	70-140	10 MO	
thylbenzene	mg/kg	ND	.04	.04	0.027	0.023	67	57	63-131	16 MO	
fethyl-tert-butyl ether	mg/kg	0.022	.04	.04	0.041	0.039	49	44	68-139	5 M0	
ert-Amylmethyl ether	mg/kg	ND	.04	.04	0.032	0.029	79	72	74-125	9 M0	
ert-Butyl Alcohol	mg/kg	0.032	.2	.2	0.16	0.16	63	66	49-122	4	
oluene	mg/kg	ND	.04	.04	0.029	0.026	71	64	61-126	11	
(ylene (Total)	mg/kg	ND	.12	.12	0.081	0.069	68	58	68-129	16 MO	
,2-Dichloroethane-d4 (S)	%						93	93	80-143		
-Bromofluorobenzene (S)	%						98	101	72-122		
Dibromofluoromethane (S)	%						100	98	80-136		
oluene-d8 (S)	%	•					96	97	80-120		

Date: 12/23/2009 07:43 AM

REPORT OF LABORATORY ANALYSIS

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Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

QC Batch Method:

252654

QC Batch:

MSV/1802

CALUFT

Analysis Method:

CALUFT

Analysis Description:

CALUFT MSV GRO

METHOD BLANK: 17687

Matrix: Solid

Associated Lab Samples:

Associated Lab Samples:

252654001

252654001

Blank Result

Reporting Limit

Analyzed

Qualifiers

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S)

Units mg/kg %

ND 99

0.25 12/17/09 11:19 72-122 12/17/09 11:19

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

17688

Spike Conc.

LCS Result

LCS % Rec

% Rec Limits

72-122

Qualifiers

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S)

%

Units mg/kg .5

0.44

88 104 60-140

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

17689

MSD

17690 MS

MSD

MS

% Rec Limits

RPD Qual

TPH-Gasoline (C05-C12) 4-Bromofluorobenzene (S)

Parameter

%

Units mg/kg

252653005 Spike Result Conc. ND .2

MS

Spike Conc. .2

Result Result .18J .2J

% Rec

% Rec 68 75 106 107

MSD

60-140 72-122







QUALIFIERS

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

252654

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-S

Pace Analytical Services - Seattle

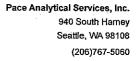
ANALYTE QUALIFIERS

1n Result was obtained from silica gel treated extract.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Date: 12/23/2009 07:43 AM







QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:

142611270 3255 McCarthy Rd.

Pace Project No.:

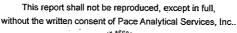
252654

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
252654001	COMP-ABCD_20091211	EPA 3546	OEXT/1735	EPA 8015B	GCSV/1382
252654001	COMP-ABCD_20091211	EPA 3050	MPRP/1382	EPA 6010	ICP/1303
252654001	COMP-ABCD_20091211	EPA 8260	MSV/1795		
252654001	COMP-ABCD_20091211	CALUFT	MSV/1802		

Date: 12/23/2009 07:43 AM

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section B				•			S	ectio	n C																	
	ent Information:	Required P	_						_	Invoice Information:										L	age:	1	Of	E :				
Company:	Delta Consultants	Report To:			2deltae					Attention: Tony Perini																		
Address:	312 Piercy Rd	Copy To:				env.com,				Company Name: Delta Consultants Address: 312 Piercy Rd, San Jose, CA 95138					hilleaves	2011	zeże zin	KIND COMPANY	estima (1911	Online references	A lith code of sures as	t my t'n dipti debataan ka	i a y trans a gabia a las as l					
San Jose, Email To:	CA 95138	jdumas@					- 01.7	1 17 /						у Ко	i, San	Jose	CA 9	5136	3	BORRE	MH (48)	REED HE	HARRISM	Reg	natonyu	lgency !!!.	MANUAL PROPERTY.	
Phone:	tperini@deltaenv.com 408.826.1867 Fax:	Purchase O Client Project		1400	1425112	270325	> /UCC	arthy k	2 P			Referer		Б-		34- h 4-				2000.0950	en en en	a e Maile de la	Las biedickess	responsation	torecture research	Name Village Co. Street	THE PROPERTY OF THE PARTY OF TH	da b ke watu û dilî rê û r
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	(A-Z, 0-9 /, -) Air Other	WP AR OT	MATRIX CODE	SAMPLETYPE]		· I	嘉十 名	Indian # OF CONTAINERS	3			_		Other Rit Analyses Test	LE BB	8260B - TPHG/BTEX/MIBE				5	8260B - TPHg / BTEX / 8 Oxygenates	11_	Residual Chlorine (Y/N)	05	2651	LJ .
娄	Sample ids must be unique Tissue	TS	×	ᇤᅵ					9 5	5 8	į 4	_	1_	Ιğ	Ē	ie.	T-ieg	-			[일]	<u> </u>	nate a	l g		123	400	į.
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SIGNATURE of SAMPLER:					₹:	1. 1	9	7.		20			DA.	TE Sig	gned;	i i	2 -	4/ ·-	0	P	EM	9 9	Sa last	¥ €				
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Sample Condition Upon Receipt

		_	
Face Analytical Client Name	: Delta Con	Suitants	Project # <u>2521e54</u>
			Optional 32
Courier: 4 Fed Ex UPS USPS Clien	nt Commercial	Pace Other	Profe Due Date
Tracking #: 8531 2801 9801			Prof. Name: Size - 2 324
Custody Seal on Cooler/Box Present:	no Seals	intact:	no E. Parista L. L. Landerson (San)
Packing Material: Bubble Wrap Bubble	Dags Le	Other	The sample has barries
Thermometer Used Horiba 132013	Type of Ice: Wei		Samples on ice, cooling process has begun Date and Initials of person examining
Cooler Temperature 1.9	Biological Tissue	is Frozen: Yes No	contents: 12/12/04 /12
Temp should be above freezing to 6°C	<u> </u>	Comments:	
Chain of Cuslody Present:	AYES DNO DNA	1.	
Chain of Custody Filled Out:	-EYes ONO ON/A	2	
Chain of Custody Relinquished: 12 শাপ	- DYES, DINO DINA	3.	
Sampler Name & Signature on COC:	Pres ONO ONIA	7	
Samples Arrived within Hold Time:	Hyes ONo ON/A	Τ"	
Short Hold Time Analysis (<72hr):	DYS AND ONIA	6.	
Rush Turn Around Time Requested:	DYES AND DWA	7.	
Sufficient Volume:	.EYes □No □N/A	В.	ened in Steenes - composited
Correct Containers Used:	_□Yes □No □N/A	19. Samples reci	Bozgars 12/14/149 AR
-Pace Containers Used:	□Yes □NA □NA	and transition is	20.290.
Containers Intact:	₽Yes □No □N/A	10.	
Fillered volume received for Dissolved tests	OYES ONO DINA	11.	
Sample Labels match COC:	_DYES □NO □N/A	12.	•
includes date/time/ID/Analysis Matrix:	soil		-
All containers needing preservation have been checked.	Dyes Ono DINA	13.	
All containers needing preservation are found to be in	□Yes □No ØÑ/A		·
compliance with EPA recommendation.	_	Initial when	Lot # of added
exceptions: VQA coliform, TDC, O&G, WHDRO (water)	ZYes ONo	completed	preservative
Samples checked for dechlorination:	DYES ONO DAIA		
Headspace in VOA Vials (>6mm):	DYes DNo 201/A	i i	
Trip Blank Present:	OYOS ONO ONA	1	
Trip Blank Custody Seals Present	Oyes Ono Data	1	
Pace Trip Blank Lot # (if purchased):		<u> </u>	
Client Notification/ Resolution:			Field Data Required? Y / N
Person Contacted:	Date	Time:	
Comments/ Resolution:			•
	<u> </u>		
Project Manager Review:			Date:
F 10:55t manager (************************************			

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (I.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Attachment E

Blaine Tech Soil Gas Sampling Field Logs

Project Name	: 2611270	Alameda s	2011 GAS S	AMPLE			· · · · · · · · · · · · · · · · · · ·	7
Project Numb	ier: 76 ロクフご)						1
Date: 1/8/1				·				7
Sampled By:	JIPARKER			Signature:	₩ <u>></u>]
Well ID: SV	-1 _		1) Sample	ID: SAL1		 -	·	_
Field Duplicat				ie ID: N/A				\dashv
Sample Depth	Interval: 5'		······································					1
Weather: ov∈	RIAT							_ _
Barometric Pr	essure: 30.1	5						
Relative Press	sure: - 0.07		-			· · · · · · · · · · · · · · · · · · ·	 -	-
Purge Device:		Landtec GE	M 2000					-
Calculated Pu	rge Volume: 🚨	100 ml	42 ce	(ME) X	3 = 12	6 ca (me)	we
Purge Rate:		300 ml/min						7
Calculated Pu	rge Time: : 2	5						7
18 F 8 F 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		7						- Marie
Well Purging	1 000		,				·	_
Elapsed Time	Volume	Methane	Carbon	Oxygen %	Balance Gas		Hydrogen	1
(sec)	Purged (ml)	(CH₄)	Dioxide	(O ₂)	(N ₂)	% LEL	Sulfide	
			(CO ₂)		1			
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:27	\$100 126	0	4.2	13.9	છી. જ	0	0	_
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Sample Collect	tion							
. [Analog		Start		End Canister	Total	1
Summa	Flow	Vacuum	Start Time	Canister	End Time	Vacuum (In-	Collection	
Canister ID	Controller ID	Gauge ID	Contine	Vacuum (In-	Trio Time	Hg)	Time	
				Hg)		119)	(minutes)	ه
1) 0663	AI3	N/A	1024	- 23	1103	-4	39	Sec
2)				L				j
Summa Caniste	or Volume:	6 Liters						
Flow Control O		100 ml/min						
Tubing:	 		meter Teflon					
			motor Tonerr		I			
Notes:								•
STATIC: -0:07	BELATIVE PE	Ermes			# NATION AN	BIGUT GAVGE R	MONE : +3 WI	h
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100 mL/mIN								
FLOW CONTR	or orifice	soluy u	sed for	SAMPLING	<u> </u>			
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Project Name:	261270 A	iameda 8	oil gas s	AMPLE			
Project Number							
Date: 1 8 10	)				<i>p</i>		
Sampled By:	J. PARKER			Signature:	#		
Well ID: Sv-			1) Sample I				
Field Duplicate	9? Y (N̄)		2) Duplicate	: ID: N/A			
Sample Depth	Interval: 5						
	GRC DST						
Barometric Pre							
Relative Press	ure: -0.06						
Purge Device:		Landtec GEI	M 2000	·			
Calculated Pur	rge Volume:	<del>900 cc</del>	42 cc	(mL) X	3 = 12	6 cc (mi	( ) ( ( ) ( ) ( ) ( ) ( ) ( ) ( )
Purge Rate:	<del></del>	300 ml/min		<del></del>			
Calculated Pur	rge Time: 2	5 sec					
oction and a second	3						<del></del>
Well Purging					· ·		· · · · · · · · · · · · · · · · · · ·
	mo	N. A	Carbon	Overgon 9/	Balance Gas		Lludrogon
Elapsed Time (sec)	Volume Purged (ml)	Methane (CH₄)	Dioxide (CO ₂ )	Oxygen % (O ₂ )	(N ₂ )	% LEL	Hydrogen Sulfide
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27	900 126	40.1	7.8	0.0	34.0	100	0
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Sample Collec	tion		·				
				Start		End Canister	Total
Summa	Flow	Analog		Canister			Collection
Canister ID	1	Vacuum	Start Time	Vacuum (In-	End Time	Vacuum (In-	Tîme
Canada 15	00110101101	Gauge ID		Hg)		Hg)	(minutes)
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1) 1266	-70	NYA	0-130	- ce	90 00		30
(2)			<u> </u>	L		L	<u> </u>
Summa Canist	er Volume:	6 Liters				<b>}</b>	
Flow Control C		100 ml/min					
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Signature:  Well ID: SW-3  Tipled Dupficate? Y (N)  2) Duplicate ID: SW-3  Field Dupficate? Y (N)  2) Duplicate ID: Sw-3  Sample Depth Interval: SI  Weather: OWECAST  Barometric Pressure: 20.14  Relative Pressure: -0.DL  Purge Device: Landiac GEM 2000  Calculated Purge Volume: 47	Project Numb	er: 2611270						<del></del>
Well ID: SV-3 1) Sample ID: SV-3 Field Duplicate? Y (N) 2) Duplicate ID: —  Sample Depth Interval: 5 '  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'  Weather: ONECAS'						d		
Well ID: SV-3 1) Sample ID: SV-3 Sample Depth Interval: 5  Well Purge Device: Landiec GEM 2000 Calculated Purge Volume: 400-14 Calculated Purge Volume: 300 ml/min Calculated Purge Time: 1/25  Well Purging  Elapsed Time (SEC) 9  O:00 0	Sampled By: J. PARKER Signature: Signature:							
Field Duplicate? Y (N) 2) Duplicate ID: —  Sample Depth Interval: S  Weather: OUPERAGE Barometric Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 30.1L Relative Pressure: 40.1L Relative Pressure: 30.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relative Pressure: 40.1L Relativ	tor 10 100 0					7		
Sample Depth Interval: S  Weather: OUDECAS Barometric Pressure: 30.14 Relative Pressure: -O.OL Purge Device: Landtec GEM 2000 Calculated Purge Volume: 90-4- 42 cc(mt) x3 = /26 cc (mt) Purge Rate: 300 ml/min Calculated Purge Time: 1/25  Well Purging Elapsed Time (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₂ ) (O ₂ ) (N ₂ ) % LEL Hydrogen Sulfide (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₂ ) (O ₂ ) (O ₂ ) (O ₃ ) % LEL Hydrogen Sulfide (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (Sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (Sec) Purged (ml) (CH ₄ ) Dioxide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (N ₂ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) % LEL Hydrogen Sulfide (CC ₂ ) (O ₃ ) % LEL Hydrogen Sulfid								
Weather: OUSECAST Barometric Pressure: 20.14 Relative Pressure: -0.06 Purge Device:  Calculated Purge Volume: -0.06 Purge Rate: -0.00				2) Duplicat	te ID: —			
Relative Pressure: 30.14	sample Depth	Interval: 5'		<del></del>				
Barometric Pressure: 30.14 Relative Pressure: -0.00 Purge Device: Landiec GEM 2000 Calculated Purge Volume: 90.44	Mostbor O. A	FD CAST						
Relative Pressure: - O.DL								
Purge Device: Landtec GEM 2000 Calculated Purge Volume: 9664 47 cc (mt) x3 = 126 cc (mt) Purge Rate: 300 ml/min Calculated Purge Time: 18 300 ml/min Calculated Purge Time: 18 Cec) Purged (ml) (CH ₄ ) Carbon Dioxide (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CH ₄ ) Dioxide (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) % LEL Hydrogen (CO ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ ) (N ₂ )								·
Calculated Purge Volume: 300 ml/min  Calculated Purge Time: 300 ml/min  Calculated Purge Time: 125  Well Purging  Elapsed Time (sec) Purged (ml) (CH ₄ ) (CO ₂ ) (M ₂ ) (M ₂ ) (M ₂ ) (LEL Hydrogen Sulfide  Co.00 0			Landton GE	M 2000		· · · · · · · · · · · · · · · · · · ·	·	
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Elapsed Time (sec)   Purged (ml)   Methane (cH ₄ )   Dioxide (cO ₂ )   Oxygen %   Balance Gas (N ₂ )   % LEL   Hydrogen Sulfide (CO ₂ )   Oxygen %   CO ₂   Methane (CH ₄ )   Methane (CH ₄ )   Dioxide (CO ₂ )   Oxygen %   Balance Gas (N ₂ )   % LEL   Hydrogen Sulfide (CO ₂ )   Methane (CH ₄ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Methane (CO ₂ )   Me		rge Time: :2°	5					
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0:00   0	(Sec)	Purgea (mi)	(CH ₄ )	1	(O ₂ )	(N ₂ )	/0 LLL	Sulfide
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### Analog Vacuum Gauge ID  Outble 157  ### Outble 157  ### Outble 157  ### Outble 157  ### Outble 157  #### Outble 157  #### Outble 157  #### Outble 157  #### Outble 157  #### Outble 157  #### Outble 157  ###################################	:09	-302 47	D	3.1			<del> </del>	
ample Collection  Summa Canister ID Controller ID Gauge ID Oql4 -30 1005 -5 50  Lumma Canister Volume: 6 Liters  ow Control Orifice: 100 ml/min-  shing: 0.25-inch diameter Teflon  11.1 79.5 0 0  Start Time Vacuum (In- Hg)	. 18							
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umma Canister Volume: 6 Liters low Control Orifice: 100-ml/min- ubing: 0.25-inch diameter Teflon  otes:  STATIC! One DELIMOE PRESS NO LEAKS, NO MOISTURE	0486	159	:1/4	001/				
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Ow Control Orifice: 100-ml/min- ubing: 0.25-inch diameter Teflon  otes:  TATIC! OD6 RELITIVE PRESS  NO LEAKS, NO MOISTURE				<u> </u>	<u> </u>		<del></del>	
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Project Numb	er: 06/1/10				~		
Date: 1/8/10	· · · · · · · · · · · · · · · · · · ·						
Sampled By:	J. PARKER			Signature:	<b>*</b>		
Well ID: SV- ป		<del></del>	1) Sample	1D: SV-1			
Field Duplicat	te? Y (N)	<u> </u>		te ID: N/A			
Sample Depth		· · · · · · · · · · · · · · · · · · ·	a) Dupitoa	e ID. N/A	<del> </del>	<del></del>	
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ourge Device:		10-4 05	24.0000			· · · · · · · · · · · · · · · · · · ·	
Calculated Pu		Landtec GE		3 1	-		
Purge Rate:	rge adicine.	200	42 ce (	inc) x	3 = 126	ice (ml)	
Calculated Pu	rge Time: 32	300 ml/min	<u></u>				
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Vell Purging	<del></del>	<u> </u>	<del></del>	<b></b>			
Elapsed Time	Volume Volume	Methane	Carbon	Oxygen %	Balance Gas		1.1
(sec)	Purged (ml)	(CH ₄ )	Dioxide	(O ₂ )	(N ₂ )	% LEL	Hydrogen
	l argua (riii)	(0114)	(CO ₂ )	(02)	(142)	<u> </u>	Sulfide
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Canister ID	Controller ID	Vacuum	Start Time	Vacuum (In-	End Time	Vacuum (In-	Collection
		Gauge ID		Hg)	-	Hg)	Time
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Project Name Project Numb	: 2611270	ALAMEDA	SOIL GAS	SAMPLE				<u></u>	
Date: 1/8/0	161. 2611270	<del></del>			<del></del>				
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Sampled By: J.PARKER Signature:									
Well ID: SV-S 1) Sample ID: SV-S									
Field Duplicat									
Field Duplicate? Y (N) 2) Duplicate ID: $N/A$   Sample Depth Interval: $S^{7}$									
Campie Depti	Willerval. 5								
Weather: out	ERLAST							٦	
Barometric Pr	essure: 30 i	5						┪	
Relative Pressure: 0.07									
Purge Device: Landtec GEM 2000									
Calculated Pu	rae Volume: 4		42 cc (	inc) x3	2 10 6	1:1			
Purge Rate:	- g	300 ml/min		int / K3	- 120	cc (int)		ing	
Calculated Pu	rge Time: :2/	5					·	-	
	<u> </u>								
Well Purging		]							
	ins		Carbon			<u> </u>		٦	
Elapsed Time	Volume	Methane	Dioxide	Oxygen %	Balance Gas	% LEL	Hydrogen		
(sec)	Purged (ml)	(CH₄)	(CO ₂ )	(O ₂ )	$(N_2)$	70 LEL	Sulfide		
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Sample Collect	ion	<del>-</del>							
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Canister ID	Controller ID	Vacuum	Start Time	Vacuum (In-	End Time	Vacuum (In-	Time	.]	
İ	1	Gauge ID		Hg)		Hg)	(minutes)		
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2)			10-03	- 12 -1	11-0	<del></del>		Cura	
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Summa Caniste	er Volume:	6 Liters							
Flow Control O	rifice:	100 ml/min							
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