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August 30, 2007

Mr. Don Hwang
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Connell Automobile Dealership – Well Installation Report**
3093 Broadway
Oakland, California

Dear Mr. Hwang:

The Hill Family Trust & Linden Broadway Property Trust (Trusts) have retained Pangea Environmental Services, Inc. (Pangea) to provide environmental consulting services for corrective action at the site referenced above. Pangea is submitting the attached report on behalf of the Trusts.

I, Paul Kibel of Fitzgerald Abbot & Beardsley, am a legal representative of the Trusts. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report is true and correct to the best of my knowledge.

Sincerely,

FITZGERALD ABBOTT & BEARDSLEY LLP

Paul S. Kibel

August 30, 2007

VIA ALAMEDA COUNTY FTP SITE

Donna Drogos
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Well Installation Report**
Connell Automobile Dealership
3093 Broadway
Oakland, California
ACEH Case No. 469

Dear Ms. Drogos:

On behalf of the Hill Family Trust and Linden Broadway Trust, Pangea Environmental Services, Inc., has prepared this *Well Installation Report* for the subject site. This report describes the installation of two groundwater monitoring wells and fifteen remediation wells for implementation of the approved interim remedial action plan.

The report will be uploaded to the Alameda County ftp site and the State Water Resources Control Board (SWRCB) *Geotracker* database. As requested, Pangea will not submit a hard copy of this report to the Alameda County Environmental Health (ACEH).

If you have any questions or comments, please call me at (510) 435-8664 or email briddell@pangeaenv.com.

Sincerely,
Pangea Environmental Services, Inc.

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Well Installation Report*

cc: Mr. George Hill, 305 Sheridan Avenue, Piedmont, California 94611
Mr. Gordon Linden, 150 La Salle Avenue, Piedmont, California 94611
Mr. Paul Kibel, Fitzgerald, Abbott & Beardsley, LLP, 1221 Broadway, 21st Floor, Oakland, California 94612
SWRCB Geotracker (electronic copy)

WELL INSTALLATION REPORT

Connell Automobile Dealership
3093 Broadway
Oakland, California
ACEH Case No. 469

August 30, 2007

Prepared for:

Hill Family Trust
c/o Mr. George Hill
305 Sheridan Avenue
Piedmont, California 94611

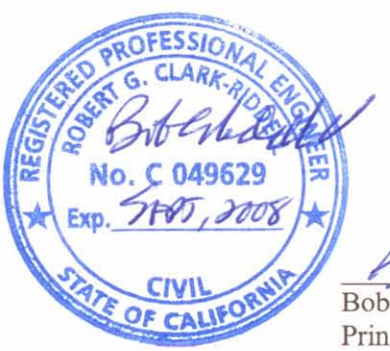
and

Linden Broadway Trust
c/o Mr. Gordon Linden
150 La Salle Avenue
Piedmont, California 94611

Prepared by:

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, California 94612

Written by:



David S. Diamond, Ph.D., C.Hg.
Senior Hydrogeologist

Bob Clark-Riddell, P.E.
Principal Engineer

WELL INSTALLATION REPORT
3093 Broadway
Oakland, California
ACEH Case No. 469

August 28, 2007

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1.0 INTRODUCTION

On behalf of the Hill Family Trust and Linden Broadway Trust, Pangea Environmental Services, Inc. (Pangea) has prepared this *Well Installation Report* (report) for the subject site. The well installation scope of work was outlined in Pangea's *Interim Remedial Action Plan* (IRAP) dated November 11, 2004, and IRAP *Addendums* dated December 6, 2005 and January 9, 2006. This work was requested and approved by ACEH in a letter dated March 17, 2006 (Appendix A). Several modifications to the approved scope were made based on field observations, and were detailed in e-mails sent to the ACEH during the fieldwork (Appendix A). The final scope consisted of the installation of two monitoring wells (MW-16A and MW-16B) to monitor the extent of groundwater contamination during site remediation, and fifteen remediation wells (AS-1A, AS-1B, AS-2A, AS-3A, AS-3B, AS-4A, RW-1, RW-2, RW-3A, RW-3B, RW-4, RW-5, MW-17A, MW-17B and VE-1) to implement air sparging (AS) and dual phase extraction (DPE).

2.0 SITE BACKGROUND

2.1 Site Description

The site is located on the east side of "Pill Hill" south of Hawthorne Avenue, between Broadway and Webster Street (Figure 1). The northern portion of the site is occupied by a one-story slab-on-grade building that houses the auto repair shop, offices and showrooms of the Connell automobile dealership, while the southern portion of the site is occupied by parking lots. Asphalt and concrete-paved access ways extend along the west and south sides of the structure. Sidewalks border the north and east sides of the site.

The site was developed by cutting into the eastern flank of a low hill referred to locally as "Pill Hill". The ground surface elevation ranges from approximately 80 to 100 feet above mean sea level (msl) and slopes southeastwards towards the base of "Pill Hill" at Broadway. Southeast of Broadway, the ground surface slopes down towards Glen Echo Creek, a southward flowing stream that empties into Lake Merritt. Three underground storage tanks (USTs) that previously contained gasoline, diesel, and waste oil were removed from the upper (northwest) portion of the site in December 1989, and are the reported source of soil and groundwater contamination at the site.

The site is underlain by soils composed of sand, silt, clay and gravel that were deposited in alluvial and fluvial environments. According to previous reports, analysis of subsurface profiles provides little correlation between soil horizons encountered within the various borings and CPT probes, which is typical of the heterogeneous and laterally discontinuous strata deposited in alluvial/fluvial environment. Groundwater typically lies approximately 15 to 30 feet below ground surface (bgs).

2.2 Summary of Previous Environmental Work

Three underground storage tanks (USTs), containing gasoline, diesel and waste oil, were formerly located beneath the sidewalk adjacent to the northern property boundary, as shown on Figure 2. Previous environmental activities associated with the USTS are summarized below.

In 1989 the USTs were removed, soil samples were collected, and the UST cavity was backfilled with clean, imported fill material.

In December 1990, a preliminary site assessment was conducted by Subsurface Consultants, Inc. (SCI), which included the completion of five soil borings (B-1 through B-5) and the installation of monitoring well MW-1 in boring B-5. The soil sample containing the highest hydrocarbon concentrations was collected from 30.5 feet bgs in boring B-5.

In 1989 and 1990, groundwater samples were analyzed from offsite wells LF2, LF3 and LF4 installed by Levine Fricke close to the northern site boundary. Samples collected from the wells in October 1990 indicated that relatively little groundwater contamination was present, since only 10 ug/L of benzene was detected in LF2, and no benzene, toluene, ethylbenzene, and only trace levels of xylenes were detected in wells LF3 and LF4.

In June 1991, SCI performed an additional site assessment consisting of the installation of groundwater monitoring wells MW-2 through MW-7.

In 1991, manual removal of separate phase hydrocarbons (SPH, also known as free product) from site monitoring wells was initiated, and continued until the first quarter of 2007.

In October 1992, SCI conducted CPT testing at seventeen (17) locations onsite and offsite, and installed wells MW-8 through MW-13. Wells MW-8 and MW-10 are six-inch diameter groundwater monitoring/extraction wells, with MW-10 located within the plume and well MW-8 located near the approximate downgradient edge of the site.

Between October 1996 and March 1998, operation of a soil vapor extraction (SVE) remediation system on well MW-6 removed approximately 1,421 lbs of hydrocarbons. SVE was discontinued when the groundwater elevation rose and contaminant removal rates decreased.

In May 1998, SCI completed seven borings (SB-A through SB-G) and converted boring SB-D into monitoring well MW-14 and boring SB-E into well MW-15.

After several meetings with the ACHCSA, RWQCB- SFBR, City of Oakland, and representatives of the site owners in 1998, a risk-based approach for site management and closure was conditionally approved, according to SCI's *Workplan for Expanded CAP Preparation* dated April 15, 1999. After months of correspondence with ACEH and the California UST Cleanup Fund, the risk-based approach was deemed inappropriate. In May 2000, Cambria Environmental Technology, Inc (Cambria) submitted a workplan addendum for additional risk assessment and feasibility testing of active remediation.

In 2000, a potential receptor and preferential pathway survey were conducted by Cambria. The potential receptor and preferential pathway survey included a well survey, conduit study, and a review of surface water and historical geological/hydrogeological maps for the vicinity, and did not identify any significant receptors or pathways of concern.

During September 2000, Cambria conducted feasibility testing of dual-phase extraction (DPE) from select site wells. The feasibility testing indicated that DPE was effective for removing hydrocarbons at the site. Cambria made several inquiries to the ACEH regarding a site corrective action plan, and in June 2004, the ACEH issued a request for an Interim Remediation Work Plan (IRAP).

In November 2004, Pangea submitted an IRAP proposing DPE with air sparging (AS) as the appropriate remedial approach for the site. Additionally, two IRAP addendums, dated December 6, 2005 and January 9, 2006, were prepared at the request of the ACEH. The IRAP with addendums was approved March 17, 2006. Implementation of the IRAP was delayed due to negotiation of a new lease with the tenants and significant remediation planning to minimize disruption to the tenants.

3.0 WELL INSTALLATION ACTIVITIES

To facilitate implementation of the approved IRAP, fifteen remediation wells and two monitoring wells were installed at the site during several mobilizations, from February 27 through April 4, 2007, as described below. To help optimize site characterization and site remediation, the final locations and screen intervals were selected dynamically based on field observations and laboratory analytical results. Well locations are shown on Figure 3.

Dual-Phase Extraction Wells: Seven new dual-phase extraction (DPE) wells (RW-1, RW-2, RW-3A, RW-3B, RW-4, RW-5 and VE-1) were installed at the site. These wells (in conjunction with conversion of existing monitoring wells MW-1, MW-6, MW-10, MW-14 and MW-15 to DPE wells) constitute the DPE well network for the site. The original scope in the IRAP and addendums included drilling of new remediation wells RW-1, RW-2, RW-3 and VE-1. During the installation of well RW-3 significant hydrocarbon impact was observed in shallow soil. RW-3 was then renamed as RW-3B and screened from 32 to 37 feet. To target elevated contaminant levels encountered from 16 to 28 feet bgs in the RW-3 boring, well

RW-3A (not in the original scope of work) was installed based on field observations and analytical results. Well VE-1 was originally proposed as a shallow soil vapor extraction well, but field observations indicated that elevated petroleum hydrocarbons were present in samples collected as deep as 35 feet bgs in a direct-push boring advanced at the VE-1 well location prior to well installation. Based on these observations, VE-1 was installed as a DPE well screened in both the vadose zone and saturated zone. Based on the significant impact observed during drilling of well VE-1 and other new wells at the upper portion of the site, Pangea completed two borings west and southwest of well MW-1 to characterize the upgradient lateral extent of contamination. Based on the elevated petroleum hydrocarbon concentrations detected in these direct-push borings, DPE wells RW-4 and RW-5 were added to the west and southwest of well MW-1.

Air Sparging Wells: Eight new air sparging wells (AS-1A, AS-1B, AS-2A, AS-3A, AS-3B, AS-4A, MW-17A and MW-17B) were installed at the site. These wells constitute the air sparging well network for the site. The original scope included wells AS-1A, AS-1B, AS-2A, AS-2B, AS-3A, AS-3B, AS-4A and AS-4B. However, the direct-push borings at both the AS-2B and AS-4B locations indicated that proposed screened intervals for these wells coincided with thick clay sections that would likely render air sparging ineffective, so these two wells were not installed. In addition, proposed monitoring wells MW-17A and MW-17B (screened from 27 to 30 feet and 35 to 40 feet bgs, respectively) were installed as air sparge wells because evidence of SPH was observed at a depth of 28 feet bgs in the direct-push boring for the MW-17 well locations. These wells were also installed as a replacement for AS-2B.

Monitoring Wells: Two new groundwater monitoring wells (MW-16A and MW-16B) were installed downgradient from the northern portion of the air sparging/DPE well network. Planned monitoring wells MW-17A and MW-17B were installed as air sparge wells as described above.

Well installation and sampling procedures are described below.

3.1 Pre-Drilling Activities

Prior to initiation of drilling activities, a comprehensive Site Safety Plan (SSP) was prepared to protect site workers and the plan was kept onsite during all field activities. Well installation permits were obtained from the Alameda County Public Works Agency (ACPWA). Copies of the permits are presented in Appendix B. The proposed drilling locations were marked and Underground Service Alert (USA) was notified at least 72 hours before the proposed field activities. The boring locations were also cleared by a private line locating contractor. Prior to drilling, concrete coring was performed for installation of wells AS-1A, AS-1B, AS-2A, MW-16A, MW-16B, MW-17A, MW-17B, RW-1, RW-4, RW-5 and VE-1.

3.2 Drilling Procedures

All monitoring wells were installed in accordance with the procedures described in Pangea's IRAP, dated November 11, 2004 and IRAP Addendums dated December 6, 2005 and January 9, 2006. Select well locations were hand-augered to 4 ft bgs to help identify subsurface utilities. Pangea retained RSI Drilling, Inc. (RSI) of Woodland, California, to install the wells. Well installation activities in the auto repair shop were conducted on Sundays from 7 am to 5 pm when no customers or workers were present to minimize disruption to the tenants and to maximize the efficiency of the drillers. Each well location was continuously cored and logged using direct-push drilling methods to expedite soil logging and assess appropriate screened intervals, with the exception of shallower wells with an "A" suffix which were constructed based on the logs of the adjacent deeper "B" zone wells. After reaching the total depth or direct-push refusal, each boring was reamed using the appropriately sized hollow-stem auger to facilitate installation of the well. Soil characteristics such as color, texture, and relative water content were logged in the field using the USCS classification system and entered onto field boring logs. Field screening of soil samples for hydrocarbons and volatile organic compounds included visual and olfactory observations and photo-ionization detector (PID) readings. Boring logs are included in Appendix C. Undisturbed soil samples were collected for laboratory analysis in acetate liners, and capped with Teflon tape and plastic end caps. All samples were shipped under chain of custody to McCampbell Analytical, Inc., a California-certified laboratory. The investigation-derived waste (generated during drilling and subsequent well development) was temporarily stored onsite in DOT approved 55-gallon drums pending analysis. The drilling was observed in the field by Pangea hydrologist Bryce Taylor and supervised by Bob Clark-Riddell, a California-registered civil Professional Engineer (P.E.).

3.3 Soil Sampling

Selected soil samples collected from the capillary fringe and saturated zone were submitted for analysis to help assess the vertical distribution contaminants. Soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015C; TPHd by EPA Method 8015C; and benzene, toluene, ethylbenzene, and toluene (BTEX) and methyl tert-butyl ether (MTBE) by EPA method 8021B.

Soil analytical results are summarized on Table 1. The laboratory analytical report is included in Appendix D. Soil logging and sampling procedures are presented in Pangea's Standard Operating Procedures for Soil Borings in Appendix E.

3.4 Well Construction

Following reaming of the direct-push borings with hollow-stem augers, each of the wells was constructed using either 2- or 4-inch diameter, 0.010-inch slotted and blank PVC casing. Traffic-rated vaults and locking well caps were installed at each wellhead. Well construction diagrams are presented in Appendix C.

3.5 Well Development & Sampling

Pangea retained Blaine Tech Services, Inc. (Blaine) of San Jose, California to develop the wells by surge block agitation and evacuation on April 11, 12 and 16, 2007. Groundwater evacuation continued until turbidity was reduced to below 100 Nephelometric Turbidity Units (NTUs), the well dewatered, or 10 casing volumes had been removed. Wells AS-1B, AS-4A, MW-16B, RW-1, RW-3B, RW-4, RW-5 and VE-1 dewatered during development, while wells AS-1A, AS-2A, AS-3A, AS-3B, MW-16A, MW-17A, MW-17B, RW-2 and RW-3A were purged until 10 casing volumes of groundwater were removed. To help control costs and to establish baseline conditions prior to remediation, groundwater samples were collected for analysis from all remediation wells immediately after development. Previously existing monitoring wells and new monitoring wells MW-16A and MW-16B were also purged and sampled during routine quarterly monitoring from May 29 to June 1, 2007. Analytical results from the new monitoring wells will be included in Pangea's *Groundwater Monitoring Report – Second Quarter 2007.* Well development field data sheets are presented in Appendix F. Additional well installation and development procedures are presented in Pangea's Standard Operating Procedures for Monitoring Wells in Appendix E.

4.0 WELL INSTALLATION RESULTS

The following discussion of site geology, hydrogeology and sampling results is based on both prior investigations and data collected during the site assessment activities described above. The findings of the investigations are presented on a plan view map showing the estimated extent of elevated TPHg and benzene concentrations (Figure 4), and on cross section A-A' (Figure 5). Soil and groundwater analytical data are summarized on Tables 1 and 2, respectively. The laboratory analytical reports for samples collected during the investigation are included in Appendix D. The laboratory analytical reports for groundwater samples collected during routine quarterly monitoring are included in Pangea's *Groundwater Monitoring Report – Second Quarter 2007* for the site.

4.1 Geology and Hydrogeology

Subsurface soil encountered during drilling generally consisted of an upper relatively impermeable silty clay or clayey silt unit underlain by a moderately to highly permeable, coarser grained unit consisting of sandy/gravelly clay and clayey/gravelly/silty sand and gravel with thin, laterally discontinuous silty clay

interbeds. Throughout much of the site, the deeper sand and gravel unit is present from approximately 25 to 35 ft bgs, although in some areas no sand and gravel was encountered, and silty clay was observed to the total depth of the soil borings. The deeper extraction wells (MW-1, RW-3B, RW-4 and RW-5) and all of the injection wells (AS-1A through AS-4A and MW-17A/17B) are screened in the sand and gravel unit. The shallowest extraction wells (MW-14, MW-15, RW-1, RW-2, RW-3A and VE-1) are partially screened within the low permeability clay and silt unit.

Historically, the depth to groundwater in site monitoring wells has ranged from approximately 15 to 34 ft bgs. During drilling of wells and borings, groundwater was first encountered at depths of approximately 24 to 31 ft bgs in the upper portion of the site and 18 to 24 ft bgs in the lower portion of the site during well installation activities, but measured depths to groundwater were up to 4 feet higher during well development (Figure 5). These observations suggest that site groundwater is under confined to semiconfined conditions.

4.2 Groundwater Flow Direction and Gradient

Depth-to-water measurements collected during prior monitoring events indicate that the groundwater flow direction has been consistently eastwards at an approximate horizontal gradient of 0.08 feet per foot (ft/ft) onsite, while groundwater beneath Broadway flows northeastwards at an approximate gradient of 0.125 ft/ft (Figure 2). As shown in Figure 5, groundwater levels for the 2nd quarter 2007 monitoring event are generally lower for wells screened in deeper horizons than for wells screened in shallow horizons, suggesting a downward gradient is present.

4.3 Hydrocarbon Distribution in Groundwater

As illustrated on Figure 4, the area of elevated hydrocarbon concentrations and SPH covers much of the site, with numerous wells containing over 50,000 µg/L TPHg and over 5,000 µg/L benzene. Wells MW-1, MW-6, MW-14 and MW-15 have historically contained SPH, although no measurable SPH was observed in these wells during the second quarter 2007 groundwater monitoring event. Offsite migration appears to be minimal, based on relatively low concentrations found in downgradient wells MW-7, MW-8, and MW-13.

The lateral extent of hydrocarbon contamination appears to be well defined by perimeter wells MW-2, MW-3, MW-5, MW-7, MW-11 and MW-13, which contained no detectable hydrocarbons (Figure 4). Note that wells MW-2, MW-3, MW-5 and MW-11 were last sampled in 1998 since they are not located in the downgradient direction or are not part of the regular monitoring program.

The vertical extent of hydrocarbon contamination has not been fully delineated in the upgradient (northwest) portion of the site, since some of the deeper (B) wells (AS-1B, MW-16B) contain similar or higher contaminant concentrations than the shallower (A) wells (AS-1A, MW-16A), although one well cluster (MW-

17A/MW-17B, located crossgradient to the south of the source zone) shows the opposite relationship, with the deeper (B) well containing lower concentrations than the shallower (A) well, as shown on Figure 4. The vertical extent of contamination appears to be better defined in the downgradient (southeast) portion of the site, where a grab groundwater sample from 50 feet bgs in boring AS-4B and deep well RW-3B contained significantly lower contaminant concentrations than shallow wells AS-4A and RW-3A (Figure 4). However, well cluster AS-3A/AS-3B shows the reverse relationship, with the deeper (B) well containing higher contaminant concentrations than the shallower (A) well. The somewhat inconsistent results between the shallower and deeper clustered wells are likely due to contaminant migration within preferential pathways resulting from the heterogeneous and discontinuous nature of site soil horizons.

5.0 CONCLUSIONS & RECOMMENDATIONS

Based on the above information, Pangea offers the following conclusions and recommendations:

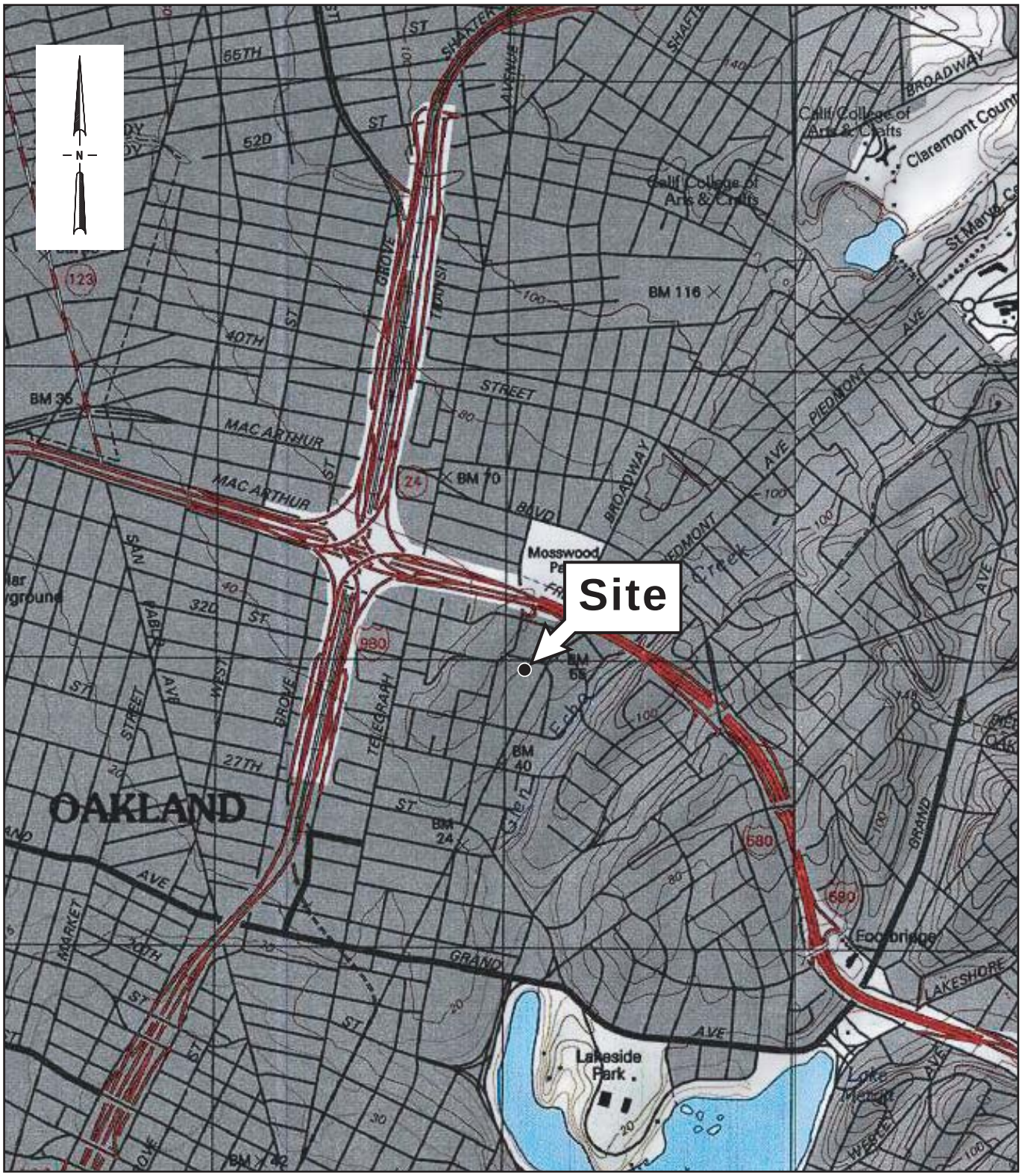
- Significant lateral delineation of the contaminant plume was provided by the planned new wells and the additional wells installed in a dynamic (based on field and analytical data) manner. The lateral extent of hydrocarbon contamination is well defined by the existing site monitoring and remediation well network. Hydrocarbon contamination, including SPH, is primarily located onsite and does not appear to have migrated off site.

- The elevated concentrations of detected contaminants and relatively high permeability of strata encountered in the screened sections of the newly installed DPE wells indicate that the wells are appropriately targeted to remediate site soil and groundwater. Air sparge well locations and screen intervals appear appropriate for commencement of interim remedial action.

- The vertical extent of contaminants appears to be well delineated based on soil and groundwater data. Contaminants are essentially present shallower than 40 ft bgs at the upper portion of the site and shallower than 30 ft bgs at the lower portion of the site.

- Pangea plans to conduct periodic groundwater monitoring from select remediation wells (e.g. MW-17A and MW-17B) for remedial effectiveness and any lateral migration of dissolved contamination and free product. Pangea recommends re-evaluating the need for additional wells after assessing conditions during interim remediation.

6/3/2005



SOURCE: TOPO! MAPS

0 1/8 1/4 1/2 1

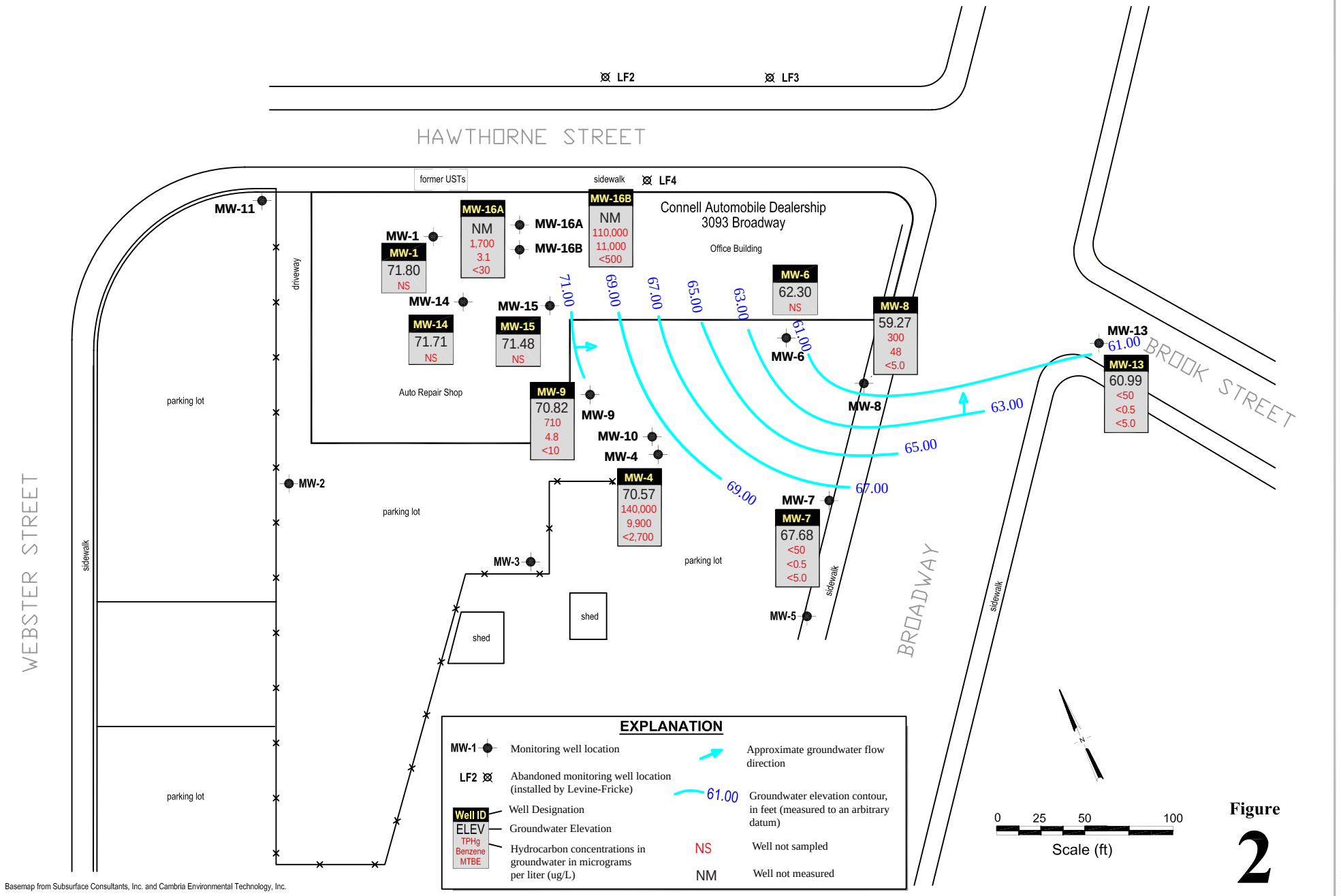
SCALE : 1" = 1/4 MILE

Figure 1

Vicinity Map

Connell Automobile Dealership
3093 Broadway
Oakland, California

PANGEA



Basemap from Subsurface Consultants, Inc. and Cambria Environmental Technology, Inc.

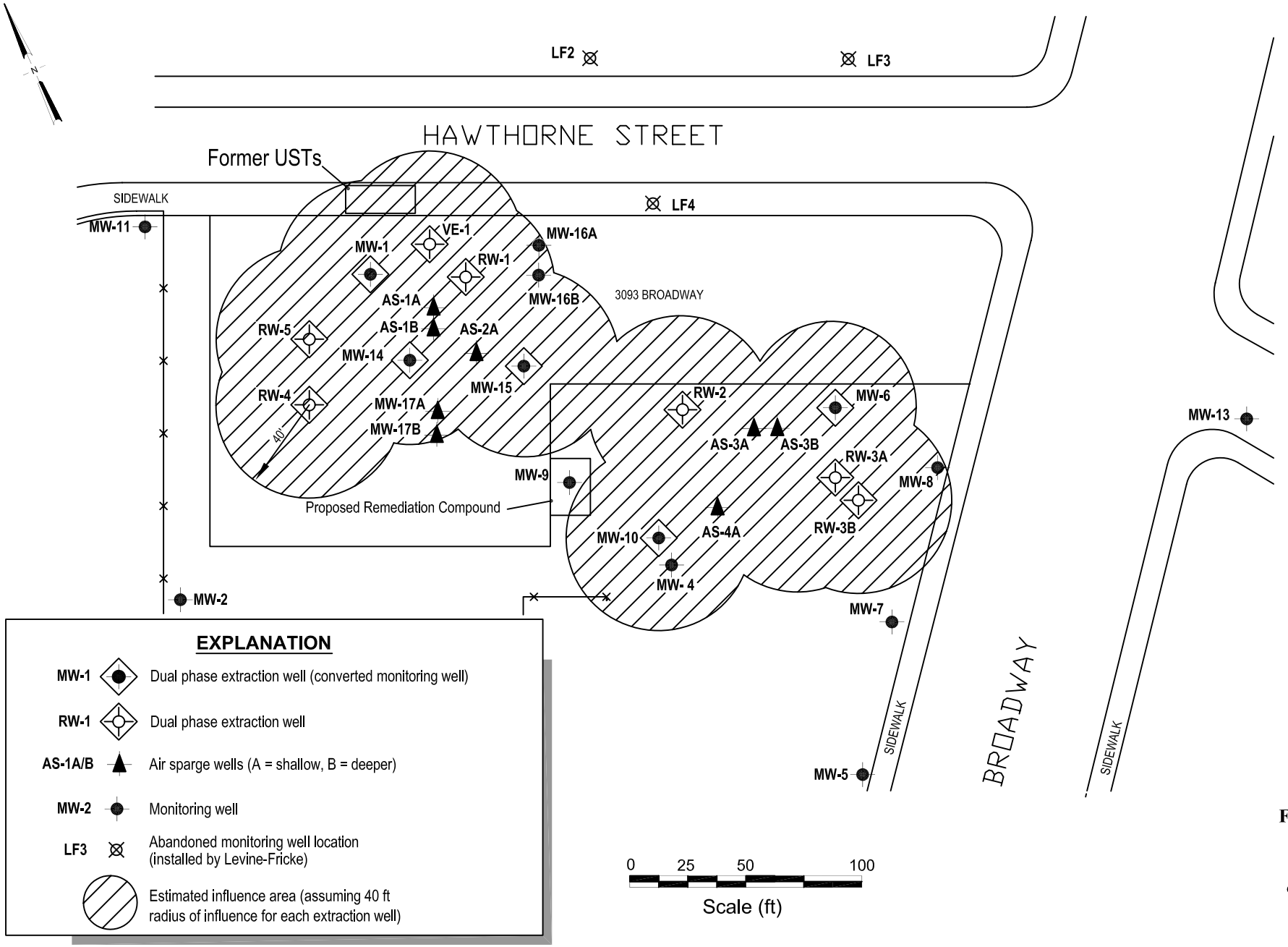
Figure 2

5/8/2007

Connell Automobile Dealership
3093 Broadway
Oakland, California

PANGEA

Groundwater Elevation and Hydrocarbon Concentration Map
May 11, 2007



Basemap from Subsurface Consultants, Inc.

Figure
3

Connell Automobile Dealership
3093 Broadway
Oakland, California

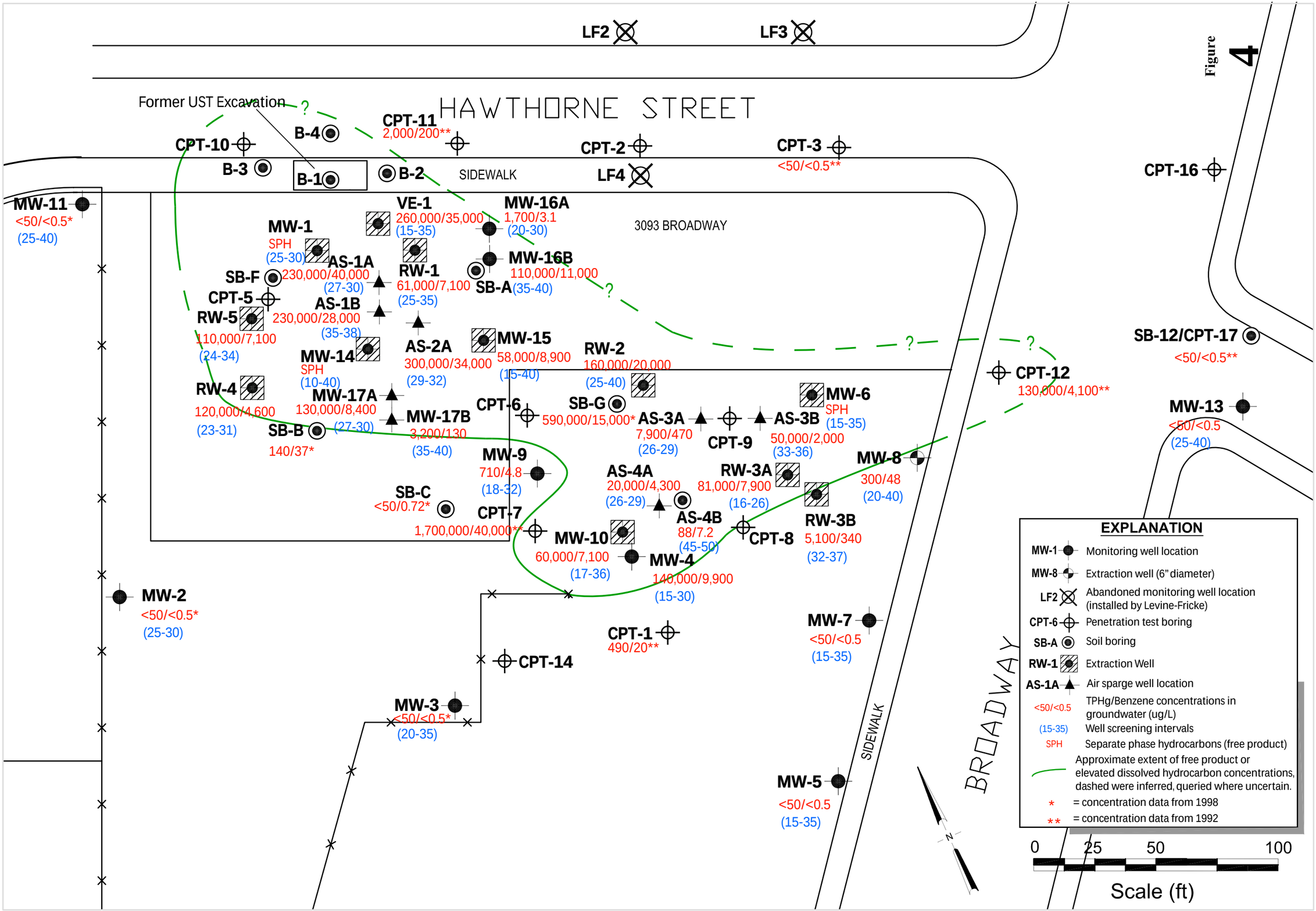
PANGEA

Remediation and Monitoring Well Locations

Figure 4

Hydrocarbon Distriubtion in Groundwater

PANGEA



Connell Automobile Dealership
3093 Broadway
Oakland, California

8/28/2007

Figure 5

Cross Section with Hydrocarbon Distribution

A Northwest — A' Southeast

Elevation

105 100 95 90 85 80 75 70 65 60 55 50 45 40

MW-11 CPT-10 RW-5 SB-F RW-4 MW-1 VE-1 AS-1A/B MW-14 RW-1 AS-2A SB-A MW-16A MW-16B MW-15 SB-G RW-2 AS-4A AS-3A AS-3B CPT-9 RW-3A RW-3B MW-6 MW-8

Service Bay

Show Room

Retaining Wall

?

?

EXPLANATION

- Baserock / Fill
- Moderate to High Permeability Soil
- Low to Moderate Permeability Soil
- Very Low to Low Permeability Soil
- Groundwater level 2nd Quarter 2007
- Initial Groundwater level
- Water Table
- Approximate extent of free product or elevated dissolved hydrocarbon concentrations (~>100,000 µg/L TVH/TPHg and ~>10,000 µg/L benzene), queried where uncertain

Scale (ft)

0 10 30

PANGEA

Connell Automobile Dealership
3093 Broadway
Oakland, California

Pangea

Table 1. Soil Analytical Data - Connell Auto - 3093 Broadway

Sample ID	Date Sampled	Sample Depth (ft bgs)	TPHd (mg/kg)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	1,2 DCA (mg/kg)	TOG (mg/kg)
Commercial ESL, drinking water			**100**	**100**	**0.044**	**2.9**	**3.3**	**2.3**	**0.023**	**0.0045**	**1,000**
Commercial ESL, non-drinking water			500	400	0.38	9.3	32	11	5.6	0.07	1,000
WELL INSTALLATION & BORINGS - 2007											
AS-3B-24	2/27/2007	24.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
AS-3B-24	2/27/2007	24.0	<1.0	3.9	**0.42**	0.39	0.33	0.33	<0.05	--	--
RW-3-20	2/28/2007	20.0	**1,100**	**9,000**	**98**	**470**	**140**	**610**	<40	--	--
RW-3-24	2/28/2007	24.0	8.2	15	**0.72**	0.76	0.19	0.76	<0.2	--	--
RW-3-28	2/28/2007	28.0	<1.0	<1.0	**0.1**	0.019	0.0076	0.018	<0.05	--	--
RW-3-35	2/28/2007	35.0	<1.0	<1.0	0.019	0.065	0.0085	0.046	<0.05	--	--
AS-4B-19	3/1/2007	19.0	--	13	**0.46**	0.96	0.16	0.85	<0.05	--	--
AS-4B-24	3/1/2007	24.0	<1.0	2.5	**0.45**	0.034	0.069	0.097	<0.05	--	--
AS-4B-27	3/1/2007	27.0	<1.0	2.8	**0.31**	0.27	0.056	0.21	<0.05	--	--
AS-4B-33	3/1/2007	33.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
AS-4B-46	3/1/2007	46.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
RW-2-20	3/1/2007	20.0	**400**	**2,300**	**25**	**110**	**36**	**180**	<10	--	--
RW-2-24	3/1/2007	24.0	**260**	**680**	**5.9**	**25**	**11**	**56**	<5.0	--	--
RW-2-30	3/1/2007	30.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW-16B-20	3/4/2007	20.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW-16B-23	3/4/2007	23.0	64	**180**	<0.050	1.1	<0.050	0.45	<0.50	--	--
MW-16B-26	3/4/2007	26.0	3.8	14	<0.005	0.041	<0.005	0.039	<0.05	--	--
MW-16B-34	3/4/2007	34.0	25	**130**	**1.1**	0.99	0.83	1.0	<0.50	--	--
MW-16B-40	3/4/2007	40.0	<1.0	1.5	**0.45**	<0.005	0.070	<0.005	<0.05	--	--
VE-1-16	3/11/2007	16.0	--	**250**	**2.5**	0.51	0.47	1.3	<1.0	--	--
VE-1-19	3/11/2007	19.0	--	6.2	**0.84**	0.38	0.086	0.43	<0.05	--	--
VE-1-22	3/11/2007	22.0	**570**	**960**	**14**	**3.9**	2.6	**52**	<10	--	--
VE-1-28	3/11/2007	28.0	--	<1.0	<0.005	<0.005	<0.005	0.0096	<0.05	--	--
VE-1-31	3/11/2007	31.0	--	15	**2.2**	1.8	0.22	1.3	<0.20	--	--
VE-1-35	3/11/2007	35.0	1.7	15	**1.9**	2.3	0.17	0.92	<0.05	--	--
AS-1B-16	3/11/2007	16.0	--	**190**	**5.5**	0.76	0.21	0.96	<1.5	--	--
AS-1B-22	3/11/2007	22.0	5.2	11	**0.12**	0.15	0.068	0.47	<0.05	--	--
AS-1B-28	3/11/2007	28.0	**450**	**2,700**	**41**	**150**	**31**	**250**	<15	--	--
MW-17B-20	3/11/2007	20.0	1.3	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW-17B-28	3/11/2007	28.0	25	42	**0.14**	1.5	0.52	**2.7**	<0.25	--	--
MW-17B-30	3/11/2007	30.0	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW-17B-36	3/11/2007	36.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
MW-17B-40	3/11/2007	40.0	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
AS-2A-24	3/18/2007	24.0	--	**2,700**	**19**	**140**	**16**	**260**	<5.0	--	--
AS-2A-38	3/18/2007	38.0	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
RW-4-23	3/25/2007	23.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
RW-4-29	3/25/2007	29.0	**240**	**1,700**	**6.9**	**50**	**17**	**130**	<10	--	--
RW-4-32	3/25/2007	32.0	--	1.1	0.0081	0.052	0.012	0.073	<0.05	--	--
RW-4-35	3/25/2007	35.0	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
RW-4-38	3/25/2007	38.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--

Table 1. Soil Analytical Data - Connell Auto - 3093 Broadway

Sample ID	Date Sampled	Sample Depth (ft bgs)	TPHd (mg/kg)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	1,2 DCA (mg/kg)	TOG (mg/kg)
Commercial ESL, drinking water			**100**	**100**	**0.044**	**2.9**	**3.3**	**2.3**	**0.023**	**0.0045**	**1,000**
Commercial ESL, non-drinking water			500	400	0.38	9.3	32	11	5.6	0.07	1,000
RW-5-20	3/25/2007	20.0	<50	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
RW-5-24	3/25/2007	24.0	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
RW-5-27	3/25/2007	27.0	--	**1,800**	**9.5**	**60**	**26**	**160**	<10	--	--
RW-5-30	3/25/2007	30.0	<1.0	2.8	**0.13**	0.30	0.073	0.40	<0.05	--	--
RW-5-36	3/25/2007	36.0	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
RW-5-40	3/25/2007	40.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	--	--
SOIL SAMPLES-MAY 1998 INVESTIGATION											
A-11.0	5/17/1998	11.0	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
A-20.5	5/17/1998	20.5	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
B-6.0	5/16/1998	6.0	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
B-20.5	5/16/1998	20.5	<1	<1	**0.076**	<0.005	<0.005	<0.005	<0.02	0.077	--
C-6.0	5/16/1998	6.0	**3,100**	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
C-15.5	5/16/1998	15.5	**790**	4.6	<0.005	<0.005	0.0079	0.033	**0.084**	<0.005	--
MW-14/D-11.0	5/16/1998	11.0	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
MW-14/D-21.0	5/16/1998	21.0	<1	<1	**0.095**	0.1	0.019	0.103	<0.02	0.1	--
MW-15/E-6.0	5/16/1998	6.0	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
MW-15/E-21.0	5/16/1998	21.0	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
F-0.5	5/17/1998	0.5	41	**25,000**	<25	<25	<25	<25	<100	<0.005	--
F-6.0	5/17/1998	6.0	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
F-21.0	5/17/1998	21.0	<1	<1	0.024	<0.005	<0.005	<0.005	<0.02	0.031	--
G-5.5	5/17/1998	5.5	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.02	<0.005	--
G-16.0	5/17/1998	16.0	<1	<1	**0.14**	<0.005	<0.005	0.048	<0.02	0.013	--
WELL BORINGS											
MW-1/15.5	9/28/1990	15.5	**1,100**	**510**	**0.64**	**6.5**	**3.4**	**14**	--	--	610
MW-1/30.5	9/28/1990	30.5	ND	**5,500**	**16.3**	**170**	**98**	**520**	--	--	ND
MW-1/34.5	9/28/1990	34.5	ND	2.0	ND	2.2	0.015	0.079	--	--	ND
MW-3/20.5	2/25/1991	20.5	ND	ND	ND	ND	ND	ND	--	--	ND
MW-4/20.5	2/26/1991	20.5	ND	100	**0.26**	2.5	1.7	**7.3**	--	--	ND
MW-4/31.0	2/26/1991	31.0	ND	2.7	**0.076**	0.38	0.054	0.29	--	--	ND
MW-5/20.0	3/8/1991	20.0	ND	ND	ND	0.0069	ND	ND	--	--	--
MW-6/21.0	3/8/1991	21.0	ND	3.2	**0.35**	0.5	0.028	0.16	--	--	--
MW-6/30.5	3/8/1991	30.5	ND	ND	ND	ND	ND	ND	--	--	--
MW-7/20.5	3/8/1991	20.5	ND	ND	ND	0.017	ND	ND	--	--	--
TEST BORINGS											
B1-8.0	Dec-90	8.0	ND	63	0.017	ND	0.1	1.6	--	--	ND
B1-23.0	Dec-90	23.0	ND	**2,700**	**16**	**120**	**50**	**220**	--	--	ND
B1-33.0	Dec-90	33.0	ND	4	**0.11**	0.2	0.052	0.29	--	--	ND
B1-43.0	Dec-90	43.0	ND	ND	0.006	0.022	0.007	0.041	--	--	ND
B2-1.5	Dec-90	1.5	--	--	--	--	--	--	--	--	ND
B2-3.0	Dec-90	3.0	--	--	--	--	--	--	--	--	ND
B2-5.5	Dec-90	5.5	--	--	--	--	--	--	--	--	ND
B2-10.5	Dec-90	10.5	--	--	--	--	--	--	--	--	ND
B2-15.0	Dec-90	15.0	ND	ND	ND	ND	ND	0.025	--	--	ND
B2-25.5	Dec-90	25.5	ND	ND	ND	0.011	ND	0.029	--	--	ND

Table 1. Soil Analytical Data - Connell Auto - 3093 Broadway

Sample ID	Date Sampled	Sample Depth (ft bgs)	TPHd (mg/kg)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	1,2 DCA (mg/kg)	TOG (mg/kg)
Commercial ESL, drinking water			**100**	**100**	**0.044**	**2.9**	**3.3**	**2.3**	**0.023**	**0.0045**	**1,000**
Commercial ESL, non-drinking water			500	400	0.38	9.3	32	11	5.6	0.07	1,000
B3-15.5	Dec-90	15.5	ND	ND	ND	0.01	ND	0.025	--	--	ND
B3-25.5	Dec-90	25.5	ND	8.8	ND	0.29	0.17	0.8	--	--	ND
B3-35.5	Dec-90	35.5	ND	ND	ND	0.021	0.0073	0.041	--	--	ND
B4-14.0	Dec-90	14.0	ND	2.3	0.011	0.038	0.031	0.15	--	--	ND
B4-24.5	Dec-90	24.5	ND	**370**	**0.45**	10	0.77	**30**	--	--	ND
B4-34.5	Dec-90	34.5	ND	ND	0.0061	0.029	0.0067	0.037	--	--	ND
TANK PIT											
1-12.0	Dec-89	12.0	ND	**31,000**	**190**	**3,000**	**68**	**2,600**	--	--	710
2-12.0	Dec-89	12.0	ND	**490**	**1.4**	2.5	**6.1**	**23**	--	--	570
3-12.0	Dec-89	12.0	**440**	**300**	ND	**720**	**4.7**	**12**	--	--	540
4-12.0	Dec-89	12.0	--	**630**	ND	ND	**17**	**29**	--	--	--
5-1.0	Dec-89	1.0	--	--	--	--	--	--	--	--	160
6-5.5	Dec-89	5.5	--	--	--	--	--	--	--	--	440
7-1.0	Dec-89	1.0	--	--	--	--	--	--	--	--	460
8-1.0	Dec-89	1.0	--	--	--	--	--	--	--	--	540
9-5.5	Dec-89	5.5	--	--	--	--	--	--	--	--	**1,100**
10-1.0	Dec-89	1.0	--	--	--	--	--	--	--	--	600
11-1.0	Dec-89	1.0	--	--	--	--	--	--	--	--	530
12-5.5	Dec-89	5.5	--	--	--	--	--	--	--	--	590
13-1.0	Dec-89	1.0	--	--	--	--	--	--	--	--	200
14-0.5	Dec-89	0.5	--	--	--	--	--	--	--	--	440
15-0.5	Dec-89	0.5	--	--	--	--	--	--	--	--	410
16-0.5	Dec-89	0.5	--	--	--	--	--	--	--	--	650

Abbreviations and Methods:

Commercial ESL, drinking water = Table A - Environmental Screening Levels for Shallow Soil (<3 meters) where groundwater is a current or potential source of

Commercial ESL, non-drinking water = Table B - Environmental Screening Levels for Shallow Soil (<3 meters) where groundwater is a not current or potential

7.1 = Concentrations in **bold** are soil exceeding the commercial ESL protective of groundwater as a drinking water resource.

ft bgs = feet below ground surface.

mg/kg = milligrams per kilogram.

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015C.

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015C.

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020.

MTBE = Methyl tertiary butyl ether by EPA Method 8260.

TOG = Total Oil & Grease

-- = Not collected, not analyzed, or not applicable.

ND = Not detected above laboratory reporting limits.

See analytical report for notes.

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
Monitoring Well Data												
MW-1	10/5/1990	26.40	68.08	620,000	33,000	50,000	7,900	41,000	--	--	ND	--
94.48	3/1/1991	27.46	67.02	SPH	--	--	--	--	--	--	--	--
	10/12/1992	26.44	68.04	490,000	51,000	59,000	5,000	27,000	--	--	--	--
	11/24/1992	26.63	67.85	320,000	35,000	43,000	4,200	22,000	--	--	ND	--
	4/5/1993	23.77	70.71	270,000	50,000	58,000	4,600	25,000	--	--	ND	--
	7/21/1993	24.51	69.97	SPH	--	--	--	--	--	--	--	--
	11/9/1993	26.06	68.42	SPH	--	--	--	--	--	--	--	--
	8/30/1995	21.73	72.75	SPH	--	--	--	--	--	--	--	--
	12/4/1995	21.94	72.54	SPH	--	--	--	--	<200	--	--	--
	5/2/1996	20.65	73.83	340,000	57,000	73,000	7,200	38,000	--	--	--	--
	11/5/1996	24.29	70.19	270,000	43,000	56,000	4,500	34,000	--	--	--	--
	5/9/1997	22.79	71.69	240,000	36,000	45,000	3,300	17,900	--	--	--	--
	11/5/1997	25.06	69.42	240,000	42,000	48,000	3,600	18,800	<1,000	--	--	--
	2/9/1998	22.64	71.84	220,000	47,000	60,000	5,200	29,800	<1,000	--	ND	--
	5/1/1998	19.95	74.53	160,000	35,000	42,000	2,800	16,000	<1,000	--	ND	--
	11/3/1998	23.29	71.19	200,000	39,000	49,000	4,400	26,000	<500	--	ND	--
	3/24/1999	22.30	72.18	SPH	--	--	--	--	--	--	--	--
	7/1/1999	22.70	71.78	SPH	--	--	--	--	--	--	--	--
	9/21/1999	23.81	70.67	SPH	--	--	--	--	--	--	--	--
	2/9/2000	23.95	70.59	SPH	--	--	--	--	--	--	--	--
	5/31/2000	22.05	72.43	SPH	--	--	--	--	--	--	--	--
	8/8/2000	22.49	71.99	SPH	--	--	--	--	--	--	--	--
	11/14/2000	24.65	69.83	SPH	--	--	--	--	--	--	--	--
	3/1/2001	24.22	70.28	SPH	--	--	--	--	--	--	--	--
	5/7/2001	23.85	70.67	SPH (0.05)	--	--	--	--	--	--	--	--
	8/1/2001	23.91	70.64	SPH (0.09)	--	--	--	--	--	--	--	--
	11/5/2001	23.95	70.67	SPH (0.18)	--	--	--	--	--	--	--	--
	2/13/2002	23.15	71.39	SPH(0.07)	--	--	--	--	--	--	--	--
	5/2/2002	23.91	70.60	SPH (0.04)	--	--	--	--	--	--	--	--
	8/4/2002	24.02	70.48	SPH (0.03)	--	--	--	--	--	--	--	--
	11/26/2002	24.47	70.05	SPH (0.05)	--	--	--	--	--	--	--	--
	1/20/2003	22.37	72.14	SPH (0.04)	--	--	--	--	--	--	--	--
	5/28/2003	21.77	72.73	SPH (0.02)	--	--	--	--	--	--	--	--
	8/5/2003	23.07	71.44	SPH (0.04)	--	--	--	--	--	--	--	--
	11/10/2003	22.53	71.97	SPH (0.03)	--	--	--	--	--	--	--	--
	2/18/2004	22.61	71.91	SPH (0.05)	--	--	--	--	--	--	--	--
	5/27/2004	22.08	72.44	SPH (0.05)	--	--	--	--	--	--	--	--
	8/19/2004	24.35	70.43	SPH (0.38)	--	--	--	--	--	--	--	--
	12/27/2004	24.62	70.21	SPH (0.44)	--	--	--	--	--	--	--	--

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-1	2/18/2005	23.14	71.37	SPH (0.04)	--	--	--	--	--	--	--	--
(continued)	5/11/2005	22.71	71.79	SPH (0.02)	--	--	--	--	--	--	--	--
	8/3/2005	23.03	71.50	SPH (0.06)	--	--	--	--	--	--	--	--
	11/30/2005	23.98	70.52	SPH (0.03)	--	--	--	--	--	--	--	--
	2/17/2006	23.81	70.68	SPH (0.01)	--	--	--	--	--	--	--	--
	5/12/2006	21.75	72.75	SPH (0.02)	--	--	--	--	--	--	--	--
	8/7/2006	21.35	73.14	SPH (0.01)	--	--	--	--	--	--	--	--
	11/21/2006	23.38	71.13	SPH (0.04)	--	--	--	--	--	--	--	--
	2/12/2007	23.18	71.32	SPH (0.03)	--	--	--	--	--	--	--	--
	5/11/2007	**22.68**	**71.80**	--	--	--	--	--	--	--	--	**0.20**
MW-2	3/1/1991	27.90	66.95	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
94.85	11/24/1992	27.95	66.90	<50	<0.5	1.1	<0.5	1.5	--	--	ND	--
	4/5/1993	25.99	68.86	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	25.63	69.22	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/10/1993	26.76	68.09	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	25.79	69.06	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	5/3/1996	23.32	71.53	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/8/1997	24.62	70.23	<50	<0.5	0.7	<0.5	<0.5	--	--	--	--
	4/29/1998	22.22	72.63	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
MW-3	3/1/1991	23.17	66.91	<50	<50	0.6	<0.5	<0.5	--	--	ND	--
90.08	11/25/1992	23.01	67.07	50	<0.5	0.9	<0.5	2	--	--	ND	--
	4/5/1993	22.11	67.97	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	23.93	66.15	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/10/1993	23.14	66.94	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	20.61	69.47	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	5/3/1996	18.43	71.65	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/8/1997	19.77	70.31	<50	<0.5	0.7	<0.5	<0.5	--	--	--	--
	4/29/1998	17.92	72.16	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
MW-4	3/1/1991	23.79	65.05	150,000	20,000	38,000	2,800	14,000	**	--	ND	--
88.84	10/12/1992	22.48	66.36	230,000	15,000	32,000	2,500	14,000	--	--	--	--
	11/24/1992	22.60	66.24	210,000	14,000	31,000	2,500	14,000	--	--	ND	--
	4/2/1993	20.11	68.73	SPH	--	--	--	--	--	--	--	--
	7/21/1993	20.48	68.36	SPH	--	--	--	--	--	--	--	--
	11/9/1993	21.71	67.13	SPH	--	--	--	--	--	--	--	--
	8/30/1995	19.90	68.94	SPH	--	--	--	--	--	--	--	--
	12/1/1995	19.40	69.44	SPH	--	--	--	--	--	--	--	--
	5/2/1996	17.50	71.34	140,000	24,000	50,000	3,000	15,100	--	--	ND	--
	11/4/1996	20.13	68.71	160,000	16,000	38,000	2,700	14,000	--	--	ND	--
	5/8/1997	18.63	70.21	170,000	16,000	37,000	2,400	15,900	--	--	--	--
	11/5/1997	20.19	68.65	190,000	15,000	31,000	2,200	14,600	<400	--	--	--
	2/9/1998	18.28	70.56	110,000	19,000	42,000	2,500	18,300	<500	--	--	--

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-4	5/1/1998	16.11	72.73	130,000	15,000	31,000	2,000	13,400	<1,000	--	ND	--
(continued)	8/4/1998	17.54	71.30	130,000	16,000	34,000	2,400	15,700	<400	--	ND	--
	11/2/1998	19.21	69.63	140,000	16,000	32,000	2,300	15,500	<400	--	ND	--
	3/26/1999	17.51	71.33	110,000	15,000	30,000	1,600	15,000	450 [4]	--	[5]	--
	7/1/1999	18.80	70.04	110,000	13,000	23,000	1,600	12,000	<83	--	[5]	--
	9/21/1999	19.85	68.99	140,000	16,000	31,000	2,400	14,800	ND	--	[5]	3.27
	2/9/2000	19.76	69.08	140,000	16,000	28,000	2,100	14,000	<400	--	DCB: 5.9, MCB: 5.9	--
	5/31/2000	17.90	70.94	15,000	17,000	28,000	2,400	14,000	<0.5 [6]	--	ND	--
	8/8/2000	18.62	70.22	140,000	15,000	25,000	2,100	13,000	<300	--	ND	0.60
	11/14/2000	19.63	69.21	150,000	19,000	36,000	2,900	17,000	< 200	--	ND	0.32
	3/1/2001	19.68	69.16	120,000	10,000	15,000	1,300	10,000	<2000	--	ND	0.13
	5/7/2001	18.60	70.24	210,000	12,000	19,000	1,900	12,000	<200	--	ND	0.23
	8/1/2001	18.73	70.11	160,000	13,000	21,000	2,200	13,000	<200	--	ND	--
	11/5/2001	18.97	69.87	220,000	15,000	26,000	3,100	16,000	<200	--	ND	--
	2/13/2002	18.59	70.25	180,000	6,100	11,000	1,400	13,000	<200	--	2-MNE: 620, NE: 1000	0.43
	5/2/2002	18.77	70.07	110,000	13,000	20,000	2,000	10,000	<1,200	--	ND	0.21
	8/4/2002	18.95	69.89	92,000	9,200	15,000	1,800	10,000	<2,000	--	ND	0.35
	11/26/2002	20.83	68.01	110,000	16,000	26,000	2,700	12,000	<1,000	--	ND	0.29
	1/20/2003	16.90	71.94	110,000	9,000	16,000	1,900	11,000	<1,200	--	ND	0.35
	5/28/2003	15.25	73.59	110,000	13,000	17,000	1,800	8,500	<1,000	--	ND	0.59
	8/5/2003	17.05	71.79	110,000	13,000	20,000	2,200	9,800	<1,000	--	<25	0.66
	11/10/2003	16.60	72.24	130,000	14,000	23,000	2,700	12,000	<2,700	--	--	0.74
88.84	2/18/2004	16.59	72.25	110,000	11,000	17,000	1,600	9,900	<3,500	--	--	0.46
	5/27/2004	15.97	72.87	97,000	12,000	18,000	2,100	8,900	<3,000	--	--	0.59
	8/19/2004	18.11	70.73	92,000	9,500	15,000	1,900	8,600	<2,500	--	--	0.77
	12/27/2004	19.53	69.31	120,000	16,000	28,000	2,800	12,000	<1,000	--	--	0.2
	2/18/2005	18.40	70.44	97,000	11,000	16,000	1,700	7,400	<4,000	<50	<50	0.89
	5/11/2005	17.93	70.91	110,000	10,000	16,000	1,900	8,400	<3,000	--	--	1.03
	8/3/2005	18.14	70.70	110,000	12,000	18,000	2,200	8,000	<3,600	--	--	0.77
	11/30/2005	19.70	69.14	100,000	12,000	18,000	2,200	9,400	<2700	--	--	0.39
	2/17/2006	17.63	71.21	100,000	12,000	17,000	2,100	7,800	<2500	39	<10	0.2
	5/12/2006	15.53	73.31	100,000	11,000	15,000	2,100	8,700	2,000	--	--	0.27
	8/7/2006	17.75	71.09	97,000	11,000	15,000	2,200	8,700	<1,500	--	--	0.47
	11/21/2006	19.14	69.70	99,000	9,200	13,000	2,000	8,100	<2,100	--	--	0.20
	2/12/2007	18.98	69.86	140,000	11,000	16,000	2,100	7,800	<3,600	32	<5 [7]	0.20
	5/11/2007	**18.27**	**70.57**	**140,000**	**9,900**	**15,000**	**2,000**	**7,200**	**<2,700**	**32**	--	**0.62**

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
MW-5	3/15/1991	26.31	58.53	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
84.84	11/10/1992	26.83	58.01	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	4/2/1993	26.62	58.22	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	26.60	58.24	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/9/1993	27.24	57.60	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	27.46	57.38	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	5/3/1996	26.02	58.82	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/8/1997	26.76	58.08	<50	<0.5	0.5	<0.5	<0.5	--	--	--	--
	4/29/1998	26.55	58.29	<50	<0.5	0.5	<0.5	<0.5	<2	--	ND	--
										--		
MW-6	3/15/1991	25.82	59.80	80,000	12,000	13,000	1,100	5,400	--	--	DBCM: 160	--
85.62	10/12/1992	25.02	60.60	19,000	3,200	1,400	200	560	--	--	--	--
	12/1/1992	28.87	56.75	SPH	--	--	--	--	--	--	--	--
	4/2/1993	26.96	58.66	SPH	--	--	--	--	--	--	--	--
	7/21/1993	26.17	59.45	SPH	--	--	--	--	--	--	--	--
	11/9/1993	27.51	58.11	SPH	--	--	--	--	--	--	--	--
	8/30/1995	28.00	57.62	SPH	--	--	--	--	--	--	--	--
	12/1/1995	27.58	58.04	SPH	--	--	--	--	<8,000,000	--	--	--
86.94	5/3/1996	28.15	58.79	130,000	37,000	50,000	3,200	14,200	--	--	ND	--
	5/9/1997	26.54	60.40	1,700,000	14,000	27,000	4,000	28,200	--	--	--	--
	11/5/1997	26.16	60.78	160,000	13,000	19,000	1,900	14,300	<200	--	--	--
	5/1/1998	22.96	62.86	130,000	15,000	23,000	1,700	13,200	<500	--	ND	--
85.82	11/3/1998	24.35	61.47	110,000	17,000	21,000	1,800	10,700	<200	--	ND	--
	3/26/1999	23.82	62.00	SPH	--	--	--	--	--	--	--	--
	7/1/1999	24.45	61.37	SPH	--	--	--	--	--	--	--	--
	9/21/1999	24.58	61.24	SPH	--	--	--	--	--	--	--	--
	2/9/2000	24.93	61.24	SPH	--	--	--	--	--	--	--	--
	5/31/2000	23.47	62.41	SPH	--	--	--	--	--	--	--	--
	8/8/2000	23.85	61.97	SPH	--	--	--	--	--	--	--	--
	11/14/2000	24.61	61.21	SPH	--	--	--	--	--	--	--	--
	3/1/2001	23.97	61.85	SPH	--	--	--	--	--	--	--	--
	5/7/2001	23.17	62.71	SPH	--	--	--	--	--	--	--	--
	8/1/2001	obstruction in well		--	--	--	--	--	--	--	--	--
	11/5/2001	obstruction in well		--	--	--	--	--	--	--	--	--
	2/13/2002	obstruction in well		--	--	--	--	--	--	--	--	--
	5/2/2002	23.25	62.41	SPH (0.05)	--	--	--	--	--	--	--	--
	8/4/2002	23.55	62.29	SPH (0.03)	--	--	--	--	--	--	--	--
	11/26/2002	24.22	61.62	SPH (0.03)	--	--	--	--	--	--	--	--
	1/20/2003	22.49	63.36	SPH (0.04)	--	--	--	--	--	--	--	--
	5/28/2003	21.92	63.93	SPH (0.04)	--	--	--	--	--	--	--	--

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-6	8/5/2003	23.98	61.87	SPH (0.04)	--	--	--	--	--	--	--	--
(continued)	11/10/2003	23.50	62.40	SPH (0.10)	--	--	--	--	--	--	--	--
	2/18/2004	22.21	63.64	SPH (0.04)	--	--	--	--	--	--	--	--
	5/27/2004	22.01	63.85	SPH (0.05)	--	--	--	--	--	--	--	--
	8/19/2004	24.16	61.68	SPH (0.03)	--	--	--	--	--	--	--	--
	12/27/2004	24.69	61.13	SPH (sheen)	--	--	--	--	--	--	--	--
	2/18/2005	23.55	62.33	SPH (0.08)	--	--	--	--	--	--	--	--
	5/11/2005	22.90	62.97	SPH (0.06)	--	--	--	--	--	--	--	--
	8/3/2005	23.68	62.19	SPH (0.06)	--	--	--	--	--	--	--	--
	11/30/2005	24.17	61.67	SPH (0.02)	--	--	--	--	--	--	--	--
	2/17/2006	23.89	61.95	SPH (0.03)	--	--	--	--	--	--	--	--
	5/12/2006	22.66	63.18	SPH (0.03)	--	--	--	--	--	--	--	--
	8/7/2006	22.83	63.01	SPH (0.02)	--	--	--	--	--	--	--	--
	11/21/2006	23.92	61.92	SPH (0.02)	--	--	--	--	--	--	--	--
	2/12/2007	23.97	61.87	SPH (0.02)	--	--	--	--	--	--	--	--
	5/11/2007	**23.54**	**62.30**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**0.70**
MW-7	3/15/1991	21.63	63.78	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
85.41	11/24/1992	21.52	63.89	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	4/2/1993	20.08	65.33	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	19.59	65.82	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/9/1993	20.65	64.76	<50	<0.5	1	<0.5	1.7	--	--	ND	--
	8/30/1995	18.78	66.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	12/1/1995	19.47	65.94	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/2/1996	17.15	68.26	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/8/1996	18.48	66.93	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	11/4/1996	18.69	66.72	<50	<1	<1	<1	<1	--	--	ND	--
	2/6/1997	17.44	67.97	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	5/8/1997	17.72	67.69	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	8/7/1997	18.49	66.92	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	11/5/1997	18.86	66.55	<50	<0.5	<0.5	<0.5	<0.5	<2	--	--	--
	2/9/1998	17.56	67.85	<50	<0.5	<0.5	<0.5	<0.5	<2	--	--	--
	4/29/1998	16.23	69.18	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	8/4/1998	17.24	68.17	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	11/2/1998	17.91	67.50	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	3/26/1999	16.42	68.99	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	7/1/1999	17.90	67.51	85	<0.5	1.1	0.55	2.5	<0.5	--	[5]	--
	9/21/1999	18.91	66.50	<50	0.7	1.8	<0.5	1.5	<5.0	--	ND	4.32
	2/9/2000	16.74	68.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	<0.5	--
	5/31/2000	16.21	69.20	<50	3	6	1	9	<0.5	--	ND	--
	8/8/2000	16.92	68.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.43
	11/14/2000	17.00	68.41	< 50	< 0.5	0.63	< 0.5	< 0.5	< 5.0	--	ND	0.44
	3/1/2001	17.09	68.32	< 50	< 0.5	<0.5	< 0.5	< 0.5	< 5.0	--	ND	--
	5/7/2001	17.19	68.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.51

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>>MW-7	8/1/2001	17.25	68.16	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
(continued)	11/5/2001	17.35	68.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	2/13/2002	17.50	67.91	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.80
	5/2/2002	17.30	68.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.31
	8/4/2002	17.58	67.83	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.37
	11/26/2002	18.35	67.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.28
	1/20/2003	15.84	69.57	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.61
	5/28/2003	15.19	70.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.74
	8/5/2003	17.00	68.41	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	<0.5	0.61
	11/10/2003	16.54	68.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.65
	2/18/2004	16.47	68.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.74
	5/27/2004	15.93	69.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.65
	8/19/2004	18.05	67.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.71
	12/27/2004	17.35	68.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	2.0
	2/18/2005	16.23	69.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	0.93
	5/11/2005	15.79	69.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	1.18
	8/3/2005	17.52	67.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.89
	11/30/2005	19.57	65.84	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	1.70
	2/17/2006	16.82	68.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	0.99
	5/12/2006	15.86	69.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.11
	8/7/2006	17.52	67.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.33
	11/21/2006	18.67	66.74	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.39
	2/12/2007	18.20	67.21	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5[7]	0.75
	5/11/2007	**17.73**	**67.68**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**--**	**--**	**0.93**
MW-8	10/12/1992	27.70	57.80	70	20	1	1	3	--	--	--	--
85.50	11/25/1992	27.62	57.88	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	4/8/1993	26.64	58.86	490	15	45	5.1	73	--	--	ND	--
	7/21/1993	26.60	58.90	180	2.5	3	<0.5	1.9	--	--	ND	--
	11/11/1993	27.18	58.32	310	23	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	26.35	59.15	660	360	6.8	13	2.8	--	--	--	--
	12/4/1995	26.72	58.78	250	46	0.9	4.9	<0.5	--	--	ND	--
	5/3/1996	25.47	60.03	69	110	<0.5	<0.5	1.5	--	--	ND	--
	8/8/1996	26.41	59.09	120	11	<0.5	<0.5	<0.5	<2	--	ND	--
	11/5/1996	26.77	58.73	110	20	<1	1	<1	--	--	ND	--
	2/6/1997	25.84	59.66	67	51	<0.5	0.56	<0.5	<2	--	ND	--
	5/9/1997	26.39	59.11	110	59	<0.5	<0.5	<0.5	--	--	--	--
	8/7/1997	26.72	58.78	<50	12	<0.5	<0.5	<0.5	<2	--	ND	--
	11/5/1997	26.82	58.68	<50	9.4	<0.5	<0.5	<0.5	<2	--	--	--
	2/9/1998	25.57	59.93	<50	6	<0.5	<0.5	<0.5	<2	--	--	--
	5/1/1998	25.64	59.86	430	490	7.1	27	26	<10	--	ND	--
	8/5/1998	25.96	59.54	140	19	<0.5	5.2	5.3	<2	--	ND	--
	11/3/1998	26.27	59.23	150	110	1.1	4.3	4.5	<2	--	ND	--
	3/31/1999	20.93	64.57	54	170	1.5	4.1	1.9	4.4	--	1,1 DCA: 0.7	--

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-8	7/1/1999	26.59	58.91	140	58	0.9	3	2.3	<0.5	--	[5]	--
(continued)	9/21/1999	26.89	58.61	670	170	2.6	11	7.9	<5	--	ND	2.61
	2/9/2000	26.60	58.90	300	60	1.2	4.8	1.2	<5.0	--	<0.5	--
	8/8/2000	26.43	59.07	270	56	1.2	4.1	1.0	<5.0	--	ND	0.25
	11/14/2000	26.60	58.90	330	64	1.3	3.5	0.60	< 5.0	--	ND	0.51
	3/1/2001	26.41	59.09	400	140	<0.5	<0.5	0.55	<5.0	--	ND	--
	5/7/2001	26.55	58.95	240	37	0.71	2.5	0.77	<5.0	--	ND	0.49
	8/1/2001	26.71	58.79	130	5.2	<0.5	<0.5	<0.5	<5.0	--	ND	--
	11/5/2001	26.67	58.83	140	3.3	<0.5	<0.5	<0.5	<5.0	--	ND	--
	2/13/2002	26.15	59.35	1,100	440	0.087	0.66	2.0	<5.0	--	ND	0.71
	5/2/2002	26.63	58.87	90	3.9	<0.5	<0.5	<0.5	<5.0	--	ND	0.37
	8/4/2002	26.80	58.70	120	2.4	0.77	<0.5	<0.5	<5.0	--	ND	0.44
	11/26/2002	27.50	58.00	85	3.7	<0.5	<0.5	<0.5	<5.0	--	ND	0.48
	1/20/2003	24.93	60.57	90	3.9	0.67	<0.5	<0.5	<5.0	--	ND	0.65
	5/28/2003	24.28	61.22	120	1.4	<0.5	<0.5	<0.5	<5.0	--	ND	0.71
	8/5/2003	26.51	58.99	150[f]	<0.5	<0.5	<0.5	<0.5	<5.0	--	<1.0	0.67
	11/10/2003	26.04	59.46	50	0.84	<0.5	<0.5	<0.5	<5.0	--	--	0.70
	2/18/2004	25.97	59.53	52	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.69
	5/27/2004	25.31	60.19	75	0.76	<0.5	<0.5	<0.5	<5.0	--	--	0.98
	8/19/2004	27.55	57.95	72	1.7	<0.5	<0.5	<0.5	<5.0	--	--	1.41
	12/27/2004	26.50	59.00	160	22	0.74	2.2	0.55	<5.0	--	--	0.2
	2/18/2005	26.00	59.50	130	27	0.70	2.3	0.69	<5.0	47	<1.0	0.91
	5/11/2005	25.47	60.03	550	190	2.5	2.9	9.3	<5.0	--	--	1.22
	8/3/2005	26.31	59.19	240	36	0.86	3.1	1.2	<5.0	--	--	1.05
	11/30/2005	26.51	58.99	160	28	1.7	2.0	1.3	<5.0	--	--	0.71
	2/17/2006	26.11	59.39	200	39	0.67	2.7	1.6	<5.0	37	<1.0	0.64
	5/12/2006	25.38	60.12	770	260	7.40	5.1	5.8	<5.0	--	--	0.19
	8/7/2006	26.10	59.40	320	52	1.0	2.7	1.2	<5.0	--	--	0.17
	11/21/2006	26.43	59.07	54	9.2	<0.5	0.56	0.64	<5.0	--	--	0.22
	2/12/2007	26.29	59.21	1,000	310	5.1	25	27	<5.0	25	<0.5[7]	0.37
	5/11/2007	**26.23**	**59.27**	**300**	**48**	**0.74**	**2.9**	**1.2**	**<5.0**	**--**	**--**	**0.55**
MW-9	11/24/1992	23.51	66.86	19,000	180	590	23	2,000	--	--	TCM: 15	--
90.37	4/5/1993	21.14	69.23	2,300	48	4	0.6	13	--	--	TCM: 2	--
	7/21/1993	21.54	68.83	2,300	170	8.1	15	<0.5	--	--	ND	--
	11/10/1993	27.53	62.84	4,400	69	7.3	21	9.7	--	--	ND	--

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-9	8/30/1995	19.59	70.78	3,200	3,900	49	80	22.8	--	--	--	--
(continued)	12/4/1995	20.65	69.72	--	--	--	--	--	<2	--	--	--
	5/2/1996	18.63	71.74	<1300	2,600	<13	200	<13	--	--	ND	--
	11/5/1996	20.69	69.68	1,800	280	<5	65	<5	--	--	ND	--
	5/9/1997	19.96	70.41	1,100	160	<0.5	42	<0.5	--	--	--	--
	8/8/1997	20.84	69.53	570 [1,2]	<0.5	<0.5	<0.5	0.78 [3]	<2	--	ND	--
	11/5/1997	21.55	68.82	490 [1]	<0.5	<0.5	6	<0.5	<2	--	--	--
	2/9/1998	20.21	70.16	270 [1]	48	17	5.8	<0.5	<2	--	--	--
	5/1/1998	19.27	71.10	550	70	<0.5	22	2.2	<2	--	ND	--
	8/5/1998	19.35	71.02	550 [1]	88	<0.5	13	1.9 [3]	<2	--	ND	--
	11/2/1998	20.43	69.94	580	<0.5	<0.5	7.5 [3]	1.6 [3]	<2	--	ND	--
	3/25/1999	18.46	71.91	1,100	160	<0.5	21	2.1 [3]	5.7 [4]	--	ND	--
	7/1/1999	19.95	70.42	540	100	7.4	26	16.9	<1.3	--	[5]	--
	9/21/1999	21.15	69.22	2,700	320	98	88	47	<20	--	ND	5.86
	2/9/2000	21.08	69.29	1,600	81	3.6	19	18	<5.0	--	<0.5	--
	5/31/2000	19.11	71.26	1,500	170	13	25	<1.0	<0.5	--	ND	--
	8/8/2000	19.86	70.51	1,300	140	2.1	19	<0.5	<5.0	--	ND	2.4
	11/14/2000	20.90	69.47	1,700	250	2.6	44	2.1	< 5.0	--	ND	0.29
	3/1/2001	20.45	69.92	1,800	170	5.6	30	2.5	<20	--	ND	0.31
	5/7/2001	19.83	70.54	1,500	120	2.6	24	<0.5	<5.0	--	ND	0.18
	8/1/2001	20.02	70.35	2,600	280	4.8	50	<0.5	<5.0	--	ND	--
	11/5/2001	19.85	70.52	2,200	170	4.5	100	0.54	<5.0	--	ND	--
	2/13/2002	19.80	70.57	1,800	98	3	58	1.5	<5.0	--	ND	0.53
	5/2/2002	19.93	70.44	1,100	82	1.4	20	<0.5	<10	--	ND	0.28
	8/4/2002	20.20	70.17	1,200	130	2.5	50	0.58	<10	--	ND	0.51
	11/26/2002	20.37	70.00	1,200	150	3.3	48	<2.5	<25	--	ND	0.53
	1/20/2003	17.93	72.44	840	110	1.2	31	0.76	<5.0	--	ND	0.31
	5/28/2003	17.25	73.12	1,100	40	1.9	3.0	<0.5	<20	--	ND	0.60
	8/5/2003	19.03	71.34	1,100[a]	62	0.99	25	<0.5	<5.0	--	<10	0.54
	11/10/2003	18.65	71.72	1,500	120	7.6	41	<1.0	<10	--	--	0.62
	2/18/2004	18.41	71.96	820	50	1.2	19	<0.5	<5.0	--	--	0.58
	5/27/2004	17.89	72.48	730	36	2.0	11	1.6	<5.0	--	--	0.90
	8/19/2004	20.14	70.23	1,200	95	2.5	24	<0.5	<25	--	--	0.98
	12/27/2004	21.65	68.72	720	25	14	2.0	3.5	<15	--	--	2.5
	2/18/2005	19.97	70.40	600	24	<0.5	3.8	<0.5	<5.0	220	<5.0	0.88
	5/11/2005	19.41	70.96	510	11	<0.5	1.6	<0.5	<5.0	--	--	0.95
	8/3/2005	19.35	71.02	620	26	5.7	4.0	<0.5	<5.0	--	--	0.65
	11/30/2005	20.96	69.41	1,300	120	2.9	22	<0.5	<10	--	--	0.49
	2/17/2006	19.13	71.24	540	11	<0.5	1.1	<0.5	<5.0	160	<10	0.70
	5/12/2006	17.70	72.67	600	12	0.54	1.7	<0.5	<5.0	--	--	0.30
	8/7/2006	18.82	71.55	600	31	1.8	4.2	<0.5	<5.0	--	--	0.24
	11/21/2006	20.10	70.27	670	32	2.6	3.4	<0.5	<5.0	--	--	0.25
	2/12/2007	20.48	69.89	520	14	0.74	1.2	<0.5	<5.0	210	<5[7]	0.51
	5/11/2007	**19.55**	**70.82**	**710**	**4.8**	**1.8**	**<0.5**	**<0.5**	**<10**	--	--	**0.60**

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MW-10	10/12/1992	21.55	67.05	28,000	2,700	3,800	210	1,300	--	--	--	--
88.60	11/24/1992	21.86	66.74	130,000	9,700	19,000	1,400	8,400	--	--	ND	--
	4/5/1993	19.14	69.46	63,000	6,300	14,000	1,100	7,500	--	--	ND	--
	7/21/1993	19.79	68.81	140,000	16,000	31,000	2,200	13,000	--	--	ND	--
	8/30/1995	17.99	70.61	92,000	13,000	24,000	1,800	9,100	--	--	--	--
	5/3/1996	17.04	71.56	81,000	17,000	29,000	2,100	8,500	--	--	ND	--
	5/9/1997	18.36	70.24	63,000	7,400	13,000	940	4,100	--	--	--	--
	5/1/1998	15.84	72.76	60,000	7,100	14,000	1,100	5,300	<250	--	ND	--
MW-11	11/24/1992	33.65	68.41	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
102.06	12/8/92***	33.37	68.69	<50	<0.1	<0.1	<0.1	<0.1	--	--	--	--
	12/8/1992	33.37	68.69	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	4/5/1993	31.03	71.03	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	31.90	70.16	160	<0.5	1.8	<0.5	<0.5	--	--	ND	--
	11/9/1993	32.60	69.46	80	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	28.92	73.14	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	5/3/1996	28.00	74.06	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/8/1997	29.93	72.13	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	4/29/1998	27.22	74.84	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
MW-13	11/24/1992	26.05	58.01	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
84.06	12/8/92***	25.08	58.98	<50	<0.1	<0.1	<0.1	<0.1	--	--	--	--
	12/8/1992	25.08	58.98	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	4/5/1993	24.64	59.42	<50	<0.5	0.9	<0.5	<0.5	--	--	ND	--
	7/21/1993	24.29	59.77	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/9/1993	24.23	59.83	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	23.30	60.76	<50	49	<0.5	<0.5	<0.5	--	--	--	--
	12/1/1995	23.80	60.26	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/3/1996	23.19	60.87	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/8/1996	23.44	60.62	<50	32	<0.5	<0.5	<0.5	<2	--	ND	--
	11/5/1996	24.04	60.02	<50	<1	<1	<1	<1	--	--	ND	--
	2/6/1997	23.24	60.82	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	5/8/1997	23.46	60.60	<50	81	<0.5	<0.5	<0.5	--	--	--	--
	8/8/1997	23.92	60.14	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	11/5/1997	24.27	59.79	<50	<0.5	<0.5	<0.5	<0.5	<2	--	--	--
	2/9/1998	22.89	61.17	<50	<0.5	<0.5	<0.5	<0.5	<2	--	--	--
	4/29/1998	22.27	61.79	<50	24	<0.5	<0.5	<0.5	<2	--	ND	--
	8/4/1998	22.75	61.31	120	200	<1	<1	<1	<4	--	ND	--
	11/3/1998	23.90	60.16	59 [1]	33	<0.5	<0.5	<0.5	<2	--	ND	--
	3/31/1999	23.11	60.95	130	0.56	<0.5	<0.5	<0.5	<2	--	ND	--

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Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-13	7/1/1999	23.40	60.66	160	370	19	1.2	3.5	<1	--	[5]	--
(continued)	9/21/1999	21.91	62.15	370	150	1.0	0.8	0.8	<5.0	--	ND	3.76
	2/9/2000	23.84	60.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	<0.5	--
	8/8/2000	23.31	60.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	1.76
	11/14/2000	24.00	60.06	< 50	< 0.5	0.52	< 0.5	< 0.5	< 5.0	--	ND	0.49
	3/1/2001	23.93	60.13	< 50	< 0.5	<0.5	< 0.5	< 0.5	< 5.0	--	ND	--
	5/7/2001	23.93	60.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.59
	8/1/2001	24.10	59.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	11/5/2001	24.02	60.04	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	2/13/2002	23.70	60.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.55
	5/2/2002	23.97	60.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.63
	8/4/2002	24.19	59.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.31
	11/26/2002	24.78	59.28	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.47
	1/20/2003	22.10	61.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.53
	5/28/2003	21.72	62.34	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.75
	8/5/2003	23.99	60.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	<0.5	0.59
	11/10/2003	23.47	60.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.70
	2/18/2004	22.58	61.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.52
	5/27/2004	21.95	62.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.84
	8/19/2004	24.29	59.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.98
	12/27/2004	23.70	60.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	5.5
	2/18/2005	23.15	60.91	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	0.97
	5/11/2005	22.68	61.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	1.05
	8/3/2005	23.04	61.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	1.12
	11/30/2005	23.65	60.41	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	2.28
	2/17/2006	23.07	60.99	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	1.35
	5/12/2006	22.02	62.04	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.39
	8/7/2006	22.61	61.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.24
	11/21/2006	23.11	60.95	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.94
	2/12/2007	23.27	60.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5[7]	0.52
	5/11/2007	**23.07**	**60.99**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**--**	**--**	**0.79**
MW-14	5/26/1998	21.67	72.99	41,000	7,100	11,000	720	3,900	<1000	--	ND	--
94.66	7/1/1999	22.95	71.71	SPH	--	--	--	--	--	--	--	--
	9/21/1999	24.26	70.40	SPH	--	--	--	--	--	--	--	--
	2/9/2000	24.13	70.53	92,000	12,000	17,000	1,300	8,700	<140	--	<0.5	--
	5/31/2000	22.09	72.57	SPH	--	--	--	--	--	--	--	--
	8/8/2000	22.88	71.78	SPH	--	--	--	--	--	--	--	--
	11/14/2000	23.90	70.76	SPH	--	--	--	--	--	--	--	--
	3/1/2001	23.97	70.69	SPH	--	--	--	--	--	--	--	--
	5/7/2001	23.45	71.23	SPH (sheen)	--	--	--	--	--	--	--	--
	8/1/2001	23.57	71.12	SPH (0.06)	--	--	--	--	--	--	--	--
	11/5/2001	23.50	71.18	SPH (0.03)	--	--	--	--	--	--	--	--
	2/13/2002	22.99	71.70	SPH (0.04)	--	--	--	--	--	--	--	--

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-14	5/2/2002	23.51	71.17	SPH (0.02)	--	--	--	--	--	--	--	--
(continued)	8/4/2002	23.61	71.06	SPH (0.01)	--	--	--	--	--	--	--	--
	1/20/2003	22.35	72.31	SPH (sheen)	--	--	--	--	--	--	--	--
	5/28/2003	21.95	72.74	SPH (0.04)	--	--	--	--	--	--	--	--
	8/5/2003	23.03	71.66	SPH (0.04)	--	--	--	--	--	--	--	--
	11/10/2003	22.70	72.02	SPH (0.07)	--	--	--	--	--	--	--	--
	2/18/2004	22.37	72.32	SPH (0.04)	--	--	--	--	--	--	--	--
	5/27/2004	21.78	72.92	SPH (0.05)	--	--	--	--	--	--	--	--
	8/19/2004	24.13	70.57	SPH (0.05)	--	--	--	--	--	--	--	--
	12/27/2004	24.19	70.47	SPH (sheen)	--	--	--	--	--	--	--	--
	2/18/2005	23.24	71.46	SPH (0.05)	--	--	--	--	--	--	--	--
	5/11/2005	22.77	71.92	SPH (0.04)	--	--	--	--	--	--	--	--
	8/3/2005	23.17	71.51	SPH (0.02)	--	--	--	--	--	--	--	--
	11/30/2005	24.02	70.66	SPH (0.02)	--	--	--	--	--	--	--	--
	2/17/2006	23.87	70.81	SPH (0.02)	--	--	--	--	--	--	--	--
	5/12/2006	21.74	72.93	SPH (0.01)	--	--	--	--	--	--	--	--
	8/7/2006	21.66	73.01	SPH (0.01)	--	--	--	--	--	--	--	--
	11/21/2006	23.41	71.27	SPH (0.03)	--	--	--	--	--	--	--	--
	2/12/2007	23.45	71.23	SPH (0.03)	--	--	--	--	--	--	--	--
	5/11/2007	**22.95**	**71.71**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**0.41**
MW-15	5/26/1998	21.87	72.89	130,000	30,000	38,000	2,500	12,600	<1000	--	ND	--
94.76	7/1/1999	22.25	72.51	SPH	--	--	--	--	--	--	--	--
	9/21/1999	24.12	70.64	SPH	--	--	--	--	--	--	--	--
	2/9/2000	24.42	70.34	180,000	32,000	37,000	2,800	14,000	<200	--	<0.5	--
	5/31/2000	22.40	72.36	SPH	--	--	--	--	--	--	--	--
	8/8/2000	23.17	71.59	SPH	--	--	--	--	--	--	--	--
	11/14/2000	24.15	70.61	SPH	--	--	--	--	--	--	--	--
	3/1/2001	23.99	70.77	SPH	--	--	--	--	--	--	--	--
	5/7/2001	23.50	71.26	SPH (sheen)	--	--	--	--	--	--	--	--
	8/1/2001	23.62	71.14	SPH (sheen)	--	--	--	--	--	--	--	--
	11/5/2001	23.65	71.11	SPH (sheen)	--	--	--	--	--	--	--	--
	2/13/2002	23.09	71.67	68,000	9,300	8,500	760	2,600	<200	--	ND	0.59
	5/2/2002	23.59	71.17	SPH (sheen)	--	--	--	--	--	--	--	--
	8/4/2002	23.65	71.11	SPH (sheen)	--	--	--	--	--	--	--	--
	11/26/2002	24.59	70.17	SPH (sheen)	--	--	--	--	--	--	--	--
	1/20/2003	22.08	72.68	48,000	9,900	10,000	1,000	3,600	<1,200	--	ND	0.24
	5/28/2003	21.68	73.08	SPH (sheen)	--	--	--	--	--	--	--	--
	8/5/2003	24.05	70.71	SPH (sheen)	--	--	--	--	--	--	--	--
	11/10/2003	23.68	71.08	SPH (sheen)	--	--	--	--	--	--	--	--
	2/18/2004	23.51	71.25	25,000	5,200	3,600	390	1,100	<1,000	--	--	0.63
	5/27/2004	22.98	71.78	SPH (sheen)	--	--	--	--	--	--	--	--
	8/19/2004	25.31	69.45	SPH (sheen)	--	--	--	--	--	--	--	0.42
	12/27/2004	24.46	70.30	SPH (sheen)	--	--	--	--	--	--	--	--

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-15	2/18/2005	23.27	71.57	SPH (0.10)	--	--	--	--	--	--	--	--
(continued)	5/11/2005	22.80	72.03	SPH (0.09)	--	--	--	--	--	--	--	--
	8/3/2005	23.29	71.48	SPH (0.01)	--	--	--	--	--	--	--	--
	11/30/2005	24.11	70.69	SPH (0.05)	--	--	--	--	--	--	--	--
	2/17/2006	23.91	70.89	SPH (0.03)	--	--	--	--	--	--	--	--
	5/12/2006	21.88	72.90	SPH (0.03)	--	--	--	--	--	--	--	--
	8/7/2006	22.05	72.73	SPH (0.01)	--	--	--	--	--	--	--	--
	11/21/2006	23.70	71.06	--	--	--	--	--	--	--	--	0.15
	2/12/2007	23.80	70.96	58,000	8,900	8,000	800	2,500	<1,000	99	<5′	0.22
	5/11/2007	**23.28**	**71.48**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**0.49**
MW-16A	**5/17/2007**	**25.12**	**--**	**1,700**	**3.1**	**4.1**	**21**	**25**	**<30**	**--**	**--**	**0.94**
MW-16B	**5/17/2007**	**28.98**	**--**	**110,000**	**11,000**	**3,300**	**1,300**	**7,700**	**<500**	**--**	**--**	**0.65**
Remediation Well Data												
AS-1A	**4/11/2007**	**22.61**	**--**	**230,000**	**40,000**	**51,000**	**2,900**	**18,000**	**<2,400**	**--**	**--**	**--**
AS-1B	**4/11/2007**	**23.69**	**--**	**230,000**	**28,000**	**27,000**	**3,500**	**15,000**	**<2,400**	**--**	**--**	**--**
AS-2A	**4/16/2007**	**22.71**	**--**	**300,000**	**34,000**	**57,000**	**5,700**	**35,000**	**<5,000**	**--**	**--**	**--**
AS-3A	**4/12/2007**	**15.79**	**--**	**7,900**	**470**	**1,100**	**210**	**1,200**	**<350**	**--**	**--**	**--**
AS-3B	**4/12/2007**	**20.31**	**--**	**50,000**	**2,000**	**4,800**	**1,400**	**8,200**	**<900**	**--**	**--**	**--**
AS-4A	**4/16/2007**	**15.18**	**--**	**20,000**	**4,300**	**1,200**	**460**	**890**	**<500**	**--**	**--**	**--**
MW-17A	**4/12/2007**	**23.87**	**--**	**130,000**	**8,400**	**31,000**	**3,100**	**17,000**	**<4,000**	**--**	**--**	**--**
MW-17B	**4/12/2007**	**23.14**	**--**	**3,200**	**130**	**470**	**70**	**470**	**<200**	**--**	**--**	**--**
RW-1	**4/11/2007**	**23.37**	**--**	**61,000**	**7,100**	**12,000**	**970**	**4,300**	**<1,000**	**--**	**--**	**--**
RW-2	**4/16/2007**	**16.66**	**--**	**160,000**	**20,000**	**30,000**	**3,700**	**19,000**	**<2,400**	**--**	**--**	**--**
RW-3A	**4/12/2007**	**15.40**	**--**	**81,000**	**7,900**	**16,000**	**1,800**	**8,400**	**<1,500**	**--**	**--**	**--**
RW-3B	**4/12/2007**	**24.06**	**--**	**5,100**	**340**	**330**	**37**	**400**	**<150**	**--**	**--**	**--**
RW-4	**4/11/2007**	**22.50**	**--**	**120,000**	**4,600**	**23,000**	**2,400**	**16,000**	**<2,500**	**--**	**--**	**--**
RW-5	**4/11/2007**	**22.37**	**--**	**110,000**	**7,100**	**13,000**	**2,000**	**9,800**	**<2,000**	**--**	**--**	**--**
VE-1	**4/11/2007**	**33.02**	**--**	**260,000**	**35,000**	**42,000**	**3,600**	**17,000**	**<4,000**	**--**	**--**	**--**
Grab Sampling Data												
AS-4B-50	**3/1/2007**	**50.0**	**--**	**88**	**7.2**	**7.1**	**1.2**	**3.5**	<5.0	**--**	**--**	**--**
RW-4	**3/25/2007**	**--**	**--**	**5,700**	**94**	**590**	**120**	**950**	<50	**--**	**--**	**--**
CPT-1****	10/6/1992	--	--	490	20	60	10	60	--	1	--	--
CPT-3	10/6/1992	--	--	50	<0.4	<0.4	3	3	--	<4	--	--
CPT-4	10/6/1992	--	--	1,100	60	50	80	15	--	110	--	--
CPT-5	10/6/1992	--	--	600,000	2,300	53,000	8,000	43,000	--	730	--	--
CPT-7	10/6/1992	--	--	1,700,000	40,000	120,000	25,000	120,000	--	2,900	--	--
CPT-9	10/7/1992	--	--	2,100,000	49,000	140,000	28,000	145,000	--	620	--	--
CPT-10	10/7/1992	--	--	190,000	13,000	16,000	3,900	18,000	--	1,400	--	--
CPT-11	10/7/1992	--	--	2,000	200	50	30	70	--	11	--	--

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
CPT-12	10/7/1992	--	--	130,000	4,100	10,000	2,600	10,000	--	9	--	--
CPT-13(MW-10)	10/7/1992	--	--	28,000	2,700	3,800	210	1,300	--	150	--	--
CPT-17 (B-12)	10/6/1992	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	<1	ND	--
B (boring)	5/16/1998	--	--	140	37	0.64	6.6	1.7	<2	17		
C (boring)	5/16/1998	--	--	<50	0.72	<0.5	<0.5	<0.5	<2	210		
G (boring)	5/16/1998	--	--	590,000	15,000	25,000	2,100	10,800	<500	880		

Table 2. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID *TOC Elev.* *(ft)*	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)

Abbreviations and Notes:

TOC Elev. (ft) = Top of casing elevation, surveyed to an arbitrary datum (measured in feet)

µg/L = micrograms per liter = parts per billion = ppb

-- = Not measured or not analyzed

ND = Not detected above laboratory reporting limit; see laboratory reports for individual reporting limits.

SPH = Separate-phase hydrocarbons encountered in well (value in parentheses is thickness in feet)

TVH = Total Volatile Hydrocarbons

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015C

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021B; value in parentheses by EPA Method 8260

MTBE = Methyl tertiary butyl ether by EPA Method 8021B; values in parentheses by EPA Method 8260

HVOCs = Halogenated volatile organic compounds by EPA Method 8010

1,2-DCA = 1,2 Dichloroethane by EPA Method 8010

DCB = 1, 3 Dichlorobenzene

DBCM = Dibromochloromethane

MCB = Chlorobenzene

NE = Naphthalene (results for MW-1 from 1995 through 1998 from SCI reporting of SVOC results)

TCM = Chloroform = trichloromethane

DO = Dissolved oxygen, measured in the field.

<*n* = Chemical not present at a concentration in excess of detection limit shown.

* = Suspect laboratory contamination contributing to test result.

** = Fuel fingerprint analysis indicates MTBE is not present in the free product sample collected from this well.

*** = Duplicate sample sent to a different chemical laboratory.

**** = CPT-2, 6, 8, 14, 15 and 16 were not sampled.

1 = Sample exhibits fuel pattern which does not resemble standard

2 = Lighter hydrocarbons than indicated standard

3 = Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two.

4 = Detection may potentially be a false positive, to be checked during the next event.

5 = One or more of the following substances found: Acetone, 1,2-Dibromoethane, 1,3,5-Trimethylbenzene, 2-Chlorotoluene, 1,2,4-Trimethylbenzene, n-Butylbenzene, and Naphthalene. See laboratory results for details.

6 = Confirmed by GC/MS.

7 = Detection levels for 2-choloroethyl vinyl ether are twice the indicated detection level which is applicable to all other target HVOCs.

APPENDIX A

Regulatory Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

March 17, 2006

Gordon Linden
150 La Salle Avenue
Piedmont, CA 94611

George Hill
305 Sheridan Avenue
Piedmont, CA 94611

Dear Mr. Linden and Mr. Hill:

Subject: Fuel Leak Case No. RO000199, Connell Automobile Dealership, 3093 Broadway, Oakland, CA

Alameda County Environmental Health (ACEH) staff has reviewed "Addendum to Interim Remedial Action Plan" dated December 6, 2005, and "Interim Remedial Action Plan - Addendum #2" dated January 9, 2006, both prepared by Pangea Environmental Services, Inc. (Pangea). These Addendums clarified and modified "Interim Remedial Action Plan" dated November 11, 2004. The Interim Remedial Action Plan with Addendums is approved. We request that you perform the proposed work and send us the technical reports requested below.

OTHER COMMENTS

1) Perjury Statement - All work plans, technical reports, or technical documents submitted to this office 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.

ELECTRONIC SUBMITTAL OF REPORTS

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. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

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. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for 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 monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at don.hwang@acgov.org .

TECHNICAL REPORT REQUEST

Please submit technical reports to the Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

May 17, 2006 – Interim Remedial Action Report

If you have any questions, call me at (510) 567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist
Local Oversight Program

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

C: Bob Clark-Riddell, Pangea Environmental Services, Inc., 64 Sonia Street, Suite B, Oakland, California 94618
Donna Drogos
File

Bob Clark-Riddell

From: Bob Clark-Riddell
Sent: Friday, March 30, 2007 4:48 PM
To: Bob Clark-Riddell; 'Drogos, Donna, Env. Health'
Cc: 'Paul Kibel'
Subject: RE: 3093 Broadway - Additional Remediation Well Locations
Attachments: Figure 2 Proposed Add. Rem. Well.pdf; RW-4 and RW-5 analytical.pdf

Donna,

Here is an update on our soil boring and remediation well installation. Pangea completed borings RW-4 and RW-5 west of source area well MW-1, which contains free product. Soil analytical results from these borings indicate that elevated contaminant concentrations are located near 28 feet below grade surface. Therefore, Pangea plans to expand the remediation well network by installing dual phase extraction wells at locations RW-4 and RW-5. The proposed well screen intervals are shown on the attached draft figure.

Feel free to call or have the new case worker call if you have any questions. Thank you.

Bob Clark-Riddell, P.E.
Principal Engineer
Pangea Environmental Services, Inc.
(510) 435.8664 Phone

From: Bob Clark-Riddell
Sent: Wednesday, March 21, 2007 3:42 PM
To: 'Drogos, Donna, Env. Health'
Cc: Paul Kibel
Subject: RE: 3093 Broadway

Donna,

Is there a new caseworker for the subject site at 3093 Broadway? We seek concurrence on our minor proposed modifications to our well network per below.

Pangea is currently installing the approved monitoring and remediation wells, and has a small revision based on observed conditions during the installation of MW-17A/B. Due to free product encountered at approximately 28 ft depth, we now propose to use MW-17A/B for remediation rather than monitoring. We also plan to install two additional delineation borings (northwest and northeast) of well MW-1 which contains free product. If we encounter elevated soil and/or groundwater contamination in the two additional 'step-out' borings we plan to install remediation wells in the borings.

These modifications are proposed to help remediate the extent of hydrocarbons. The wells, if needed, will be screened and constructed in a similar manner as proposed in the approved remedial action documents. Please have the new case worker contact us with approval to proceed or with any questions. Thank you.

Bob Clark-Riddell, P.E.
Principal Engineer
Pangea Environmental Services, Inc.
(510) 435.8664 Phone

APPENDIX B

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: 02/13/2007 By jamesy

Permit Numbers: W2007-0144 to W2007-0149
Permits Valid from 02/27/2007 to 03/31/2007

Application Id: 1170968230034
Site Location: 3093 Broadway
Project Start Date: 02/27/2007

City of Project Site: Oakland

Completion Date: 03/31/2007

Applicant: Pangea Environmental Services, Inc. - Morgan Gillies
1710 Franklin St., Suite 200, Oakland, CA 94612
Phone: 408-910-1783

Property Owner: Hill Family Trust & Linden Broadway Property Trust
1221 Broadway, 21st Floor, Oakland, CA 94612
Phone: --

Client: ** same as Property Owner **

Total Due: $1600.00
Receipt Number: WR2007-0071 **Total Amount Paid:** $1600.00
Payer Name : Robert Clark-Riddell Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Remedian Well Construction-Extraction - 4 Wells
Driller: RSI Drilling, Inc. - Lic #: 802334 - Method: hstem

Work Total: $200.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2007-0144	02/13/2007	05/28/2007	RW-1	8.00 in.	2.00 in.	14.00 ft	35.00 ft
W2007-0144	02/13/2007	05/28/2007	RW-2	8.00 in.	2.00 in.	14.00 ft	30.00 ft
W2007-0144	02/13/2007	05/28/2007	RW-3	10.00 in.	4.00 in.	27.00 ft	35.00 ft
W2007-0144	02/13/2007	05/28/2007	VE-1	8.00 in.	2.00 in.	7.00 ft	18.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

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

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

7. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

Remedian Well Construction-Injection - 8 Wells
Driller: RSI Drilling, Inc. - Lic #: 802334 - Method: hstem **Work Total: $200.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2007-0145	02/13/2007	05/28/2007	AS-1A	8.00 in.	2.00 in.	26.50 ft	30.00 ft
W2007-0145	02/13/2007	05/28/2007	AS-1B	8.00 in.	2.00 in.	34.50 ft	38.00 ft
W2007-0145	02/13/2007	05/28/2007	AS-2A	8.00 in.	2.00 in.	26.50 ft	30.00 ft
W2007-0145	02/13/2007	05/28/2007	AS-2B	8.00 in.	2.00 in.	34.50 ft	38.00 ft
W2007-0145	02/13/2007	05/28/2007	AS-3A	8.00 in.	2.00 in.	25.50 ft	29.00 ft
W2007-0145	02/13/2007	05/28/2007	AS-3B	8.00 in.	2.00 in.	32.50 ft	36.00 ft
W2007-0145	02/13/2007	05/28/2007	AS-4A	8.00 in.	2.00 in.	25.50 ft	29.00 ft
W2007-0145	02/13/2007	05/28/2007	AS-4B	8.00 in.	2.00 in.	32.50 ft	36.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 at least five (5) working days prior to

starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

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

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

7. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

Well Construction-Monitoring-Monitoring - 4 Wells
Driller: RSI Drilling, Inc. - Lic #: 802334 - Method: hstem **Work Total: $1200.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2007-0146	02/13/2007	05/28/2007	MW-16A	8.00 in.	2.00 in.	19.00 ft	30.00 ft
W2007-0147	02/13/2007	05/28/2007	MW-16B	8.00 in.	2.00 in.	33.00 ft	40.00 ft
W2007-0148	02/13/2007	05/28/2007	MW-17A	8.00 in.	2.00 in.	19.00 ft	30.00 ft
W2007-0149	02/13/2007	05/28/2007	MW-17B	8.00 in.	2.00 in.	33.00 ft	40.00 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 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 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 contact Vicky Hamlin for an inspection time at 510-670-5443 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

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

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

9. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

APPENDIX C

Boring Logs & Well Construction Diagrams

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-1A

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/25/07 **COMPLETED** 3/25/07
GROUND ELEVATION _____ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger - 8"
AT TIME OF DRILLING ---
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						**See AS-1B for representative lithology.**	Concrete; Portland Cement
5							
10							
15							
20							
25							

TOTAL WELL LOG CONNELL AS-1A.GPJ GINT US.GDT 6/6/07

(Continued Next Page)

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-1A

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25						**See AS-1B for representative lithology.** *(continued)*	Bentonite; #2/12 Sand; .010 Slotted 2" Schedule 40 PVC
30						30.0 Bottom of hole at 30.0 feet.	

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-1B

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/11/07 **COMPLETED** 3/11/07
GROUND ELEVATION _____ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
▽ **AT TIME OF DRILLING** 25.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored.
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Concrete Hand Augered	Concrete
						4.0 **Silty Clay (CL)**; olive grey; 100% low to medium plasticity fines; dry; stiff.	
5				CL			
10		27				**Silty Clay with Sand (CL)**; olive grey; 75-80% low to medium plasticity fines; 10-15% fine-grain sand; 5-10% fine gravels; dry; medium stiff to loose.	
		68					
15	AS-1B-16	19				@17' Hydrocarbon odor.	Portland Cement
						18.0 **Silty Sand (SM)**; olive grey; 60-70% fine- to coarse-grain sand; 20-30% low plasticity fines; 5-10% fine gravels; moist; soft.	
20	AS-1B-19	27		SM			
	AS-1B-22	215				24.0	
25				SC		**Clayey Sand (SC)**; light brown; 60-70% fine-grain sand; 20-30% low plasticity fines; 10% fine gravels; wet; strong hydrocarbon odor. ▽	

TOTAL WELL LOG CONNELL AS-1B.GPJ GINT US.GDT 6/12/07

(Continued Next Page)

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-1B

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25	AS-1B-25			SC		**Clayey Sand (SC)**; light brown; 60-70% fine-grain sand; 20-30% low plasticity fines; 10% fine gravels; wet; strong hydrocarbon odor. *(continued)*	
						26.0	
		208		SW		**Gravelly Sand (SW)**; brown with black; 60-70% fine- to coarse-grain sand; 30-40% fine gravels; wet; strong hydrocarbon odor. @27' SPH.	
	AS-1B-28			SW		**Sand (SW)**; brown; 95-100% fine-grain sand; trace to 5% low plasticity fines; heavy odor.	
						29.0	
30		45		CL		**Sandy Clay (CL)**; olive grey; 45-55% medium plasticity fines; 40-50% fine-grain sand; wet; strong hydrocarbon odor.	
	AS-1B-32					33.0	
		214		SW		**Sand (SW)**; brown; 100% fine- to coarse-grain sand; wet; strong hydrocarbon odor.	Bentonite
35							#2/12 Sand
						(Pilot boring was advanced to 38' bgs using direct push method. Boring was reamed with 8" hollow stem auger to facilitate the installation of the well.)	.010 Slotted 2" Schedule 40 PVC
		300					
						38.0	
						Bottom of hole at 38.0 feet.	

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-2A

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/18/07 **COMPLETED** 3/18/07
GROUND ELEVATION ___ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
AT TIME OF DRILLING 29.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Concrete Hand augered.	Concrete
						4.0 **Silty Clay (CL)**; brown; 95-100% low to medium plasticity fines; trace-5% fine-grain sand; dry; stiff.	
5		5		CL			
10		193				13.0 **Silty Clay with Sand (CL)**; grey; 75-80% low to medium plasticity fines; 20-30% fine-grain sand; trace-5% fine gravels; dry; stiff.	
15		595		GM		**Silty Gravel (GM)**; reddish brown; 70-80% fine to coarse gravels to 1.5"; 20-30% low plasticity fines; loose; dry.	Portland Cement
20	AS-2A-20					@19' Green staining and hydrocarbon odor.	
						22.0 **Sandy Gravel with Clay (GP)**; greyish brown; 50-60% fine gravels; 30-40% fine- to coarse-grain sand; 10-20% low plasticity fines; moist to wet; strong hydrocarbon odor.	
25	AS-2A-24			GP			

TOTAL WELL LOG CONNELL AS-2A.GPJ GINT US.GDT 6/12/07

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PANGEA
Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-2A

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25		993		GP		**Sandy Gravel with Clay (GP)**; greyish brown; 50-60% fine gravels; 30-40% fine- to coarse-grain sand; 10-20% low plasticity fines; moist to wet; strong hydrocarbon odor. *(continued)*	Bentonite
						▽	#2/12 Sand
30		756					.010 Slotted 2" Schedule 40 PVC
	AS-2A-32					32.0	
				CL		**Silty Clay with Sand (CL)**; grey; 70-80% low to medium plasticity fines; 20-30% fine-grain sand; dry; stiff.	Native Soil
35		230					Bentonite
	AS-2A-38					38.0	
						Bottom of hole at 38.0 feet.	

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-3A

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 2/27/07 **COMPLETED** 2/27/07
GROUND ELEVATION _____ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger - 8"
AT TIME OF DRILLING ---
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						See boring AS-3B for representative lithology.	Concrete
5							
10							Portland Cement
15							
20							
25							Bentonite #2/12 Sand .010 Slotted 2" Schedule 40 PVC
						29.0 Bottom of hole at 29.0 feet.	

TOTAL WELL LOG CONNELL AS-3A.GPJ GINT US.GDT 6/12/07

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-3B

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 2/27/07 **COMPLETED** 2/27/07
GROUND ELEVATION _____ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
▽ **AT TIME OF DRILLING** 24.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.3 Asphalt Baserock 0.5	Concrete
				CL		**Clay with Gravel (CL)**; grey; 85-90% medium plasticity fines; 10-15% fine gravels; dry; stiff.	
						3.0 **Gravelly Silt (ML)**; brown; 75-80% non-plastic fines; 15-20% fine gravels; 5-10% fine-grain sand; dry; loose.	
5				ML			
10							
						13.0	
				GC		**Clayey Gravel (GC)**; dark brown; 65-75% fine gravel to 3/4"; 25-35% low to medium plasticity fines; dry; stiff.	
15						15.0	
				SC		**Gravelly Sand with Clay (SC)**; brown; 50-60% fine- to coarse-grain sand; 25-35% fine gravels; 10-15% medium plasticity fines; dry.	Portland Cement
20						@22' Green staining; hydrocarbon odor.	
						23.0	
				SP		**Sand (SP)**; greyish green; 95-100% fine- to coarse-grain sand; trace fine gravels; moist to wet; dense. ▽	
25	AS-3B-24						

TOTAL WELL LOG CONNELL AS-3B.GPJ GINT US.GDT 6/12/07

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Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-3B

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25				SP		**Sand (SP)**; greyish green; 95-100% fine- to coarse-grain sand; trace fine gravels; moist to wet; dense. *(continued)*	
						@27' Grey; no hydrocarbon odor.	
30						30.0	
				SC		**Gravelly Sand with Clay (SC)**; brownish grey; 50-55% fine- to coarse-grain sand; 35-40% fine gravels; 5-10% medium plasticity fines; moist.	Bentonite
	AS-3B-32						#2/12 Sand
						34.0	
35				SM		**Silty Sand (SM)**; brownish grey; 45-50% fine-grain sand; 40-50% low plasticity fines; moist.	.010 Slotted 2" Schedule 40 PVC
	AS-3B-35					36.0	
						(Pilot boring was advanced to 36' bgs using direct push method. Boring was reamed with 8" hollow stem auger to facilitate the installation of the well.)	
						Bottom of hole at 36.0 feet.	

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-4A

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/1/07 **COMPLETED** 3/1/07
GROUND ELEVATION _____ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger - 8"
AT TIME OF DRILLING ---
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						**See boring AS-4B for representative lithology.**	Concrete
5							
10							Portland Cement
15							
20							
25							Bentonite

(Continued Next Page)

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER AS-4A

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25						**See boring AS-4B for representative lithology.** *(continued)*	#2/12 Sand .010 Slotted 2" Schedule 40 PVC
						29.0 Bottom of hole at 29.0 feet.	

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

BORING NUMBER AS-4B

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/1/07 **COMPLETED** 3/1/07
GROUND ELEVATION ___ **HOLE SIZE** 2.25"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Direct Push - Dual Tube
▽ **AT TIME OF DRILLING** 26.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Boring only - no well.
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0					0.5 Asphalt 1.0 Baserock **Clayey Silt (ML)**; dark brown; 100% low to medium plasticity fines; dry; stiff.	
5			ML			
10					**Gravelly Silt (ML)**; reddish brown; 45-55% non-plastic fines; 35-40% fine gravels to 3/4"; 10% fine- to coarse-grain sand; dry; loose.	
15					**Silt (ML)**; brown; 90-100% non-plastic fines; trace-5% fine-grain sand; dry.	
20	AS-4B-19				**Clayey Silt (ML)**; brown; 100% low to medium plasticity fines; dry; medium stiff.	
	AS-4B-22					
25	AS-4B-24				**Clayey Silt with Gravel (ML)**; brown; 70-80% low plasticity fines; 20-30% fine gravels; dry; stiff.	

BH COPY CONNELL AS-4B.GPJ GINT US.GDT 7/31/07

(Continued Next Page)

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

BORING NUMBER AS-4B

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
25					**Clayey Silt with Gravel (ML)**; brown; 70-80% low plasticity fines; 20-30% fine gravels; dry; stiff. *(continued)*	Portland Cement
					26.0 ▽ **Sandy Gravel (GP)**; stained green; 60-70% fine gravel; 30-40% fine- to coarse-grain sand; wet; hydrocarbon odor.	
	AS-4B-27		GP			
30					@29' Brown.	
	AS-4B-30				31.0 **Silty Clay (CL)**; light brown; 100% medium plasticity fines; dry; stiff.	
			CL			
	AS-4B-33				**Clay (CL)**; light brown; 100% medium to high plasticity fines; dry; stiff.	
35						
	AS-4B-36					
40						
45					45.0	
			GP		**Sandy Gravel (GP)**; greyish brown; 45-50% fine gravel; 35-40% fine- to coarse-grain sand; 5-10% low plasticity fines; dry; loose.	
					46.0 **Sandy Silt (ML)**; 60-70% low plasticity fines; 30-40% fine-grain sand; moist; soft.	
			ML			
50					**Clayey Silt (ML)**; greyish brown; 100% low plasticity fines; dry; stiff.	
					50.0	
					Bottom of hole at 50.0 feet.	

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER MW-16A

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/11/07 **COMPLETED** 3/11/07
GROUND ELEVATION _____ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger - 8"
AT TIME OF DRILLING ---
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						**See MW-16B for representative lithology.**	Concrete
5							
10							Portland Cement
15							
20							Bentonite #2/12 Sand
25							

(Continued Next Page)

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WELL NUMBER MW-16A

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25						**See MW-16B for representative lithology.** *(continued)*	.010 Slotted 2" Schedule 40 PVC
30						30.0 Bottom of hole at 30.0 feet.	

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WELL NUMBER MW-16B

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/4/07 **COMPLETED** 3/4/07
GROUND ELEVATION ___ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
▽ **AT TIME OF DRILLING** 26.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Concrete Hand Augered to 5'	Concrete
5		0		ML		5.0 **Clayey Silt (ML)**; brown; 95-100% low to medium plasticity fines; trace coarse-grain sand; dry; stiff.	
10	MW-16B-8	0				**Gravelly Silt (ML)**; reddish brown; 60-70% low plasticity fines; 30-40% fine gravels to 1/2"; dry.	
15	MW-16B-12	0				15.0	
	MW-16B-15			GC		**Clayey Gravel (GC)**; reddish gravels and grey clay; 50-60% fine to coarse gravels to 1"; 40-50% medium plasticity fines; soft; moist.	
		0		ML		17.0 **Clayey Silt (ML)**; brown; 95-100% low to medium plasticity fines; trace fine-grain sand; stiff; dry.	Portland Cement
20	MW-16B-18	0					
	MW-16B-20	0				21.0	
				CL		**Clay (CL)**; 95-100% low to medium plasticity fines; dry; stiff.	
25	MW-16B-23					**Sandy Clay (CL)**; 70-80% medium plasticity fines; 20-30% fine-grain sand; medium stiff; moist. @25' Green staining; slight hydrocarbon odor.	

TOTAL WELL LOG CONNELL MW-16B.GPJ GINT US.GDT 6/12/07

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WELL NUMBER MW-16B

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25		22				26.0 ▽	
	MW-16B-26	20		SP		**Sand (SP)**; 90-100% fine-grain sand; trace non-plastic fines; wet; strong hydrocarbon odor. 27.0	
	MW-16B-27			CL		**Clay (CL)**; 90-100% medium to high plasticity fines; trace fine-grain sands; stiff; moist. 28.0	
		7		SC		**Clayey Sand (SC)**; greyish brown; 50-60% fine-grain sand; 40-50% medium plasticity fines; soft; moist; hydrocarbon odor.	
30	MW-16B-29						
		11					
	MW-16B-31						
		18				33.0	
				CL		**Sandy Clay (CL)**; greyish brown; 50-60% medium plasticity fines; 40-50% fine-grain sand; hydrocarbon odor; staining to 36'.	Bentonite
35	MW-16B-34						#2/12 Sand
		28					
	MW-16B-36					@36' 0.3' Fine white gravels.	
		2				*(Pilot boring was advanced to 40' bgs using direct push method. Boring was reamed with 8" hollow stem auger to facilitate the installation of the well.)*	.010 Slotted 2" Schedule 40 PVC
		12					
40	MW-16B-40					40.0	
						Bottom of hole at 40.0 feet.	

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WELL NUMBER MW-17A

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/18/07 **COMPLETED** 3/18/07
GROUND ELEVATION _____ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger - 8"
AT TIME OF DRILLING ---
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored.
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						**See MW-17B for representative lithology.**	Concrete
5							
10							
15							Portland Cement
20							
25							

TOTAL WELL LOG CONNELL MW-17A.GPJ GINT US.GDT 6/12/07

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WELL NUMBER MW-17A

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25						**See MW-17B for representative lithology.** *(continued)*	Bentonite #2/12 Sand .010 2" Schedule 40 PVC
30						30.0	
						Bottom of hole at 30.0 feet.	

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WELL NUMBER MW-17B

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/11/07 **COMPLETED** 3/11/07
GROUND ELEVATION ___ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
▽ **AT TIME OF DRILLING** 27.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Concrete Hand augered.	Concrete
						4.0 **Silty Clay (CL)**; brown; 85-90% low to medium plasticity fines; 10-15% fine gravels; dry; stiff.	
5		0		CL			
10		0				12.0 **Silty Gravel (GM)**; reddish brown; 60-70% fine gravels; 30-40% low plasticity fines; dry; loose.	
15	MW-17B-16	5		GM			Portland Cement
		106					
20	MW-17B-20					21.0 **Sand (SW)**; olive brown; 95-100% fine- to coarse-grain sand; trace to 5% low plasticity fines; hydrocarbon odor; moist to wet.	
	MW-17B-22	30		SW			
25	MW-17B-24						

TOTAL WELL LOG CONNELL MW-17B.GPJ GINT US.GDT 6/12/07

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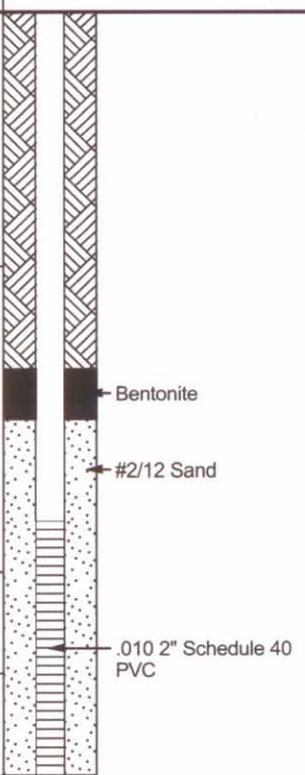
WELL NUMBER MW-17B

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
25	MW-17B-26	290		SW		**Sand (SW)**; olive brown; 95-100% fine- to coarse-grain sand; trace to 5% low plasticity fines; hydrocarbon odor; moist to wet. *(continued)*
	MW-17B-28					@28' SPH
30	MW-17B-30	19		SC		30.0 **Clayey Sand (SC)**; greyish brown; 60-70% fine- to coarse-grain sand; 30-40% low plasticity fines; wet.
	MW-17B-32					
35	MW-17B-34	29				36.0
	MW-17B-36			SW		**Gravelly Sand (SW)**; brown; 50-60% fine-grain sand; 30-40% fine gravels; trace-5% low plasticity fines; wet; hydrocarbon odor.
	MW-17B-38	304		SP		38.0 **Sand (SP)**; greyish brown; 100% fine-grain sand; wet; hydrocarbon odor.
40	MW-17B-40	283				40.0 *(Pilot boring was advanced to 40' bgs using direct push method. Boring was reamed with 8" hollow stem auger to facilitate the installation of the well.)*
						Bottom of hole at 40.0 feet.

WELL DIAGRAM



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WELL NUMBER RW-1

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/25/07 **COMPLETED** 3/25/07
GROUND ELEVATION _____ **HOLE SIZE** 10"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
AT TIME OF DRILLING 26.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete Cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Concrete Hand augered.	Concrete
						4.0	
5				CL		**Silty Clay with sand (CL)**; brown; 60-70% low to medium plasticity fines; 20-30% fine- to coarse-grain sand; 5-10% fine gravels; dry stiff.	
						9.0	
10				ML		**Sandy Silt (ML)**; brown; 70-80% low plasticity fines; 20-30% fine- to coarse-grain sand; trace-5% fine gravels; dry; stiff.	Portland Cement
		1				**Gravelly Silt (ML)**; olive green; 60-70% low plasticity fines; 20-30% fine gravels; 5-10% fine-grain sand; dry; hydrocarbon odor.	
15		696					
20		162				**Clayey Silt (ML)**; green stained; 100% low to medium plasticity fines; moist; soft; hydrocarbon odor.	Bentonite #2/12 Sand
		462					
25						25.0 **Sandy Silt (ML)**; green stained; 70-80% low to medium plasticity fines; 20-25% fine- to coarse-grain sand; trace-5% fine gravels; moist to wet;	

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WELL NUMBER RW-1

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25				CL		soft; hydrocarbon odor.	
		268		SC		26.0 ▽ **Sandy Clay (CL)**; 60-70% medium plasticty fines; 30-40% fine-grain sand; wet; soft; hydrocarbon odor.	
						27.0 **Clayey Sand (SC)**; olive green; 70-80% fine-grain sand; 20-30% low plasticity fines; wet; soft; hydrocarbon odor.	.010 Slotted 4" Schedule 40 PVC
		308		CL		**Silty Clay (CL)**; greenish brown; 80-90% low plasticity fines; 10-20% fine-grain sand; moist to wet; soft; hydrocarbon odor.	
30						31.0	
				SP		**Sand (SP)**; brown; 95-100% fine-grain sand; trace-5% low plasticity fines; wet; strong hydrocarbon odor.	
		693				32.0 **Silty Clay (CL)**; brown; 80-90% low plasticity fines; 10-15% fine-grain sand; soft.	
		491		CL			
35						@35' Stiff; grey.	Slough
						36.0	
		138				*(Pilot boring was advanced to 36' bgs using direct push method. Boring was reamed with 10" hollow stem auger to facilitate the installation of the well.)*	
						Bottom of hole at 36.0 feet.	

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WELL NUMBER RW-2

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/1/07 **COMPLETED** 3/1/07
GROUND ELEVATION _____ **HOLE SIZE** 8"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
▽ **AT TIME OF DRILLING** 18.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Asphalt 1.0 Baserock	Concrete
				CL		**Silty Clay (CL)**; brown; 50-60% medium plasticity fines; 40-50% non-plastic fines; dry; stiff.	
5						**Silty Clay with Sand (CL)**; brown; 70-80% low to medium plasticity fines; 20-30% fine-grain sand; trace coarse-grain sand; dry.	Portland Cement
						8.0	
10						**Gravelly Sand with Silt (SW-SM)**; reddish brown to grey; 50-60% fine- to coarse-grain sand; 30-40% fine gravels; 10-20% non-plastic fines; loose.	Bentonite
15				SW-SM		@16' Hydrocarbon odor.	#2/12 Sand
						▽ @18' Moist to wet.	
20	RW-2-20						.010 Slotted 2" Schedule 40 PVC
25	RW-2-24					@24.5' Strong hydrocarbon odor; SPH in soil; moist.	
						25.0	

TOTAL WELL LOG CONNELL RW-2.GPJ GINT US.GDT 6/12/07

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WELL NUMBER RW-2

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25							
	RW-2-27			SW		**Sand with Gravel (SW)**; brownish grey; 90-95% fine- to coarse-grain sand; 5-10% fine gravels; trace medium plasticity fines; loose; wet; faint hydrocarbon odor. *(Pilot boring was advanced to 30' bgs using direct push method. Boring was reamed with 8" hollow stem auger to facilitate the installation of the well.)*	
30	RW-2-30					30.0 Bottom of hole at 30.0 feet.	

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WELL NUMBER RW-3A

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 4/4/07 **COMPLETED** 4/4/07
GROUND ELEVATION _____ **HOLE SIZE** 10"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Hollow Stem Auger - 10"
AT TIME OF DRILLING ---
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						**For representative lithology, see well number RW-3B.**	Concrete
5							Portland Cement
10							
15							Bentonite #2/12 Sand
20							.010 Slotted 4" Schedule 40 PVC
25							

TOTAL WELL LOG CONNELL RW-3A.GPJ GINT US.GDT 6/7/07

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WELL NUMBER RW-3A

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25							
						26.0	
						Bottom of hole at 26.0 feet.	

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WELL NUMBER RW-3B

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DATE STARTED 2/28/07 **COMPLETED** 2/28/07 **GROUND ELEVATION** _____ **HOLE SIZE** 10"

DRILLING CONTRACTOR RSI **GROUND WATER LEVELS:**

DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger ▽ **AT TIME OF DRILLING** 18.0 ft

LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell **AT END OF DRILLING** ---

NOTES _____ **AFTER DRILLING** ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						Asphalt	Concrete
						1.0 Baserock 2.0	
				ML		**Clayey Silt (ML)**; dark brown; 95-100% low to non-plastic fines; trace fine gravel; dry; stiff.	
5						**Gravelly Silt with Sand (ML)**; reddish brown; 40-50% non-plastic fines; 20-30% fine gravels to 3/4"; 15-20% fine- to coarse-grain sand; dry; loose.	
10							
15						16.0	Portland Cement
				SW		**Sand with Gravel (SW)**; brown; 90-95% fine- to coarse-grain sand; 5-10% fine gravels; strong hydrocarbon odor; wet. ▽	
20	RW-3-20					21.5	
				GM		**Sandy Gravel (GM)**; brown; 60-70% fine gravels; 30-40% fine- to coarse-grain sand; trace medium plasticty fines; moist. 23.0	
				SP		**Sand (SP)**; greyish green; 95-100% fine-grain sand; trace non-plastic fines; stained; strong hydrocarbon odor; wet.	
25	RW-3-24						

TOTAL WELL LOG CONNELL RW-3.GPJ GINT US.GDT 6/7/07

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WELL NUMBER RW-3B

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25				SP		**Sand (SP)**; greyish green; 95-100% fine-grain sand; trace non-plastic fines; stained; strong hydrocarbon odor; wet. *(continued)*	
						28.0	
	RW-3-28			ML		**Clayey Silt (ML)**; brown; 100% low to medium plasticity fines; dry; stiff.	
30						32.0	Bentonite
				SM		**Silty Sand (SM)**; greyish brown; 70-80% fine-grain sand; 20-30% non-plastic fines; wet; slight hydrocarbon odor.	#2/12 Sand
						33.0	
				CL		**Silty Clay (CL)**; brown; 80-85% low to medium plasticity fines; 15-20% fine gravels; dry; stiff.	.010 Slotted 4" Schedule 40 PVC
35						35.0	
				SW		**Gravelly Sand (SW)**; brown; 60-70% fine- to coarse-grain sand; 30-40% fine gravels; trace- 5% medium plasticity fines; wet.	
						36.5	
				CL		**Silty Clay (CL)**; brown; 100% low to medium plasticity fines; moist; stiff.	Slough
						38.0	
						(Pilot boring was advanced to 38' bgs using direct push method. Boring was reamed with 10" hollow stem auger to facilitate the installation of the well.)	
						Bottom of hole at 38.0 feet.	

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WELL NUMBER RW-4

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/25/07 **COMPLETED** 3/25/07
GROUND ELEVATION _____ **HOLE SIZE** 10"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
▽ **AT TIME OF DRILLING** 24.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Concrete	Concrete
						Hand Augered	
						4.0	
5				CL		**Silty Clay (CL)**; brown; 95-100% medium plasticity fines; trace-5% fine gravels; dry; stiff.	
						8.0	
		8				**Clayey Silt (ML)**; brown; 80-90% low plasticity fines; 10-20% fine-grain sand; dry; soft.	
10							
		11		ML			Portland Cement
15							
		36				**Gravelly Silt (ML)**; reddish brown; 60-70% low plasticity fines; 20-30% fine-gravels; 10-20% fine- to coarse-grain sand; dry; loose.	
20		2					Bentonite
							#2/12 Sand
						23.0	
	RW-4-23	2		SW		**Gravelly Sand (SW)**; brown with green staining; 60-70% fine- to coarse-grain sand; 20-30% fine gravels; 10-20% low plasticity fines; ▽ hydrocarbon odor.	
25							

TOTAL WELL LOG CONNELL RW-4.GPJ GINT US.GDT 6/12/07

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WELL NUMBER RW-4

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25	RW-4-26	12		SW		**Gravelly Sand (SW)**; brown with green staining; 60-70% fine- to coarse-grain sand; 20-30% fine gravels; 10-20% low plasticity fines; hydrocarbon odor. *(continued)*	.010 Slotted 4" Schedule 40 PVC
30	RW-4-29	556					Sand
	RW-4-32	24		SP		32.0 **Sand (SP)**; grey; 85-90% fine-grain sand; 10-15% low plasticity fines; very wet; slight hydrocarbon odor.	Native Soil
35	RW-4-35	6					Bentonite
	RW-4-38	2		CL		36.0 **Clay (CL)**; brown; 95-100% medium plasticity fines; trace-5% fine-grain sand; dry; very stiff; no hydrocarbon odor.	
						38.0 *(Pilot boring was advanced to 38' bgs using direct push method. Boring was reamed with 10" hollow stem auger to facilitate the installation of the well.)*	
						Bottom of hole at 38.0 feet.	

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WELL NUMBER RW-5

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/25/07 **COMPLETED** 3/25/07
GROUND ELEVATION ___ **HOLE SIZE** 10"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
AT TIME OF DRILLING 26.0 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Concrete Hand Augered	Concrete
						4.0	
5				CL		**Silty Clay (CL)**; brown; 95-100% low to medium plasticity fines; trace-5% fine-grain sand; dry; very stiff.	
		28					
10						11.0	
		7		ML		**Sandy Silt (ML)**; greyish brown; 60-70% low to medium plasticity fines; 20-30% fine-grain sands; 5-10% fine gravels; dry; stiff.	Portland Cement
15						15.0	
		25		GM		**Silty Gravel with sand (GM)**; reddish brown; 50-60% fine gravels; 20-30% low plasticity fines; 15-25% fine- to coarse-grain sand; moist.	
20	RW-5-20	8					Bentonite
						24.0	#2/12 Sand
25	RW-5-24	29		GW		**Sandy Gravel (GW)**; brown; 50-60% fine gravels; 30-40% fine- to coarse-grain sand; 10-20% low plasticity fines; moist; hydrocarbon odor.	

TOTAL WELL LOG CONNELL RW-5.GPJ GINT US.GDT 6/12/07

(Continued Next Page)

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER RW-5

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25				GW		**Sandy Gravel (GW)**; brown; 50-60% fine gravels; 30-40% fine- to coarse-grain sand; 10-20% low plasticity fines; moist; hydrocarbon odor. *(continued)*	
	RW-5-27	713				27.0 **Gravelly Sand (SW)**; greenish brown; 60-70% fine- to coarse-grain sand; 20-30% fine gravels; 5-10% low plasticity fines; wet; hydrocarbon odor.	.010 Slotted 4" Schedule 40 PVC
30	RW-5-30	334		SW			
	RW-5-33	45					
35							Native Soil
	RW-5-36	163				36.0 **Sand (SP)**; greenish grey; 95-100% fine- to coarse-grain sand; trace-5% fine gravels; wet; hydrocarbon odor.	Bentonite
				SP		*(Pilot boring was advanced to 40' bgs using direct push method. Boring was reamed with 10" hollow stem auger to facilitate the installation of the well.)*	
40	RW-5-40					40.0 Bottom of hole at 40.0 feet.	

TOTAL WELL LOG CONNELL RW-5.GPJ GINT US.GDT 6/12/07

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER VE-1

CLIENT Connell
PROJECT NAME Connell
PROJECT NUMBER 1005.001
PROJECT LOCATION 3093 Broadway, Oakland
DATE STARTED 3/11/07 **COMPLETED** 3/11/07
GROUND ELEVATION ___ **HOLE SIZE** 10"
DRILLING CONTRACTOR RSI
GROUND WATER LEVELS:
DRILLING METHOD Dual Tube Direct Push/Hollow Stem Auger
AT TIME OF DRILLING 31.5 ft
LOGGED BY Bryce Taylor **CHECKED BY** Bob Clark-Riddell
AT END OF DRILLING ---
NOTES Concrete cored
AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 Concrete Hand Augered	Concrete
						4.0	
5				GM		4.5 **Silty Gravel (GM)**; black; 60-70% fine gravels; 30-40% non-plastic fines; dry; loose.	
		0		CL		**Silty Clay (CL)**; olive grey; 100% low to medium plasticity fines; medium stiff.	Portland Cement
	VE-1-8						
10		0					
	VE-1-12					**Silty Clay with Sand (CL)** 75-80% low to medium plasticity fines; 10-15% fine-grain sand; 5-10% fine gravels; dry; stiff.	Bentonite
		21					#2/12 Sand
15						@15' Hydrocarbon odor.	
	VE-1-16					16.0	
				GM		**Silty Gravel (GM)**; olive grey; 60-70% fine gravels; 30-40% low plasticity fines; dry; loose.	
		133				18.0	
				ML		**Silt (ML)**; light brown with green staining; 100% low to non-plastic fines; dry; loose.	
20	VE-1-19						.010 Slotted 4" Schedule 40 PVC
		191				21.0	
	VE-1-22			CL		**Silty Clay (CL)**; brownish grey; 100% low to medium plasticity fines; medium stiff; hydrocarbon odor to approximately 26'.	
25							

TOTAL WELL LOG CONNELL VE-1.GPJ GINT US.GDT 6/12/07

(Continued Next Page)

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
Telephone: 510-836-3700
Fax: 510-836-3709

WELL NUMBER VE-1

CLIENT Connell **PROJECT NAME** Connell

PROJECT NUMBER 1005.001 **PROJECT LOCATION** 3093 Broadway, Oakland

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25	VE-1-25	93		CL		**Silty Clay (CL)**; brownish grey; 100% low to medium plasticity fines; medium stiff; hydrocarbon odor to approximately 26'. *(continued)*	
		82				28.0	
	VE-1-28			SC		**Clayey Sand (SC)**; brown; 70-80% fine-grain sand; 20-30% low to medium plasticity fines; medium stiff to soft; wet.	
30		201				@31.5' Wet. ▽	.010 Slotted 4" Schedule 40 PVC
	VE-1-31						
		248				*(Pilot boring was advanced to 35' bgs using direct push method. Boring was reamed with 10" hollow stem auger to facilitate the installation of the well.)*	
35	VE-1-35					35.0 Bottom of hole at 35.0 feet.	

APPENDIX D

Laboratory Analytical Reports

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto	Date Sampled: 02/27/07-03/01/07
		Date Received: 03/02/07
	Client Contact: Bryce Taylor	Date Reported: 03/09/07
	Client P.O.:	Date Completed: 03/09/07

WorkOrder: 0703033

March 09, 2007

Dear Bryce:

Enclosed are:

1). the results of **14** analyzed samples from your **#1005.001.410; Connell Auto project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

0703033

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor	**Bill To:** Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	
	E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
PO#: 3093 Broadway, Oakland, CA	Project Name: Connell Auto
Project Location: 3093 Broadway, Oakland, Ca	Project #: 1005.001.410
Sampler Signature: BA TM	

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Analysis Request: TPH as Diesel (8015)	Analysis Request: Total Petroleum Oil & Grease (5520 E&F/B&F)	Analysis Request: Total Petroleum Hydrocarbons (418.1)	Analysis Request: EPA 601 / 8010 / 8021	Analysis Request: BTEX ONLY (EPA 602 / 8020)	Analysis Request: EPA 608 / 8081	Analysis Request: EPA 608 / 8082 PCB's ONLY	Analysis Request: EPA 8140 / 8141	Analysis Request: EPA 8150 / 8151	Analysis Request: EPA 524.2 / 624 / 8260	Analysis Request: EPA 525 / 625 / 8270	Analysis Request: PAH's / PNA's by EPA 625 / 8270 / 8310	Analysis Request: CAM-17 Metals (6010 / 6020)	Analysis Request: LUFT 5 Metals (6010 / 6020)	Analysis Request: Lead (200.8 / 200.9 / 6010)	Other: 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Comments
RW-3-20		2-28	1300	1	Tube		X				X				X	X															
RW-3-24		2/28	1305	1	↓		↓				↓				X	X															
RW-3-28		2/28	1310	1											X	X															
RW-3-35		2/28	1315	1											X	X															
AS-4B-19		3/1	1257	1																											HOLD
AS-4B-22		3/1	1300	1																											HOLD
AS-4B-24		3/1	1303	1											X	X															
AS-4B-27		3/1	1306	1											X	X															
AS-4B-30		3/1	1310	1																											HOLD
AS-4B-33		3/1	1313	1											X	X															
AS-4B-36		3/1	1316	1																											HOLD
AS-4B-42		3/1	1330	1																											HOLD
AS-4B-46		3/1	1400	1	↓		↓				↓				X	X															

Relinquished By:	Date:	Time:	Received By:
BA TM	3/3/07	15	
Relinquished By:	Date:	Time:	Received By:
	3/2/07	300	
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

Filter Samples for Metals analysis: Yes / No

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No **Write On (DW)** No

Report To: Bryce Taylor	**Bill To:** Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	
	E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702	**Fax:** (510) 836-3709
PO#: 3093 Broadway, Oakland, CA	**Project Name:** Connell Auto
Project Location: 3093 Broadway, Oakland, Ca	**Project #:** 1005.001.410
Sampler Signature:	

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Analysis Request: TPH as Diesel (8015)	Analysis Request: Total Petroleum Oil & Grease (5520 E&F/B&F)	Analysis Request: Total Petroleum Hydrocarbons (418.1)	Analysis Request: EPA 601 / 8010 / 8021	Analysis Request: BTEX ONLY (EPA 602 / 8020)	Analysis Request: EPA 608 / 8081	Analysis Request: EPA 608 / 8082 PCB's ONLY	Analysis Request: EPA 8140 / 8141	Analysis Request: EPA 8150 / 8151	Analysis Request: EPA 524.2 / 624 / 8260	Analysis Request: EPA 525 / 625 / 8270	Analysis Request: PAH's / PNA's by EPA 625 / 8270 / 8310	Analysis Request: CAM-17 Metals (6010 / 6020)	Analysis Request: LUFT 5 Metals (6010 / 6020)	Analysis Request: Lead (200.8 / 200.9 / 6010)	Other: 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Comments
AS-3B-35		2/27	9:55	1	tube		X				X																					HOLD
AS-3B-32		2/27	9:45	1			X				X				X	X																
AS-3B-24		2/27	9:00	1			X				X				X	X																
RW-2-20		3/1	10:00	1			X				X				X	X																
RW2-24		3/1	10:05	1			X				X				X	X																
RW2-27		3/1	10:10	1			X				X																				HOLD
RW2-30		3/1	10:15	1	↓		X				X				X	X																
AS-4B-50		3/1	1500	3	VOA	X					X	X			X																	

Relinquished By:	Date:	Time:	Received By:
	3/2/07	1551	
	3/2/07	300	

ICE/t° 6 ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB ✓
APPROPRIATE CONTAINERS
PRESERVED IN LAB

PRESERVATION: VOAS ✓ O&G METALS OTHER pH<2

COMMENTS:

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0703033 **ClientID: PEO**

☐ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bryce Taylor
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: btaylor@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001.410; Connell Auto
PO:

Bill to
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **03/02/2007**
Date Printed: **03/09/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0703033-001	RW-3-20	Soil	02/28/07 1:00:00	☐	A		A	A								
0703033-002	RW-3-24	Soil	02/28/07 1:05:00	☐	A			A								
0703033-003	RW-3-28	Soil	02/28/07 1:10:00	☐	A			A								
0703033-004	RW-3-35	Soil	02/28/07 1:15:00	☐	A			A								
0703033-007	AS-4B-24	Soil	03/01/07 1:03:00	☐	A			A								
0703033-008	AS-4B-27	Soil	03/01/07 1:06:00	☐	A			A								
0703033-009	AS-4B-30	Soil	03/01/07 1:10:00	☑	A			A								
0703033-010	AS-4B-33	Soil	03/01/07 1:13:00	☐	A			A								
0703033-011	AS-4B-36	Soil	03/01/07 1:16:00	☑	A			A								
0703033-012	AS-4B-42	Soil	03/01/07 1:30:00	☑	A			A								
0703033-013	AS-4B-46	Soil	03/01/07 2:00:00	☐	A			A								
0703033-015	AS-3B-24	Soil	02/27/07 9:45:00	☐	A			A								
0703033-016	AS-3B-24	Soil	02/27/07 9:00:00	☐	A			A								
0703033-017	RW-2-20	Soil	03/01/07 10:00:00	☐	A			A								
0703033-018	RW-2-24	Soil	03/01/07 10:05:00	☐	A			A								

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	PREDF REPORT	4	TPH(D)_S	5	
6		7		8		9		10	
11		12							

Prepared by: Elisa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0703033 **ClientID: PEO**

☐ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bryce Taylor
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: btaylor@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001.410; Connell Auto
PO:

Bill to
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **03/02/2007**
Date Printed: **03/09/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0703033-019	RW-2-27	Soil	03/01/07 10:10:00	☑	A			A								
0703033-020	RW-2-30	Soil	03/01/07 10:15:00	☐	A			A								
0703033-021	AS-4B-50	Water	03/01/07 3:00:00	☐		A										

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	PREDF REPORT	4	TPH(D)_S	5	
6		7		8		9		10	
11		12							

Prepared by: Elisa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: #1005.001.410; Connell Auto	Date Sampled: 02/27/07-03/01/07
1710 Franklin Street, Ste. 200		Date Received: 03/02/07
Oakland, CA 94612	Client Contact: Bryce Taylor	Date Extracted: 03/02/07-03/06/07
	Client P.O.:	Date Analyzed: 03/02/07-03/06/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0703033

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	RW-3-20	S	9000,a	ND<40	98	470	140	610	200	86
002A	RW-3-24	S	15,a	ND<0.2	0.72	0.76	0.19	0.76	1	93
003A	RW-3-28	S	ND,a	ND	0.10	0.019	0.0076	0.018	1	89
004A	RW-3-35	S	ND	ND	0.019	0.065	0.0085	0.046	1	91
007A	AS-4B-24	S	2.5,a	ND	0.45	0.034	0.069	0.097	1	87
008A	AS-4B-27	S	2.8,a	ND	0.31	0.27	0.056	0.21	1	81
010A	AS-4B-33	S	ND	ND	ND	ND	ND	ND	1	89
013A	AS-4B-46	S	ND	ND	ND	ND	ND	ND	1	88
015A	AS-3B-24	S	ND	ND	ND	ND	ND	ND	1	91
016A	AS-3B-24	S	3.9,a	ND	0.42	0.39	0.077	0.33	1	101
017A	RW-2-20	S	2300,a	ND<10	25	110	36	180	50	92
018A	RW-2-24	S	680,a	ND<5.0	5.9	25	11	56	100	92
020A	RW-2-30	S	ND	ND	ND	ND	ND	ND	1	90
021A	AS-4B-50	W	88,a,i	ND	7.2	7.1	1.2	3.5	1	107

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto	Date Sampled: 02/27/07-03/01/07
		Date Received: 03/02/07
	Client Contact: Bryce Taylor	Date Extracted: 03/02/07
	Client P.O.:	Date Analyzed 03/02/07-03/08/07

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0703033

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0703033-001A	RW-3-20	S	1100,d	10	91
0703033-002A	RW-3-24	S	8.2,d,b	1	92
0703033-003A	RW-3-28	S	ND	1	94
0703033-004A	RW-3-35	S	ND	1	95
0703033-007A	AS-4B-24	S	ND	1	95
0703033-008A	AS-4B-27	S	ND	1	93
0703033-010A	AS-4B-33	S	ND	1	94
0703033-013A	AS-4B-46	S	ND	1	94
0703033-015A	AS-3B-24	S	ND	1	92
0703033-016A	AS-3B-24	S	ND	1	93
0703033-017A	RW-2-20	S	400,d	1	94
0703033-018A	RW-2-24	S	260,d	1	104
0703033-020A	RW-2-30	S	ND	1	90

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; o) results are reported on a dry weight basis.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703033

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 26514				Spiked Sample ID: 0702666-013A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	107	109	2.26	108	108	0	70 - 130	30	70 - 130	30
MTBE	ND	0.10	88.2	85.7	2.86	92.5	86.4	6.75	70 - 130	30	70 - 130	30
Benzene	ND	0.10	104	98.8	5.13	108	109	0.767	70 - 130	30	70 - 130	30
Toluene	ND	0.10	94.2	90.7	3.79	97.2	99.3	2.16	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	100	89.6	11.4	105	111	4.88	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	96.7	100	3.39	100	107	6.45	70 - 130	30	70 - 130	30
%SS:	96	0.10	107	104	2.84	101	110	8.53	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26514 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703033-001A	02/28/07 1:00 PM	03/02/07	03/02/07 11:03 PM	0703033-002A	02/28/07 1:05 PM	03/02/07	03/03/07 1:34 AM
0703033-003A	02/28/07 1:10 PM	03/02/07	03/03/07 2:04 AM	0703033-004A	02/28/07 1:15 PM	03/02/07	03/03/07 3:04 AM
0703033-007A	03/01/07 1:03 PM	03/02/07	03/03/07 4:04 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703033

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 26550				Spiked Sample ID: 0703033-010A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	109	107	2.00	108	114	5.21	70 - 130	30	70 - 130	30
MTBE	ND	0.10	114	124	8.17	113	112	1.50	70 - 130	30	70 - 130	30
Benzene	ND	0.10	95.5	101	5.21	97.6	93.2	4.61	70 - 130	30	70 - 130	30
Toluene	ND	0.10	106	110	3.82	108	104	3.81	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	103	103	0	103	103	0	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	113	113	0	113	113	0	70 - 130	30	70 - 130	30
%SS:	89	0.10	94	103	9.14	101	99	2.00	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26550 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703033-008A	03/01/07 1:06 PM	03/02/07	03/06/07 2:17 AM	0703033-010A	03/01/07 1:13 PM	03/02/07	03/03/07 4:34 AM
0703033-013A	03/01/07 2:00 PM	03/02/07	03/03/07 5:04 AM	0703033-015A	02/27/07 9:45 AM	03/02/07	03/03/07 6:04 AM
0703033-016A	02/27/07 9:00 AM	03/02/07	03/06/07 2:47 AM	0703033-017A	03/01/07 10:00 AM	03/02/07	03/03/07 7:04 AM
0703033-018A	03/01/07 10:05 AM	03/02/07	03/03/07 7:34 AM	0703033-020A	03/01/07 10:15 AM	03/02/07	03/03/07 8:04 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0703033

EPA Method SW8021B/8015Cm	Extraction SW5030B	BatchID: 26544	Spiked Sample ID: 0703044-001A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	107	108	1.22	97.8	97.5	0.253	70 - 130	30	70 - 130	30
MTBE	ND	10	89.3	92.8	3.77	93.5	92.5	1.13	70 - 130	30	70 - 130	30
Benzene	ND	10	105	110	4.70	97.9	97.2	0.758	70 - 130	30	70 - 130	30
Toluene	ND	10	108	112	3.92	98.2	97.4	0.858	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	102	106	3.81	103	102	1.00	70 - 130	30	70 - 130	30
Xylenes	ND	30	113	120	5.71	117	117	0	70 - 130	30	70 - 130	30
%SS:	89	10	90	91	1.88	92	90	2.29	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26544 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703033-021A	03/01/07 3:00 PM	03/05/07	03/05/07 3:33 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703033

EPA Method SW8015C	Extraction SW3550C	BatchID: 26513	Spiked Sample ID: 0702666-013A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	ND	20	98.8	98.8	0	95	95.6	0.593	70 - 130	30	70 - 130	30
%SS:	97	50	103	104	0.598	101	102	0.586	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26513 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703033-001A	02/28/07 1:00 PM	03/02/07	03/08/07 6:19 PM	0703033-002A	02/28/07 1:05 PM	03/02/07	03/02/07 9:49 PM
0703033-003A	02/28/07 1:10 PM	03/02/07	03/02/07 10:58 PM	0703033-004A	02/28/07 1:15 PM	03/02/07	03/03/07 12:08 AM
0703033-007A	03/01/07 1:03 PM	03/02/07	03/03/07 1:16 AM	0703033-008A	03/01/07 1:06 PM	03/02/07	03/03/07 2:26 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification N° 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703033

EPA Method SW8015C	Extraction SW3550C	BatchID: 26552	Spiked Sample ID: 0703033-010A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	ND	20	99.8	102	2.66	103	104	0.805	70 - 130	30	70 - 130	30
%SS:	94	50	90	91	0.555	94	95	1.15	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26552 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703033-010A	03/01/07 1:13 PM	03/02/07	03/03/07 3:34 AM	0703033-013A	03/01/07 2:00 PM	03/02/07	03/03/07 9:19 AM
0703033-015A	02/27/07 9:45 AM	03/02/07	03/03/07 10:29 AM	0703033-016A	02/27/07 9:00 AM	03/02/07	03/03/07 11:40 AM
0703033-017A	03/01/07 10:00 AM	03/02/07	03/03/07 12:51 PM	0703033-018A	03/01/07 10:05 AM	03/02/07	03/03/07 2:02 PM
0703033-020A	03/01/07 10:15 AM	03/02/07	03/03/07 3:13 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification N° 1644

QA/QC Officer

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto	Date Sampled: 03/01/07
		Date Received: 03/02/07
	Client Contact: Bryce Taylor	Date Reported: 03/09/07
	Client P.O.:	Date Completed: 03/16/07

WorkOrder: 0703033

March 16, 2007

Dear Bryce:

Enclosed are:

1). the results of **1** analyzed sample from your **#1005.001.410; Connell Auto project,**

2). a QC report for the above sample

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

0703033

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
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Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
PO#: 3093 Broadway, Oakland, CA Project Name: Connell Auto
Project Location: 3093 Broadway, Oakland, Ca Project #: 1005.001.410
Sampler Signature: BT

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Comments
RW-3-20		2-28	1300	1	Tube		X				X				X	X																
RW-3-24		2/28	1305	1											X	X																
RW-3-28		2/28	1310	1											X	X																
RW-3-35		2/28	1315	1											X	X																
AS-4B-19		3/1	1257	1											X																HOLD B35 BT	
AS-4B-22		3/1	1300	1																											HOLD	
AS-4B-24		3/1	1303	1											X	X																
AS4B-27		3/1	1306	1											X	X																
AS4B-30		3/1	1310	1																											HOLD	
AS4B-33		3/1	1313	1											X	X																
AS4B-36		3/1	1316	1																											HOLD	
AS4B-42		3/1	1330	1																											HOLD	
AS4B-46		3/1	1400	1											X	X																

Relinquished By:	Date:	Time:	Received By:
BT	3/3/07	15	
Relinquished By:	Date:	Time:	Received By:
	3/2/07	300	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 6 ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0703033 **ClientID: PEO**

☐ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bryce Taylor
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: btaylor@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001.410; Connell Auto
PO:

Bill to
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days
Date Received: 3/02/2007
Date Add-On: 3/12/2007
Date Printed: 3/14/2007

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
0703033-005	AS-4B-19	Soil	03/01/07 12:57:00	☐	A											

Test Legend:

1	G-MBTEX_S	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Elisa Venegas

Comments: 3-12-07 005 taken off hold and ran for mbtex added per MG

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: #1005.001.410; Connell Auto	Date Sampled: 03/01/07
1710 Franklin Street, Ste. 200		Date Received: 03/02/07
Oakland, CA 94612	Client Contact: Bryce Taylor	Date Extracted: 03/14/07
	Client P.O.:	Date Analyzed 03/14/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0703033

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
005A	AS-4B-19	S	13,a	ND	0.46	0.96	0.16	0.85	1	92

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703033

EPA Method SW8021B/8015Cm	Extraction SW5030B	BatchID: 26780	Spiked Sample ID: 0703303-005A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	98.2	99.3	1.06	111	117	5.64	70 - 130	30	70 - 130	30
MTBE	ND	0.10	88.6	92.1	3.92	82.3	81.9	0.414	70 - 130	30	70 - 130	30
Benzene	ND	0.10	85.1	85.5	0.494	88.1	92.5	4.86	70 - 130	30	70 - 130	30
Toluene	ND	0.10	80.9	80	1.08	83.6	88	5.15	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	78	89.6	13.9	93.1	95.9	2.94	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	92	83.3	9.89	91.7	92.7	1.08	70 - 130	30	70 - 130	30
% SS1	0	0.10	69	91	27.5	94	92	2.15	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26780 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703033-005A	03/01/07 12:57 PM	03/14/07	03/14/07 5:21 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto 3093 Broadway, Oakland	Date Sampled: 03/04/07
		Date Received: 03/06/07
	Client Contact: Bryce Taylor	Date Reported: 03/13/07
	Client P.O.:	Date Completed: 03/13/07

WorkOrder: 0703119

March 13, 2007

Dear Bryce:

Enclosed are:

1). the results of **5** analyzed samples from your **#1005.001.410; Connell Auto 3093 Broadway, Oakland project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

PEO 0703119

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
PO#: 3093 Broadway, Oakland, CA Project Name: Connell Auto
Project Location: 3093 Broadway, Oakland, Ca Project #: 1005.001.410
Sampler Signature: BT

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Comments
MW-16B-8		3/4	1100	1	↑		X				X																					HOLD
MW-16B-12			1105				X				X																					HOLD
MW-16B-15			1110				X				X																					HOLD
MW-16B-18			1115				X				X																					HOLD
MW-16B-20			1120				X				X				X	X																
MW-16B-23			1125				X				X				X	X																
MW-16B-26			1130				X				X				X	X																
MW-16B-27			1145				X				X																					HOLD
MW-16B-29			1147				X				X																					HOLD
MW-16B-31			1150				X				X																					HOLD
MW-16B-34			1157				X				X				X	X																
MW-16B-36			1200				X				X																					HOLD
MW-16B-40		↓	1213	↓	acetate liners		X				X				X	X																
MW-16B 38																																Hold

Relinquished By:	Date:	Time:	Received By:
Bryce Taylor	3/6/07	1700	
	3/6/07	530	Mel Vall

ICE/t° 4.8°
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

VOAS O&G METALS OTHER
PRESERVATION pH<2

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0703119 **ClientID: PEO**

☐ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bryce Taylor
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: btaylor@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001.410; Connell Auto 3093 Bro
PO:

Bill to
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **03/06/2007**
Date Printed: **03/08/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0703119-005	MW-16B-20	Soil	03/04/07 11:20:00	☐	A	A	A									
0703119-006	MW-16B-23	Soil	03/04/07 11:25:00	☐	A		A									
0703119-007	MW-16B-26	Soil	03/04/07 11:30:00	☐	A		A									
0703119-011	MW-16B-34	Soil	03/04/07 11:57:00	☐	A		A									
0703119-013	MW-16B-40	Soil	03/04/07 12:13:00	☐	A		A									

Test Legend:

1	G-MBTEX_S	2	PREDF REPORT	3	TPH(D)_S	4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto 3093 Broadway, Oakland	Date Sampled: 03/04/07
		Date Received: 03/06/07
	Client Contact: Bryce Taylor	Date Extracted: 03/06/07
	Client P.O.:	Date Analyzed 03/08/07-03/09/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0703119

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
005A	MW-16B-20	S	ND	ND	ND	ND	ND	ND	1	87
006A	MW-16B-23	S	180,b,m	ND<0.50	ND<0.050	1.1	ND<0.050	0.45	10	90
007A	MW-16B-26	S	14,m	ND	ND	0.041	ND	0.039	1	86
011A	MW-16B-34	S	130,b,m	ND<0.50	1.1	0.99	0.83	1.0	10	109
013A	MW-16B-40	S	1.5,a	ND	0.45	ND	0.070	ND	1	98

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto 3093 Broadway, Oakland	Date Sampled: 03/04/07
		Date Received: 03/06/07
	Client Contact: Bryce Taylor	Date Extracted: 03/06/07
	Client P.O.:	Date Analyzed 03/08/07-03/10/07

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method SW3550C Analytical methods SW8015C Work Order: 0703119

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0703119-005A	MW-16B-20	S	ND	1	89
0703119-006A	MW-16B-23	S	64,d	1	107
0703119-007A	MW-16B-26	S	3.8,d	1	118
0703119-011A	MW-16B-34	S	25,d	1	94
0703119-013A	MW-16B-40	S	ND	1	89

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; o) results are reported on a dry weight basis.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703119

EPA Method SW8015Cm	Extraction SW5030B				BatchID: 26618				Spiked Sample ID: 0703119-005A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	103	97.6	5.72	103	97.9	5.08	70 - 130	30	70 - 130	30
MTBE	ND	0.10	103	102	0.951	113	115	1.96	70 - 130	30	70 - 130	30
Benzene	ND	0.10	97.2	106	8.27	95	94.1	0.938	70 - 130	30	70 - 130	30
Toluene	ND	0.10	89.1	96.4	7.89	86.8	86	0.966	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	97.6	103	5.58	98.4	97.2	1.20	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	96.3	100	3.74	96.3	93	3.52	70 - 130	30	70 - 130	30
%SS:	87	0.10	100	110	9.52	95	93	2.13	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26618 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703119-005A	03/04/07 11:20 AM	03/06/07	03/08/07 5:27 AM	0703119-006A	03/04/07 11:25 AM	03/06/07	03/08/07 3:30 AM
0703119-007A	03/04/07 11:30 AM	03/06/07	03/09/07 11:33 PM	0703119-011A	03/04/07 11:57 AM	03/06/07	03/08/07 4:28 AM
0703119-013A	03/04/07 12:13 PM	03/06/07	03/08/07 4:58 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0703119

EPA Method: SW8015C	Extraction: SW3550C	BatchID: 26619	Spiked Sample ID: 0703119-013A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	ND	20	120	120	0	120	104	14.2	70 - 130	30	70 - 130	30
%SS:	89	50	105	106	0.472	101	93	8.34	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26619 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703119-005A	03/04/07 11:20 AM	03/06/07	03/08/07 4:11 PM	0703119-006A	03/04/07 11:25 AM	03/06/07	03/08/07 5:20 PM
0703119-007A	03/04/07 11:30 AM	03/06/07	03/10/07 10:48 AM	0703119-011A	03/04/07 11:57 AM	03/06/07	03/10/07 11:56 AM
0703119-013A	03/04/07 12:13 PM	03/06/07	03/10/07 5:35 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification N° 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; 3093 Broadway Oakland, Ca	Date Sampled: 03/11/00-03/11/07
		Date Received: 03/12/07
	Client Contact: Bryce Taylor	Date Reported: 03/19/07
	Client P.O.:	Date Completed: 03/19/07

WorkOrder: 0703250

March 19, 2007

Dear Bryce:

Enclosed are:

1). the results of **14** analyzed samples from your **#1005.001.410; 3093 Broadway Oakland, Ca project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

PEO 0703250

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor Bill To: Pangea

Company: Pangea Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612

E-Mail: btaylor@pangeaenv.com

Tele: (510) 836-3702 Fax: (510) 836-3709

PO#: 3093 Broadway, Oakland, CA Project Name: Connell Auto

Project Location: 3093 Broadway, Oakland, Ca Project #: 1005.001.410

Sampler Signature: BV

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other
VE-1-8	Connell Auto	3-11-07	1000	1	tube		X				X			
VE-1-12			1002											
VE-1-16			1005											
VE-1-19			1008											
VE-1-22			1010											
VE-1-25			1013											
VE-1-28			1015											
VE-1-31			1018											
VE-1-35			1025											
AS-1B-16			1140											
AS-1B-19			1145											
AS-1B-22			1150											
AS-1B-25			1152											
AS-1B-28			1155											

Analysis Request	Other	Comments
BTEX & TPH as Gas (602/8020 + 8015)/MTBE		Filter Samples for Metals analysis: Yes / No
TPH as Diesel (8015)		
Total Petroleum Oil & Grease (5520 E&F/B&F)		
Total Petroleum Hydrocarbons (418.1)		
EPA 601 / 8010 / 8021		
BTEX ONLY (EPA 602 / 8020)		
EPA 608 / 8081		
EPA 608 / 8082 PCB's ONLY		
EPA 8140 / 8141		
EPA 8150 / 8151		
EPA 524.2 / 624 / 8260		
EPA 525 / 625 / 8270		
PAH's / PNA's by EPA 625 / 8270 / 8310		
CAM-17 Metals (6010 / 6020)		
LUFT 5 Metals (6010 / 6020)		
Lead (200.8 / 200.9 / 6010)		
	5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	
VE-1-8		
VE-1-12		
VE-1-16		
VE-1-19		
VE-1-22		
VE-1-25		
VE-1-28		
VE-1-31		
VE-1-35		
AS-1B-16		
AS-1B-19		HOLD
AS-1B-22		
AS-1B-25		HOLD
AS-1B-28		

Relinquished By:	Date:	Time:	Received By:
BV	3/12	1100	
	3/12/07	1400	

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

VOAS O&G METALS OTHER
PRESERVATION pH<2

McCAMPBELL ANALYTICAL, INC.
110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
PO#: 3093 Broadway, Oakland, CA Project Name: Connell Auto
Project Location: 3093 Broadway, Oakland, Ca Project #: 1005.001.410
Sampler Signature: [signature]

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other
AS-1B-32	Connell	3-11-07	1200	1	Tube		X				X			
MW-17B-16	Auto		1425											
MW-17B-20			1430											
MW-17B-22			1432											
MW-17B-24			1435											
MW-17B-26			1436											
MW-17B-28			1437											
MW-17B-30			1440											
MW-17B-32			1445											
MW-17B-34			1448											
MW-17B-36			1450											
MW-17B-38			1452											
MW-17B-40			1455											

SAMPLE ID	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Other	Other	Comments: Filter Samples for Metals analysis: Yes / No
AS-1B-32	X																			HOLD
MW-17B-16																				HOLD
MW-17B-20	X	X																		
MW-17B-22																				HOLD
MW-17B-24	X																			HOLD
MW-17B-26																				HOLD
MW-17B-28	X	X																		
MW-17B-30	X																			
MW-17B-32																				HOLD
MW-17B-34																				HOLD
MW-17B-36	X	X																		
MW-17B-38																				HOLD
MW-17B-40	X																			

Relinquished By:	Date:	Time:	Received By:
[signature]	3/12	1100	[signature]
[signature]	3/12/07	1400	[signature]

ICE/t° ______
GOOD CONDITION ______
HEAD SPACE ABSENT ______
DECHLORINATED IN LAB ______
APPROPRIATE CONTAINERS ______
PRESERVED IN LAB ______

COMMENTS:

PRESERVATION VOAS O&G METALS OTHER
pH<2

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0703250 **ClientID: PEO**

☑ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bryce Taylor
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: btaylor@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001.410; 3093 Broadway Oaklan
PO:

Bill to
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **03/12/2007**
Date Printed: **03/13/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0703250-003	VE-1-16	Soil	03/11/00 10:05:00	☐	A	A										
0703250-004	VE-1-19	Soil	03/11/07 10:08:00	☐	A											
0703250-005	VE-1-22	Soil	03/11/07 10:10:00	☐	A		A									
0703250-007	VE-1 28	Soil	03/11/07 10:15:00	☐	A											
0703250-008	VE-1-31	Soil	03/11/07 10:18:00	☐	A											
0703250-009	VE-1-35	Soil	03/11/07 10:25:00	☐	A		A									
0703250-010	AS-1B-16	Soil	03/11/07 11:40:00	☐	A											
0703250-012	AS-1B-22	Soil	03/11/07 11:50:00	☐	A		A									
0703250-014	AS-1B-28	Soil	03/11/07 11:55:00	☐	A		A									
0703250-017	MW-17B-20	Soil	03/11/07 2:30:00	☐	A		A									
0703250-021	MW-17B-28	Soil	03/11/07 2:37:00	☐	A		A									
0703250-022	MW-17B-30	Soil	03/11/07 2:40:00	☐	A											
0703250-025	MW-17B-36	Soil	03/11/07 2:50:00	☐	A		A									
0703250-027	MW-17B-40	Soil	03/11/07 2:55:00	☐	A											

Test Legend:

1	G-MBTEX_S	2	PREDF REPORT	3	TPH(D)_S	4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; 3093 Broadway Oakland, Ca	Date Sampled: 03/11/00-03/11/07
		Date Received: 03/12/07
	Client Contact: Bryce Taylor	Date Extracted: 03/12/07
	Client P.O.:	Date Analyzed 03/13/07-03/16/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0703250

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
003A	VE-1-16	S	250,a,g	ND<1.0	2.5	0.51	0.47	1.3	20	97
004A	VE-1-19	S	6.2,a	ND	0.84	0.38	0.086	0.43	1	81
005A	VE-1-22	S	960,a,m	ND<10	14	3.9	2.6	52	40	118
007A	VE-1 28	S	ND	ND	ND	ND	ND	0.0096	1	78
008A	VE-1-31	S	15,a	ND<0.20	2.2	1.8	0.22	1.3	2	87
009A	VE-1-35	S	15,a	ND	1.9	2.3	0.17	0.92	1	100
010A	AS-1B-16	S	190,a,g	ND<1.5	5.5	0.76	0.21	0.96	20	87
012A	AS-1B-22	S	11,a	ND	0.12	0.15	0.068	0.47	1	118
014A	AS-1B-28	S	2700,a,m	ND<15	41	150	31	250	40	100
017A	MW-17B-20	S	ND	ND	ND	ND	ND	ND	1	74
021A	MW-17B-28	S	42,a	ND<0.25	0.14	1.5	0.52	2.7	5	86
022A	MW-17B-30	S	ND	ND	ND	ND	ND	ND	1	96
025A	MW-17B-36	S	ND	ND	ND	ND	ND	ND	1	83
027A	MW-17B-40	S	ND	ND	ND	ND	ND	ND	1	82
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	NA	NA	NA	NA	NA	NA	1	ug/L
		S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; 3093 Broadway Oakland, Ca	Date Sampled: 03/11/07
		Date Received: 03/12/07
	Client Contact: Bryce Taylor	Date Extracted: 03/12/07
	Client P.O.:	Date Analyzed 03/13/07-03/15/07

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0703250

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0703250-005A	VE-1-22	S	570,g,d	20	108
0703250-009A	VE-1-35	S	1.7,d	1	107
0703250-012A	AS-1B-22	S	5.2,d,b	1	102
0703250-014A	AS-1B-28	S	450,d,b	1	99
0703250-017A	MW-17B-20	S	1.3,b	1	110
0703250-021A	MW-17B-28	S	25,d	1	104
0703250-025A	MW-17B-36	S	ND	1	101

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; o) results are reported on a dry weight basis.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703250

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 26675				Spiked Sample ID: 0703187-008A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	97.9	103	5.10	102	101	1.48	70 - 130	30	70 - 130	30
MTBE	ND	0.10	103	110	6.64	101	101	0	70 - 130	30	70 - 130	30
Benzene	ND	0.10	97.5	94.2	3.43	95.4	93.9	1.56	70 - 130	30	70 - 130	30
Toluene	ND	0.10	92.1	87.3	5.30	88.7	87.3	1.53	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	101	99	2.15	100	99.4	0.761	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	96.7	96.3	0.345	96.3	96.3	0	70 - 130	30	70 - 130	30
%SS:	82	0.10	105	94	11.1	101	92	9.33	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26675 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703250-022A	03/11/07 2:40 PM	03/12/07	03/13/07 7:50 PM	0703250-025A	03/11/07 2:50 PM	03/12/07	03/13/07 11:24 PM
0703250-027A	03/11/07 2:55 PM	03/12/07	03/13/07 10:54 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703250

EPA Method SW8021B/8015Cm **Extraction SW5030B** **BatchID: 26734** **Spiked Sample ID: 0703247-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	106	102	3.06	101	103	2.25	70 - 130	30	70 - 130	30
MTBE	ND	0.10	102	108	5.68	113	107	5.44	70 - 130	30	70 - 130	30
Benzene	ND	0.10	97	109	11.6	94.6	97.3	2.78	70 - 130	30	70 - 130	30
Toluene	ND	0.10	89.1	101	12.4	86.2	89.8	4.01	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	98.3	108	9.71	98.2	99.4	1.16	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	96.7	107	9.84	96	96.7	0.692	70 - 130	30	70 - 130	30
%SS:	85	0.10	101	108	6.70	98	99	1.02	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26734 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703250-003A	03/11/00 10:05 AM	03/12/07	03/14/07 8:25 PM	0703250-004A	03/11/07 10:08 AM	03/12/07	03/13/07 7:20 PM
0703250-005A	03/11/07 10:10 AM	03/12/07	03/13/07 6:49 PM	0703250-007A	03/11/07 10:15 AM	03/12/07	03/16/07 4:47 PM
0703250-008A	03/11/07 10:18 AM	03/12/07	03/15/07 9:17 AM	0703250-009A	03/11/07 10:25 AM	03/12/07	03/13/07 8:21 PM
0703250-010A	03/11/07 11:40 AM	03/12/07	03/15/07 5:33 AM	0703250-012A	03/11/07 11:50 AM	03/12/07	03/13/07 4:47 PM
0703250-014A	03/11/07 11:55 AM	03/12/07	03/13/07 4:16 PM	0703250-017A	03/11/07 2:30 PM	03/12/07	03/16/07 8:19 PM
0703250-021A	03/11/07 2:37 PM	03/12/07	03/15/07 8:12 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0703250

EPA Method SW8015C	Extraction SW3550C	BatchID: 26740	Spiked Sample ID: 0703259-004A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	14,000	20	NR	NR	NR	94.3	97.4	3.25	70 - 130	30	70 - 130	30
%SS:	101	50	83	99	18.1	74	70	6.51	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26740 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703250-005A	03/11/07 10:10 AM	03/12/07	03/15/07 10:19 AM	0703250-009A	03/11/07 10:25 AM	03/12/07	03/14/07 1:02 AM
0703250-012A	03/11/07 11:50 AM	03/12/07	03/14/07 2:49 AM	0703250-014A	03/11/07 11:55 AM	03/12/07	03/13/07 10:45 PM
0703250-017A	03/11/07 2:30 PM	03/12/07	03/13/07 9:37 PM	0703250-021A	03/11/07 2:37 PM	03/12/07	03/13/07 9:37 PM
0703250-025A	03/11/07 2:50 PM	03/12/07	03/14/07 1:42 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification N° 1644

QA/QC Officer

McCampbell Analytical, Inc.
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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; 3093 Broadway, Oakland, CA	Date Sampled: 03/18/07
		Date Received: 03/19/07
	Client Contact: Bryce Taylor	Date Reported: 03/26/07
	Client P.O.:	Date Completed: 03/26/07

WorkOrder: 0703424

March 26, 2007

Dear Bryce:

Enclosed are:

1). the results of **2** analyzed samples from your **#1005.001.410; 3093 Broadway, Oakland, CA project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

PEO 0703424

McCAMPBELL ANALYTICAL, INC.

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Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor Bill To: Pangea

Company: Pangea Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612

E-Mail: btaylor@pangeaenv.com

Tele: (510) 836-3702 Fax: (510) 836-3709

PO#: 3093 Broadway, Oakland, CA Project Name: Connell Auto

Project Location: 3093 Broadway, Oakland, Ca Project #: 1005.001.410

Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Comments
AS-2B-20		3/18	1515	1	Ac		X				X																					HOLD
AS-2B-24		3/18	1530	1	Ac		X				X				X																	
AS-2B-32		3/18	1550	1	Ac		X				X																					HOLD
AS-2B-38		3/18	1600	1	Ac		X				X				X																	

Relinquished By:	Date:	Time:	Received By:
	3/19	2:45	
Relinquished By:	Date:	Time:	Received By:
	3-19-06	4:06	
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0703424 **ClientID: PEO**

☐ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bryce Taylor
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: btaylor@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001.410; 3093 Broadway, Oakla
PO:

Bill to
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **03/19/2007**
Date Printed: **03/19/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0703424-002	AS-2B-24	Soil	03/18/07 3:30:00	☐	A											
0703424-004	AS-2B-38	Soil	03/18/07 4:00:00	☐	A											

Test Legend:

1	G-MBTEX_S	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; 3093 Broadway, Oakland, CA	Date Sampled: 03/18/07
		Date Received: 03/19/07
	Client Contact: Bryce Taylor	Date Extracted: 03/19/07
	Client P.O.:	Date Analyzed: 03/20/07-03/26/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0703424

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
002A	AS-2B-24	S	2700,a	ND<5.0	19	140	16	260	100	---#
004A	AS-2B-38	S	ND	ND	ND	ND	ND	ND	1	93
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0703424

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 26885				Spiked Sample ID: 0703412-004A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	111	107	3.96	102	95.9	5.71	70 - 130	30	70 - 130	30
MTBE	ND	0.10	71.6	77	7.23	114	107	6.93	70 - 130	30	70 - 130	30
Benzene	ND	0.10	93.2	99.3	6.39	97	96.5	0.518	70 - 130	30	70 - 130	30
Toluene	ND	0.10	103	109	5.88	88	87.6	0.442	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	101	107	6.33	98.5	94.2	4.49	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	112	119	5.71	95.7	92	3.91	70 - 130	30	70 - 130	30
%SS:	106	0.10	95	95	0	88	95	7.82	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 26885 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703424-002A	03/18/07 3:30 PM	03/19/07	03/20/07 5:24 AM	0703424-004A	03/18/07 4:00 PM	03/19/07	03/26/07 4:32 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto 3093 Broadway, Oakland	Date Sampled: 03/25/07
		Date Received: 03/27/07
	Client Contact: Bryce Taylor	Date Reported: 04/02/07
	Client P.O.:	Date Completed: 04/02/07

WorkOrder: 0703646

April 02, 2007

Dear Bryce:

Enclosed are:

1). the results of **12** analyzed samples from your **#1005.001.410; Connell Auto 3093 Broadway, Oakland project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

PEO 0703646

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
PO#: 3093 Broadway, Oakland, CA Project Name: Connell Auto
Project Location: 3093 Broadway, Oakland, Ca Project #: 1005.001.410
Sampler Signature: [signature]

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Comments: Filter Samples for Metals analysis: Yes / No
RW-4-23	Connell Auto	3/25	13:45	1	Ac		X				X				X	X																Rush on gas 3-28-07
RW-4-26	Connell Auto	3/25	13:48	1	Ac		X				X																					Hold
RW-4-29	Connell Auto	3/25	13:50	1	Ac		X				X				X	X																Rush on gas 3-28-07
RW-4-32	Connell Auto	3/25	13:52	1	Ac		X				X				(X)																	Hold / Rush gas 3-28-07
RW-4-35	Connell Auto	3/25	13:55	1	Ac		X				X				(X)																	Hold / Rush gas 3-28-07
RW-4-38	Connell Auto	3/25	14:00	1	Ac		X				X				X	X																Rush gas 3-28-07
RW-4	Connell Auto	3/25	14:25	3	vo	X					X	X			X	X																Rush gas 3-28-07
RW-5-20	Connell Auto	3/25	14:50	1	Ac		X				X				X	X																Rush gas 3-28-07
RW-5-24	Connell Auto	3/25	14:55	1	Ac		X				X				(X)																	Hold / Rush gas 3-28-07
RW-5-27	Connell Auto	3/25	15:00	1	Ac		X				X				(X)																	Hold / Rush gas 3-28-07
RW-5-30	Connell Auto	3/25	15:05	1	Ac		X				X				X	X																Rush gas 3-28-07
RW-5-33	Connell Auto	3/25	15:10	1	Ac		X				X																					Hold
RW-5-36	Connell Auto	3/25	15:15	1	Ac		X				X				(X)																	Hold / Rush gas 3-28-07
RW-5-40	Connell Auto	3/25	15:40	1	Ac		X				X				X	X																Rush gas 3-28-07

Relinquished By:	Date:	Time:	Received By:
[signature]	3/2[illegible]	[illegible]	[signature]
[signature]	3/26	1480	Mc Vall [signature]

ICE/t° 6.4°C ✓
GOOD CONDITION____
HEAD SPACE ABSENT____
DECHLORINATED IN LAB____ ✓
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB____

COMMENTS:

PRESERVATION VOAS O&G METALS OTHER
pH<2

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0703646 **ClientID: PEO**

☑ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bryce Taylor
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: btaylor@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001.410; Connell Auto 3093 Bro
PO:

Bill t
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received **03/27/2007**
Date Printed: **03/29/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0703646-001	RW-4-23	Soil	3/25/2007 1:45:00	☐	A		A	A								
0703646-003	RW-4-29	Soil	3/25/2007 1:50:00	☐	A			A								
0703646-004	RW-4-32	Soil	3/25/2007 1:52:00	☐	A											
0703646-005	RW-4-35	Soil	3/25/2007 1:55:00	☐	A											
0703646-006	RW-4-38	Soil	3/25/2007 2:00:00	☐	A			A								
0703646-007	RW-4	Water	3/25/2007 2:25:00	☐		A			B							
0703646-008	RW-5-20	Soil	3/25/2007 2:50:00	☐	A			A								
0703646-009	RW-5-24	Soil	3/25/2007 2:55:00	☐	A											
0703646-010	RW-5-27	Soil	3/25/2007 3:00:00	☐	A											
0703646-011	RW-5-30	Soil	3/25/2007 3:05:00	☐	A			A								
0703646-013	RW-5-36	Soil	3/25/2007 3:15:00	☐	A											
0703646-014	RW-5-40	Soil	3/25/2007 3:40:00	☐	A			A								

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	PREDF REPORT	4	TPH(D)_S	5	TPH(D)_W
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments: Per Client request G-MBTEX moved to Rush with 004,005,009,010,013 taken off hold on 3-28-07 but we will charge 48hr because they came in yesterday

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto 3093 Broadway, Oakland	Date Sampled: 03/25/07
		Date Received: 03/27/07
	Client Contact: Bryce Taylor	Date Extracted: 03/27/07-03/29/07
	Client P.O.:	Date Analyzed 03/28/07-03/29/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0703646

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	RW-4-23	S	ND	ND	ND	ND	ND	ND	1	87
003A	RW-4-29	S	1700,a	ND<10	6.9	50	17	130	200	95
004A	RW-4-32	S	1.1,a	ND	0.0081	0.052	0.012	0.073	1	85
005A	RW-4-35	S	ND	ND	ND	ND	ND	ND	1	89
006A	RW-4-38	S	ND	ND	ND	ND	ND	ND	1	94
007A	RW-4	W	5700,a	ND<50	94	590	120	950	10	104
008A	RW-5-20	S	ND	ND	ND	ND	ND	ND	1	94
009A	RW-5-24	S	ND	ND	ND	ND	ND	ND	1	89
010A	RW-5-27	S	1800,a	ND<10	9.5	60	26	160	200	---#
011A	RW-5-30	S	2.8,a	ND	0.13	0.30	0.073	0.40	1	87
013A	RW-5-36	S	ND	ND	ND	ND	ND	ND	1	86
014A	RW-5-40	S	ND	ND	ND	ND	ND	ND	1	89

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto 3093 Broadway, Oakland	Date Sampled: 03/25/07
		Date Received: 03/27/07
	Client Contact: Bryce Taylor	Date Extracted: 03/27/07
	Client P.O.:	Date Analyzed 03/29/07-03/31/07

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method SW3510C/SW3550C Analytical methods SW8015C Work Order: 0703646

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0703646-001A	RW-4-23	S	ND	1	95
0703646-003A	RW-4-29	S	240,d	10	130
0703646-006A	RW-4-38	S	ND	1	92
0703646-007B	RW-4	W	1200,d	1	94
0703646-008A	RW-5-20	S	ND	1	105
0703646-011A	RW-5-30	S	ND	1	94
0703646-014A	RW-5-40	S	ND	1	91

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; o) results are reported on a dry weight basis.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0703646

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 27075				Spiked Sample ID: 0703642-006A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	95.3	98.9	3.69	95	93.1	2.03	70 - 130	30	70 - 130	30
MTBE	ND	0.10	85.9	88.5	2.99	83.7	87.8	4.81	70 - 130	30	70 - 130	30
Benzene	ND	0.10	88.6	91.1	2.79	91.1	93.2	2.28	70 - 130	30	70 - 130	30
Toluene	ND	0.10	89.7	91.9	2.43	91.9	93.5	1.75	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	95	96.5	1.59	96.7	98.2	1.57	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	107	110	3.08	110	110	0	70 - 130	30	70 - 130	30
%SS:	90	0.10	85	87	2.16	80	92	14.1	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 27075 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703646-001A	03/25/07 1:45 PM	03/27/07	03/29/07 5:10 AM	0703646-003A	03/25/07 1:50 PM	03/27/07	03/28/07 3:25 PM
0703646-006A	03/25/07 2:00 PM	03/27/07	03/29/07 5:40 AM	0703646-008A	03/25/07 2:50 PM	03/27/07	03/28/07 6:29 PM
0703646-011A	03/25/07 3:05 PM	03/27/07	03/28/07 7:00 PM	0703646-013A	03/25/07 3:15 PM	03/28/07	03/28/07 11:27 PM
0703646-014A	03/25/07 3:40 PM	03/27/07	03/28/07 7:30 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

DHS ELAP Certification N° 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0703646

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 27097				Spiked Sample ID: 0703632-005A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	103	108	4.35	96.3	94.3	2.05	70 - 130	30	70 - 130	30
MTBE	ND	0.10	104	107	2.61	107	108	0.393	70 - 130	30	70 - 130	30
Benzene	ND	0.10	92.9	96	3.30	93.3	92.9	0.504	70 - 130	30	70 - 130	30
Toluene	ND	0.10	85.3	88	3.16	85.7	85.2	0.531	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	95.6	98.7	3.20	94.3	95.1	0.789	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	91.3	91.7	0.364	91	91.3	0.366	70 - 130	30	70 - 130	30
%SS:	91	0.10	92	94	2.60	93	94	0.792	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 27097 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703646-004A	03/25/07 1:52 PM	03/28/07	03/29/07 12:36 AM	0703646-005A	03/25/07 1:55 PM	03/28/07	03/29/07 12:02 AM
0703646-009A	03/25/07 2:55 PM	03/28/07	03/29/07 3:25 AM	0703646-010A	03/25/07 3:00 PM	03/28/07	03/28/07 10:53 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

DHS ELAP Certification N° 1644

QA/QC Officer

McCampbell Analytical, Inc.
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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0703646

EPA Method: SW8021B/8015Cm	Extraction: SW5030B	BatchID: 27087	Spiked Sample ID: 0703657-005A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	80.5	98.3	19.8	114	122	6.09	70 - 130	30	70 - 130	30
MTBE	ND	10	119	124	4.85	112	112	0	70 - 130	30	70 - 130	30
Benzene	ND	10	90.1	98.7	9.18	98.4	94.9	3.66	70 - 130	30	70 - 130	30
Toluene	ND	10	84.2	93.1	9.99	91.2	88.3	3.30	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	94	103	9.38	100	98.4	2.10	70 - 130	30	70 - 130	30
Xylenes	ND	30	91.7	96.7	5.31	96.3	96.3	0	70 - 130	30	70 - 130	30
%SS:	92	10	89	98	8.59	99	94	4.53	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 27087 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703646-007A	03/25/07 2:25 PM	03/29/07	03/29/07 1:03 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0703646

EPA Method SW8015C	Extraction SW3550C	BatchID: 27063	Spiked Sample ID: 0703600-017A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	ND	20	110	106	3.90	101	97.9	3.57	70 - 130	30	70 - 130	30
%SS:	102	50	107	106	0.350	101	96	4.24	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 27063 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703646-001A	03/25/07 1:45 PM	03/27/07	03/29/07 6:45 AM	0703646-003A	03/25/07 1:50 PM	03/27/07	03/31/07 11:29 AM
0703646-006A	03/25/07 2:00 PM	03/27/07	03/29/07 6:45 AM	0703646-008A	03/25/07 2:50 PM	03/27/07	03/30/07 1:45 PM
0703646-011A	03/25/07 3:05 PM	03/27/07	03/29/07 5:35 AM	0703646-014A	03/25/07 3:40 PM	03/27/07	03/30/07 6:11 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification N° 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0703646

EPA Method SW8015C	Extraction SW3510C	BatchID: 27067	Spiked Sample ID: N/A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	112	108	4.05	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	101	99	1.50	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 27067 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0703646-007B	03/25/07 2:25 PM	03/27/07	03/29/07 7:54 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001.410; Connell Auto	Date Sampled: 04/11/07-04/16/07
		Date Received: 04/17/07
	Client Contact: Bryce Taylor	Date Reported: 04/23/07
	Client P.O.: #3093 Broadway, Oakland, CA	Date Completed: 04/23/07

WorkOrder: 0704333

April 23, 2007

Dear Bryce:

Enclosed are:

1). the results of **15** analyzed samples from your **#1005.001.410; Connell Auto project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

0704333

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
PO#: 3093 Broadway, Oakland, CA	Project Name: Connell Auto
Project Location: 3093 Broadway, Oakland, Ca	Project #: 1005.001.410
Sampler Signature: BT	

	SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Comments
+	RW-4	Connell	4/11	1745	3	Voa	X					X	X			X																		Filter Samples for Metals analysis: Yes / No
+	RW-5	Auto		1735																														
+2	VE-1			1650																														
+	RW-1			1705																														
+2	AS-1A			1720																														
+1	AS-1B			1810																														
+2	MW-17A		4/12	0915																														
+	MW-17B			0840																														
+	AS-3A			1300																														
+	AS-3B			1705																														
+5	RW-3A			1055																														
+10	RW-3B		4/16	1445																														
+10	RW-2			1600																														
+10	AS-4A			1730																														

Relinquished By:	Date:	Time:	Received By:
BT	4/17	1730	
Relinquished By:	Date:	Time:	Received By:
	4/17/08	1730	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 3.6
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓		pH<2	

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Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Bryce Taylor Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
PO#: 3093 Broadway, Oakland, CA Project Name: Connell Auto
Project Location: 3093 Broadway, Oakland, Ca Project #: 1005.001.410
Sampler Signature: BN

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: 5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.	Comments
AS-2A	Connell Auto	4/16	1910	3	Vaa	X					X	X			X																	Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
BN	4/17	1230	
Relinquished By:	Date:	Time:	Received By:
	4/17/15	1430	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 3.6
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

COMMENTS:

VOAS O&G METALS OTHER
PRESERVATION pH<2

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0704333 **ClientID: PEO**

☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bryce Taylor
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: btaylor@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001.410; Connell Auto
PO: #3093 Broadwa

Bill t
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received **04/17/2007**
Date Printed: **04/17/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0704333-001	RW-4	Water	04/11/07 5:45:00	☐	A	A										
0704333-002	RW-5	Water	04/11/07 5:35:00	☐	A											
0704333-003	VE-1	Water	04/11/07 4:50:00	☐	A											
0704333-004	RW-1	Water	04/11/07 5:05:00	☐	A											
0704333-005	AS-1A	Water	04/11/07 5:20:00	☐	A											
0704333-006	AS-1B	Water	04/11/07 6:10:00	☐	A											
0704333-007	MW-17A	Water	04/12/07 9:15:00	☐	A											
0704333-008	MW-17B	Water	04/12/07 8:40:00	☐	A											
0704333-009	AS-3A	Water	04/12/07 1:00:00	☐	A											
0704333-010	AS-3B	Water	04/12/07 12:05:00	☐	A											
0704333-011	RW-3A	Water	04/12/07 10:55:00	☐	A											
0704333-012	RW-3B	Water	04/16/07 2:45:00	☐	A											
0704333-013	RW-2	Water	04/16/07 4:00:00	☐	A											
0704333-014	AS-4A	Water	04/16/07 5:30:00	☐	A											
0704333-015	AS-2A	Water	04/16/07 7:10:00	☐	A											

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**

Date and Time Received: **04/17/07 5:08:36 PM**

Project Name: **#1005.001.410; Connell Auto**

Checklist completed and reviewed by: Maria Venegas

WorkOrder N°: **0704333** Matrix Water

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	

Client contacted: Date contacted: Contacted by:

Comments:

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Pangea Environmental Svcs., Inc.	Client Project ID: #1005.001.410; Connell Auto	Date Sampled: 04/11/07-04/16/07
1710 Franklin Street, Ste. 200		Date Received: 04/17/07
Oakland, CA 94612	Client Contact: Bryce Taylor	Date Extracted: 04/18/07-04/19/07
	Client P.O.: #3093 Broadway, Oakland, CA	Date Analyzed: 04/18/07-04/19/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0704333

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	RW-4	W	120,000,a,h	ND<2500	4600	23,000	2400	16,000	200	100
002A	RW-5	W	110,000,a,h	ND<2000	7100	13,000	2000	9800	200	112
003A	VE-1	W	260,000,a,h,i	ND<4000	35,000	42,000	3600	17,000	400	101
004A	RW-1	W	61,000,a	ND<1000	7100	12,000	970	4300	100	96
005A	AS-1A	W	230,000,a,h,i	ND<2400	40,000	51,000	2900	18,000	200	99
006A	AS-1B	W	230,000,a,h,i	ND<2400	28,000	27,000	3500	15,000	200	91
007A	MW-17A	W	130,000,a,h,i	ND<4000	8400	31,000	3100	17,000	100	101
008A	MW-17B	W	3200,a	ND<200	130	470	70	470	1	94
009A	AS-3A	W	7900,a	ND<350	470	1100	210	1200	10	93
010A	AS-3B	W	50,000,a,h	ND<900	2000	4800	1400	8200	100	99
011A	RW-3A	W	81,000,a,i	ND<1500	7900	16,000	1800	8400	100	99
012A	RW-3B	W	5100,a,h,i	ND<150	340	330	37	400	1	96
013A	RW-2	W	160,000,a,h,i	ND<2400	20,000	30,000	3700	19,000	200	93
014A	AS-4A	W	20,000,a,h,i	ND<500	4300	1200	460	890	100	99
015A	AS-2A	W	300,000,a,h	ND<5000	34,000	57,000	5700	35,000	1000	95
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0704333

EPA Method: SW8021B/8015Cm	Extraction: SW5030B	BatchID: 27466	Spiked Sample ID: 0704304-008A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	93.1	106	12.7	110	101	8.86	70 - 130	30	70 - 130	30
MTBE	ND	10	107	111	3.91	111	109	2.30	70 - 130	30	70 - 130	30
Benzene	ND	10	108	117	8.43	109	110	0.0817	70 - 130	30	70 - 130	30
Toluene	ND	10	106	115	7.71	109	109	0	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	105	111	5.27	102	106	3.40	70 - 130	30	70 - 130	30
Xylenes	ND	30	96	100	4.08	95.3	100	4.78	70 - 130	30	70 - 130	30
%SS:	103	10	108	120	10.3	115	107	6.69	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 27466 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0704333-001A	04/11/07 5:45 PM	04/18/07	04/18/07 9:31 AM	0704333-002A	04/11/07 5:35 PM	04/19/07	04/19/07 3:49 PM
0704333-003A	04/11/07 4:50 PM	04/19/07	04/19/07 4:49 PM	0704333-004A	04/11/07 5:05 PM	04/18/07	04/18/07 11:12 AM
0704333-005A	04/11/07 5:20 PM	04/19/07	04/19/07 4:02 AM	0704333-006A	04/11/07 6:10 PM	04/19/07	04/19/07 5:19 PM
0704333-007A	04/12/07 9:15 AM	04/18/07	04/18/07 12:57 AM	0704333-008A	04/12/07 8:40 AM	04/18/07	04/18/07 1:30 AM
0704333-009A	04/12/07 1:00 PM	04/18/07	04/18/07 2:03 AM	0704333-010A	04/12/07 12:05 PM	04/19/07	04/19/07 3:33 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0704333

EPA Method: SW8021B/8015Cm **Extraction: SW5030B** **BatchID: 27475** **Spiked Sample ID: 0704317-006A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	104	101	3.08	100	104	3.81	70 - 130	30	70 - 130	30
MTBE	ND	10	121	110	9.12	126	121	3.60	70 - 130	30	70 - 130	30
Benzene	ND	10	107	112	4.63	108	108	0	70 - 130	30	70 - 130	30
Toluene	ND	10	97.5	104	6.02	97.9	96.6	1.31	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	109	113	3.63	108	107	0.288	70 - 130	30	70 - 130	30
Xylenes	ND	30	103	103	0	100	100	0	70 - 130	30	70 - 130	30
%SS:	98	10	101	103	2.33	96	96	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 27475 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0704333-011A	04/12/07 10:55 AM	04/19/07	04/19/07 5:41 AM	0704333-012A	04/16/07 2:45 PM	04/18/07	04/18/07 7:11 PM
0704333-013A	04/16/07 4:00 PM	04/18/07	04/18/07 4:23 PM	0704333-014A	04/16/07 5:30 PM	04/19/07	04/19/07 6:07 PM
0704333-015A	04/16/07 7:10 PM	04/18/07	04/18/07 3:50 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

McCampbell Analytical, Inc.
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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001; Connell 3093 Broadway, Oakland, CA	Date Sampled: 05/11/07
		Date Received: 05/11/07
	Client Contact: Bob Clark-Riddell	Date Reported: 05/18/07
	Client P.O.:	Date Completed: 05/18/07

WorkOrder: 0705331

May 18, 2007

Dear Bob:

Enclosed are:

1). the results of **7** analyzed samples from your **#1005.001; Connell 3093 Broadway, Oakland, CA project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

PEO 0705331

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ■ 5 DAY

EDF Required? Yes / No

Report To: Bob Clark-Riddel	Bill To: Pangea Environmental
Company: Pangea Environmental Services Inc.	
1710 Franklin Street Sutie 200	
Oakland, CA 94612	E-Mail: bcr@pangeaenv.com
Tele: 510-836-3702	Fax: 510-836-3709
Project #: 1005.001	Project Name: Connell 3093 Broadway, Oakland, CA
Project Location: 3093 Broadway, Oakland, CA	
Sampler Signature: Muskan Environmental Sampling	

		SAMPLING				MATRIX					METHOD PRESERVED				Analysis Request																Other		Comments
SAMPLE ID (Field Point Name)	LOCATION	Date	Time	# Containers	Type Containers	Water	Soil	Air	Sludge	Other	ICE	HCL	HNO_3	Other	MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel (8015) / MO with silica gel clean	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	Fuel Additives (MTBE, ETBE, TAME, DIPE, TBA, 1,2 – DCA, 1,2 – EDB, ethanol) by 8260B	If Mtbe is detected by 8021 confirm by 8260B				
MW-4		5-11-07	2:50	3	40ml VOA	X					X	X			X		X														
MW-7		"	12:45	"	"	X					X	X			X		X														
MW-8		"	2:10	"	"	X					X	X			X		X														
MW-9		"	2:30	"	"	X					X	X			X		X														
MW-13		"	12:10	"	"	X					X	X			X		X														
MW-16A		"	3:23	"	"	X					X	X			X		X														
MW-16B		X	3:45	3	X	X					X	X			X		X														

ICE/t° 4°C
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB
PRESERVATION ✓ VOAS | O&G | METALS | OTHER

Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
	5/11/07	6:20	
Relinquished By:	Date:	Time:	Received By:

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0705331 **ClientID: PEO**

☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Email: bcr@pangeaenv.com
TEL: (510) 836-370 FAX: (510) 836-370
ProjectNo: #1005.001; Connell 3093 Broadway, O
PO:

Bill t
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received **05/11/2007**
Date Printed: **05/11/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0705331-001	MW-4	Water	5/11/07 2:50:00	☐	A	A	B									
0705331-002	MW-7	Water	5/11/07 12:45:00	☐	A		B									
0705331-003	MW-8	Water	5/11/07 2:10:00	☐	A		B									
0705331-004	MW-9	Water	5/11/07 2:30:00	☐	A		B									
0705331-005	MW-13	Water	5/11/07 12:10:00	☐	A		B									
0705331-006	MW-16A	Water	5/11/07 3:23:00	☐	A		B									
0705331-007	MW-16B	Water	5/11/07 3:45:00	☐	A		B									

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3	TPH(D)WSG_W	4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.** Date and Time Received: **5/11/07 6:41:32 PM**

Project Name: **#1005.001; Connell 3093 Broadway, Oakland, CA** Checklist completed and reviewed by: Melissa Valles

WorkOrder N°: **0705331** Matrix Water Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 4.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑

Client contacted: Date contacted: Contacted by:

Comments:

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001; Connell 3093 Broadway, Oakland, CA	Date Sampled: 05/11/07
		Date Received: 05/11/07
	Client Contact: Bob Clark-Riddell	Date Extracted: 05/14/07-05/16/07
	Client P.O.:	Date Analyzed 05/14/07-05/16/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0705331

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-4	W	140,000,a,h	ND<2700	9900	15,000	2000	7200	200	116
002A	MW-7	W	ND	ND	ND	ND	ND	ND	1	112
003A	MW-8	W	300,a	ND	48	0.74	2.9	1.2	1	101
004A	MW-9	W	710,a	ND<10	4.8	1.8	ND	ND	1	112
005A	MW-13	W	ND	ND	ND	ND	ND	ND	1	114
006A	MW-16A	W	1700,a,i	ND<30	3.1	4.1	21	25	2	117
007A	MW-16B	W	110,000,a,h,i	ND<500	11,000	3300	1300	7700	100	99

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1005.001; Connell 3093 Broadway, Oakland, CA	Date Sampled: 05/11/07
		Date Received: 05/11/07
	Client Contact: Bob Clark-Riddell	Date Extracted: 05/11/07
	Client P.O.:	Date Analyzed 05/12/07-05/18/07

Diesel Range (C10-C23) Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method SW3510C/3630C Analytical methods SW8015C Work Order: 0705331

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0705331-001B	MW-4	W	23,000,d,b,h	1	119
0705331-002B	MW-7	W	ND	1	116
0705331-003B	MW-8	W	ND	1	116
0705331-004B	MW-9	W	57,d	1	102
0705331-005B	MW-13	W	ND	1	115
0705331-006B	MW-16A	W	760,d,i	1	111
0705331-007B	MW-16B	W	15,000,d,h,i	1	114

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; p) see attached narrative.

DHS ELAP Certification N° 1644

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0705331

EPA Method SW8015C	Extraction SW3510C/3630C	BatchID: 28003	Spiked Sample ID: N/A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	91.6	90.7	0.971	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	103	103	0	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 28003 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0705331-001B	05/11/07 2:50 PM	05/11/07	05/12/07 6:22 AM	0705331-002B	05/11/07 12:45 PM	05/11/07	05/12/07 7:30 AM
0705331-003B	05/11/07 2:10 PM	05/11/07	05/12/07 11:52 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification N° 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0705331

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 28047				Spiked Sample ID: 0705327-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	78.3	82.9	5.69	110	106	0.508	70 - 130	30	70 - 130	30
MTBE	ND	10	73.9	77.2	4.42	87.5	87.5	0	70 - 130	30	70 - 130	30
Benzene	ND	10	93.3	97.7	4.58	98.9	98	0.135	70 - 130	30	70 - 130	30
Toluene	ND	10	94.1	98	4.00	111	110	0.551	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	97.1	102	4.71	109	108	0.479	70 - 130	30	70 - 130	30
Xylenes	ND	30	107	113	6.06	120	120	0	70 - 130	30	70 - 130	30
%SS:	90	10	99	98	1.13	98	98	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 28047 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0705331-001A	05/11/07 2:50 PM	05/14/07	05/14/07 6:01 PM	0705331-002A	05/11/07 12:45 PM	05/14/07	05/14/07 7:03 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0705331

EPA Method SW8021B/8015Cm	Extraction SW5030B				BatchID: 28050				Spiked Sample ID: 0705333-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	110	111	1.34	91.4	101	9.58	70 - 130	30	70 - 130	30
MTBE	ND	10	87.5	82.7	5.67	87.1	87.4	0.307	70 - 130	30	70 - 130	30
Benzene	ND	10	97.4	98.7	1.30	91.9	95.1	3.35	70 - 130	30	70 - 130	30
Toluene	ND	10	109	110	0.517	92.5	96	3.74	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	108	108	0	96.5	100	3.90	70 - 130	30	70 - 130	30
Xylenes	ND	30	120	120	0	107	110	3.08	70 - 130	30	70 - 130	30
%SS:	96	10	98	101	2.63	97	96	0.813	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 28050 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0705331-003A	05/11/07 2:10 PM	05/14/07	05/14/07 8:03 PM	0705331-004A	05/11/07 2:30 PM	05/14/07	05/14/07 9:04 PM
0705331-005A	05/11/07 12:10 PM	05/14/07	05/14/07 9:34 PM	0705331-006A	05/11/07 3:23 PM	05/16/07	05/16/07 4:15 PM
0705331-007A	05/11/07 3:45 PM	05/14/07	05/14/07 10:35 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0705331

EPA Method SW8015C	Extraction SW3510C/3630C	BatchID: 28051	Spiked Sample ID: N/A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	103	104	0.277	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	103	101	1.71	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 28051 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0705331-004B	05/11/07 2:30 PM	05/11/07	05/18/07 4:50 AM	0705331-005B	05/11/07 12:10 PM	05/11/07	05/12/07 1:04 PM
0705331-006B	05/11/07 3:23 PM	05/11/07	05/12/07 2:15 PM	0705331-007B	05/11/07 3:45 PM	05/11/07	05/12/07 3:26 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification N° 1644

QA/QC Officer

APPENDIX E

Pangea's Standard Operating Procedures

STANDARD FIELD PROCEDURES FOR SOIL BORINGS

This document describes Pangea Environmental Services' standard field methods for drilling and sampling soil borings. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate ground water depth and quality, and to submit samples for chemical analysis.

Soil Classification/Logging

All soil samples are classified according to the Unified Soil Classification System by a trained geologist, scientist or engineer working under the supervision of a California Registered Engineer, California Registered Geologist (RG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e. sand, silt, clay or gravel)
- Approximate percentage of each grain size category,
- Color,
- Approximate water or product saturation percentage,
- Observed odor and/or discoloration,
- Other significant observations (i.e. cementation, presence of marker horizons, mineralogy), and
- Estimated permeability.

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or hydraulic-push technologies. At least one and one half ft of the soil column is collected for every five ft of drilled depth. Additional soil samples are collected near the water table and at lithologic changes. With hollow-stem drilling, samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the borehole. With hydraulic-push drilling, samples are typically collected using acetate liners. The vertical location of each soil sample is determined by measuring the distance from the middle of the soil sample tube to the end of the drive rod used to advance the split barrel sampler. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Storage, Handling and Transport

Sampling tubes or cut acetate liners chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

Soil samples collected during drilling will be analyzed in the field for ionizable organic compounds using a photo-ionization detector (PID) with a 10.2 eV lamp. The screening procedure will involve placing an undisturbed soil sample in a sealed container (either a zip-lock bag, glass jar, or a capped soil tube). The container will be set aside, preferably in the sun or warm location. After approximately fifteen minutes, the head space within the container will be tested for total organic vapor, measured in parts per million on a volume to volume basis (ppmv) by the PID. The PID instrument will be calibrated prior to boring using hexane or isobutylene. PID measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

Water Sampling

Water samples collected from borings are either collected from the open borehole, from within screened PVC inserted into the borehole, or from a driven Hydropunch-type sampler. Groundwater is typically extracted using a bailer, check valve and/or a peristaltic pump. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

Pangea often performs electrical conductivity (EC) logging and/or continuous coring to identify potential water-bearing zones. Hydropunch-type sampling is then performed to provide discrete-depth grab groundwater sampling within potential water-bearing zones for vertical contaminant delineation. Hydropunch-type sampling typically involves driving a cylindrical sheath of hardened steel with an expendable drive point to the desired depth within undisturbed soil. The sheath is retracted to expose a stainless steel or PVC screen that is sealed inside the sheath with Neoprene O-rings to prevent infiltration of formation fluids until the desired depth is attained. The groundwater is extracted using tubing inserted down the center of the rods into the screened sampler.

Duplicates and Blanks

Blind duplicate water samples are collected usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells sampled. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory QA/QC blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite on top of and covered by plastic sheeting. At least four individual soil samples are collected from the stockpiles for later compositing at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Ground water removed during sampling and/or rinsate generated during decontamination procedures are stored onsite in sealed 55 gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Disposal of the water is based on the analytic results for the well samples. The water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document describes Pangea Environmental Services' standard field methods for drilling, installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Well Construction and Surveying

Groundwater monitoring wells are installed in soil borings to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

APPENDIX F

Well Development Field Data Sheets

WELL DEVELOPMENT DATA SHEET

Project #: 070411AB1	Client: Pangea
Developer: A. Brown	Date Developed: 4/11/07
Well I.D. AS-1A	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before 29.73 After 30.07	Depth to Water: Before 22.61 After 23.37
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
{12 x (d^2/4) x π} /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

1.1	X	10	=	11.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1628	62.8	7.3	1594	>1000	1.1	Silty
1632	63.9	7.2	1632	>1000	2.2	DTW: 24.60
1636	65.3	7.5	1379	>1000	3.3	Hard Bottom Cloudy
1644	65.9	7.2	1277	>1000	4.4	DTW: 24.70
1648	65.7	7.5	1233	>1000	5.5	
1653	65.5	7.5	1228	>1000	6.6	DTW: 24.90
1701	65.1	7.1	1199	>1000	7.7	
1707	65.2	7.3	1106	440	8.8	DTW: 24.52
1711	65.7	7.2	1091	252	9.9	
1715	65.5	7.2	1080	215	11.0	DTW: 24.96
1720	66.7	7.3	1172	>1000	—	
Did Well Dewater? N		If yes, note above.		Gallons Actually Evacuated:		11.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411 AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/11/07
Well I.D. AS-1B	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before 38.05 After 38.15	Depth to Water: Before 23.69 After 34.67
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

2.3	X	10		23.0
1 Case Volume		Specified Volumes	=	gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump: _____
Other equipment used: 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or uS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1726	65.4	7.0	1467	Turbid	2.3	(Hand Bailed)
1732	66.0	6.4	1449	Turbid	4.6	DTW: 34.97
1738	65.7	6.4	1387	Turbid	6.9	Cloudy
		Well Developed	at 7.0 gal			DTW: 36.62 (Surged)
1752	65.6	6.6	1278	Turbid	9.3	
1758	65.7	[redacted]	1283	983	11.6	DTW: 34.71
1804	66.1	6.4	1307	919	18.9	
		Developed	at 14.0 gal			DTW: 36.97 (Surged)
1810	64.4	6.6	1271	Turbid	—	

Did Well Dewater? Yes	If yes, note above.	Gallons Actually Evacuated:	13.9

WELL DEVELOPMENT DATA SHEET

Project #: 070411 AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/14/07
Well I.D. AS-3A	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before 32.95 After 33.38	Depth to Water: Before 22.71 After 25.73
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

1 Case Volume	X	Specified Volumes	=	gallons
1.6	X	10	=	16.0

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1837	67.9	8.1	1319	>1000	1.6	Hard Bottom Silty
1840	67.7	7.5	1257	>1000	3.2	DTW: 26.81 Cloudy
1843	67.7	7.4	1219	>1000	4.8	Slightly Cloudy
1846	67.8	7.4	1184	>1000	6.4	DTW: 26.95
1849	67.9	7.4	1133	>1000	8.0	
1852	67.7	7.3	1088	>1000	9.6	DTW: 26.96
1855	67.6	7.3	1063	>1000	11.2	Hard Bottom (cleaning)
1858	67.7	7.3	1044	>1000	12.8	DTW: 26.78
1901	67.6	7.3	1037	>1000	14.4	
1904	67.5	7.3	1034	686	16.0	DTW: 26.87
SD 1910	67.5	7.4	1018	>1000	→	
Did Well Dewater? No		If yes, note above.		Gallons Actually Evacuated:		16.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411 AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/12/07
Well I.D. ~~AS-3A~~ AS-3A	Well Diameter: (circle one) ② 3 4 6
Total Well Depth: Before 29.03 After 29.05	Depth to Water: Before 15.79 After 15.71
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^3/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

2.1	X	10	=	21.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump: _____
Other equipment used: 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1216	65.6	7.2	935	71000	2.1	Hard Bottom
1220	66.7	6.9	927	71000	4.2	DTW: 16.17
1225	66.8	6.9	933	71000	6.3	
1230	67.5	6.9	929	506	8.4	DTW: 16.25 Hard Bottom
1235	65.7	6.9	939	392	10.5	
1238	66.0	6.9	932	251	12.6	DTW: 16.23
1242	66.1	6.9	935	216	14.7	
1246	66.1	6.8	933	152	16.8	DTW: 16.44
1251	65.4	6.9	932	127	18.9	
1254	66.2	6.9	933	124	21.0	DTW: 16.40
1300	65.6	7.2	937	157	—	

Did Well Dewater? No	If yes, note above.	Gallons Actually Evacuated:	21.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411AB1	Client: PWGEA
Developer: A. Brown	Date Developed: 4/12/07
Well I.D. AS-3B	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before 33.95 After 33.99	Depth to Water: Before 20.31 After 21.80
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
$(12 \times (d^2/4) \times \pi) / 231$	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

2.2	X	10		22.0
1 Case Volume		Specified Volumes	=	gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump: _____
Other equipment used: 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1119	65.4	7.4	976	>1000	2.2	Silty
1124	66.4	7.0	944	>1000	4.4	DTW: 23.19 Hard Bottom
1127	67.2	6.9	941	>1000	6.6	
1131	67.0	6.9	939	>1000	8.8	DTW: 23.34 Hard Bottom
1138	66.8	6.9	942	>1000	11.0	
1142	66.7	6.9	935	>1000	13.2	DTW: 23.65
1146	66.6	6.9	942	676	15.4	
1150	67.0	6.9	937	517	17.6	DTW: 23.40
1154	67.2	6.9	940	437	19.8	
1158	67.4	6.8	941	971	22.0	DTW: 24.25
1205	66.5	7.1	939	589	—	

Did Well Dewater? No	If yes, note above.	Gallons Actually Evacuated:	22.0

WELL DEVELOPMENT DATA SHEET

Project #: U70411A01	Client: FANG FA
Developer: A. Brown	Date Developed: 4/12/07
Well I.D. AS-4A	Well Diameter: (circle one) (2) 3 4 6 __
Total Well Depth: Before 26.50 After 28.90	Depth to Water: Before 15.18 After 27.81
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
{12 x (d²/4) x π} /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

1.8	X	10	=	18.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump ______

Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1603	77.5	8.5	446	>1000	1.8	Very Silty
1607	77.7	8.3	386	>1000	3.6	DTW: 26.09
		Dewatered at		4.0 gal		DTW: 28.45
	Recharge rate	to slow		1730	DTW: 27.80	
	Need	to develope		MW-16B while	there after	6pm
ST 1730	76.7	7.4	660	>1000	—	
Did Well Dewater? Yes	If yes, note above.			Gallons Actually Evacuated:		4.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/11/07
Well I.D. MW-16A	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before 29.90 After 30.07	Depth to Water: Before 23.90 After 26.79
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^3/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

.96	X	10	=	9.6
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1827	64.9	7.2	766	>1000	.96	Hard Bottom
1833	65.2	6.7	752	607	1.92	DTW: 26.79 Cloudy
1845	64.3	6.7	781	>1000	2.88	
1855	64.1	6.8	821	>1000	3.84	DTW: 26.83
1905	64.0	6.8	788	545	4.8	
1913	65.1	6.8	791	>1000	5.76	DTW: 26.80 Clear
1922	64.4	6.7	861	227	6.72	
1932	65.0	6.8	778	157	7.68	DTW: 26.83
1942	64.5	6.8	790	124	8.64	Hard Bottom
1952	64.0	6.8	753	96	9.6	DTW: 26.80

Did Well Dewater? No	If yes, note above.	Gallons Actually Evacuated:	9.6

WELL DEVELOPMENT DATA SHEET

Project #: 070411-AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/16/07
Well I.D. MW-16B	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before ~~39.05~~ 39.96 After 39.98	Depth to Water: Before ~~35.46~~ 27.05 After 37.16
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

2.0	X	10	=	20.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump: _____
Other equipment used: 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or (uS))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1821	69.4	8.1	1580	71000	2.0	DTW: 34.67 Hard Bottom
1826	69.1	7.4	1512	71000	4.0	DTW: 36.77 Hard Bottom cloudy
1831	68.4	7.3	1731	71000	6.0	Water Clearing
	Dewatered at 6.0 gal					DTW: 39.34 (Surged)
1912	67.2	8.2	~~1668~~ 1624	71000	6.5	Water becoming clear
		Dewatered at 6.5 gal				DTW: 37.19
	Recharge not enough to purge. Access limitations prevents					
	from purging to standards.					
Did Well Dewater? Yes	If yes, note above.			Gallons Actually Evacuated:		6.5

WELL DEVELOPMENT DATA SHEET

Project #: 070411 A&I	Client: PANGEA
Developer: A. Brown	Date Developed: 4/12/07
Well I.D. MW-17A	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before 28.84 After 28.87	Depth to Water: Before 23.87 After 23.15
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
$(12 \times (d^2/4) \times \pi) / 231$	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

.9	X	10	=	9.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump: _____
Other equipment used: 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
0844	56.9	7.4	1406	>1000	.9	
0847	62.2	7.1	1252	>1000	1.8	DTW: 23.92
0850	62.7	7.3	1240	>1000	2.7	Silty
0853	64.0	7.0	1223	>1000	3.6	DTW: 23.95
0856	64.1	7.0	1189	>1000	4.5	Cloudy
0859	63.9	6.9	1185	>1000	5.4	DTW: 24.27
0902	63.8	6.9	1171	>1000	6.3	
0905	63.7	6.9	1163	>1000	7.2	DTW: 24.22
0908	64.0	6.9	1164	>1000	8.1	Clearing
0911	64.1	6.9	1158	>1000	9.0	DTW: 24.41 (Hard Bottom)
ST 915	63.2	7.2	1164	>1000	—	
Did Well Dewater? No		If yes, note above.		Gallons Actually Evacuated:		9.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/12/07
Well I.D. MW-17B	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: Before 39.34 After 40.10	Depth to Water: Before 23.14 After 23.71
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF): {12 x (d^2/4) x π} /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

2.5	X	10	=	25.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump
Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or (µS))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
0723	58.7	6.2	1170	>1000	2.5	Silty
0728	62.7	6.3	1132	>1000	5.0	DTW: 23.67
0734	63.5	6.7	1135	>1000	7.5	
0739	63.9	6.8	1138	>1000	10.0	DTW: 23.75 (Hard Bottom)
0746	63.0	6.9	1138	>1000	12.5	Hard Bottom
0750	63.8	6.8	1134	>1000	15.0	DTW: 23.95
0755	61.8	6.8	1120	420	17.5	
0801	62.4	6.8	1127	352	20.0	DTW: 23.75
0809	62.5	6.8	1130	254	22.5	
0813	63.0	6.8	1134	304	25.0	DTW: 23.82
840	63.5	7.3	1188	786	—	

Did Well Dewater? NO | If yes, note above. | Gallons Actually Evacuated: 25.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411AB1	Client: PANEGA
Developer: A. Brown	Date Developed: 4/11/07
Well I.D. RW-1	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 34.38 After 34.76	Depth to Water: Before 23.37 After 30.87
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
(12 x (d^2/4) x π) /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

7.1	X	10	=	71.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☑ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump ___
Other equipment used 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1540	66.0	7.1	1900	>1000	7.1	Hard Bottom
1552	65.8	6.8	1674	618	14.2	DTW: 27.02
1601	66	7.1	1724	757	21.3	Switched to 4" E.S. Pump
1603		Dewatered at		25.0 gal		DTW: 32.69 Surged
1614	66.9	7.0	1497	>1000	32.0	
		Dewatered at		32.0 gal		DTW: 32.57 Surged
1659	64.9	7.4	1310	987	39.1	
		Dewatered at		40.0 gal		DTW: 32.79 Surged
1705	65.2	7.3	1390	>1000	---	

Did Well Dewater? Y	If yes, note above.	Gallons Actually Evacuated:	40.0

1705

WELL DEVELOPMENT DATA SHEET

Project #: 070411AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/16/07
Well I.D. DW-2	Well Diameter: (circle one) (2) 3 4 6 ___
Total Well Depth: Before 24.96 After 30.62	Depth to Water: Before 16.66 After 16.90
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

2.1	X	10	=	21.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump ___
Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1509	74.3	8.2	871	>1000	2.1	Silty
1513	72.1	8.1	850	>1000	4.2	DTW: 16.93 (Hard Bottom)
1517	72.4	8.0	862	>1000	6.3	Very Cloudy
1521	71.1	8.2	867	>1000	8.4	DTW: 17.05
1525	71.0	7.9	880	>1000	10.5	Cloudy, Hard Bottom
1529	71.1	8.0	875	>1000	12.6	DTW: 17.00
1534	71.3	7.8	876	>1000	14.7	
1538	70.9	7.8	875	>1000	16.8	DTW: 16.96
1542	70.6	7.7	888	382	18.9	
1547	70.6	7.6	892	251	21.0	DTW: 17.02
1600	72.4	7.9	876	>1000	—	

Did Well Dewater? No	If yes, note above.	Gallons Actually Evacuated:	21.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411A01	Client: GANGEA
Developer: A. Boss	Date Developed: 4/12/07
Well I.D. Rw-3A	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 26.19 After 26.18	Depth to Water: Before 15.40 After 19.12
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF): {12 x (d^2/4) x π} /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

7.0	X	10	=	70
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☑ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump: _____
Other equipment used: 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1017	63.0	7.4	1192	71000	7.0	Hard Bottom
1029	62.5	7.2	1140	71000	14.0	OTw: 16.35 Hard Bottom
1036	63.1	7.1	1134	71000	21.0	Switched to S.S. Pump
1038	66.4	6.9	1178	71000	28.0	OTw: 17.89
1040	67.1	6.8	1125	71000	35.0	Cloudy
1041	67.5	6.8	1101	71000	42.0	OTw: 20.02
1043	67.4	6.8	1091	71000	49.0	Slightly Cloudy
1045	67.8	6.8	1090	71000	56.0	OTw: 20.37
1047	67.6	6.8	1085	71000	63.0	Clearing
1048	67.8	6.8	1085	71000	70.0	OTw: 21.02
1055	64.6	7.1	1088	71000	—	

Did Well Dewater? No | If yes, note above. | Gallons Actually Evacuated: 70.0

WELL DEVELOPMENT DATA SHEET

Project #: 090411AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/17/07
Well I.D. RW-313	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 36.20 After 36.23	Depth to Water: Before 24.06 After 32.87
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

7.9	X	10	=	79.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☑ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump: _____
Other equipment used: 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
0949	63.7	7.7	1422	>1000	7.9	Cloudy, Hand Bailer
0958	62.4	7.6	1374	>1000	15.8	DTW: 32.38
	Dewatered at		16.0	gal		DTW: 34.51 Switched to 4" S.S. Pump Surged
1101	64.9	7.1	1286	>1000	23.9	
		Dewatered at	25.0	gal		DTW: 33.79 (Surged)
1208	66.8	7.1	1308	>1000	32.9	
		Dewatered at	35.0	gal		DTW 33.52 (Surged)
1405	68.6	7.1	1302	>1000	43.9	
		Dewatered at	43.0	gal		DTW 33.79 (Surged)
4/16 1432	72.2	6.7	1311	148	50.9	
1473	71.1	6.9	1313	>1000	58.8	
		Dewatered	at 60.0	gal		DTW: 34.06 (AB Surged)
ST 1445	70.4	7.4	1328	>1000	—	
Did Well Dewater? Yes		If yes, note above.		Gallons Actually Evacuated:		60.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411A31	Client: SAIC/EA
Developer: A. Brown	Date Developed: 4/14/87
Well I.D. RW-4	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 28.19 After 34.01	Depth to Water: Before 22.50 After 24.74
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

3.7	X	10	=	37.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or (µS))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1227	65.3	6.4	1732	>1000	3.7	Very Silty
1237	66.8	6.7	1687	>1000	7.4	DTW: 26.75 Silty
	Dewatered at		8.0	gal		DTW: 27.63 Surged
1353	65.8	7.3	1620	>1000	11.7	
1357	66.1	7.2	1654	>1000	15.4	DTW: 25.02 (Cloudy)
1401	65.7	7.2	1661	>1000	19.1	
	Dewatered		at 20.0	gal		DTW: 27.57 (Surged)
1420	65.9	7.3	1433	>1000	23.7	DTW: 24.52 (Cloudy)
1425	66.0	7.4	1452	>1000	27.4	(Harder Bottom)
1430	66.0	7.1	1435	>1000	31.1	DTW: 25.60 (Hard Bottom)
1435	66.2	7.0	1415	>1000	34.8	(Hardly Cloudy)
1440	66.0	7.0	1381	>1000	37.0	DTW: 26.07 (Clearing)
1745	65.0	6.9	1220	79	—	
Did Well Dewater? Y	If yes, note above.			Gallons Actually Evacuated:		37.0

5T

WELL DEVELOPMENT DATA SHEET

Project #: 070411A31	Client: PAN/GEA
Developer: A. Brown	Date Developed: 4/11/07
Well I.D. RW-5	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 33.74 After 33.97	Depth to Water: Before 22.37 After 26.12
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

7.4	X	10	=	74.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☑ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or (µS))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1322	65.8	6.9	1568	>1000	7.4	Silty
1333	66.1	7.0	1618	>1000	14.8	DTW: 25.63 (Hard Bottom) Cloudy
1340	65.9	7.2	1509	>1000	22.2	Switched to 4" E.S. Pump
1341	67.1	6.9	1466	>1000	29.6	DTW: 30.20
	Dewatered at			30.0 gal	~~37.0~~	DTW: 32.07 (Surged)
1405	65.7	7.3	1326	>1000	37.4	
1406	66.9	6.9	1279	>1000	44.8	DTW: 27.38 (cloudy)
1407	67.5	6.8	1291	>1000	52.2	
1408	67.3	6.9	1247	>1000	59.6	DTW: 29.40
	Dewatered at			60.0 gal		DTW: 31.09 (Surged)
1445	66.5	7.1	1232	983	67.4	
1446	67.1	6.9	1220	792	74.0	DTW: 27.07
ST 1735	65.4	7.0	1247	72	—	
Did Well Dewater? Y		If yes, note above.		Gallons Actually Evacuated:		74.0

WELL DEVELOPMENT DATA SHEET

Project #: 070411AB1	Client: PANGEA
Developer: A. Brown	Date Developed: 4/11/07
Well I.D. VE-1	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 34.98 After 35.06	Depth to Water: Before 33.02 After 31.59
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

1 Case Volume	X	Specified Volumes	=	gallons
7.8		10		78.0

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☑ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1511	65.7	7.4	1129	Tidbits	7.8	Hand Bailer
1520	64.6	7.2	1007	430	15.6	DTW: 25.71
1527	66.5	7.3	975	797	23.4	Switched to 4" G.S. Pump
1529	66.3	6.9	1044	>1000	31.2	DTW: 32.07
	Dewatered at		32.0	gal		DTW: 32.76 (Surged)
1607	66.8	7.0	1553	592	39.8	
	Dewatered at		40.0			DTW: 32.74
1642	65.6	7.2	1554	>1000	47.8	(Surged)
		Dewatered at	48.0	gal		DTW: 33.76
1650	66.7	7.1	1557	>1000	-	

Did Well Dewater? Y	If yes, note above.	Gallons Actually Evacuated:	48.0