

**U.S. Department of Justice**

Federal Bureau of Prisons

Federal Correctional Institution, Dublin

*5701 8th Street - Camp Parks
Dublin, CA 94568*

November 10, 2008

Mr. Paresh Khatri
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RECEIVED

2:32 pm, Nov 14, 2008

Alameda County
Environmental Health

Re: Federal Correctional Institution
5701 8th Street
Dublin, CA
SLIC Case No. RO0002977

Dear Mr. Khatri:

Federal Correctional Institution, Dublin (FCI, Dublin), has retained Marcor Environmental Remediation, Inc. (MARCOR) for services and acknowledges their subcontractor Pangea Environmental Services, Inc. (PANGEA) as the environmental contractor/consultant for the project referenced above. MARCOR/PANGEA is submitting the *Soil and Water Investigation Report* dated November 10, 2008, on my behalf.

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,

A handwritten signature in cursive script that reads "Ledezma".

Armando Ledezma
Facility Administrator
FCI Dublin



November 10, 2008

VIA UPLOAD TO ACEH FTP SITE

Mr. Paresh Khatri
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Soil and Water Investigation Report**
Federal Correctional Institution
5701 8th St. – Camp Parks, Dublin, CA
SLIC Case No. RO0002977

Dear Mr. Paresh:

The Federal Correctional Institution – Dublin (FCI-Dublin) retained MARCOR Environmental Remediation (MARCOR) and its subcontractor, Pangea Environmental Services, Inc. (Pangea), to prepare this *Soil and Water Investigation Report* for the subject site. This report documents implementation of the *Preliminary Site Assessment Phase Workplan* (Workplan) dated August 18, 2008, which was conditionally approved by Alameda County Environmental Health (ACEH) letter dated September 4, 2008. The goal of the proposed work scope was to delineate the horizontal and vertical extent of diesel-contaminated soil and to complete deeper borings to assess groundwater impact. On April 25, 2008, an estimated 100 gallons of diesel fuel was released from the day tank supplying the generator during routine testing. Interim remedial action involved the use of absorbent material and the excavation of approximately 100 bank (in place) cubic yards of impacted soil. The site background is described further in the Workplan. This report describes investigation procedures and results, and includes our conclusions and recommendations.

INVESTIGATION PROCEDURES

On September 25, 2008, Marcoc and Pangea conducted shallow sampling using hand tools and deeper sampling using direct-push drilling techniques. The sampling was conducted in general accordance with the approved *Preliminary Site Assessment Phase*. While refusal prevented planned soil sampling at some locations, Pangea conducted deeper soil sampling and additional groundwater sampling (beyond the proposed work scope) based on field indications of deeper soil impact. This additional investigation provided significant additional delineation of hydrocarbon impact. A total of twenty one (21) soil samples and three (3) grab groundwater samples were analyzed during this investigation.

PANGEA Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612 Telephone 510.836.3700 Facsimile 510.836.3709 www.pangeaenv.com

Select soil and groundwater samples were analyzed for Total Petroleum Hydrocarbons as Diesel (TPHd) by modified EPA Method 8015C; and benzene, toluene, ethylene, and xylenes (BTEX) by EPA Method 8020 and EPA Method 8260B; and MTBE and Naphthalene by EPA Method 8260B. Soil and groundwater samples were submitted for analysis to McCampbell Analytical, Inc., a California-certified laboratory. All samples were labeled, sealed in protective plastic bags, and stored on crushed ice at or below 4° C.

Shallow Sampling using Hand Tools

Hand-auger borings were completed using a hand-held bucket auger to remove soil to the desired sampling depth. Samples were collected using a lined split-barrel slide hammer driven into undisturbed sediments beyond the bottom of the augered hole. The vertical location of each soil sample was determined using a tape measure.

Soil sampling locations are shown on Figure 1. Soil samples were collected from sampling locations A, B, C, D, F and I. Consistent with the Workplan, initial samples (A-1, A-2, B-1, C-1, D-1, F-1, F-2 and I-1) were collected through the bottom of the excavation trench, and within a few feet from the trench bottom. Also consistent with the Workplan, other sampling locations (A-3, B-3, C-3, D-3, D-4, F-3 and F-4) were collected from within the sidewalls of the excavation to determine the impact of contamination in the horizontal direction and beneath the generator building. These sidewall samples were collected by hand augering and slide hammer sampling at an angle within the sidewall. Samples were not collected from planned locations G and H due to refusal during sample collection attempts. Samples were not collected from location E due to time limitations.

Based on field conditions during hand augering, additional investigation was conducted at sample location B-1 to provide additional vertical assessment of the diesel release. Due to significant soil staining, hydrocarbon odor, and photo-ionization detector (PID) readings at sample location B-1, soil sample B-2 was collected at approximately 14.5-15 ft below grade surface (bgs). Because groundwater was encountered at approximately 14.5 ft bgs in the hand auger, a grab groundwater sample (B-gw) was collected by lowering a disposable bailer into the open borehole. The groundwater sampling location is shown on Figure 2.

Note that the excavation trench was approximately four feet deep near the generator building, and only a few inches deep beyond the building and toward the loading dock. The sampling depth listed on Table 1 is relative to the asphalt-paved surface. The sample label presents the sample

depth below the bottom or side of the excavation trench, where applicable. Additional sampling procedures are described in Pangea's standard procedures in Appendix B.

Sampling via Direct-Push Drilling

To sample deeper soil and first encountered groundwater, two direct-push borings were completed by drilling contractor Woodlands Drilling Co., Inc. of Rio Vista, California on September 25, 2008. Soil boring D-5 was drilled using dual-tube, direct-push techniques to obtain discrete depth soil and groundwater samples at location D-5. Due to time limitations and difficult drilling at location I, only discrete-depth groundwater sampling was conducted using Hydropunch-type sampling equipment to collect sample "Igw". Soil and groundwater sampling locations are shown on Figures 1 and 2, respectively.

The boring locations were hand augered to 5 ft bgs to help avoid subsurface utilities. The drilling was observed in the field by Pangea Hydrologist Bryce Taylor and supervised by Bob Clark-Riddell, a California Registered Professional Civil Engineer (P.E.). Soil characteristics such as color, texture, and relative water contents were noted in the field using the USCS classification system and entered onto a field boring log. Field screening of soil samples for potential hydrocarbons and volatile organic compounds included visual and olfactory observations and a photo-ionization detector (PID). 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., of Pittsburg, California, a California-certified laboratory.

During boring at location D-5, groundwater was encountered at 22.5 ft bgs and rose to 16.5 ft bgs. A groundwater sample was collected by installing ¾" temporary PVC casing and lowering a stainless steel bailer. At location I, discrete-depth grab groundwater sampling was conducted within the potential water-bearing materials. The Hydropunch-type sampling involved driving a cylindrical sheath of hardened steel with an expendable drive point to the desired depth (25 ft bgs) within undisturbed soil. The sheath was retracted to expose a stainless steel or PVC screen that was sealed inside the sheath with Neoprene O-rings to prevent infiltration of formation fluids until the desired depth was attained. Groundwater was extracted using a stainless steel bailer inserted down the center of the rods into the discrete-depth sampling device screened from approximately 20 to 25 ft bgs. Additional sampling procedures are described in Pangea's standard procedures in Appendix B.

SITE INVESTIGATION RESULTS

Soil and groundwater analytical data is summarized on Tables 1 and 2, respectively. The estimated primary extent of TPHd in soil and groundwater is illustrated on Figures 1 and 2, respectively. The soil lithology and groundwater depth (first encountered and static) is illustrated on the boring log for D-5 in Appendix C.

To determine the areas of primary concern regarding the subsurface impact, Pangea compared soil and groundwater concentrations to the Environmental Screening Levels (ESLs) for residential site use where groundwater is considered a current or potential source of drinking water. These ESLs seem appropriate since site groundwater is apparently used as a drinking water source and may be within a groundwater recharge area. The ESLs are conservative screening levels protective of human health and the environment, established by the Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) in a their November 2007 (revised May 2008) guidance document *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*. The soil and groundwater concentrations that exceed these ESLs are described below and highlighted on the attached figures and tables.

Site Geology and Hydrogeology

Soil encountered during site investigation primarily consisted of a few feet of baserock and fill underlain by clay with small percentage of fine-grain sand to a depth of approximately 20 ft bgs. A unit of clayey sand with gravel was present between 20 ft bgs and the maximum explored depth of 22.5 ft bgs. The soil type is illustrated on the boring log for D-5.

During hand augering at location B-2, groundwater was first encountered at a depth of 14.5 ft bgs, but rose to a depth of approximately 13.5 ft bgs. During direct-push drilling at D-5, groundwater was first encountered 22.5 ft bgs and rose to approximately 16.5 ft bgs. During the Hydropunch-type sampling at location I, groundwater was present in the screen interval of 20 to 25 ft bgs. The depth to the potentiometric groundwater surface is estimated to be approximately 14.5 ft at the site.

Based on soil lithology and analytical results presented below, the primary water-bearing materials appear to be the sand unit present at approximately 20 to 22.5 ft bgs and possibly deeper. Given the overlying clayey soil and rising water during drilling, groundwater may be under semi-confined or confined conditions.

Soil Analytical Results

TPHd was detected at elevated concentrations. No naphthalene, benzene, or other compounds were detected in analyzed soil samples. Regarding the lateral extent of TPHd, the diesel (TPHd) impact to soil that exceeds the ESL of 83 milligrams per kilogram (mg/kg) is located primarily near the western corner of the generator building (sample locations A, B, C and D). This primary impact area is where diesel product exited the building and was initially contained by the retaining wall and sorbent material (Figure 1). The highest TPHd concentrations were near or beneath the building at depths ranging from approximately 5 to 11 ft bgs. The maximum detected TPHd concentration was 4,000 milligrams per kilogram (mg/kg) in sample B-2 from a depth of 10.5-11 ft bgs. Elevated TPHd concentrations (>1,000 mg/kg) were also detected in the sidewalls of the excavation beneath the generator building at approximately 5.5 ft bgs at locations B-3, C-3 and D-3. No TPHd was detected in soil near the southern corner of the generator building and a low TPHd (3.9 mg/kg) concentration was detected in shallow soil near the loading dock.

In deeper boring D-5, elevated TPHd impact was encountered in soil at approximately 17 and 23 ft bgs (at concentrations of 220 and 1,200 mg/kg, respectively). A low TPHd concentration (14 mg/kg) was detected between these elevated concentrations. Note that the isoconcentration contours on Figure 1 focus on the unsaturated soil samples (above the water table estimated at approximately 13.5 to 15 ft bgs) and do not include the sample results from deeper saturated soil at 17 and 23 ft bgs in sample location D-5. The PID readings from D-5 shown on the boring log correlate with the laboratory analytical results for this boring. The laboratory analytical report is included in Appendix D.

Groundwater Analytical Results

The primary compound detected in site groundwater was TPHd, although lower concentrations of naphthalene and/or benzene were also detected in all three grab groundwater samples. As shown on Figure 2, the TPHd groundwater impact that exceeds the ESL for TPHd (100 µg/L) is located primarily near the western corner of the generator building. Groundwater samples Bgw and Dgw both contained elevated TPHd concentrations (190,000 µg/L and 680,000 µg/L, respectively). TPHd in downgradient groundwater sample Igw, contained a significantly lower concentration (410 µg/L), which also slightly exceeds the ESL. Additional investigation is merited to evaluate if the groundwater impact extends from the source area to location I, or if compounds detected at I are the result of infiltration near the loading dock.

Naphthalene was detected in groundwater samples Bgw and Dgw at concentrations of 350 µg/L and 260 µg/L, respectively, and detected at a significantly lower concentration (2.1 µg/L) in sample Igw. Benzene was detected in groundwater sample Bgw (7.7 µg/L). The naphthalene and benzene concentrations detected near the release source area exceeded the ESLs (17 µg/L and 1 µg/L, respectively), but these compound concentrations did not exceed ESLs in the presumably downgradient direction at sample location I. The laboratory analytical report is included in Appendix D.

CONCLUSIONS AND RECOMMENDATIONS

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

- Elevated contaminant concentrations are present in site soil and groundwater. The primary compound of concern is diesel fuel (TPHd), although lower concentrations of naphthalene and benzene were detected in groundwater (but were not detected in soil). Select contaminant concentrations in soil and groundwater exceeded final ESLs established by the RWQCB, but primarily near the release source area.
- Contaminant concentrations are highest in soil and groundwater near and beneath the western edge of the generator building where the diesel fuel release exited the building. The highest TPHd soil impact was detected in clayey soil approximately 5 to 11 ft bgs. The groundwater impact is in clayey sand material present at approximately 20 to 23 ft bgs, and possibly deeper. The significantly lower contaminant concentrations further from the release source area suggest that the contaminant extent is fairly limited.
- Additional soil and groundwater investigation is merited. Pangea recommends preparation of an investigation workplan to provide additional lateral and vertical delineation of site contaminants. Additional investigation would help determine if the groundwater impact extends from the source area to location I, or if compounds detected at location I are the result of infiltration near the loading dock.

CLOSING

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

Sincerely,
Pangea Environmental Services, Inc.



Bob Clark-Riddell, P.E.
Principal Engineer

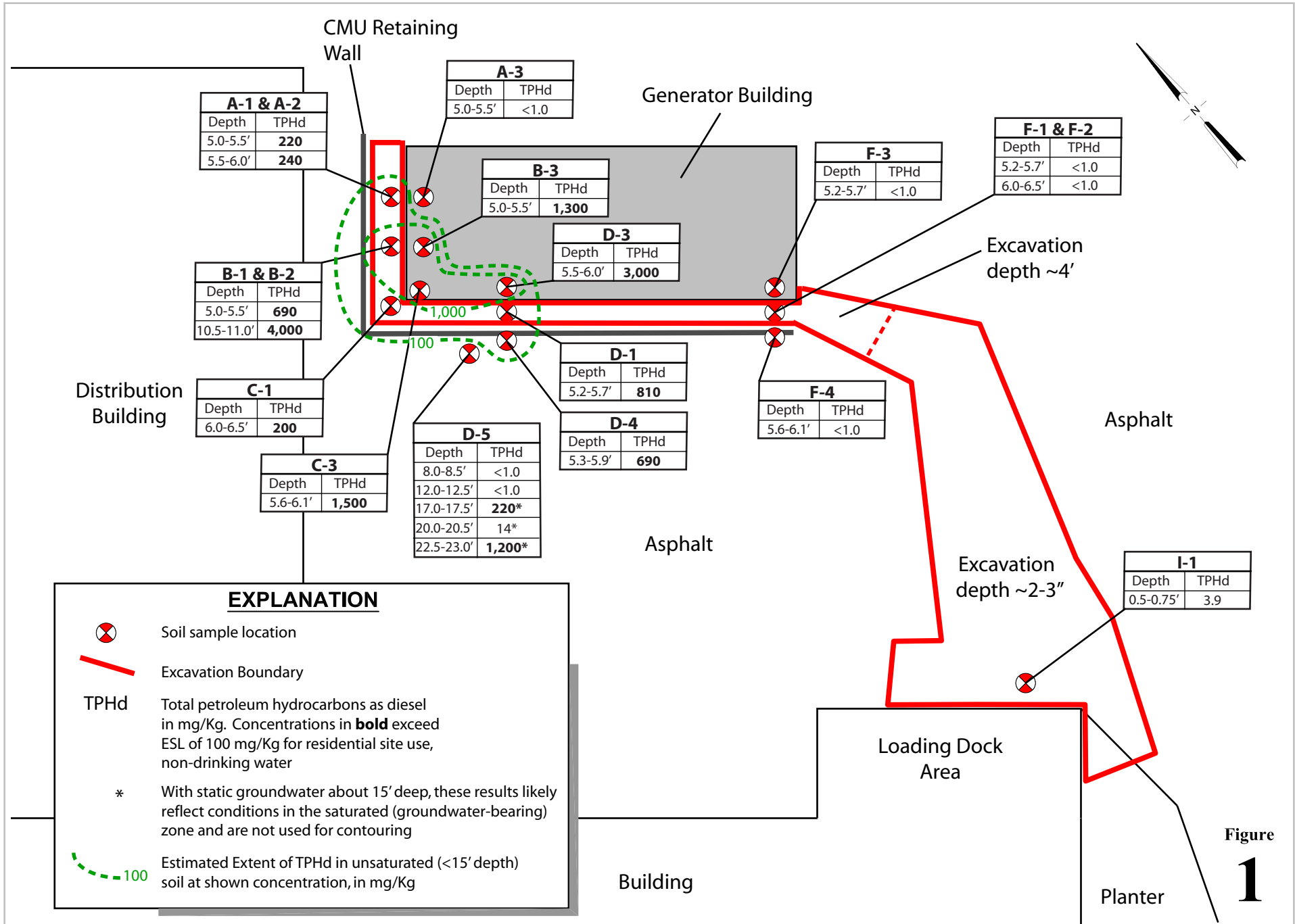


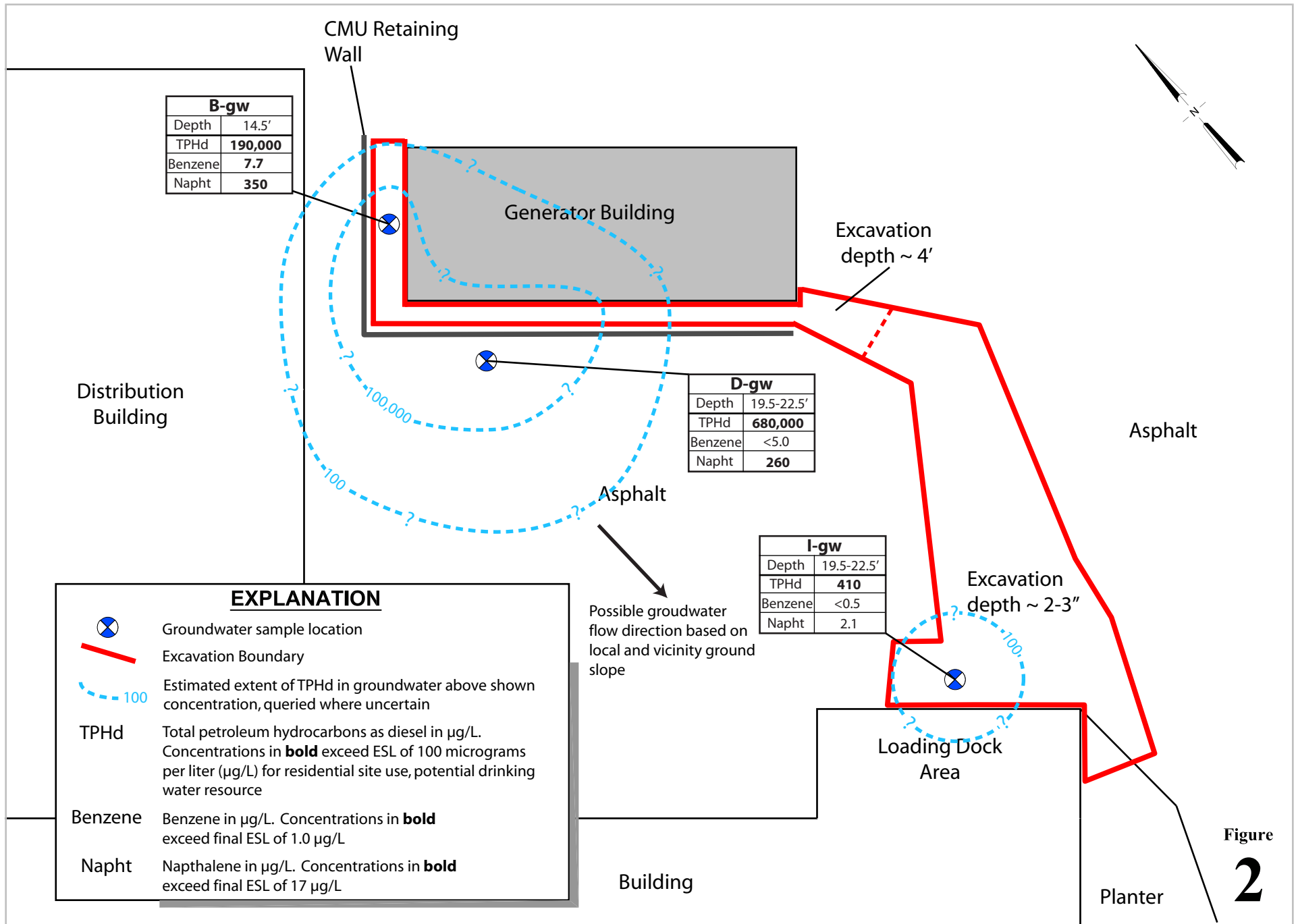
ATTACHMENTS

Figure 1 – Soil Sample Location Map with TPHd Isoconcentration Contours
Figure 2 – Groundwater Sample Location Map with TPHd Isoconcentration Contours

Table 1 – Soil Analytical Data
Table 2 – Groundwater Analytical Data

Appendix A – Regulatory Letter
Appendix B – Standard Field Operating Procedures for Soil Borings & Hand Auger Soil Borings
Appendix C – Boring Log
Appendix D – Laboratory Analytical Report





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Table 1. Soil Analytical Data - Camp Parks Federal Correctional Institution, 5701 8th Street, Dublin, California

Boring/ Sample ID	Date Sampled	Sample Depth Interval (feet bgs)	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene
			←----- mg/kg -----→						
Gross Contamination on Ceiling Value			100	500	500	400	420	100	500
Urban Area Ecotoxicity Criteria			--	25	--	--	--	--	40
Direct Exposure			110	0.12	63	2.3	31	30	1.3
Protection (Soil Leaching)			83	0.044	2.9	3.3	2.3	0.023	3.4
Final ESL - Residential, Non-Drinking Water Resource			100	0.12	9.3	2.3	11	8.4	1.3
Final ESL - Residential, Drinking Water Resource			83	0.044	2.9	2.3	2.3	0.023	1.3

SOIL INVESTIGATION - SEPTEMBER 2008

A-1	9/25/2008	5.0-5.5	220	<0.005	<0.005	<0.005	<0.005	--	--
A-2	9/25/2008	5.5-6.0	240	--	--	--	--	--	--
A-3*	9/25/2008	5.0-5.5	<1.0	--	--	--	--	--	--
B-1	9/25/2008	5.0-5.5	690	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
B-2	9/25/2008	10.5-11.0	4,000	--	--	--	--	--	--
B-3*	9/25/2008	5.0-5.5	1,300	--	--	--	--	--	--
C-1	9/25/2008	6.0-6.5	200	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
C-3*	9/25/2008	5.6-6.1	1,500	--	--	--	--	--	--
D-1	9/25/2008	5.2-5.7	810	<0.10	<0.10	<0.10	<0.10	--	--
D-3*	9/25/2008	5.5-6.0	3,000	--	--	--	--	--	--
D-4*	9/25/2008	5.3-5.9	690	--	--	--	--	--	--
D-5**	9/25/2008	8.0-8.5	<1.0	--	--	--	--	--	--
D-5**	9/25/2008	12.0-12.5	<1.0	--	--	--	--	--	--
D-5**	9/25/2008	17.0-17.5	220	--	--	--	--	--	--
D-5**	9/25/2008	20.0-20.5	14	--	--	--	--	--	--
D-5**	9/25/2008	22.5-23.0	1,200	--	--	--	--	--	--
F-1	9/25/2008	5.2-5.7	<1.0	<0.005	<0.005	<0.005	<0.005	--	--
F-2	9/25/2008	6.0-6.5	<1.0	--	--	--	--	--	--
F-3*	9/25/2008	5.2-5.7	<1.0	--	--	--	--	--	--
F-4*	9/25/2008	5.6-6.1	<1.0	--	--	--	--	--	--
I-1	9/25/2008	0.5-0.75	3.9	--	--	--	--	--	--

mg/Kg = milligrams per Kilogram

ft bgs = Depth below ground surface (bgs) in feet.

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

ESL = Environmental Screening Level for Shallow Soil with Residential Land Use, Groundwater is/is not a current or potential source of

ESL established by the SFBRWQCB, Interim Final - February 2005, and amended in November 2006 and May 2008.

Bold = Concentration above ESLs for Residential Land Use, potential drinking water resource

TPHd = Total Petroleum Hydrocarbons as diesel by EPA Method 8015C

Benzene, Toluene, Ethylbenzene and Xylenes by EPA Method 8021B

Naphthalene and MTBE by EPA Method 8260B

ND = Chemical not present in a concentration in excess of the reporting limit.

* = Sample collected from the sidewall of the excavation

** = Sample collected using geoprobe combo rig dual tube direct push techniques

Pangea

Table 2. Groundwater Analytical Data - Camp Parks Federal Correctional Institution, 5701 8th Street, Dublin, California

Boring/ Sample ID	Date Sampled	Sample Depth/Screening Interval (ft bgs)	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene
			←————— ug/L —————→						
Ceiling Value (Taste, Odors, etc.)			100	170	40	30	20	5.0	21
Drinking Water (Toxicity)			210	1.0	150	300	1,800	13	17
Vapor Intrusion Into Buildings			84	540	380,000	170,000	160,000	24,000	3,200
Aquatic Habitat Goal (Chronic)			210	46	130	43	100	8,000	24
Final Groundwater ESL - Residential, Non- Drinking Water Resource			210	46	130	43	100	1,800	24
Final Groundwater ESL - Residential, Drinking Water Resource			100	1.0	40	30	20	5.0	17

GRAB GROUNDWATER SAMPLING - SEPTEMBER 2008

B-gw*	9/25/2008	14.5	190,000	7.7	<5.0	<5.0	<5.0	<5.0	350
D-gw	9/25/2008	19.5-22.5	680,000	<5.0	<5.0	<5.0	<5.0	<5.0	260
I-gw	9/25/2008	20-25	410	<0.5	<0.5	<0.5	<0.5	1.0	2.1

ug/L = micrograms per liter

ft bgs = Depth below ground surface (bgs) in feet.

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

ESL = Environmental Screening Level for Shallow Soil with Residential Land Use. Groundwater is a current or potential source of drinking water. (Table A-1, Table B-1, Table H-2, Table K-1, Table E-1b and Table G).

ESL established by the SFBRWQCB, Interim Final - February 2005, and amended in November 2006 and May 2008.

Bold = Concentration above final ESL.

TPHd = Total Petroleum Hydrocarbons as diesel by EPA Method 8015C

Benzene, Toluene, Ethylbenzene and Xylenes by EPA Method 8021B

Naphthalene and MTBE by EPA Method 8260B

* = Groundwater sample was collected by lowering a disposable bailer into the open borehole.

APPENDIX A

Regulatory Letter



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

September 4, 2008

RECEIVED

Mr. Michael Goldstein
Federal Corrections Institution Dublin
5701 8th Street
Dublin, CA 94568

SEP 09 2008

MARCOR Remediation - SF

Subject: SLIC Case No. RO0002977 and Geotracker Global ID SLT19749067, FCI Dublin,
5701 8th Street, Dublin, CA 94568

Dear Mr. Goldstein:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Preliminary Site Assessment Phase Workplan," dated August 18, 2008 and received on August 27, 2008, which was prepared by McElligott Consulting (McElligott) for the subject site. McElligott proposes to collect 30 soil samples and one "grab" groundwater sample to delineate the extent of diesel contamination in soil and groundwater.

ACEH generally concurs with the proposed scope of work and the work may be implemented provided that the modifications requested in the technical comments below are addressed and incorporated during the field implementation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed.

TECHNICAL COMMENTS

1. **Groundwater Plume Delineation** – McElligott proposes to collect thirty soil samples and one "grab" groundwater to characterize the vertical and lateral extent of diesel contamination in soil and groundwater. Although the soil sampling strategy appears to adequately delineate diesel impact in soil, the single "grab" groundwater sample may not be sufficient to adequately characterize possible impact to groundwater. To address this apparent data gap and address ACEH's concerns, please install one additional direct push boring to the northwest of proposed soil sample location I. Please submit a revised figure illustrating the locations of the all the sampling points for approval prior to conducting fieldwork.
2. **GeoTracker Compliance** – A review of the case file and the State Water Resources Control Board's (SWRCB) GeoTracker website indicate that electronic copies of analytical data have not been submitted, rendering the site to non-compliance status. Pursuant to California Code of Regulations, Title 23, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1, beginning September 1, 2001, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the UST or LUST program, must be transmitted electronically to the SWRCB GeoTracker system via the internet. Also, beginning January 1, 2002, all permanent monitoring points utilized to collect groundwater samples (i.e.

monitoring wells) and submitted in a report to a regulatory agency, must be surveyed (top of casing) to mean sea level and latitude and longitude to sub-meter accuracy using NAD 83. A California licensed surveyor may be required to perform this work. Additionally, pursuant to California Code of Regulations, Title 23, Division 3, Chapter 30, Articles 1 and 2, Sections 3893, 3894, and 3895, beginning July 1, 2005, the successful submittal of electronic information (i.e. report in PDF format) shall replace the requirement for the submittal of a paper copy. Please claim your site and upload analytical data and PDF reports from July 1, 2005 to current to GeoTracker by the date specified below. Electronic reporting is described below.

TECHNICAL REPORT REQUEST

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

- **September 23, 2008** – Revised Sample Location Figure
- **October 14, 2008** – Claim Site in GeoTracker & Complete Uploads
- **November 11, 2008** – Soil and Water Investigation Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

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

Mr. Goldstein
RO0002977
September 4, 2008, Page 3

PERJURY STATEMENT

Cover letter from Mike Goldstein

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

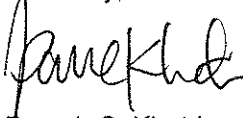
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

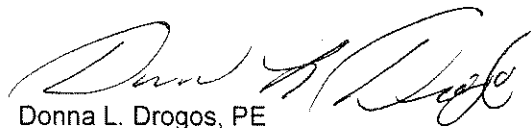
If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section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

If you have any questions, please call me at (510) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,



Paresh C. Khatri
Hazardous Materials Specialist



Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

Mr. Goldstein
RO0002977
September 4, 2008, Page 4

cc: Noah Ceteras, Marcor Remediation, Inc., 6644 Sierra Lane, Dublin, CA 94568
Anthony S. McElligott, McElligott Consulting, 41547 Chadbourne Dr., Fremont, CA 94539
Cheryl Dizon (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551
Donna Drogos, ACEH
Paresh Khatri, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

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

Submission Instructions

- 1) Obtain User Name and Password:
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to dehloptoxic@acgov.org
or
 - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
 - b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape and Firefox browsers will not open the FTP site.
 - b) Click on File, then on Login As.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload)

APPENDIX B

Standard Field Operating Procedures for Soil Borings & Hand Auger Soil Borings

STANDARD FIELD PROCEDURES FOR HAND-AUGER SOIL BORINGS

This document describes Pangea Environmental Services' standard field methods for drilling and sampling soil borings using a hand-auger. 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 or engineer working under the supervision of a California Registered Geologist (RG), Certified Engineering Geologist (CEG), or Professional Engineer. 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

Hand-auger borings are typically drilled using a hand-held bucket auger to remove soil to the desired sampling depth. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the augered hole. The vertical location of each soil sample is determined using a tape measure. 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.

Augering 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 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

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. 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, if they are collected from the boring, are collected from the open borehole using bailers. 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.

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

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 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 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.

APPENDIX C

Boring Log



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

BORING NUMBER D-5

CLIENT <u>Marcor</u>	PROJECT NAME <u>Dublin FCI</u>
PROJECT NUMBER <u>1320.001</u>	PROJECT LOCATION <u>5701 8th Street, Dublin, CA</u>
DATE STARTED <u>9/25/08</u>	COMPLETED <u>9/25/08</u>
DRILLING CONTRACTOR <u>Woodward</u>	GROUND ELEVATION _____
DRILLING METHOD <u>Direct Push - Dual Tube</u>	HOLE SIZE <u>3.25 "</u>
LOGGED BY <u>Bryce Taylor</u>	CHECKED BY <u>Bob Clark-Riddell</u>
NOTES <u>Hand Auger to 5'.</u>	GROUND WATER LEVELS:
	▽ AT TIME OF DRILLING <u>22.5 ft</u>
	▼ AT END OF DRILLING <u>16.0 ft</u>
	AFTER DRILLING <u>---</u>

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0					Asphalt, baserock and fill.	
5						
	D-5-8	0	CL		Clay (CL) ; brown to grey; 95-100% medium plasticity fines; trace fine-grain sand; dry; stiff.	
10						
	D-5-12	0	CL		Clay (CL) ; olive grey; 85-90% medium plasticity fines; 10-15% fine-grain sand; soft; moist.	
15						
	D-5-17	115	CL			
20						
	D-5-20	95	SC		Sandy Clay with Gravel (SC) ; olive grey; 65-75% medium-grain sand; 15-20% medium plasticity fines; wet; hydrocarbon odor.	
	D-5-22	253			Bottom of hole at 22.5 feet.	

BH COPY DUBLIN FCI D-5.GPJ GINT US.GDT 10/08/08

Cement

APPENDIX D

Laboratory Analytical Report



McC Campbell Analytical, Inc.

"When Quality Counts"

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

Marcor Remediation Env. 6644 Sierra Lane Dublin, CA 94568	Client Project ID: FCI- Dublin; 5701 8th St. Camp Parks	Date Sampled: 09/25/08
	Client Contact: Bryce Taylor	Date Received: 09/26/08
	Client P.O.:	Date Reported: 10/03/08
		Date Completed: 10/03/08

WorkOrder: 0809835

October 03, 2008

Dear Bryce:

Enclosed within are:

- 1) The results of the **24** analyzed samples from your project: **FCI- Dublin; 5701 8th St. Camp Park**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

0809835

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560

Website: www.mccampbell.com Email: main@mccampbell.com

Telephone: (877) 252-9262

Fax: (925) 252-9269

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: MARCOR ATTN: NATH CETERA Analysis Request: BTX / PAH / METALS ONLY Other: Comments:

Company: Marcor Remediation, Inc
6644 Sierra Lane, Dublin, CA 94568
Cetera@marcor.com E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709

Project #: Project Name: FCI - Dublin
Project Location: 5701 8th St. - Camp Parks
Sampler Signature: [Signature]

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				BTEX & TPH as Gas (602/8020 + 8015)/NTURE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&P)	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)	Filter Samples	for Metals analysis: Yes / No
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other																		

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				BTEX & TPH as Gas (602/8020 + 8015)/NTURE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&P)	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)	Filter Samples	for Metals analysis: Yes / No			
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other																					
B-gw		9/5	907	1	Amber	x					x	x		x																					
O-gw			1000	4	Amber	x					x	x		x																					
I-gw			1200	4	Amber	x					x	x		x																					
A-1 12-18"			730	1	brass		x							x																					
A-2 18-24"			745	1	brass		x							x																					
A-3 12-18"			800	1	brass		x							x																					
B-1 12-18"			815	1	brass		x							x																					
B-2 6'-7'			830	1	brass		x							x																					
B-3 12-18"			845	1	brass		x							x																					
C-1 24-30"			1115	1	brass		x							x																					
C-3 20-26"			1130	1	brass		x							x																					

Relinquished By: [Signature] Date: 9/5/06 Time: 8:00 Received By: [Signature] COMMENTS: ICE/r° 2.4
GOOD CONDITION yes
HEAD SPACE ABSENT yes
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS no/yes
PRESERVED IN LAB

Relinquished By: [Signature] Date: 9/25/06 Time: 14:15 Received By: [Signature]

Relinquished By: [Signature] Date: 9/25/06 Time: 14:15 Received By: [Signature]

VOAS O&G METALS OTHER
PRESERVATION pH < 2

+30
+10
+10

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560

Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

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: Marcor Attn: Noah Ceteys
Company: Marcor Remediation, INC
6644 Sierra Lane, Dublin, CA 94568
Caterane@marcor.com E-Mail: btaylor@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
Project #: Project Name: FCI - Dublin
Project Location: 5701 8th St. - Camp Parks
Sampler Signature: BT

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other				
D-1	14-20"	FCI	9/25	9:30	1	brass	X					X						
D-3	18-24"			9:45	1	brass	X					X						
D-4	16-22"			10:00	1	brass	X					X						
D-5	8"			9:45	1	liner	X					X						
D-5	12"			9:20	1	liner	X					X						
D-5	17"			9:25	1	liner	X					X						
D-5	20"			9:30	1	liner	X					X						
D-5	22.5"			9:35	1	liner	X					X						
F-1	14-20"			10:30	1	brass	X					X						
F-2	42-48"			10:45	1	brass	X					X						
F-3	14-20"			10:50	1	brass	X					X						
F-4	20-20"			10:55	1	brass	X					X						
I-1	6-9"			11:00	1	brass	X					X						

Analysis Request												Other	Comments			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Filter Samples for Metals analysis: Yes / No			
BTEX & TPH as Gas (602/8020 + 8015)/M/BE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/Bl&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)
X				X												
X				X												
X				X												
X				X												
X				X												
X				X												
X				X												
X				X												
X				X												
X				X												

Relinquished By: [Signature] Date: 9/25/03 Time: 9:30
Relinquished By: [Signature] Date: 9/26/03 Time: 9:45
Relinquished By: _____ Date: _____ Time: _____

ICE/r 2.4 COMMENTS:
GOOD CONDITION yes
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS yes
PRESERVED IN LAB
VOAS | O&G | METALS | OTHER
PRESERVATION | pH<2

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0809835

ClientCode: MRES

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Bryce Taylor
 Marcor Remediation Env.
 6644 Sierra Lane
 Dublin, CA 94568
 (510) 836-3702 FAX (510) 836-3709

Email: btaylor@pangeaenv.com
 cc:
 PO:
 ProjectNo: FCI- Dublin; 5701 8th St. Camp Parks

Bill to:

Leonor Carrasco
 Marcor Remediation Env.
 6644 Sierra Lane
 94568, CA 94568
 carrasl@marcor.com

Requested TAT: 5 days

Date Received: 09/26/2008

Date Printed: 09/26/2008

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0809835-001	B-gw	Water	9/25/2008 9:07	<input type="checkbox"/>			A		A							
0809835-002	D-gw	Water	9/25/2008 10:00	<input type="checkbox"/>			A		B							
0809835-003	I-gw	Water	9/25/2008 12:00	<input type="checkbox"/>			A		B							
0809835-004	A-1 12-18"	Soil	9/25/2008 7:30	<input type="checkbox"/>	A			A								
0809835-005	A-2 18-24"	Soil	9/25/2008 7:45	<input type="checkbox"/>				A								
0809835-006	A-3 12-18"	Soil	9/25/2008 8:00	<input type="checkbox"/>				A								
0809835-007	B-1 12-18"	Soil	9/25/2008 8:15	<input type="checkbox"/>		A		A								
0809835-008	B-2 6'6"-7'	Soil	9/25/2008 8:30	<input type="checkbox"/>				A								
0809835-009	B-3 12-18"	Soil	9/25/2008 8:45	<input type="checkbox"/>				A								
0809835-010	C-1 24-30"	Soil	9/25/2008 11:15	<input type="checkbox"/>		A		A								
0809835-011	C-3 20-26"	Soil	9/25/2008 11:30	<input type="checkbox"/>				A								
0809835-012	D-1 14-20"	Soil	9/25/2008 9:30	<input type="checkbox"/>	A			A								
0809835-013	D-3 18-24"	Soil	9/25/2008 9:45	<input type="checkbox"/>				A								
0809835-014	D-4 16-22"	Soil	9/25/2008 10:00	<input type="checkbox"/>				A								

Test Legend:

1	G-MBTEX_S	2	MBTEX-8260B_S	3	MBTEX-8260B_W	4	TPH(D)_S	5	TPH(D)_W
6		7		8		9		10	
11		12							

Prepared by: Rosa Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0809835

ClientCode: MRES

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Bryce Taylor
Marcor Remediation Env.
6644 Sierra Lane
Dublin, CA 94568
(510) 836-3702 FAX (510) 836-3709

Email: btaylor@pangeaenv.com
cc:
PO:
ProjectNo: FCI- Dublin; 5701 8th St. Camp Parks

Bill to:

Leonor Carrasco
Marcor Remediation Env.
6644 Sierra Lane
94568, CA 94568
carrasl@marcor.com

Requested TAT: 5 days

Date Received: 09/26/2008

Date Printed: 09/26/2008

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0809835-015	D-5 8'	Soil	9/25/2008 9:15	<input type="checkbox"/>				A								
0809835-016	D-5 12'	Soil	9/25/2008 9:20	<input type="checkbox"/>				A								
0809835-017	D-5 17'	Soil	9/25/2008 9:25	<input type="checkbox"/>				A								
0809835-018	D-5 20'	Soil	9/25/2008 9:30	<input type="checkbox"/>				A								
0809835-019	D-5 22.5'	Soil	9/25/2008 9:35	<input type="checkbox"/>				A								
0809835-020	F-1 14-20"	Soil	9/25/2008 10:30	<input type="checkbox"/>	A			A								
0809835-021	F-2 42-48"	Soil	9/25/2008 10:45	<input type="checkbox"/>				A								
0809835-022	F-3 14-20"	Soil	9/25/2008 10:50	<input type="checkbox"/>				A								
0809835-023	F-4 20-26"	Soil	9/25/2008 10:55	<input type="checkbox"/>				A								
0809835-024	I-1 6-9"	Soil	9/25/2008 11:00	<input type="checkbox"/>				A								

Test Legend:

1	G-MBTEX_S	2	MBTEX-8260B_S	3	MBTEX-8260B_W	4	TPH(D)_S	5	TPH(D)_W
6		7		8		9		10	
11		12							

Prepared by: Rosa Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Marcor Remediation Env.**

Date and Time Received: **9/26/08 5:05:53 PM**

Project Name: **FCI- Dublin; 5701 8th St. Camp Parks**

Checklist completed and reviewed by: Rosa Venegas

WorkOrder N°: **0809835** Matrix Soil/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 shipping 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: 2.4°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
 - Samples Received on Ice? Yes No
- (Ice Type: WET ICE)

* NOTE: If the "No" box is checked, see comments below.

Client contacted:

Date contacted:

Contacted by:

Comments:



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Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Marcor Remediation Env. 6644 Sierra Lane Dublin, CA 94568	Client Project ID: FCI- Dublin; 5701 8th St. Camp Parks	Date Sampled: 09/25/08
	Client Contact: Bryce Taylor	Date Received: 09/26/08
	Client P.O.:	Date Analyzed 09/27/08-09/29/08

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0809835

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
004A	A-1 12-18"	S	---	---	ND	ND	ND	ND	1	88
012A	D-1 14-20"	S	---	---	ND<0.10	ND<0.10	ND<0.10	ND<0.10	20	105
020A	F-1 14-20"	S	---	---	ND	ND	ND	ND	1	90

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	ug/L
	S	1	0.05	0.005	0.005	0.005	0.005	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 w/surrogate peak; low surrogate recovery due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram



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Marcor Remediation Env. 6644 Sierra Lane Dublin, CA 94568	Client Project ID: FCI- Dublin; 5701 8th St. Camp Parks	Date Sampled: 09/25/08
	Client Contact: Bryce Taylor	Date Received: 09/26/08
	Client P.O.:	Date Analyzed: 10/02/08

MTBE and BTEX by GC/MS + Naphthalene*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0809835

Lab ID	0809835-007A	0809835-010A			Reporting Limit for DF =1
Client ID	B-1 12-18"	C-1 24-30"			
Matrix	S	S			
DF	1	1			

Compound	Concentration				mg/kg	ug/L
	Benzene	ND	ND			0.005
Ethylbenzene	ND	ND			0.005	NA
Methyl-t-butyl ether (MTBE)	ND	ND			0.005	NA
Naphthalene	ND	ND			0.005	NA
Toluene	ND	ND			0.005	NA
Xylenes	ND	ND			0.005	NA

Surrogate Recoveries (%)

%SS1:	82	82		
%SS2:	97	95		
%SS3:	91	90		

Comments

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



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Marcor Remediation Env. 6644 Sierra Lane Dublin, CA 94568	Client Project ID: FCI- Dublin; 5701 8th St. Camp Parks	Date Sampled: 09/25/08
	Client Contact: Bryce Taylor	Date Received: 09/26/08
	Client P.O.:	Date Extracted: 09/29/08-09/30/08
		Date Analyzed 09/29/08-09/30/08

MTBE and BTEX by GC/MS + Naphthalene*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0809835

Lab ID	0809835-001A	0809835-002A	0809835-003A		Reporting Limit for DF =1	
Client ID	B-gw	D-gw	I-gw			
Matrix	W	W	W			
DF	10	10	1			

Compound	Concentration			ug/kg	µg/L
	Benzene	7.7	ND<5.0	ND	NA
Ethylbenzene	ND<5.0	ND<5.0	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND<5.0	ND<5.0	1.0	NA	0.5
Naphthalene	350	260	2.1	NA	0.5
Toluene	ND<5.0	ND<5.0	ND	NA	0.5
Xylenes	ND<5.0	ND<5.0	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	92	101	104		
%SS2:	94	109	111		
%SS3:	84	73	78		

Comments	b6,b1	b6,b1	b1		
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* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

b6) lighter than water immiscible sheen/product is present



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Marcor Remediation Env. 6644 Sierra Lane Dublin, CA 94568	Client Project ID: FCI- Dublin; 5701 8th St. Camp Parks	Date Sampled: 09/25/08
	Client Contact: Bryce Taylor	Date Received: 09/26/08
	Client P.O.:	Date Analyzed: 09/28/08-10/03/08

Total Extractable Petroleum Hydrocarbons*

Extraction method SW3510C/SW3550C

Analytical methods: SW8015B

Work Order: 0809835

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0809835-001A	B-gw	W	190,000,e1,b6,b1	5	125
0809835-002B	D-gw	W	680,000,e1,b6,b1	200	119
0809835-003B	I-gw	W	410,e7,e2,b1	1	85
0809835-004A	A-1 12-18"	S	220,e3	1	84
0809835-005A	A-2 18-24"	S	240,e3	1	85
0809835-006A	A-3 12-18"	S	ND	1	116
0809835-007A	B-1 12-18"	S	690,e1	1	107
0809835-008A	B-2 6'6"-7'	S	4000,e1	50	94
0809835-009A	B-3 12-18"	S	1300,e1	20	102
0809835-010A	C-1 24-30"	S	200,e1	1	108
0809835-011A	C-3 20-26"	S	1500,e1	20	106
0809835-012A	D-1 14-20"	S	810,e1	20	99
0809835-013A	D-3 18-24"	S	3000,e1	50	101
0809835-014A	D-4 16-22"	S	690,e1	1	101
0809835-015A	D-5 8'	S	ND	1	114

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 McC Campbell Analytical is not responsible for their interpretation:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- e1) unmodified or weakly modified diesel is significant
- e2) diesel range compounds are significant; no recognizable pattern
- e3) aged diesel is significant
- e7) oil range compounds are significant



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Marcor Remediation Env. 6644 Sierra Lane Dublin, CA 94568	Client Project ID: FCI- Dublin; 5701 8th St. Camp Parks	Date Sampled: 09/25/08
	Client Contact: Bryce Taylor	Date Received: 09/26/08
	Client P.O.:	Date Analyzed: 09/28/08-10/03/08

Total Extractable Petroleum Hydrocarbons*

Extraction method SW3510C/SW3550C

Analytical methods: SW8015B

Work Order: 0809835

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS
0809835-016A	D-5 12'	S	ND	1	115
0809835-017A	D-5 17'	S	220,e1	1	85
0809835-018A	D-5 20'	S	14,e1	1	124
0809835-019A	D-5 22.5'	S	1200,e1	20	96
0809835-020A	F-1 14-20"	S	ND	1	115
0809835-021A	F-2 42-48"	S	ND	1	84
0809835-022A	F-3 14-20"	S	ND	1	113
0809835-023A	F-4 20-26"	S	ND	1	84
0809835-024A	I-1 6-9"	S	3.9,e7,e2	1	102

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 McC Campbell Analytical is not responsible for their interpretation:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- e1) unmodified or weakly modified diesel is significant
- e2) diesel range compounds are significant; no recognizable pattern
- e3) aged diesel is significant
- e7) oil range compounds are significant



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 38561

WorkOrder: 0809835

EPA Method: SW8021B/8015Cm		Extraction: SW5030B							Spiked Sample ID: 0809841-001A			
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	90.6	95.2	5.00	106	113	6.62	70 - 130	20	70 - 130	20
MTBE	ND	0.10	108	113	4.43	112	121	7.92	70 - 130	20	70 - 130	20
Benzene	ND	0.10	96.8	92.9	4.06	98.1	97.2	0.863	70 - 130	20	70 - 130	20
Toluene	ND	0.10	108	105	3.36	110	111	1.42	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	107	104	2.92	109	105	3.66	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	118	115	2.32	120	117	2.36	70 - 130	20	70 - 130	20
%SS:	97	0.10	102	99	3.31	108	96	11.9	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 38561 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809835-004A	09/25/08 7:30 AM	09/26/08	09/27/08 7:51 PM	0809835-012A	09/25/08 9:30 AM	09/26/08	09/29/08 1:23 PM
0809835-020A	09/25/08 10:30 AM	09/26/08	09/27/08 8:25 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 enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or 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.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 38425

WorkOrder 0809835

EPA Method SW8260B		Extraction SW5030B							Spiked Sample ID: 0809708-008A			
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
Benzene	ND	0.050	110	110	0	110	99.1	10.4	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	105	109	4.11	105	94.8	10.3	60 - 130	30	60 - 130	30
Toluene	ND	0.050	109	111	1.25	112	98.8	12.2	60 - 130	30	60 - 130	30
%SS1:	88	0.12	88	88	0	87	86	1.07	70 - 130	30	70 - 130	30
%SS2:	103	0.12	99	98	0.325	100	99	0.214	70 - 130	30	70 - 130	30
%SS3:	98	0.012	98	98	0	99	98	1.38	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 38425 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809835-007A	09/25/08 8:15 AM	09/26/08	10/02/08 6:36 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.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 38540

WorkOrder 0809835

Analyte	EPA Method SW8260B Extraction SW5030B								Spiked Sample ID: 0809797-019A			
	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
Benzene	ND	0.050	97.4	112	13.9	107	104	2.94	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	96.8	110	12.5	108	103	4.40	60 - 130	30	60 - 130	30
Toluene	ND	0.050	99.5	114	14.0	111	111	0	60 - 130	30	60 - 130	30
%SS1:	79	0.12	84	84	0	86	84	2.43	70 - 130	30	70 - 130	30
%SS2:	91	0.12	94	95	0.955	96	96	0	70 - 130	30	70 - 130	30
%SS3:	76	0.012	99	100	1.43	98	97	0.804	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 38540 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809835-010A	09/25/08 11:15 AM	09/26/08	10/02/08 8:45 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.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38556

WorkOrder 0809835

EPA Method SW8015B		Extraction SW3510C							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-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	102	105	2.05	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	87	88	1.27	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 38556 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809835-001A	09/25/08 9:07 AM	09/26/08	10/02/08 5:01 PM	0809835-002B	09/25/08 10:00 AM	09/26/08	10/03/08 9:37 AM
0809835-003B	09/25/08 12:00 PM	09/26/08	10/03/08 12:47 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.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 38562

WorkOrder: 0809835

EPA Method: SW8260B		Extraction: SW5030B							Spiked Sample ID: 0809842-014C			
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
Benzene	ND	10	97.9	100	2.15	119	121	1.47	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	94.4	96.1	1.81	115	116	1.21	70 - 130	30	70 - 130	30
Toluene	ND	10	106	110	3.68	120	120	0	70 - 130	30	70 - 130	30
%SS1:	103	25	80	80	0	90	89	0.705	70 - 130	30	70 - 130	30
%SS2:	117	25	79	81	1.97	87	86	0.410	70 - 130	30	70 - 130	30
%SS3:	98	2.5	75	75	0	70	70	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 38562 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809835-001A	09/25/08 9:07 AM	09/30/08	09/30/08 6:38 AM	0809835-002A	09/25/08 10:00 AM	09/29/08	09/29/08 10:37 PM
0809835-003A	09/25/08 12:00 PM	09/29/08	09/29/08 11:20 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.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 38448

WorkOrder: 0809835

EPA Method: SW8015B		Extraction: SW3550C							Spiked Sample ID: 0809832-012A			
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-Diesel (C10-C23)	66	20	128	129	0.252	105	111	5.35	70 - 130	30	70 - 130	30
%SS:	96	50	96	102	5.93	86	86	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 38448 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809835-004A	09/25/08 7:30 AM	09/26/08	09/28/08 6:16 PM	0809835-005A	09/25/08 7:45 AM	09/26/08	09/28/08 7:23 PM
0809835-006A	09/25/08 8:00 AM	09/26/08	09/29/08 11:03 PM	0809835-007A	09/25/08 8:15 AM	09/26/08	09/29/08 11:39 AM
0809835-008A	09/25/08 8:30 AM	09/26/08	10/01/08 3:53 PM	0809835-009A	09/25/08 8:45 AM	09/26/08	09/30/08 3:42 PM
0809835-010A	09/25/08 11:15 AM	09/26/08	09/29/08 6:30 PM	0809835-011A	09/25/08 11:30 AM	09/26/08	10/02/08 12:46 PM
0809835-012A	09/25/08 9:30 AM	09/26/08	09/30/08 11:31 PM	0809835-013A	09/25/08 9:45 AM	09/26/08	10/01/08 9:28 PM
0809835-014A	09/25/08 10:00 AM	09/26/08	09/29/08 5:25 PM	0809835-015A	09/25/08 9:15 AM	09/26/08	09/29/08 9:55 PM
0809835-016A	09/25/08 9:20 AM	09/26/08	09/30/08 1:27 PM	0809835-017A	09/25/08 9:25 AM	09/26/08	09/29/08 2:57 PM
0809835-018A	09/25/08 9:30 AM	09/26/08	09/30/08 8:11 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.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 38504

WorkOrder: 0809835

EPA Method: SW8015B		Extraction: SW3550C							Spiked Sample ID: 0809835-024A			
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-Diesel (C10-C23)	3.9	20	105	104	1.11	111	108	2.77	70 - 130	30	70 - 130	30
%SS:	102	50	118	107	9.92	85	85	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 38504 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809835-019A	09/25/08 9:35 AM	09/26/08	09/30/08 4:49 PM	0809835-020A	09/25/08 10:30 AM	09/26/08	09/30/08 12:12 AM
0809835-021A	09/25/08 10:45 AM	09/26/08	09/29/08 9:52 PM	0809835-022A	09/25/08 10:50 AM	09/26/08	09/30/08 12:05 AM
0809835-023A	09/25/08 10:55 AM	09/26/08	09/29/08 10:59 PM	0809835-024A	09/25/08 11:00 AM	09/26/08	10/03/08 1:39 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.