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11:01 am, Nov 21, 2008

Alameda County
Environmental Health

**CORRECTIVE ACTION PLAN
4600-4700 COLISEUM WAY
OAKLAND, CALIFORNIA**

SEPTEMBER 23, 2008

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DISTRIBUTION

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1.0 INTRODUCTION

This Corrective Action Plan (CAP) was prepared by PES Environmental, Inc. (PES) on behalf of Mr. John Weber, owner of the subject property, to describe voluntary cleanup activities to be conducted on the property located at 4600-4700 Coliseum Way, Oakland, California (the Site) (Plate 1). The objective of the CAP is to address on-Site volatile organic compound (VOC)-affected soil and groundwater.

The results of PES' recently completed investigations and previous on-Site and off-Site investigations by others indicate that:

- The lateral and vertical extent of VOC-impacted soil has been defined and the area of concern appears to be limited to shallow soil (upper 6 feet) beneath the footprint of a shed located along the northeast property boundary; and
- The lateral extent of VOC-impacted groundwater has been defined and appears to be primarily limited to the eastern-northeastern portion of the Site.

The results of the recent and previous investigations suggest that a limited soil removal action (totaling approximately 49 cubic yards of soil) is warranted, but remediation of groundwater is not required based on a comparison to applicable screening levels.

The following sections in this CAP include:

- Section 2.0, Background - presents a description of the Site and its history, the local geology and hydrogeology, a summary of environmental conditions on adjacent properties, and a summary of previous on-Site environmental investigations;
- Section 3.0, Objective and Proposed Target Cleanup Goals – discusses the objective of the corrective action and identifies applicable and established target soil cleanup levels to be applied at the Site;
- Section 4.0, Proposed Soil Excavation - presents a summary of the field activities to be performed to fulfill the proposed corrective action objective; and
- Section 5.0, Reporting - discusses items to be included in the post-remedial action report.

Appendix A includes a copy of PIERS Environmental Services, Inc. (PIERS) *Limited Phase II Site Investigation Report*, which presents the results of their January 2008 on-Site investigation; Appendix B contains pertinent data from PES' 2008 subsurface investigations; and Appendix C is the *Verification and Waste Characterization Sampling and Analysis Plan*, which presents details for the proposed field sampling and laboratory procedures.

2.0 BACKGROUND

2.1 Site Description

The 2.7-acre Site is comprised of two adjacent rectangular parcels with addresses of 4600 and 4700 Coliseum Way that are identified by Alameda County Assessor's Parcel Number (APN) 34-2293-3 and 34-2293-4-2, respectively.

Currently buildings at the Site consist of two smaller metal-framed warehouse buildings in the western portion of the Site, a large warehouse building in the central portion of the Site, and a small shed near the northeastern property boundary (Plate 2). The Site is located in a commercial/industrial area within the City of Oakland and County of Alameda, California. As shown on Plates 1 and 2, the Site is bounded to the northeast by an abandoned railroad spur and further northeast by a property owned by Learner Investment Company, to the southeast by Superior Plaster Casting Property, to the southwest by Coliseum Way, and to the northwest by 46th Avenue. Vehicle access to the property is via Coliseum Way.

According to the United States Geological Survey (USGS) *Oakland East, California* Quadrangle 7.5-minute series topographic map, the Site is situated at an elevation of approximately 10 feet above mean sea level. The topography on the Site and in the vicinity is relatively flat. The closest water body is San Francisco Bay, located approximately ½-mile to the southwest.

2.2 Site History

According to a Phase I Environmental Site Assessment (ESA) prepared by AEI Consultants (AEI) in October 2007 (AEI, 2007), the metal-framed warehouses in the western portion of the Site were constructed between 1912 and 1925 for use as storage facilities for feed and coal. According to AEI, these warehouses have historically been used for various operations including wooden molding manufacturing, insulation manufacturing, and cabinet making. Currently, the warehouses are being used for storage of miscellaneous equipment and construction supplies (ERAS Environmental, Inc. [ERAS], 2007a). The abandoned railroad spur shown on Plate 2, was present at the Site from at least 1925 through 1969.

The large warehouse building in the central portion of the Site was constructed in 1968 for use as a metal manufacturing facility by Bostrom Bergen Metal Manufacturing (Bostrom) (AEI, 2007). Bostrom occupied the Site, including the two metal-framed warehouses from at least 1969 through 2000. The large warehouse is currently occupied by LVI Environmental Services (ERAS, 2007a). LVI is a demolition and environmental remediation services company.

2.3 Local Geology and Hydrogeology

According to ERAS, the Site is underlain by “fine-grained alluvial sediment that represents distal deposits of alluvial fans that were deposited by rivers draining upland surfaces” (ERAS, 2007a). Also beneath the Site are clay layers referred to as Bay Mud. Several hundred feet of Bay Mud deposits are likely present in the vicinity of the Site. Beneath the Bay Muds are sedimentary and metamorphic rocks of the Jurassic-aged Franciscan Formation (ERAS, 2007a). Groundwater was encountered at depths ranging between 4 and 15 feet below ground surface (bgs) during an on-Site investigation conducted by PIERS in January 2008 (PIERS, 2008). The PIERS investigation is discussed in Section 2.5. Groundwater flow in the vicinity of the Site is generally toward the south (ERAS, 2007a).

Soil beneath the northeastern and eastern portions of the Site investigated by PES in June and July 2008 consists of dark grayish brown to dark brown gravelly silts to a depth ranging between 1.5 to 3 feet bgs (PES, 2008). Soil below this material generally consists of a yellowish brown to very dark gray clay, clay with silt, or silty clay to 19 feet bgs, the maximum depth investigated. This material contains discontinuous, approximately 0.5-foot thick interbeds of sand and clayey sand and 1- to 3-foot thick interbeds of clay with gravel and gravelly clay. Wet soil was first encountered at depths ranging between 9 and 12 feet bgs. However, groundwater may be under confining conditions because water stabilized at depths between 7 and 8 feet bgs (PES, 2008).

As discussed in Section 2.4 below, shallow groundwater in the vicinity of the Site is impacted by regional total petroleum hydrocarbon (TPH) and VOC plumes that are currently being addressed under the oversight of Alameda County Department of Environmental Health (ACDEH). Studies conducted on nearby properties indicate that the underlying groundwater is brackish (Harding ESE, Inc. [Harding ESE], 2002; LFR, Inc. [LFR], 2008). Therefore, groundwater in this area is not considered a drinking water source.

2.4 Summary of Environmental Conditions on Adjacent Properties

Properties adjacent to the Site including the Superior Plaster Castings Property, PG&E Property, Former AAA Equipment Company, and Learner Investment Company Property. The positions of these properties relative to the subject Site are shown on Plate 1. A summary of the environmental conditions on these adjacent properties is presented below.

Superior Plaster Castings Property: This property is located southeast and immediately adjacent to the subject Site (Plate 1) and appears to be hydraulically down- and cross-gradient from the Site with respect to the direction of groundwater flow. The primary contaminants detected at this property include petroleum hydrocarbons (TPH quantified as gasoline [TPHg] and quantified as diesel [TPHd], respectively), xylenes, and VOCs. VOCs present on the Superior Plaster Castings Property appear to be limited to chlorobenzene (CB), 1,2-dichlorobenzene (1,2-DCB), 1,3-DCB and 1,4-DCB. 1,1,1-trichloroethane (1,1,1-TCA) and its breakdown products were not detected in groundwater samples collected on this

property (ERAS, 2000). Work at this property is ongoing and is currently under the oversight of the ACDEH.

PG&E Property: This property is located southeast from the subject Site and immediately adjacent to the Superior Plaster Castings Property (Plate 1) and appears to be hydraulically down-and cross-gradient from the subject property with respect to the direction of groundwater flow. This property is the location of a general construction yard and a former gas holder tank that was removed in May 1990. Seven groundwater monitoring wells are located on the PG&E Property. The wells were sampled in November 2007 and VOCs detected were primarily CB and DCBs. Fuel hydrocarbons are also present in the groundwater at the PG&E Property. In April 2007, 1,1,1-TCA was detected in one groundwater sample (OW-1) but at a low concentration of 0.6 micrograms per liter ($\mu\text{g/L}$) and 1,1-dichloroethane (1,1-DCA) was also detected at a maximum concentration of 12 $\mu\text{g/L}$ (Geomatrix Consultants, Inc. [Geomatrix], 2007), each well below its applicable California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) risk-based Environmental Screening Levels (ESLs).

A workplan was submitted by PG&E to the ACDEH on November 16, 2007 to conduct additional assessment of the petroleum hydrocarbons, CB and DCB contamination in groundwater. The status of that proposed work is not known at this time.

Former AAA Equipment Company: This property is located east-southeast of the subject Site and appears to be hydraulically cross-gradient from the Site (Plate 1) with respect to the direction of groundwater flow. TPHd and TPH quantified as motor oil (TPHmo) have been detected on the property. Polynuclear aromatics (PNAs) and polychlorinated biphenyls (PCBs) have also been detected on this property. VOCs detected in soil and groundwater appears to be limited to CB and DCBs (Harding ESE, 2002).

LFR submitted a *Workplan for Assessment of Dichlorobenzene in Soil and Groundwater* dated October 30, 2007 to the ACDEH for this property (745 50th Street) and the Learner Investment Company Property at 768 46th Avenue. The status of that proposed work is not known at this time.

Learner Investment Company Property: This property is located north and northeast of the subject Site and appears to be hydraulically up-gradient from the Site (Plate 1) with respect to the direction of groundwater flow. This property is being actively investigated and is under oversight by the ACDEH. Previous sampling conducted on this property indicates that it is affected by petroleum hydrocarbons (TPHd and TPHmo), PCBs, benzene, toluene, ethylbenzene, and xylenes (BTEX), and metals.

The most recent investigation at this property was conducted by LFR in April 2008 and involved advancing 12 borings (LFR, 2008). Soil samples at depths ranging from 1 to 5 feet bgs were collected from each boring and grab groundwater samples were collected from four borings. Four of the borings (LP-4, LP-5, LP-6 and LP-13) were located near the boundary

northeast of the subject Site; grab groundwater samples were collected from borings LP-6 and LP-13. The summary below focuses on the results these four borings.

The soil samples collected from borings LP-4, LP-5, LP-6 and LP-13 were analyzed for TPHd, TPHmo, VOCs, metals, and PCBs and the groundwater samples were analyzed for TPHd, TPHmo, VOCs, and metals. In summary, TPHd, TPHmo, PCBs, acetone and methylene chloride were detected in the soil samples.

LFR indicated that most of the metals concentrations in soil were within range of naturally occurring metals concentrations in the San Francisco Bay Area. However, according to LFR, six metals (arsenic, cadmium, copper, lead, nickel, and zinc) were detected at elevated concentrations. The maximum concentrations of these metals in the samples collected from borings LP-4, LP-5, LP-6 and LP-13 were arsenic at 12 mg/kg, cadmium at 10 mg/kg, copper at 100 mg/kg, lead at 1,000 mg/kg, and zinc at 2,800 mg/kg.

TPHd, TPHmo, 1,1-DCA, 1,2-dichloroethane (1,2-DCA), cis-1,2-dichloroethene (cis-1,2-DCE), and bromodichloromethane were detected in the grab groundwater samples.

2.5 Summary of Previous On-Site Environmental Investigations

2.5.1 Phase I ESA by Kleinfelder

In 2002, Kleinfelder, Inc. (Kleinfelder) conducted a Phase I ESA at the Site (Kleinfelder, 2002). Kleinfelder's site description and historical evaluation of the subject Site are similar to those presented above. Kleinfelder indicated that their assessment revealed the following Recognized Environmental Conditions (RECs):

- “A rail spur terminated inside the property, used as recently as 1959, for the shipment of dry grains”;
- “Minor oil stains were observed on the concrete in various locations but appear to have been isolated incidents and did not indicate a re-occurring event. Additionally, soil that was stained red from non-lead based paint over-spray was observed in the metal painting area at the rear of the site”;
- “The primary concern associated with surrounding areas is impacted ground water quality from past discharges at up-gradient properties, including sodium dichromate spill and methyl-tert-butyl ether (MTBE) reported in ground water at the site at 5115 East 8th Street”;
- “The vacant lot located at 745 50th Avenue was observed to contain corroding, leaking, unlabeled drums and other containers of unknown waste fluids”; and

- “Bostrom-Bergen was cited for improperly disposing of waste paint and paint thinner on the ground in 1986 and 1987 by Alameda County. Per Alameda County’s request, Bostrom-Bergen completed a Corrective Actions Plan to correct this violation”.

Kleinfelder recommended that the concrete stains be properly cleaned and stained soils be properly removed from the Site.

2.5.2 Excavation of Red-Stained Soils

Based on the results of Kleinfelder’s Phase I ESA (Kleinfelder, 2002), W.A. Craig, Inc. (W.A. Craig) collected four surface soil samples (samples S1 through S4) in the red-stained area at the rear of the property. The results of this sampling are presented in W.A. Craig’s *Soil Sample Results* letter report dated May 22, 2003 (W.A. Craig, 2003). The samples were analyzed for cadmium, chromium, lead, nickel, and zinc. Maximum detected concentrations of these constituents were as follows: cadmium, 8.3 milligrams per kilogram (mg/kg); chromium, 1,100 mg/kg; lead 4,500 mg/kg; nickel, 130 mg/kg; and zinc, 18,000 mg/kg.

Based on these results, Controlled Environmental Services (CES) excavated the area of red-stained soils to approximately 12 inches bgs on June 12 and 18, 2003 (Kleinfelder, 2003). Approximately 226 tons of California hazardous soil and 159 tons of RCRA hazardous soil was removed from an area measuring 140 feet by 40 feet. Following excavation activities, Kleinfelder collected four confirmation soil samples. The samples were analyzed for total lead, which ranged in concentration from 42 to 130 mg/kg (Kleinfelder, 2003). The lead results were all below Risk Based Screening Level established by the RWQCB.

2.5.3 Additional Phase I ESAs

AEI conducted a Phase I ESA at the Site in 2007 (AEI, 2007). AEI indicated their assessment revealed the following RECs:

- The use of the subject property for industrial purposed since at least 1925;
- The historical presence of railroad spurs on or near the Site;
- The presence of a gasoline tank shown on Sanborn maps between 1953 and 1969; and
- “The adjacent properties to the north, northeast, east, and southeast have been grouped together as a common source of historical releases that occurred on each of the four properties, resulting in a comingled plume”.

AEI recommended a subsurface soil and/or groundwater investigation to evaluate the identified RECs.

In 2007, ERAS also conducted a Phase I ESA at the Site (ERAS, 2007a). ERAS prepared an addendum to their Phase I ESA report (ERAS, 2007b). ERAS' Phase I ESA and addendum did not contain any additional significant findings regarding the subject property.

2.5.4 PIERS January 2008 Phase II Investigation

In January 2008, based on the investigation and recommendations of AEI, PIERS conducted a soil and groundwater investigation at the Site that involved advancing five borings (i.e., borings B1 through B5, see Plate 2 for locations) and collecting a four point composite sample along the former railroad spur (i.e., composite sample from locations S1A through S1D, see Plate 2 for locations). The purposes of borings B1 through B5 were as follows (PIERS, 2008):

- B1 through B3 were located in the northeastern portion of the Site to investigate potential off-Site sources “that could cause contamination to migrate in groundwater beneath the Property”; and
- Borings B4 and B5 were located at and adjacent to the location of the former gasoline tank location shown on historical Sanborn maps.

A copy of PIERS *Limited Phase II Site Investigation Report* is included in Appendix A and selected soil and grab groundwater sample results from borings B1 through B5 are posted on the plates included in Appendix B. As shown on Plate 4 (Appendix B), the VOCs 1,1,1-TCA and its degradation products were detected in groundwater in the borings advanced in the eastern-northeastern portion of the Site. The highest concentrations in groundwater (1,1,1-TCA detected at 1,200 $\mu\text{g/L}$) were encountered in boring B1 located in the eastern corner of the Site. Lower concentrations of 1,1,1-TCA were detected in the soil sample collected from boring B1 (Plate 3, Appendix B).

Very low concentrations of toluene were detected in the groundwater samples collected from the location of the former gasoline tank shown on historical Sanborn maps (see Table 1 in Appendix A). Hydrocarbons and VOCs were not detected in the soil samples collected from these borings. TPHd and TPHmo were detected at concentrations of 9.9 and 84 mg/kg in the composite sample collected along the former railroad spur; VOCs and PCBs were not detected in this sample.

2.5.5 PES' 2008 Subsurface Investigations

In June and July 2008, PES performed subsurface investigations at the Site. The results of the investigations are included in PES' *Subsurface Investigation Report* (PES, 2008). The objectives of these investigations were to:

- Provide a better understanding of soil and groundwater conditions in the eastern-northeastern portion of the Site based on information provided in prior Site assessments;

- Verify the results of the previous sampling conducted in the eastern portion of the Site;
- Assess soil conditions in the immediate vicinity of a storage shed to evaluate whether soil beneath and in the vicinity of the shed is the source of VOC-affected groundwater; and
- Define the extent of groundwater north (up-gradient), west (cross-gradient), and south (down-gradient) of the shed.

During the investigations, PES completed fifteen borings (B-1 through B-15; see Plate 2). Pertinent soil and groundwater data from the investigations are included in Appendix B. Soil data are presented on Table 2 and Plate 3 and groundwater data are presented on Table 3 and Plate 4 of this appendix. The soil and groundwater analytical results from PES' subsurface investigations were compared to the following RWQCB risk-based ESLs:

- **Soil:** Risk-based ESL concentrations for shallow soil (less than 3 meters [9.84 feet] bgs) in a commercial/industrial setting where groundwater is not a current or potential drinking water source (RWQCB, 2008); and
- **Groundwater:** Risk-based ESL concentrations for evaluation of potential vapor intrusion concerns (RWQCB, 2008).

As shown on Plate 3 (Appendix B), the only VOCs detected in soil during PES' investigations and PIERS January 2008 investigation were 1,1-DCE, 1,1-DCA and 1,1,1-TCA. The highest concentrations of these compounds were detected in the vicinity of the shed (Plate 3, Appendix B). The concentrations of 1,1-DCA and 1,1,1-TCA in the 2.5 to 3 feet bgs sample collected directly beneath the shed (boring B-12) are above their respective ESL values. However, concentrations of these compounds in the 6 to 6.5 feet bgs sample collected beneath the shed are below their respective ESL values. As shown on Plate 3 (Appendix B), relatively low concentrations of VOCs were detected in the borings advanced immediately outside the shed (i.e., borings B-4, B-13, B-14, and B-15) and were not present at or above the laboratory reporting limit in the other borings further removed from the shed.

Similar to soil conditions, the highest concentrations of VOCs (specifically 1,1,1-TCA, 1,1-DCA and their associated degradation products) detected in groundwater were in the vicinity of the shed (Plate 4, Appendix B). During PIERS January 2008 investigation, the highest VOC concentrations were detected in boring B1, which was advanced near the eastern corner of the Site. Co-located boring B-1 was advanced during PES' June 2008 investigation to verify the sampling results from boring B1. However, as indicated on Table 3 and Plate 4 in Appendix B, the concentrations of VOCs detected in the groundwater sample collected from boring B-1 were much lower. None of the detected groundwater concentrations during PES' or PIERS investigations are above potential vapor intrusion ESL values developed for commercial properties. Additionally, concentrations of VOCs in groundwater in samples collected from down-gradient borings B-1 and B-2 were very low. This finding suggests the

VOC-affected groundwater is primarily contained on the subject Site and has not significantly impacted off-Site properties.

Based on the results of the soil and groundwater investigations conducted at the subject property, PES' *Subsurface Investigation Report* concluded the following (PES, 2008):

- The results of previous investigations performed at the subject property indicate the area of potential environmental concern at the property is limited to the eastern-northeastern portion of the Site;
- The results of previous investigations performed at the subject property indicate the constituents of potential concern are limited to VOCs, primarily 1,1,1-TCA and its degradation products;
- Soil beneath properties in the vicinity of the subject property has been impacted by metals, petroleum hydrocarbons, PCBs, and petroleum hydrocarbon-related constituents from historic activities conducted at those off-site locations;
- Groundwater in the vicinity of the Site has been impacted by releases of petroleum hydrocarbons and VOCs, primarily petroleum hydrocarbon-related constituents such as BTEX and isomers of dichlorobenzene from historic activities conducted at those off-site locations;
- The off-site properties discussed in this report are all under regulatory oversight from ACDEH;
- Shallow soil beneath the on-Site shed has been impacted with elevated levels of 1,1,1 TCA and 1,1-DCA, a breakdown product of 1,1,1-TCA. Based on the results of the soil sample analyses, other VOCs detected in soil in the vicinity of the shed are present at relatively low levels, each of which is below applicable screening levels;
- The lateral and vertical extent of VOC-impacts to soil has been defined and the area of concern is limited to shallow soil (upper 6 feet) beneath the footprint of the shed;
- The groundwater sampling results suggest that portions of the groundwater underlying the subject property has been affected by off-Site releases of petroleum hydrocarbon-related constituents (e.g., toluene, xylenes and DIPE, a fuel oxygenate), although at concentrations below levels of concern;
- Groundwater beneath the subject property has been impacted by 1,1,1-TCA and its degradation products. The maximum concentrations of 1,1,1-TCA and degradation products are orders of magnitude lower than the respective ESLs developed by the RWQCB for vapor intrusion concerns at commercial/industrial properties where underlying groundwater is not considered a drinking water source;

- Groundwater conditions beneath the subject property appear to be conducive to degradation of 1,1,1-TCA and its degradation products and based on the presence of 1,1,1-TCA and its degradation products in groundwater, natural degradation of these VOCs is occurring; and
- On the basis of the grab groundwater sampling results, the lateral extent of the 1,1,1-TCA and its degradation products impacts in groundwater has been defined and appear to be limited to the subject property.

2.6 Discussion of Site and Surrounding Properties

Based on the results of the on-Site and off-Site investigations discussed above, the constituents of environmental concern on-Site are different than those on surrounding properties. The area of potential environmental concern at the Site is limited to the eastern-northeastern portion of the Site and constituents of potential concern are limited to 1,1,1-TCA and its degradation products. The extent of the 1,1,1-TCA-impacted groundwater has been defined and appears to be primarily limited to the subject Site. The lateral extent of 1,1,1-TCA and 1,1-DCA-impacts to soil has been defined and the area of concern appears to be limited to shallow soil (upper 6 feet) beneath the footprint of the shed.

In summary, constituents of potential concern at off-Site properties consist of:

- **Superior Plaster Castings Property** (down- and cross-gradient from the Site): The primary contaminants detected at this property include TPHg, TPHd, xylenes, 1,2-DCB, 1,3-DCB and 1,4-DCB, and CB. 1,1,1-TCA and its breakdown products were not detected in groundwater samples collected on this property (ERAS, 2000).
- **PG&E Property** (down- and cross-gradient from the Site): This property is not directly adjacent to the Site, as the Superior Plaster Casting property sites between the PG&E property and the Site. Constituents detected in groundwater monitoring wells on this property consisted primarily of fuel hydrocarbons and the VOCs CB and DCBs. In April 2007, 1,1,1-TCA was detected at a low concentration (0.6 $\mu\text{g/L}$) in one groundwater sample and 1,1-DCA was also detected at a maximum concentration of 12 $\mu\text{g/L}$ (Geomatrix, 2007), each well below applicable ESLs. The source of these contaminants is not documented. Given the absence of 1,1,1-TCA and 1,1-DCA detections at the Superior Plaster Casting Property, it is unlikely that such contaminants are related to the Site.
- **Former AAA Equipment Company** (cross-gradient from the Site): VOCs, TPHd, TPHmo, PNAs, and PCBs have been detected on the property. VOCs detected in soil and groundwater appears to be limited to CB and DCBs (Harding ESE, 2002).
- **Learner Investment Company Property** (up-gradient from the Site): Previous sampling conducted on this property indicates that it is primarily affected by TPHd, TPHmo, PCBs, BTEX, and metals. In addition, low concentrations of 1,1-DCA,

1,2-DCA, cis-1,2-DCE, and bromodichloromethane, each below its applicable respective ESL, were detected in groundwater near the boundary with the subject Site (LFR, 2008). As the Learner property is located up-gradient from the subject Site, it is unlikely that those VOCs originated on the subject Site.

Groundwater sampling results suggest that portions of the groundwater underlying the subject Site has been affected by off-Site releases of petroleum hydrocarbon-related constituents (e.g., toluene, xylenes and DIPE, a fuel oxygenate), although at concentrations below levels of concern.

3.0 OBJECTIVE AND PROPOSED TARGET SOIL CLEANUP GOALS

The objective of the voluntary remediation at the Site is to remove soil in the vicinity of the shed that contains elevated concentrations of 1,1-DCA and 1,1,1-TCA. The proposed target soil cleanup goals are conservatively established at the RWQCB risk-based ESL concentrations for shallow soil (less than 3 meters [9.84 feet] bgs) in a commercial/industrial setting where groundwater is not a current or potential drinking water source. ESL concentrations for soil and groundwater are provided in the RWQCB's *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (RWQCB, 2008). The ESLs were developed by the RWQCB to be protective of human health and the environment for potentially complete exposure pathways. The soil ESLs proposed as target soil cleanup goals are presented in Table B of the referenced document and in Table 2 in Appendix B of this CAP. As discussed in Section 2.5.5, the compounds that have been detected in soil in the vicinity of the shed are 1,1-DCE, 1,1-DCA, and 1,1,1-TCA. The ESL values for 1,1-DCE, 1,1-DCA and 1,1,1-TCA are 4,300, 1,900, and 7,800 $\mu\text{g}/\text{kg}$, respectively (RWQCB, 2008).

The groundwater in the site vicinity is considered brackish and therefore application of drinking water standards or groundwater ESLs established by the RWQCB for drinking water sources is not applicable. 1,1,1-TCA and its associated degradation products have also been detected in groundwater in the vicinity of the shed. However, concentrations of those chemicals are well below the RWQCB's risk-based ESL concentrations for evaluation of potential vapor intrusion concerns in a commercial/industrial setting (RWQCB, 2008). In addition, the low concentrations of TPH-related VOCs in Site groundwater is attributed to off-Site sources based on the absence or low concentrations (i.e., TPHd and TPHmo in the composite sample collected during PIERS investigation) of TPH constituents in the soil samples collected at the Site. Removal of the shallow VOC-affected soil from the Site is expected to result in still further improvements to groundwater quality. In light of the planned soil remediation, and the fact that VOC and TPH concentrations in groundwater at the Site are already below applicable ESLs, further characterization and/or remediation of groundwater at the Site is not required and not a component of the proposed remediation.

4.0 PROPOSED SOIL REMEDIATION

The following section presents the procedures for conducting the voluntary remediation.

4.1 Preliminary Activities and Site Preparation

PES' existing Site-specific Health and Safety Plan (HASP) will be modified prior to conducting the remedial actions to comply with Occupational Safety and Health Administration, 29 CFR 1910.120 and California Code of Regulations Title 8 CCR G150 5192. Additionally, any subcontractors selected to perform work on-Site will be required to prepare a HASP for their own staff and work activities. PES personnel and subcontractors will be required to have 40-hour Hazardous Waste Operations (HAZWOPER) training/current 8-hour HAZWOPER refresher training and medical monitoring.

Although the proposed remedial action is not a soil aeration process, some volatilization occurs during excavation and soil management activities. Consequently, guidelines and notification requirements set by the Bay Area Air Quality Management Division (BAAQMD) in Regulation 8, Rule 40 of the BAAQMD Rules and Regulations for aeration of contaminated soil may apply to the remedial action. Therefore, notification will be provided to BAAQMD as required.

Prior to conducting the field activities, necessary permits needed to complete the project will be obtained by PES or the selected earthwork contractor. However, based on the anticipated volume of soil to be excavated (i.e., approximately 49 cubic yards), a grading permit will not be required.

A private underground utility locating service will be retained to clear the excavation area of subsurface utilities. In addition, Underground Service Alert will be contacted to arrange utility clearances to be performed by public and private utility companies.

The shed and associated concrete floor will be removed by a licensed contractor prior to conducting excavation activities. Any permits required for the demolition of the shed will be obtained by the contractor. The concrete will be stored on-Site temporarily pending characterization for disposal or recycling off-Site. For disposal and recycling purposes, the concrete will be sampled and analyzed for VOCs by U.S. Environmental Protection Agency (USEPA) Test Method 8260B. A discussion of waste characterization sampling procedures is presented in Appendix C.

4.2 Excavation of VOC-Affected Soil

Soil affected with concentrations of VOCs in excess of target cleanup goals will be excavated from an area having plan dimensions of approximately 220 square feet. The approximate area of excavation is shown on Plate 3. Based on the results of the previous subsurface investigations, the estimated depth of the soil excavation is approximately 6 feet bgs.

Therefore, the volume of excavated soil is estimated to be approximately 49 cubic yards. A PES engineer or geologist will be present to observe the excavation activities.

The excavated soils will be visually inspected for signs of contamination (e.g., staining) and field screened for VOCs with a photoionization detector (PID). The PID will also be used to monitor the potential presence of VOCs in the breathing space. If field observations indicate that significant VOC-affected soil extends laterally or vertically beyond the proposed excavation area shown on Plate 3, then the excavation will be extended to remove the affected soil, to the extent practicable. The excavated soil will be placed on plastic sheeting and covered at the end of the work day.

The excavation will be left open overnight pending receipt of the soil verification analytical results. In the event that the excavation is left open, barricades with flashing lights and flagging will be placed around it for safety purposes. Alternatively, a security service may be contracted to monitor the premises during non-working hours and weekends.

4.3 Excavation and Stockpile Soil Verification Sampling and Analysis

To confirm that the cleanup goals are achieved, verification soil samples will be collected from excavation bottom and sidewalls for laboratory analysis after the limits of the excavation have been reached. At a minimum, verification soil samples will be collected from excavation sidewalls at a frequency of one sample per 20 linear feet of sidewall and one bottom sample per 200 square feet of excavation bottom. As shown on Plate 3, the following verification soil samples are proposed:

- One from each sidewall of the excavation at about 3 feet bgs (i.e., midpoint of sidewall and consistent with depth of the soil samples that currently exceed the respective ESLs); and
- Two from the bottom of the excavation.

The locations of the proposed verification samples may need to be modified based on field observations. Therefore, if necessary, the verification samples will be moved or additional samples will be collected to target areas of the excavation where VOC concentrations appear to be highest.

Soil from the sidewalls and bottom of the excavation will be obtained using the excavator bucket and Encore[®] soil sampling devices will be pushed directly into fresh, undisturbed soil in the excavator bucket to collect samples for laboratory analysis. The Encore[®] soil samples will be collected in accordance with USEPA Method 5035. Following sample collection, the sample containers will be labeled for identification and immediately placed in a chilled, thermally insulated cooler containing “blue-ice” packs or bagged ice.

The soil samples will be sent under chain-of-custody documentation to Curtis & Tompkins, Ltd. (C&T) in Berkeley, California, which is a California state-certified laboratory for

chemical analysis performed. The soil samples will be analyzed for VOCs on the USEPA Test Method 8010 list using USEPA Test Method 8260B.

Sample handling, labeling, documentation and chain of custody procedures will be performed as described in the *Verification and Waste Characterization Sampling and Analysis Plan*, attached as Appendix C. If the verification sample results indicates the target cleanup goals has been attained, no further excavation will be conducted and the excavation will be backfilled as described below. If the verification sample analysis indicates the target cleanup goals have not been attained, further excavation will be conducted, to the extent practicable.

Four-point composite samples will be collected from the stockpiled soil for analyses of VOCs using USEPA Test Method 8260B to characterization the soil for disposal or recycling purposes. A sampling ratio of one 4-point composite sample per approximate 200 cubic yards of excavated soil will be implemented. Based on the estimated volume of soil (approximately 49 cubic yards), one 4-point composite sample will need to be collected. A discussion of waste characterization sampling procedures is presented in Appendix C.

4.4 Soil Stockpiling and Transport

Excavated soil will be disposed or recycled off-Site pending the results of the soil chemical analyses. Excavated soil will be temporarily stockpiled on-Site. The soil stockpile will be constructed with plastic sheeting beneath and above the material to prevent runoff/runoff and fugitive dust emissions. The stockpile will be covered and secured at the end of each day.

Following acceptance of the affected soil at an appropriate disposal or recycling facility, the soil will be loaded in licensed haul trucks (end-dumps or transfers) and transported off the Site following appropriate California and federal waste manifesting procedures. The soil will be disposed or recycled off-Site in accordance with applicable local, state, and federal regulations.

Based on current Site data, the volume of soil to be excavated is not expected to exceed 49 cubic yards. It is estimated that the soil stockpile will remain on-Site between 2 and 4 weeks.

The appropriate waste manifest documentation will be provided to the truck driver hauling the affected soil off-Site. As each truck is filled, an inspection will be made to verify that the affected soil is securely covered and that the tires of the haul trucks are reasonably free of accumulated soil prior to leaving the Site. Similarly, truck exteriors will be inspected for residual Site soil. If accumulated soil is observed, the truck exteriors will be cleaned with wire brushes, stiff-bristled brooms or a water rinse to remove the soil. A street sweeper will be made available, as needed, to keep the loading area and Coliseum Way clean. The soil will be wetted, as necessary, to reduce the potential for dust generation during loading and transportation activities.

4.5 Dust and Odor Control

Depending upon the soil conditions, during excavation there is a potential to generate a nuisance dust condition. Water will be applied to the work area where soil is being disturbed on an as needed basis to mitigate the potential for dust generation. The presence of airborne dust will be evaluated through the use of real time personal sampling equipment and perimeter air sampling. The dust standard will be based on a ceiling level of no more than 50 micrograms per cubic meter difference between upwind and downwind sampling locations. If this level is exceeded additional dust suppression activities such as water application, will be conducted in the areas of active soil excavation and handling. Information gathered will be used to verify the adequacy of the levels of protection being employed at the Site, and may be used as the basis for upgrading or downgrading levels of personal protection, at the discretion of a Site Safety Officer.

Trucks used for transporting affected soil will be covered and decontaminated, as described in Section 4.4.6, prior to leaving the Site to reduce the potential for fugitive dust during transport to the disposal facility. Street sweeping may be used to remove soil/dust from public roadways as required. Swept material will be added to soil stockpiles for subsequent disposal off-Site.

4.6 Decontamination Procedures

All equipment contacting excavation materials will be cleaned using a stiff-bristled broom or wire brush, and if necessary, a hot water wash or a mild phosphate-free detergent solution and double rinsed with deionized water, prior to leaving the remediation area. Verification sampling equipment will be cleaned with a mild phosphate-free detergent solution and double rinsed with deionized water prior to beginning sampling and between each sample location. The work areas will be kept clean and free of excessive soil or debris.

Decontamination fluids will be stored in Department of Transportation (DOT)-approved 55-gallon drums, labeled appropriately (including the accumulation date), and stored on-Site pending characterization and transportation off-Site for disposal or recycling at a licensed facility. A discussion of decontamination fluid sampling procedures is presented in Appendix C.

4.7 Excavation Backfilling Procedures

The excavation area will be backfilled using imported select fill material. All fill will be non-corrosive and free of organic material, will contain no rocks greater than 3 inches in the largest dimension, and will have a low expansion potential. The base of the excavations will be prepared by compacting the soil using a non-vibratory compactor to at least 90 percent relative compaction. The overlying backfill material will be placed in thin lifts (maximum 8 inches thick), moisture conditioned to near optimum moisture and compacted to at least 90 percent relative dry density. Field density testing will be conducted by the selected contractor in accordance with ANSI/ASTM 1557. If the field density tests indicate the tested

soil does not meet specified requirements, the soil will be re-compacted and retested until the minimum requirements are met.

5.0 REPORTING

The results of the remedial activities will be presented in a post-remediation completion report. The purpose of the report is to describe remedial activities and to document compliance with this CAP. The report will provide the following information:

- A summary of remedial activities conducted prior to and during the remediation, and description and bases for deviations, if any, from this CAP;
- Limits of excavation and quantity of contaminated soil excavated;
- Results of the excavation verification sampling and laboratory analyses;
- Results of the backfilling operations including soil compaction testing results;
- Documentation of soil and concrete disposal or recycling; and
- Recommendations, as appropriate.

The report will be presented to the ACHSA for review and approval of the remediation project.

6.0 REFERENCES

AEI Consultants (AEI), 2007. *Phase I Environmental Site Assessment, 4700 Coliseum Way, Oakland, California 94621*. October 22.

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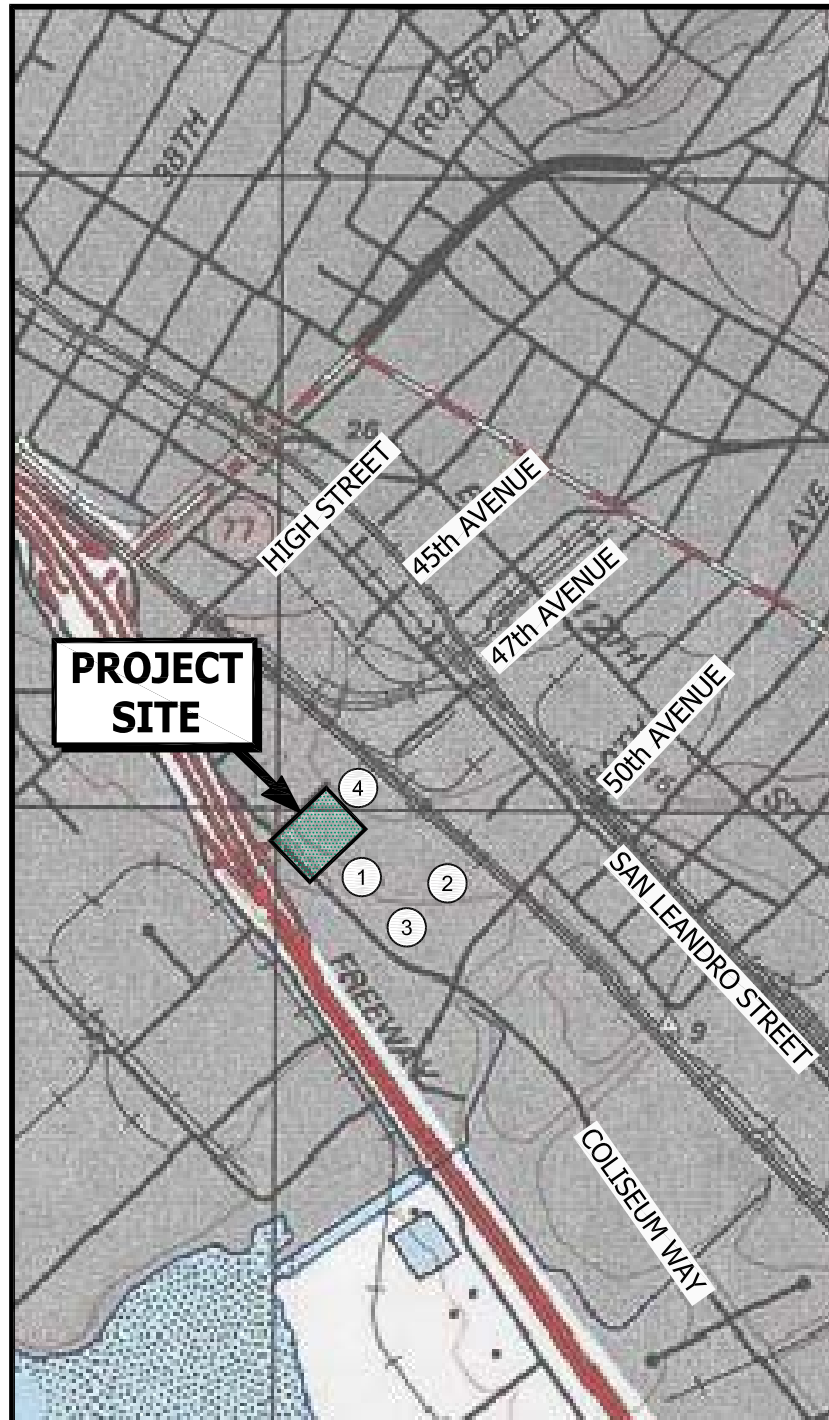
LFR Inc. (LFR), 2008. *Summary Report of Soil and Groundwater Investigation, Former Learner Investment Company Property, 768 46th Avenue, Oakland, California (SLIC Case RO0002478; Geotracker Global ID SLT2O150156).* June 6.

PES Environmental, Inc. (PES), 2008. *Site Investigation Report, 4600-4700 Coliseum Way, Oakland, California.* September 18.

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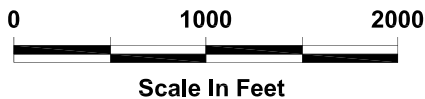
W.A. Craig, Inc. (W.A. Craig), 2003. *Soil Sample Results, 4700 Coliseum Way, Oakland, California.* May 22.

ILLUSTRATIONS



Site Vicinity Features and Adjacent Properties Discussed in Text

- ① Superior Plaster Castings Property (4800 Coliseum Way)
- ② Former AAA Equipment Company (745 50th Street)
- ③ PG&E Property (4930 Coliseum Way)
- ④ Learner Investment Company Property (768 46th Avenue)

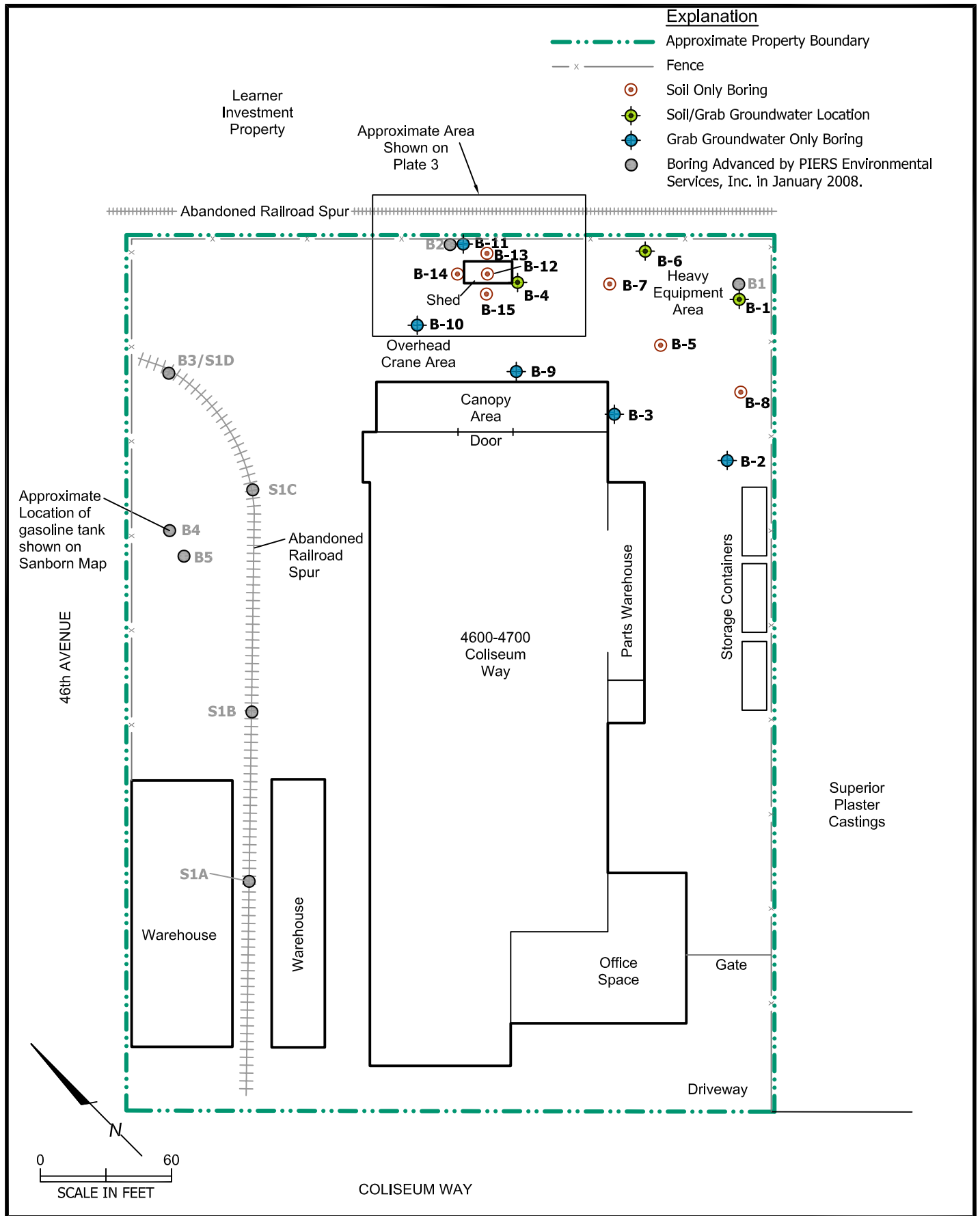


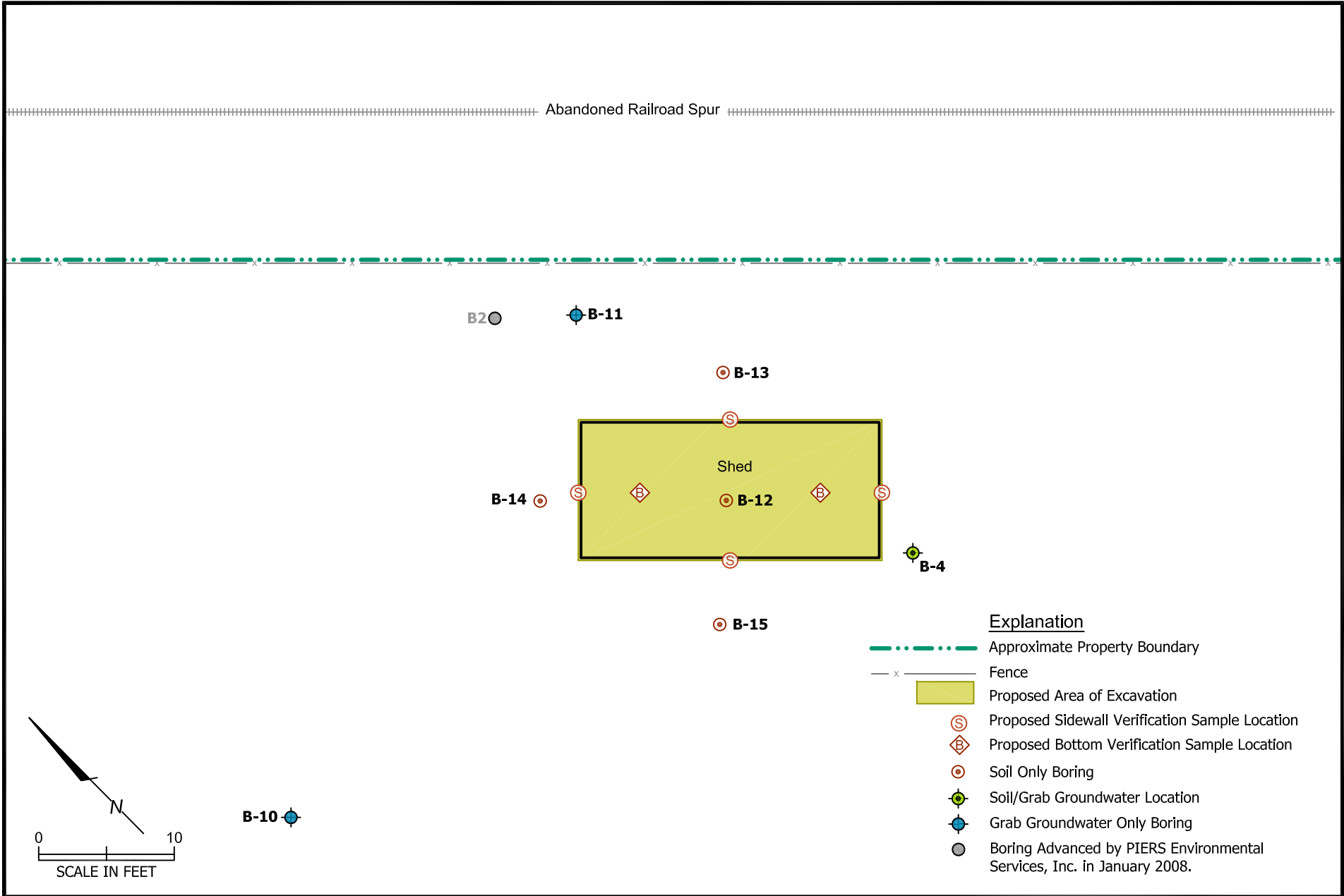
U.S.G.S. Topo Map - Oakland East, California, 7.5-minute quadrangle.1997.



Site Location Map
 Corrective Action Plan
 4600-4700 Coliseum Way
 Oakland, California

PLATE
1





APPENDIX A

PIERS JANUARY 2008 LIMITED PHASE II SITE INVESTIGATION REPORT

***Limited Phase II
Site Investigation Report
of
4600-4700 COLISEUM WAY
OAKLAND, CALIFORNIA***

Prepared For:

Mr. Samuel Leung
United Commercial Bank
900 Webster Street
Oakland, CA 94607

Prepared By:

PIERS Environmental Services, Inc.
1330 S. Bascom Avenue, Suite F
San Jose, CA 95128

January 2008

PIERS Project Number: 7339

January 23, 2008

Mr. Samuel Leung
United Commercial Bank
900 Webster Street
Oakland, CA 94607

RE: Limited Phase II Site Investigation Report
4600-4700 Coliseum Way, Oakland, CA

Dear Mr. Leung:

At your request, PIERS Environmental, Inc. (PIERS) has prepared this report of "Limited Phase II Site Investigation Report" for the above-referenced site (hereinafter referred to as "the Property"). The work was performed to investigate whether the subsurface soils and groundwater at the Property have been impacted by the prior and current use of the Property, and to investigate the potential of impacts to the Property from off-site sources.

SITE DESCRIPTION AND BACKGROUND

The Property is located on the northeastern side of Coliseum Way, which is a frontage road along the eastern side of the Interstate I-880 freeway in Oakland, California. A Property Site Plan is attached to this report as Figure 2.

PIERS' previous work for this Property was performed in December 2007, when PIERS reviewed previous Phase I Environmental Site Assessments (ESAs) that were completed in October and November of 2007 by two other environmental firms, AEI Consultants and ERAS. PIERS review of these ESAs was summarized in a letter dated December 7, 2007. The scope of work completed for this investigation was based on recommendations from the October 2007 ESA completed by AEI Consultants.

THIS INVESTIGATION

On January 7, 2008, eight exploratory soil borings, designated as B1 through B5 and S1A through S1C on the attached Figure 2, were completed at the Property (borings S1D and B3 were combined).

Prior to drilling, a health and safety plan was prepared, and the site was marked and Underground Service Alert was notified. Also, a drilling permit was obtained from Alameda County Public Works.

The exploratory soil borings were completed using a Geoprobe direct push drill rig provided by Vironex, Inc. of Pacheco, California, a state-licensed driller. Soil borings B1 through B3 were located as close as was possible to the northeastern perimeter of the Property to investigate potential off-site sources that could cause contamination to migrate in groundwater beneath the Property. Borings B4 and B5 were located at and adjacent to the location of a former gasoline tank shown on historical Sanborn Maps. These soil borings were extended to approximately ten feet below grade. Groundwater entered the boreholes and rose to approximately four feet below grade, except in B3, where the soil boring was extended to approximately 15 feet below grade and several feet of water eventually collected in the borehole.

Four shallow soil borings had been proposed along a former railroad spur. Soil borings S1A through S1C were collected along this feature. A soil sample designated as S1D was collected at soil boring B3 to complete a four-part composite soil sample.

At all of the soil borings except B3, the soils were continuously cored to approximately ten feet below grade, the rods retracted, and slotted PVC casing was placed in the borehole. The groundwater samples were retrieved by using small diameter vinyl tubing fitted with a chuck ball tip to surge the water to the surface, or a bailer. The groundwater samples were decanted into VOAs and an amber liter, labeled, placed in an ice chest, on ice, and entered on a chain of custody form prior to same day delivery to the laboratory.

At B3, the borehole collapsed upon retrieval of the rods, and no groundwater was encountered above approximately eight feet below grade. A hydropunch tool was then used to collect a groundwater sample. During the first attempt, the rods were extended to approximately 13 feet below grade and the hydropunch screen was exposed over a four-foot interval; however, sufficient water to allow for sample collection did not accumulate over a half-hour time period. The rods were retracted and then the hydropunch was extended to approximately 15 feet below grade and the water sample was successfully collected.

At soil borings B1 through B3, shallow soil samples from the unsaturated zone were collected but placed on hold pending the results of the water analyses. At B4, one soil sample that would correspond to the likely bottom of an underground storage tank (UST) was collected at approximately 9.5 feet below grade. At nearby soil boring B5, one soil sample that would correspond to the capillary fringe zone was retained from approximately 3.5 feet below grade. At S1A through S1D, soil samples from approximately 0.5 to 1.5 feet below grade were retained (S1D was collected from soil boring B3).

The subsurface conditions beneath approximately 2.5 feet consisted predominantly of dark brown to olive brown silt (ML) and sandy gravelly silt (ML). Fill material, also consisting of sandy gravelly silt, was present at the surface to approximately one to two feet below grade. No obvious odors or soil staining were observed during drilling.

The sections of the plastic liners containing soil samples to be retained were first cut with a hacksaw. The ends of the liner containing the soil samples were covered with Teflon tape and caps and then the soil samples were labeled, placed in an ice chest, on ice, and entered on a chain of custody form prior to same day delivery to the laboratory.

The groundwater samples were retrieved by using small diameter vinyl tubing fitted with a chuck ball tip to surge the water to the surface, or a bailer. The groundwater samples were decanted into VOAs and an amber liter, labeled, placed in an ice chest, on ice, and entered on a chain of custody form prior to same day delivery to the laboratory.

Soil cuttings from the soil boring were stored on site in a 5-gallon pail for proper disposal. Upon completion of groundwater sampling, the soil borings were filled with neat cement grout using the PVC casing as a tremie pipe. Ms. Vicky Hamlin of Alameda County Public Works witnessed the sealing of some of the soil borings.

ANALYTICAL RESULTS

The soil and groundwater samples were transported on the same day in an ice chest under chain of custody procedures to McCampbell Analytical Laboratory in Pittsburg, California. The soil samples from the four shallow soil borings along the railroad spur were composited into one sample by the laboratory. All of the soil and water samples were analyzed for volatile organic compounds (VOC) by EPA Method 8260B. The groundwater samples from the three soil borings along the northeastern perimeter of the Property and the composite soil sample were also analyzed for Total Petroleum Hydrocarbons (TPH) as diesel and as motor oil by EPA Method 8015. The soil and groundwater samples from the two soil borings at the former fuel tank location were also analyzed for TPH as gasoline by EPA Method 8015. The composite soil sample was also analyzed for polychlorinated biphenols (PCBs) by EPA Method 8082A.

The four-part composite soil sample yielded non-detectable results for VOCs, and for PCBs. TPH as diesel and motor oil were detected at concentrations of 9.9 parts per million (ppm) and 84 ppm, respectively.

Concentrations of VOCs and TPH as gasoline were not detected in the soil samples collected at the former fuel tank location (B4 d9.5' and B5 d 3.5').

Concentrations of TPH as gasoline and VOCs were non-detectable in the water samples from B4 and B5, at the former fuel tank location, except for toluene, which was detected at concentrations of 1.3 parts per billion (ppb) and 0.70 ppb, respectively.

In the water sample from B1, concentrations of 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), 1,1,2-trichloroethane (1,1,2-TCA), and 1,1,1-TCA were detected at 310 ppb, 38 ppb, 17 ppb, and 1,200 ppb, respectively. In B2, concentrations of 1,1-DCA and 1,1-DCE were detected at 9.2 ppb and 18 ppb, respectively. In B3, concentrations of 1,1-DCA, trichloroethene (TCE), 1,2-DCA, and cis-1,2-DCE were detected at 1.5 ppb, 1.7 ppb, 3.3 ppb and 1.0 ppb, respectively. Toluene and di-isopropyl ether (DIPE, a fuel oxygenate) were also detected at concentrations of 1.3 ppb and 2.6 ppb, respectively. Concentrations of TPH as diesel and as motor oil were not detected in B1 or B3. TPH as diesel was detected in B2 at a concentration of 95 ppb. Laboratory footnotes indicate that a portion of the concentration reported as diesel overlapped with gasoline.

Based on the groundwater sample results, the three shallow soil samples from B1 through B3 (B1d2.5', B2d0.5', and B3d4.5'), which had been put on hold in the laboratory were then analyzed for VOCs by EPA Method 8260. The only analyte detected in the soil samples was 1,1,1-TCA, which was detected in B1d2.5' at a concentration of 0.061 ppm.

The analytical results are summarized on Table 1. Copies of the laboratory analytical data sheets are attached to this report.

CONCLUSIONS AND RECOMMENDATIONS

“Environmental Screening Levels” (ESLs) for concentrations of contaminants in soils and groundwater have been established by the Regional Water Quality Control Board (RWQCB). These levels are used to determine the relative risks to human health and the environment. Generally the presence of a chemical in soil or groundwater at concentrations below the corresponding ESL can be assumed to not pose a significant threat to human health or the environment. The ESLs for the compounds detected in groundwater are shown on Table 1.

The concentrations of detected VOCs and hydrocarbons in groundwater are summarized on Table 1. Concentrations of VOCs detected above the ESLs are shown on Figure 2.

Borings B1 through B3 were located as close as was possible to the northeastern perimeter of the Property to investigate potential off-site sources that could cause contamination in groundwater to migrate beneath the Property. VOCs were detected in groundwater at elevated concentrations. The only analyte detected in the soil samples was 1,1,1-TCA, which was detected in B1d2.5' at a concentration of 0.061 ppm. The highest concentration of any analyte in groundwater was 1,1,1-TCA at a concentration of 1,200 ppb in B1. The occurrence in groundwater (1,200 ppb) is significantly above the ESL of 200 ppb. The occurrence in soil at 2.5 feet (0.061 ppm) is below the residential and commercial ESL of 7.8 ppm.

The highest concentration of 1,1,1-TCA was found in B1 at the northeastern corner of the Property and the lowest concentration was found in B3, which was the farthest boring away from B1. The only occurrence of 1,1,1-TCA in soil was found in B1, which had the highest groundwater concentrations. **Because of the shallow occurrence of groundwater (approximately four feet below grade on the drilling date), it is possible that the 1,1,1-TCA in soil at B1 is from migration of contaminants in groundwater from an up-gradient source.**

During PIERS review of the two previous Phase I reports by AEI and ERAS, it was determined that, “Adjacent parcels to the north, northeast, east, and southeast are currently under remediation for the release of chlorinated solvents, petroleum hydrocarbons, polychlorinated biphenyls, volatile organic compounds and metals. The sites have been grouped together as a common source of historical releases that have resulted in a commingled plume. The adjacent sites are:

- Former Learner property at 768 – 46th Ave to the north
- Former AAA Equipment Company at 745 – 50th Avenue to the northeast
- PG&E at 4930 Coliseum Way to the east
- Former Superior Plaster Casting at 4800 Coliseum Way to the southeast
- Pacific Galvanizing at 715 – 46th Avenue, adjacent to the northwest across 46th Avenue, and
- East Bay Clarklift at 4701 Coliseum Way, adjacent to the southwest across Coliseum Way.”

The available data reviewed by PIERS to date have not revealed an identified up-gradient source of the 1,1,1-TCA. To make that determination (if possible), additional file reviews, particularly of the up-gradient 768-46th Street site, should be conducted. If data indicating an up-gradient source cannot be found, additional delineation (additional soil borings) should be completed.

Borings B4 and B5 were located at and adjacent to the location of a former gasoline tank shown on historical Sanborn Maps, and soil and groundwater samples were collected. Very low concentrations of toluene below the ESLs were detected at 1.3 ppb and 0.70 ppb, respectively. Hydrocarbons and other VOCs were not detected in the soil samples. Based on these findings, the Property does not appear to have been significantly impacted by the former gasoline tank at this location.

Four shallow soil samples were completed along a former railroad spur and composited into one sample by the laboratory. The four-part composite soil sample yielded non-detectable results for VOCs and for PCBs. TPH as diesel and motor oil were detected at concentrations of 9.9 ppm and 84 ppm, respectively, below the ESL for heavy hydrocarbons in shallow soils (1,000 ppm for commercial use).

PIERS recommends that because contaminants in on-site soil and groundwater were identified during this investigation, this report should be submitted to the Alameda County Health Care Services Agency.

LIMITATIONS

The observations and conclusions presented in this report are professional opinions based on the scope of work outlined herein. This report was prepared in accordance with generally accepted standards of environmental geological practice in California at the time this investigation was performed. The opinions presented apply to site conditions existing at the time of our study and cannot apply to site conditions or changes of which we are not aware or have not had the opportunity to evaluate. This investigation was conducted solely to evaluate environmental conditions beneath the Property at specific locations. Subsurface conditions may vary away from the data points available. Additional work, including subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation. It must be recognized that any conclusions drawn from these data rely on the integrity of the information available at the time of investigation and that a full and complete determination of environmental contamination and risks cannot be made.

Should you have any questions regarding this report, please do not hesitate to call me at (510) 593-5382.

Sincerely,
PIERS Environmental Services, Inc.



Joel G. Greger
Senior Project Manager
CEG # EG1633, REA # 07079

Kay Pannell
Chief Operations Officer
REP #5800, REA-II #20236

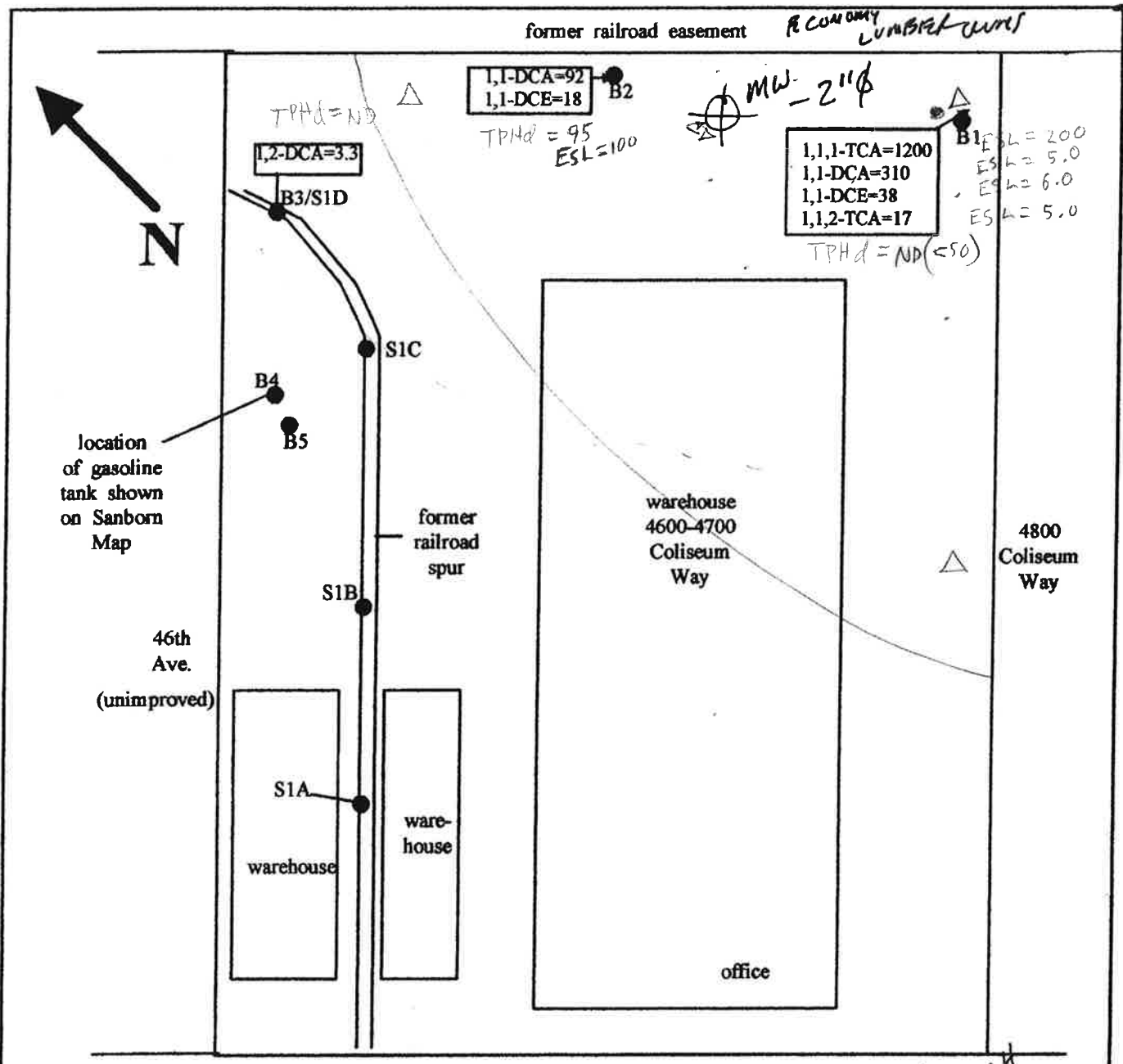
Attachments: Figure 2
Table 1
Laboratory Analytical Data Sheets

1,2-DCA is old job

LEARNER PROP.

SW FLOW

X
X



LEGEND

● exploratory boring, 1-7-08

1,2-DCA=3.3 concentrations of VOCs in groundwater above the ESLs, ppb

add to
- TAO-where
- well SEARCH
@ C.D.

4600-4700 COLISEUM WAY
OAKLAND, CA

FIGURE 2
SITE PLAN - LOCATIONS OF
EXPLORATORY BORINGS

JANUARY 2008
SCALE: 1" = 60'

PIERS ENVIRONMENTAL SERVICES, INC. 1330 BASCOM AVE. SUITE F SAN JOSE, CA 95128
PHONE: 408-559-1248 FAX: 408-559-1224 WEB: PIERSSES.COM

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
4700 Coliseum Way, Oakland, CA
Samples collected on 1-7-08.

Sample No.	TPH-gas (ppb)	TPH-diesel (ppb)	TPH-motor oil	1,1-DCA (ppb)	1,1-DCE (ppb)	1,1,2-TCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	1,2-DCA (ppb)	cis-1,2-DCE (ppb)	Toluene (ppb)	DIPE (ppb)
B1 water	NA	<50	<250	310	38	17	1200*	<12	<12	<12	<12	<12
B2 water	NA	95	<250	9.2	18	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5
B3 water	NA	<50	<250	1.5	<0.5	<0.5	<0.5	1.7	3.3	1.0	1.3	2.6
B4 water	<50	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
B5 water	<50	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.70	<0.5
ESL	100/5000	100/2500	100/2500	5.2/100	6.0/6300	5.0/350	200/200	5.0/530	0.5/200	6.0/6200	40/400	

EXPLANATION:

ppb = parts per billion DCA = dichloroethane, DCE = dichloroethene, TCA = Trichloroethane, TCE = Trichloroethene, DIPE = Diisopropyl ether,
 NA = not analyzed. TPH = Total Petroleum Hydrocarbons.

* 0.061 ppm of 1,1,1-TCA was detected in soil from B1 at 2.5'.

ESL - Environmental Screening Level - groundwater is/is not considered a resource, Tables A/B.



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

Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Reported: 01/14/08
	Client P.O.:	Date Completed: 01/14/08

WorkOrder: 0801147

January 14, 2008

Dear Joel:

Enclosed within are:

- 1) The results of the **8** analyzed samples from your project: **Coliseum Way**,
- 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.

McC Campbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0801147

ClientID: PESJ

EDF Excel Fax Email HardCopy ThirdParty

Report to: Joel Greger
Piers Environmental
1330 S. Bascom Avenue, Ste. F
San Jose, CA 95128

Email: piers@pierses.com
TEL: (408) 559-1248 FAX: (408) 559-1224
ProjectNo: Coliseum Way
PO:

Bill to: Jennifer
Piers Environmental
1330 S. Bascom Avenue, Ste. F
San Jose, CA 95128
jennifer@pierses.com

Requested TAT: 5 days

Date Received: 01/07/2008
Date Printed: 01/08/2008

Sample ID	ClientSampleID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0801147-001	B1 Water	Water	1/7/2008 8:10:00	<input type="checkbox"/>			B			A		A				
0801147-002	B2 Water	Water	1/7/2008 8:51:00	<input type="checkbox"/>			B					A				
0801147-003	B3 Water	Water	1/7/2008 12:15:00	<input type="checkbox"/>			B					A				
0801147-004	B4 Water	Water	1/7/2008 10:17:00	<input type="checkbox"/>			B		A							
0801147-005	B5 Water	Water	1/7/2008 10:51:00	<input type="checkbox"/>			B		A							
0801147-006	Comp S1A-D	Soil	1/7/2008 9:29:00	<input type="checkbox"/>	A	A						A				
0801147-010	B4d9.5'	Soil	1/7/2008 10:02:00	<input type="checkbox"/>		A		A								
0801147-011	B5d3.5'	Soil	1/7/2008 10:37:00	<input type="checkbox"/>		A		A								

Test Legend:

1	8082A PCB S	2	8260B S	3	8260B W	4	G-MBTEX S	5	G-MBTEX W
6	PREDF REPORT	7	TPH(DMO)WGS S	8	TPH(DMO)WGS W	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.



Sample Receipt Checklist

Client Name: **Piers Environmental**

Date and Time Received: **1/7/2008 7:16:06 PM**

Project Name: **Coliseum Way**

Checklist completed and reviewed by: **Melissa Valles**

WorkOrder N°: **0801147** 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: 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
- TTLIC Metal - pH acceptable upon receipt (pH<2)? Yes No NA

Client contacted:

Date contacted:

Contacted by:

Comments:



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

Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/07/08
	Client P.O.:	Date Analyzed 01/09/08

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550C

Analytical Method: SW8082A

Work Order: 0801147

Lab ID	0801147-006A				Reporting Limit for DF =1
Client ID	Comp S1A-D				
Matrix	S				
DF	1				

Compound	Concentration				mg/kg	ug/L
	Aroclor1016	ND				0.025
Aroclor1221	ND				0.025	NA
Aroclor1232	ND				0.025	NA
Aroclor1242	ND				0.025	NA
Aroclor1248	ND				0.025	NA
Aroclor1254	ND				0.025	NA
Aroclor1260	ND				0.025	NA
PCBs, total	ND				0.025	NA

Surrogate Recoveries (%)

%SS:	85				
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Comments

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

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

surrogate diluted out of range or surrogate coelutes with another peak.

(h) a lighter than water immiscible sheen/product is present; (i) liquid sample that contains >~1 vol. % sediment; (j) sample diluted due to high organic content/matrix interference; (k) p,p,- is the same as 4,4,-; (l) florisisil (EPA 3620) cleanup; (m) silica-gel (EPA 3630) cleanup; (n) elemental sulfur (EPA 3660) cleanup; (o) sulfuric acid permanganate (EPA 3665) cleanup; (p) see attached narrative; (q) reporting limit raised due to insufficient sample amount; (r) results are reported on a dry weight basis;



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/07/08
	Client P.O.:	Date Analyzed 01/10/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-006A
Client ID	Comp S1A-D
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	Acrolein (Propenal)	ND	1.0	0.05
Acrylonitrile	ND	1.0	0.02	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	2-Chloroethyl Vinyl Ether	ND	1.0	0.01
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
2-Chlorotoluene	ND	1.0	0.005	4-Chlorotoluene	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromo-3-chloropropane	ND	1.0	0.004
1,2-Dibromoethane (EDB)	ND	1.0	0.004	Dibromomethane	ND	1.0	0.005
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
1,3-Dichloropropane	ND	1.0	0.005	2,2-Dichloropropane	ND	1.0	0.005
1,1-Dichloropropene	ND	1.0	0.005	cis-1,3-Dichloropropene	ND	1.0	0.005
trans-1,3-Dichloropropene	ND	1.0	0.005	Diisopropyl ether (DIPE)	ND	1.0	0.005
Ethylbenzene	ND	1.0	0.005	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Hexachlorobutadiene	ND	1.0	0.005
Hexachloroethane	ND	1.0	0.005	2-Hexanone	ND	1.0	0.005
Isopropylbenzene	ND	1.0	0.005	4-Isopropyl toluene	ND	1.0	0.005
Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	Methylene chloride	ND	1.0	0.005
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	Naphthalene	ND	1.0	0.005
Nitrobenzene	ND	1.0	0.1	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	92	%SS2:	101
%SS3:	103		

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.

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 organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/07/08
	Client P.O.:	Date Analyzed 01/10/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-010A
Client ID	B4d9.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	Acrolein (Propenal)	ND	1.0	0.05
Acrylonitrile	ND	1.0	0.02	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	2-Chloroethyl Vinyl Ether	ND	1.0	0.01
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
2-Chlorotoluene	ND	1.0	0.005	4-Chlorotoluene	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromo-3-chloropropane	ND	1.0	0.004
1,2-Dibromoethane (EDB)	ND	1.0	0.004	Dibromomethane	ND	1.0	0.005
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
1,3-Dichloropropane	ND	1.0	0.005	2,2-Dichloropropane	ND	1.0	0.005
1,1-Dichloropropene	ND	1.0	0.005	cis-1,3-Dichloropropene	ND	1.0	0.005
trans-1,3-Dichloropropene	ND	1.0	0.005	Diisopropyl ether (DIPE)	ND	1.0	0.005
Ethylbenzene	ND	1.0	0.005	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Hexachlorobutadiene	ND	1.0	0.005
Hexachloroethane	ND	1.0	0.005	2-Hexanone	ND	1.0	0.005
Isopropylbenzene	ND	1.0	0.005	4-Isopropyl toluene	ND	1.0	0.005
Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	Methylene chloride	ND	1.0	0.005
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	Naphthalene	ND	1.0	0.005
Nitrobenzene	ND	1.0	0.1	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	92	%SS2:	101
%SS3:	105		

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.

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 organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/07/08
	Client P.O.:	Date Analyzed 01/10/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-011A
Client ID	B5d3.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	Acrolein (Propenal)	ND	1.0	0.05
Acrylonitrile	ND	1.0	0.02	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	2-Chloroethyl Vinyl Ether	ND	1.0	0.01
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
2-Chlorotoluene	ND	1.0	0.005	4-Chlorotoluene	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromo-3-chloropropane	ND	1.0	0.004
1,2-Dibromoethane (EDB)	ND	1.0	0.004	Dibromomethane	ND	1.0	0.005
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
1,3-Dichloropropane	ND	1.0	0.005	2,2-Dichloropropane	ND	1.0	0.005
1,1-Dichloropropene	ND	1.0	0.005	cis-1,3-Dichloropropene	ND	1.0	0.005
trans-1,3-Dichloropropene	ND	1.0	0.005	Diisopropyl ether (DIPE)	ND	1.0	0.005
Ethylbenzene	ND	1.0	0.005	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Hexachlorobutadiene	ND	1.0	0.005
Hexachloroethane	ND	1.0	0.005	2-Hexanone	ND	1.0	0.005
Isopropylbenzene	ND	1.0	0.005	4-Isopropyl toluene	ND	1.0	0.005
Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	Methylene chloride	ND	1.0	0.005
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	Naphthalene	ND	1.0	0.005
Nitrobenzene	ND	1.0	0.1	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	91	%SS2:	101
%SS3:	104		

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.

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 organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/11/08
	Client P.O.:	Date Analyzed: 01/11/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-001B
Client ID	B1 Water
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<250	25	10	Acrolein (Propenal)	ND<120	25	5.0
Acrylonitrile	ND<50	25	2.0	tert-Amvl methyl ether (TAME)	ND<12	25	0.5
Benzene	ND<12	25	0.5	Bromobenzene	ND<12	25	0.5
Bromochloromethane	ND<12	25	0.5	Bromodichloromethane	ND<12	25	0.5
Bromoform	ND<12	25	0.5	Bromomethane	ND<12	25	0.5
2-Butanone (MEK)	ND<50	25	2.0	t-Butyl alcohol (TBA)	ND<50	25	2.0
n-Butyl benzene	ND<12	25	0.5	sec-Butyl benzene	ND<12	25	0.5
tert-Butyl benzene	ND<12	25	0.5	Carbon Tetrachloride	ND<12	25	0.5
Carbon Disulfide	ND<12	25	0.5	Chlorobenzene	ND<12	25	0.5
Chloroethane	ND<12	25	0.5	2-Chloroethyl Vinyl Ether	ND<25	25	1.0
Chloroform	ND<12	25	0.5	Chloromethane	ND<12	25	0.5
2-Chlorotoluene	ND<12	25	0.5	4-Chlorotoluene	ND<12	25	0.5
Dibromochloromethane	ND<12	25	0.5	1,2-Dibromo-3-chloropropane	ND<5.0	25	0.2
1,2-Dibromoethane (EDB)	ND<12	25	0.5	Dibromomethane	ND<12	25	0.5
1,2-Dichlorobenzene	ND<12	25	0.5	1,3-Dichlorobenzene	ND<12	25	0.5
1,4-Dichlorobenzene	ND<12	25	0.5	Dichlorodifluoromethane	ND<12	25	0.5
1,1-Dichloroethane	310	25	0.5	1,2-Dichloroethane (1,2-DCA)	ND<12	25	0.5
1,1-Dichloroethene	38	25	0.5	cis-1,2-Dichloroethene	ND<12	25	0.5
trans-1,2-Dichloroethene	ND<12	25	0.5	1,2-Dichloropropane	ND<12	25	0.5
1,3-Dichloropropane	ND<12	25	0.5	2,2-Dichloropropane	ND<12	25	0.5
1,1-Dichloropropene	ND<12	25	0.5	cis-1,3-Dichloropropene	ND<12	25	0.5
trans-1,3-Dichloropropene	ND<12	25	0.5	Diisopropyl ether (DIPE)	ND<12	25	0.5
Ethylbenzene	ND<12	25	0.5	Ethyl tert-butyl ether (ETBE)	ND<12	25	0.5
Freon 113	ND<250	25	10	Hexachlorobutadiene	ND<12	25	0.5
Hexachloroethane	ND<12	25	0.5	2-Hexanone	ND<12	25	0.5
Isopropylbenzene	ND<12	25	0.5	4-Isopropyl toluene	ND<12	25	0.5
Methyl-t-butyl ether (MTBE)	ND<12	25	0.5	Methylene chloride	ND<12	25	0.5
4-Methyl-2-pentanone (MIBK)	ND<12	25	0.5	Naphthalene	ND<12	25	0.5
Nitrobenzene	ND<250	25	10	n-Propyl benzene	ND<12	25	0.5
Styrene	ND<12	25	0.5	1,1,1,2-Tetrachloroethane	ND<12	25	0.5
1,1,2,2-Tetrachloroethane	ND<12	25	0.5	Tetrachloroethene	ND<12	25	0.5
Toluene	ND<12	25	0.5	1,2,3-Trichlorobenzene	ND<12	25	0.5
1,2,4-Trichlorobenzene	ND<12	25	0.5	1,1,1-Trichloroethane	1200	25	0.5
1,1,2-Trichloroethane	17	25	0.5	Trichloroethene	ND<12	25	0.5
Trichlorofluoromethane	ND<12	25	0.5	1,2,3-Trichloropropane	ND<12	25	0.5
1,2,4-Trimethylbenzene	ND<12	25	0.5	1,3,5-Trimethylbenzene	ND<12	25	0.5
Vinyl Chloride	ND<12	25	0.5	Xylenes	ND<12	25	0.5

Surrogate Recoveries (%)

%SS1:	106	%SS2:	99
%SS3:	102		

Comments: i

* 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 & SPL 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.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; J) analyte detected below quantitation limits; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative; q) reported in ppm.



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Piers Environmental

1330 S. Bascom Avenue, Ste. F

San Jose, CA 95128

Client Project ID: Coliseum Way

Client Contact: Joel Greger

Client P.O.:

Date Sampled: 01/07/08

Date Received: 01/07/08

Date Extracted: 01/11/08

Date Analyzed 01/11/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-002B						
Client ID	B2 Water						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	1.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	2.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Tetrachloride	ND	1.0	0.5
Carbon Disulfide	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.2
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	9.2	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	18	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,1,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	1.8	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	107	%SS2:	99
%SS3:	102		

Comments: i

* 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.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; J) analyte detected below quantitation limits; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative; q) reported in ppm.



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/10/08
	Client P.O.:	Date Analyzed 01/10/08

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-003B
Client ID	B3 Water
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	10	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amvl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	2.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Tetrachloride	ND	1.0	0.5
Carbon Disulfide	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.2
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	1.5	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	3.3	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	1.0	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	2.6	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,1,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	1.3	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	1.7	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	105	%SS2:	102
%SS3:	105		

Comments: i

* 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.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; J) analyte detected below quantitation limits; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative; q) reported in ppm.



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/10/08
	Client P.O.:	Date Analyzed 01/10/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-004B						
Client ID	B4 Water						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	1.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	2.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Tetrachloride	ND	1.0	0.5
Carbon Disulfide	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.2
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	1.3	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	106	%SS2:	99
%SS3:	104		

Comments: i

* 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.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; J) analyte detected below quantitation limits; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative; q) reported in ppm.



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/10/08
	Client P.O.:	Date Analyzed: 01/10/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-005B
Client ID	B5 Water
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	1.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	2.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Tetrachloride	ND	1.0	0.5
Carbon Disulfide	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.2
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	0.70	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	105	%SS2:	100
%SS3:	103		

Comments: i

* 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.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; J) analyte detected below quantitation limits; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative; q) reported in ppm.



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/08/08
	Client P.O.:	Date Analyzed: 01/08/08

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0801147

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
004A	B4 Water	W	ND,i	ND	ND	1.1	ND	ND	1	90
005A	B5 Water	W	ND,i	ND	ND	ND	ND	ND	1	96

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 McC Campbell 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.



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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Extracted: 01/07/08
	Client P.O.:	Date Analyzed 01/08/08

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C/3630C

Analytical methods: SW8015C

Work Order: 0801147

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0801147-001A	B1 Water	W	ND,i	ND,i	1	102
0801147-002A	B2 Water	W	95,d,b,i	ND,i	1	100
0801147-003A	B3 Water	W	ND,i	ND,i	1	103

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	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; &) low or no surrogate 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: 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 (asphalt); 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; j) reporting limit raised due to matrix interference; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; p) see attached narrative.



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QC SUMMARY REPORT FOR SW8082A

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0801147

EPA Method SW8082A		Extraction SW3550C			BatchID: 33042			Spiked Sample ID: 0801144-030A				
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
Aroclor1260	ND	0.075	125	124	0.567	124	125	0.640	70 - 130	20	70 - 130	20
%SS:	124	0.050	116	115	0.143	112	109	2.83	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 33042 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0801147-006A	01/07/08 9:29 AM	01/07/08	01/09/08 8:26 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.



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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0801147

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 33045			Spiked Sample ID: 0801159-001A				
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) ^f	ND	60	106	105	1.26	109	111	1.76	70 - 130	30	70 - 130	30
MTBE	ND	10	103	95.3	7.89	96.9	91.7	5.46	70 - 130	30	70 - 130	30
Benzene	ND	10	99.3	102	2.71	93.1	92.6	0.552	70 - 130	30	70 - 130	30
Toluene	ND	10	99.7	100	0.682	93.5	93	0.502	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	106	106	0	99.9	99	0.918	70 - 130	30	70 - 130	30
Xylenes	ND	30	117	120	2.82	110	110	0	70 - 130	30	70 - 130	30
%SS:	89	10	90	92	1.80	88	88	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 33045 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0801147-004A	01/07/08 10:17 AM	01/08/08	01/08/08 5:08 PM	0801147-005A	01/07/08 10:51 AM	01/08/08	01/08/08 4:34 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.



QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0801147

EPA Method SW8015C		Extraction SW3510C/3630C				BatchID: 33046			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	93.9	81.9	13.7	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	114	111	2.39	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 33046 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0801147-001A	01/07/08 8:10 AM	01/07/08	01/08/08 3:03 PM	0801147-002A	01/07/08 8:51 AM	01/07/08	01/08/08 4:11 PM
0801147-003A	01/07/08 12:15 PM	01/07/08	01/08/08 5:18 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 SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0801147

EPA Method SW8015C		Extraction SW3550C/3630C				BatchID: 33048			Spiked Sample ID: 0801147-006A			
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(d)	9.9	20	70.7	71	0.199	93.8	92	1.96	70 - 130	30	70 - 130	30
%SS:	93	50	98	98	0	114	110	4.21	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 33048 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0801147-006A	01/07/08 9:29 AM	01/07/08	01/08/08 6:57 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 SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0801147

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 33049			Spiked Sample ID: 0801147-011A				
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	96.9	84.9	13.1	88.5	97.9	10.1	70 - 130	30	70 - 130	30
MTBE	ND	0.10	90.7	92	1.38	91.7	91.7	0	70 - 130	30	70 - 130	30
Benzene	ND	0.10	97.7	97.4	0.250	105	101	3.40	70 - 130	30	70 - 130	30
Toluene	ND	0.10	85.5	84.6	1.06	93.3	91	2.48	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	98.9	97.5	1.39	103	102	1.51	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	91.3	91	0.366	95.3	95.3	0	70 - 130	30	70 - 130	30
%SS:	85	0.10	99	96	2.74	105	103	1.45	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 33049 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0801147-010A	01/07/08 10:02 AM	01/07/08	01/09/08 2:11 AM	0801147-011A	01/07/08 10:37 AM	01/07/08	01/08/08 7:33 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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Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Client Project ID: Coliseum Way	Date Sampled: 01/07/08
		Date Received: 01/07/08
	Client Contact: Joel Greger	Date Reported: 01/14/08
	Client P.O.:	Date Completed: 01/18/08

WorkOrder: 0801147

January 18, 2008

Dear Joel:

Enclosed within are:

- 1) The results of the 3 analyzed samples from your project: **Coliseum Way**,
- 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.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0801147

EPA Method SW8260B	Extraction SW5030B			BatchID: 33044					Spiked Sample ID: 0801146-025A				
	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
tert-Amyl methyl ether (TAME)	ND	0.050	109	110	0.571	115	113	1.57	70 - 130	30	70 - 130	30	
Benzene	ND	0.050	118	117	0.433	120	120	0	70 - 130	30	70 - 130	30	
t-Butyl alcohol (TBA)	ND	0.25	86.5	97.8	12.2	91.4	91.5	0.181	70 - 130	30	70 - 130	30	
Chlorobenzene	ND	0.050	93	93.6	0.659	103	104	0.271	70 - 130	30	70 - 130	30	
1,2-Dibromoethane (EDB)	ND	0.050	81.8	84.1	2.82	92.8	90	3.01	70 - 130	30	70 - 130	30	
1,2-Dichloroethane (1,2-DCA)	ND	0.050	109	110	1.06	107	108	0.581	70 - 130	30	70 - 130	30	
1,1-Dichloroethene	ND	0.050	126	123	2.42	128	129	0.576	70 - 130	30	70 - 130	30	
Diisopropyl ether (DIPE)	ND	0.050	127	127	0	129	129	0	70 - 130	30	70 - 130	30	
Ethyl tert-butyl ether (ETBE)	ND	0.050	116	116	0	116	114	1.85	70 - 130	30	70 - 130	30	
Methyl-t-butyl ether (MTBE)	ND	0.050	105	104	0.775	111	110	1.01	70 - 130	30	70 - 130	30	
Toluene	ND	0.050	90.9	91.7	0.916	99.5	99.4	0.0736	70 - 130	30	70 - 130	30	
Trichloroethene	ND	0.050	81	82	1.23	84.9	85.9	1.25	70 - 130	30	70 - 130	30	
%SS1:	92	0.050	93	92	1.35	98	96	1.38	70 - 130	30	70 - 130	30	
%SS2:	101	0.050	92	93	0.836	99	99	0	70 - 130	30	70 - 130	30	
%SS3:	100	0.050	99	100	0.574	100	101	0.631	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 33044 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0801147-006A	01/07/08 9:29 AM	01/07/08	01/10/08 4:06 AM	0801147-010A	01/07/08 10:02 AM	01/07/08	01/10/08 4:52 AM
0801147-011A	01/07/08 10:37 AM	01/07/08	01/10/08 5:38 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

WorkOrder 0801147

EPA Method SW8260B	Extraction SW5030B								BatchID: 33011		Spiked Sample ID: 0801172-006B		
	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
tert-Amyl methyl ether (TAME)	ND	10	103	98.4	5.00	115	117	1.71	70 - 130	30	70 - 130	30	
Benzene	ND	10	116	113	2.07	121	123	1.56	70 - 130	30	70 - 130	30	
t-Butyl alcohol (TBA)	ND	50	84.5	90.1	6.41	89.1	92.8	4.03	70 - 130	30	70 - 130	30	
Chlorobenzene	ND	10	101	90.1	11.0	101	103	1.16	70 - 130	30	70 - 130	30	
1,2-Dibromoethane (EDB)	ND	10	88.6	80.6	9.42	87.9	88.3	0.464	70 - 130	30	70 - 130	30	
1,2-Dichloroethane (1,2-DCA)	ND	10	127	125	2.03	110	111	1.29	70 - 130	30	70 - 130	30	
1,1-Dichloroethene	ND	10	128	129	0.125	126	127	0.223	70 - 130	30	70 - 130	30	
Diisopropyl ether (DIPE)	ND	10	123	126	2.00	129	129	0	70 - 130	30	70 - 130	30	
Ethyl tert-butyl ether (ETBE)	ND	10	109	110	0.843	117	120	2.20	70 - 130	30	70 - 130	30	
Methyl-t-butyl ether (MTBE)	ND	10	117	121	3.41	109	111	1.65	70 - 130	30	70 - 130	30	
Toluene	ND	10	96.4	85.7	11.2	96.3	98	1.71	70 - 130	30	70 - 130	30	
Trichloroethene	8.1	10	84.6	82	1.58	85.6	86.1	0.543	70 - 130	30	70 - 130	30	
%SS1:	103	10	104	106	2.08	93	91	2.17	70 - 130	30	70 - 130	30	
%SS2:	100	10	95	90	4.74	97	96	1.12	70 - 130	30	70 - 130	30	
%SS3:	99	10	91	88	4.13	100	101	0.500	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 33011 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0801147-001B	01/07/08 8:10 AM	01/11/08	01/11/08 11:32 AM	0801147-002B	01/07/08 8:51 AM	01/11/08	01/11/08 12:17 PM
0801147-003B	01/07/08 12:15 PM	01/10/08	01/10/08 3:50 AM	0801147-004B	01/07/08 10:17 AM	01/10/08	01/10/08 4:36 AM
0801147-005B	01/07/08 10:51 AM	01/10/08	01/10/08 5:21 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.



McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701

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

0801147

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

GeoTracker EDF PDF Excel Write On (DW)

Check if sample is effluent and "J" flag is required

Report To: Joel Greer Bill To: PIERS
Company: PIERS Environmental
1320 S Bascom Ave, Suite F
E-Mail: piers@piers.com
Tel: (510) 539-382 Fax: (510) 787-1457
Project #: _____ Project Name: Eclipseum Way
Project Location: 4800 Y 700 Eclipseum Way, Oakland
Sampler Signature: Joel Greer

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED		Analysis Request	Other	Comments	
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL				HNO ₃
B1 water		7/1/08	8:10 AM	4	5											Filter Samples for Metals analysis: Yes / No
B2 water			8:15 PM													
B3 water			8:15 PM	2	5											
B4 water			11:16 AM	4	5											
B5 water			10:51 AM	4	5											
Corp 31A-D			4:24 PM	4	5											
B1 10.5'			8:01 AM	1	J											
B2 10.5'			8:41 AM	1	J											
B3 14.5'			8:40 AM	1	J											
B4 19.5'			10:42 AM	1	J											
B5 23.5'			10:37 AM	1	J											

BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE
TPH as Diesel (8015) + motor oil / naphthalene
Total Petroleum Oil & Grease (1604 - 5710 E.B.A.)
Total Petroleum Hydrocarbons (418.1)
EPA 502.2 / 601 / 8010 / 8021 (HVOCs)
MTBE / BTEX ONLY (EPA 602 / 8021)
EPA 505: 608 / 8081 (CI Pesticides)
EPA 608 / 8082 PCB's ONLY: Aroclors Congeners
EPA 507 / 8141 (NP Pesticides)
EPA 515 / 8151 (Acidic CI Herbicides)
EPA 524.2 / 624 / 8260 (VOCs)
EPA 525.2 / 625 / 8270 (SVOCs)
EPA 8270 SIM 8310 (PAHs) PNAs
CAN 17 Metals (200.7 / 200.8 / 6010 / 6020)
LEAD 5 Metals (200.7 / 200.8 / 6010 / 6020)
Lead (200.7 / 200.8 / 6010 / 6020)

PCBs
8260 added 7/15/08 SD

110
110
120
130
140

Relinquished By: Joel Greer Date: 7/1/08 Time: 12:45 PM Received By: [Signature]
Relinquished By: [Signature] Date: 7/2/08 Time: 4:45 Received By: me vall
Relinquished By: _____ Date: _____ Time: _____ Received By: _____

COMMENTS:
ICE? 60.4 ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ✓
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ✓
VOAS O&G METALS OTHER
PRESERVATION 7 011-2

McC Campbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 080114 **A** ClientID: PESJ

EDF Excel Fax Email HardCopy ThirdParty

Report to: Joel Greger Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128	Email: piers@pierses.com TEL: (408) 559-1248 FAX: (408) 559-1224 ProjectNo: Coliseum Way PO:	Bill to: Jennifer Piers Environmental 1330 S. Bascom Avenue, Ste. F San Jose, CA 95128 jennifer@pierses.com	Requested TAT: 5 days Date Received: 01/07/2008 Date Add-On: 01/15/2008 Date Printed: 01/15/2008
--	--	---	---

Sample ID	ClientSampleID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12			
0801147-007	B1d2.5'	Soil	01/07/08 8:01:00	<input type="checkbox"/>	A														
0801147-008	B2d0.5'	Soil	01/07/08 8:41:00	<input type="checkbox"/>	A														
0801147-009	B3d4.5'	Soil	01/07/08 9:40:00	<input type="checkbox"/>	A														

Test Legend:

1	8260B S	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments: B1d2.5', B2d0.5', B3d4.5' off hold for VOCs 1/15/08 5d per J.G

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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Piers Environmental
1330 S. Bascom Avenue, Ste. F
San Jose, CA 95128

Client Project ID: Coliseum Way

Date Sampled: 01/07/08

Date Received: 01/07/08

Client Contact: Joel Greger

Date Extracted: 01/15/08

Client P.O.:

Date Analyzed 01/15/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-007A						
Client ID	B1d2.5'						
Matrix	Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	Acrolein (Propenal)	ND	1.0	0.05
Acrylonitrile	ND	1.0	0.02	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	2-Chloroethyl Vinyl Ether	ND	1.0	0.01
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
2-Chlorotoluene	ND	1.0	0.005	4-Chlorotoluene	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromo-3-chloropropane	ND	1.0	0.004
1,2-Dibromoethane (EDB)	ND	1.0	0.004	Dibromomethane	ND	1.0	0.005
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
1,3-Dichloropropane	ND	1.0	0.005	2,2-Dichloropropane	ND	1.0	0.005
1,1-Dichloropropene	ND	1.0	0.005	cis-1,3-Dichloropropene	ND	1.0	0.005
trans-1,3-Dichloropropene	ND	1.0	0.005	Diisopropyl ether (DIPE)	ND	1.0	0.005
Ethylbenzene	ND	1.0	0.005	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Hexachlorobutadiene	ND	1.0	0.005
Hexachloroethane	ND	1.0	0.005	2-Hexanone	ND	1.0	0.005
Isopropylbenzene	ND	1.0	0.005	4-Isopropyl toluene	ND	1.0	0.005
Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	Methylene chloride	ND	1.0	0.005
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	Naphthalene	ND	1.0	0.005
Nitrobenzene	ND	1.0	0.1	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	0.061	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	107	%SS2:	101
%SS3:	97		

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.

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 organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Piers Environmental
1330 S. Bascom Avenue, Ste. F
San Jose, CA 95128

Client Project ID: Coliseum Way
Client Contact: Joel Greger
Client P.O.:

Date Sampled: 01/07/08
Date Received: 01/07/08
Date Extracted: 01/15/08
Date Analyzed: 01/15/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-008A						
Client ID	B2d0.5'						
Matrix	Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	Acrolein (Propenal)	ND	1.0	0.05
Acrylonitrile	ND	1.0	0.02	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	2-Chloroethyl Vinyl Ether	ND	1.0	0.01
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
2-Chlorotoluene	ND	1.0	0.005	4-Chlorotoluene	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromo-3-chloropropane	ND	1.0	0.004
1,2-Dibromoethane (EDB)	ND	1.0	0.004	Dibromomethane	ND	1.0	0.005
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
1,3-Dichloropropane	ND	1.0	0.005	2,2-Dichloropropane	ND	1.0	0.005
1,1-Dichloropropene	ND	1.0	0.005	cis-1,3-Dichloropropene	ND	1.0	0.005
trans-1,3-Dichloropropene	ND	1.0	0.005	Diisopropyl ether (DIPE)	ND	1.0	0.005
Ethylbenzene	ND	1.0	0.005	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Hexachlorobutadiene	ND	1.0	0.005
Hexachloroethane	ND	1.0	0.005	2-Hexanone	ND	1.0	0.005
Isopropylbenzene	ND	1.0	0.005	4-Isopropyl toluene	ND	1.0	0.005
Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	Methylene chloride	ND	1.0	0.005
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	Naphthalene	ND	1.0	0.005
Nitrobenzene	ND	1.0	0.1	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	105	%SS2:	101
%SS3:	97		

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.

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 organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Piers Environmental
1330 S. Bascom Avenue, Ste. F
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Client Project ID: Coliseum Way
Client Contact: Joel Greger
Client P.O.:

Date Sampled: 01/07/08
Date Received: 01/07/08
Date Extracted: 01/15/08
Date Analyzed: 01/15/08

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0801147

Lab ID	0801147-009A
Client ID	B3d4.5'
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	Acrolein (Propenal)	ND	1.0	0.05
Acrylonitrile	ND	1.0	0.02	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	2-Chloroethyl Vinyl Ether	ND	1.0	0.01
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
2-Chlorotoluene	ND	1.0	0.005	4-Chlorotoluene	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromo-3-chloropropane	ND	1.0	0.004
1,2-Dibromoethane (EDB)	ND	1.0	0.004	Dibromomethane	ND	1.0	0.005
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
1,3-Dichloropropane	ND	1.0	0.005	2,2-Dichloropropane	ND	1.0	0.005
1,1-Dichloropropene	ND	1.0	0.005	cis-1,3-Dichloropropene	ND	1.0	0.005
trans-1,3-Dichloropropene	ND	1.0	0.005	Diisopropyl ether (DIPE)	ND	1.0	0.005
Ethylbenzene	ND	1.0	0.005	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Hexachlorobutadiene	ND	1.0	0.005
Hexachloroethane	ND	1.0	0.005	2-Hexanone	ND	1.0	0.005
Isopropylbenzene	ND	1.0	0.005	4-Isopropyl toluene	ND	1.0	0.005
Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	Methylene chloride	ND	1.0	0.005
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	Naphthalene	ND	1.0	0.005
Nitrobenzene	ND	1.0	0.1	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	104	%SS2:	101
%SS3:	96		

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.

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 organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0801147

EPA Method SW8260B	Extraction SW5030B			BatchID: 33164				Spiked Sample ID: 0801317-004A				
	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
tert-Amyl methyl ether (TAME)	ND	0.050	103	105	1.82	116	115	0.723	70 - 130	30	70 - 130	30
Benzene	ND	0.050	102	104	1.93	117	117	0	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	90	90.2	0.279	100	95.4	4.82	70 - 130	30	70 - 130	30
Chlorobenzene	ND	0.050	93.6	95.4	1.93	104	103	0.563	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	95.2	96.6	1.48	103	103	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	99.5	102	2.19	110	111	0.568	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	0.050	121	123	1.90	127	128	1.12	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	116	119	2.07	127	128	1.00	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	107	108	1.48	120	119	0.766	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	108	109	1.40	117	120	1.99	70 - 130	30	70 - 130	30
Toluene	ND	0.050	89.7	91.8	2.26	101	99.4	1.40	70 - 130	30	70 - 130	30
Trichloroethene	ND	0.050	76.9	78.6	2.14	88.1	87.8	0.302	70 - 130	30	70 - 130	30
%SS1:	105	0.050	103	101	1.72	103	103	0	70 - 130	30	70 - 130	30
%SS2:	98	0.050	94	94	0	93	93	0	70 - 130	30	70 - 130	30
%SS3:	96	0.050	106	106	0	107	107	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 33164 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0801147-007A	01/07/08 8:01 AM	01/15/08	01/15/08 4:36 PM	0801147-008A	01/07/08 8:41 AM	01/15/08	01/15/08 5:21 PM
0801147-009A	01/07/08 9:40 AM	01/15/08	01/15/08 6:05 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.

APPENDIX B

PERTINENT DATA FROM PES' 2008 SUBSURFACE INVESTIGATIONS

Table 2
Volatile Organic Compounds in Soil
4600-4700 Coliseum Way Site
Oakland, California

Boring Identification	Sample Identification	Sample Depth (Feet bgs)	Sample Date	1,1- DCE (µg/kg)	1,1- DCA (µg/kg)	1,1,1- TCA (µg/kg)	Other VOCs
B-1	B-1-2.5'-3'	2.5-3	6/27/2008	ND (4.7)	ND (4.7)	ND (4.7)	All ND
B-1	B-1-7.5'-8'	7.5-8	6/27/2008	ND (5.2)	ND (5.2)	ND (5.2)	All ND
B-4	B-4-2.5'-3'	2.5-3	6/27/2008	ND (5.3)	44	5.9	All ND
B-4	B-4-6'-6.5'	6-6.5	6/27/2008	4.9	69	14	All ND
B-5	B-5-2.5'-3'	2.5-3	6/27/2008	ND (4.7)	ND (4.7)	ND (4.7)	All ND
B-5	B-5-6'-6.5'	6-6.5	6/27/2008	ND (4.9)	ND (4.9)	ND (4.9)	All ND
B-6	B-6-2.5'-3'	2.5-3	6/27/2008	ND (5.3)	ND (5.3)	ND (5.3)	All ND
B-6	B-6-6'-6.5'	6-6.5	6/27/2008	ND (5.0)	ND (5.0)	ND (5.0)	All ND
B-7	B-7-2.5'-3'	2.5-3	6/27/2008	ND (5.6)	ND (5.6)	ND (5.6)	All ND
B-7	B-7-6'-6.5'	6-6.5	6/27/2008	ND (4.4)	ND (4.4)	ND (4.4)	All ND
B-8	B-8-2.5'-3'	2.5-3	6/27/2008	ND (5.1)	ND (5.1)	ND (5.1)	All ND
B-8	B-8-6'-6.5'	6-6.5	6/27/2008	ND (4.8)	ND (4.8)	ND (4.8)	All ND
B-12	B-12-1-1.5	1-1.5	7/31/2008	ND (5,000)	ND (5,000)	ND (5,000)	All ND
B-12	B-12-2.5-3	2.5-3	7/31/2008	ND (1,000)	2,500	11,000	All ND
B-12	B-12-6-6.5	6-6.5	7/31/2008	ND (8.0)	350	1,000	All ND
B-13	B-13-2.5-3	2.5-3	7/31/2008	ND (5.1)	ND (5.1)	ND (5.1)	All ND
B-13	B-13-6-6.5	6-6.5	7/31/2008	ND (6.2)	ND (6.2)	ND (6.2)	All ND
B-14	B-14-2.5-3	2.5-3	7/31/2008	ND (7.5)	22	460	All ND
B-14	B-14-6-6.5	6-6.5	7/31/2008	ND (5.6)	26	84	All ND
B-15	B-15-2.5-3	2.5-3	7/31/2008	15	130	160	All ND
B-15	B-15-6-6.5	6-6.5	7/31/2008	31	ND (130)	ND (130)	All ND
Shallow (<3 meters bgs) Soil ESL⁽¹⁾				4,300	1,900	7,800	N/A

Notes:

ESL⁽¹⁾ = San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) for commercial/industrial land use where potentially impacted groundwater is not a current or potential drinking water resource (Table B).

- Results exceeding commercial/industrial ESLs are shaded

1,1-DCE = 1,1-Dichloroethene

1,1-DCA = 1,1-Dichloroethane

1,1,1-TCA = 1,1,1-Trichloroethane

bgs = Below ground surface

µg/kg = Micrograms per kilogram

ND (4.7) - Analyte not detected above the stated laboratory reporting limit.

ND = Not detected

N/A = Not applicable

Table 3
Volatile Organic Compounds in Groundwater
4600-4700 Coliseum Way Site
Oakland, California

Boring Identification	Sample Identification	Sample Date	Acetone (µg/L)	1,1- DCE (µg/L)	1,1- DCA (µg/L)	1,2- DCA (µg/L)	1,1,1- TCA (µg/L)	1,1,2- TCA (µg/L)	Toluene (µg/L)	TCE (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	DIPE (µg/L)	Isopropylbenzene (µg/L)	All Other VOCs
B-1	B-1-W	6/27/2008	ND (10)	ND (0.5)	0.6	5.4	ND (0.5)	ND (0.5)	41	ND (0.5)	0.6	2.9	14	ND (0.5)	All ND
B-2	B-2-W	6/27/2008	ND (10)	1.0	3.1	1.5	ND (0.5)	ND (0.5)	3.5	ND (0.5)	ND (0.5)	0.5	ND (0.5)	ND (0.5)	All ND
B-3	B-3-W	6/27/2008	ND (10)	2.5	11	3.9	7.8	ND (0.5)	1.1	ND (0.5)	ND (0.5)	ND (0.5)	19	ND (0.5)	All ND
B-4	B-4-W	6/27/2008	ND (50)	1,000	230	20	540	3.5	2.5	9.0	ND (2.5)	ND (2.5)	2.7	ND (2.5)	All ND
B-6	B-6-W	6/27/2008	ND (10)	ND (0.5)	0.9	1.8	ND (0.5)	ND (0.5)	7.1	ND (0.5)	ND (0.5)	ND (0.5)	1.7	ND (0.5)	All ND
B-9	B-9-W	7/31/2008	12	4.5	5.1	0.9	1.4	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	22	ND (0.5)	All ND
B-10	B-10-W	7/31/2008	610	39	48	ND (3.6)	ND (3.6)	ND (3.6)	9.6	120	340	2,200	6.3	7.3	All ND
B-11	B-11-W	7/31/2008	ND (10)	10	7.7	ND (0.5)	12	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	All ND
Potential Vapor Intrusion ESL⁽¹⁾			150,000,000	18,000	3,400	690	360,000	1,200	530,000	1,800	170,000	160,000	NE	NE	N/A

Notes:
⁽¹⁾ = San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) for evaluation of potential vapor intrusion concerns (Table E-1).

█ - Results exceeding groundwater ESLs are shaded

1,1-DCE = 1,1-Dichloroethene

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1,1-TCA = 1,1,1-Trichloroethane

1,1,2-TCA = 1,1,2-Trichloroethane

TCE = Trichloroethylene

DIPE = Isopropyl ether

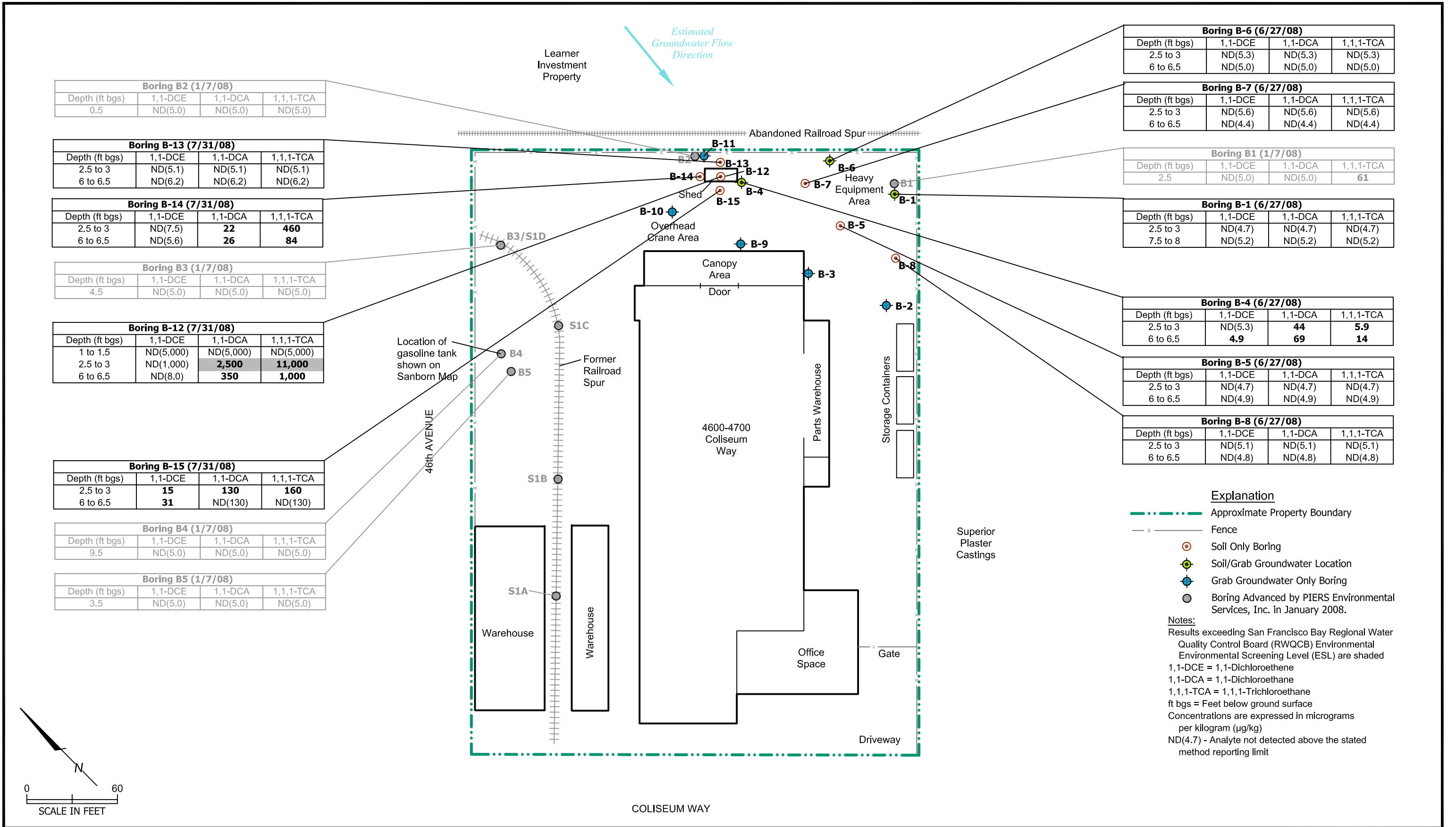
µg/L = Micrograms per liter

ND (0.5) - Analyte not detected above the stated laboratory reporting limit.

ND = Not detected

NE = Not established

N/A = Not applicable



Boring B-11	7/31/08
1,1-DCE	10
1,1-DCA	7.7
1,2-DCA	ND(0.5)
1,1,1-TCA	12
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)

Boring B2	1/7/08
1,1-DCE	18
1,1-DCA	310
1,2-DCA	ND(0.5)
1,1,1-TCA	1.8
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)

Boring B-4	6/27/08
1,1-DCE	1,000
1,1-DCA	230
1,2-DCA	20
1,1,1-TCA	540
1,1,2-TCA	3.5
TCE	9.0

Boring B3	1/7/08
1,1-DCE	ND(0.5)
1,1-DCA	1.5
1,2-DCA	3.3
1,1,1-TCA	ND(0.5)
1,1,2-TCA	ND(0.5)
TCE	1.7

Boring B-10	7/31/08
1,1-DCE	39
1,1-DCA	48
1,2-DCA	ND(3.6)
1,1,1-TCA	ND(3.6)
1,1,2-TCA	ND(3.6)
TCE	120

Boring B4	1/7/08
1,1-DCE	ND(0.5)
1,1-DCA	ND(0.5)
1,2-DCA	ND(0.5)
1,1,1-TCA	ND(0.5)
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)

Boring B5	1/7/08
1,1-DCE	ND(0.5)
1,1-DCA	ND(0.5)
1,2-DCA	ND(0.5)
1,1,1-TCA	ND(0.5)
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)

Boring B-9	7/31/08
1,1-DCE	4.5
1,1-DCA	5.1
1,2-DCA	0.9
1,1,1-TCA	1.4
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)

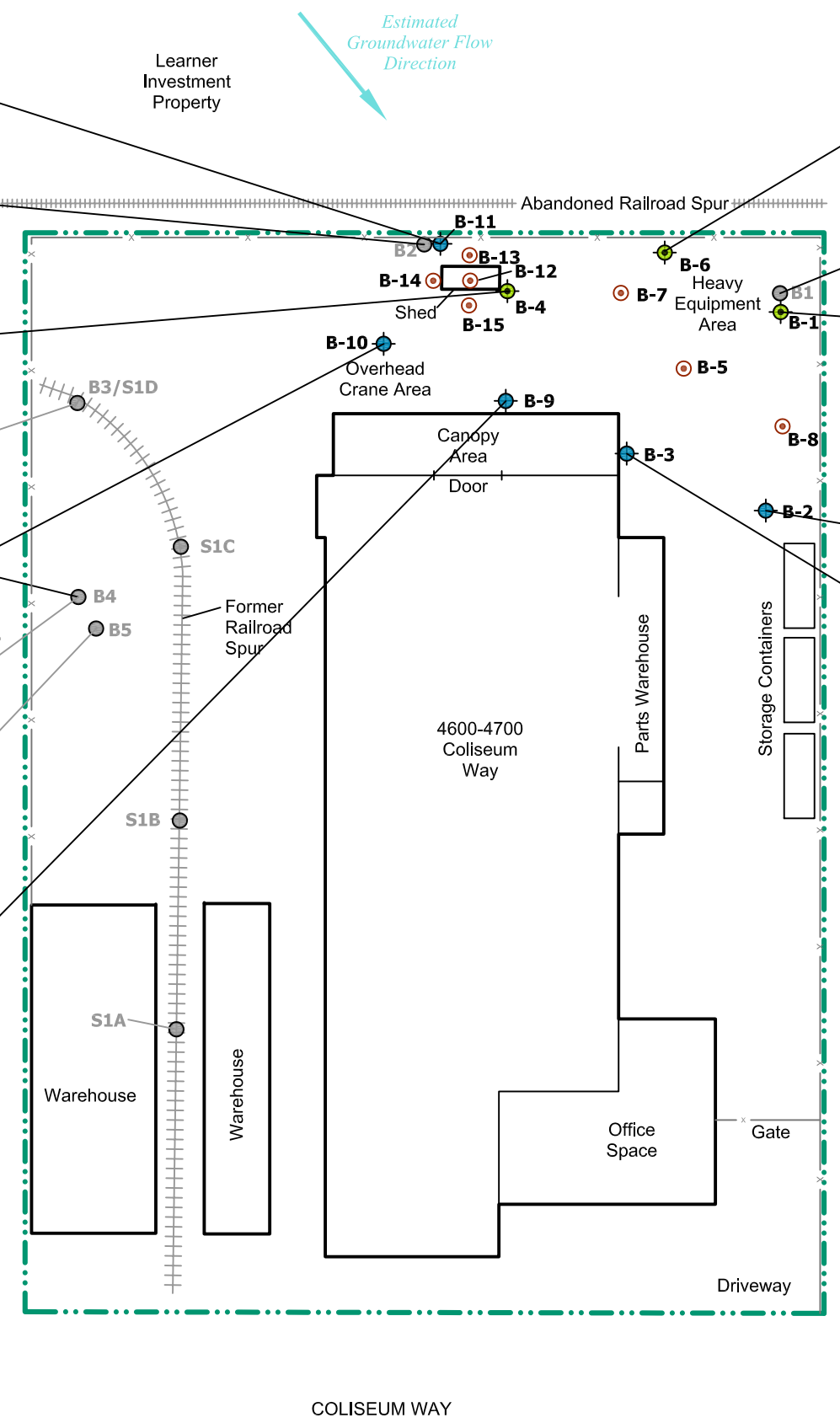
Boring B-6	6/27/08
1,1-DCE	ND(0.5)
1,1-DCA	0.9
1,2-DCA	1.8
1,1,1-TCA	ND(0.5)
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)

Boring B1	1/7/08
1,1-DCE	38
1,1-DCA	310
1,2-DCA	ND(12)
1,1,1-TCA	1,200
1,1,2-TCA	17
TCE	ND(12)

Boring B-1	6/27/08
1,1-DCE	ND(0.5)
1,1-DCA	0.6
1,2-DCA	5.4
1,1,1-TCA	ND(0.5)
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)

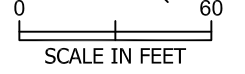
Boring B-2	6/27/08
1,1-DCE	1.0
1,1-DCA	3.1
1,2-DCA	1.5
1,1,1-TCA	ND(0.5)
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)

Boring B-3	6/27/08
1,1-DCE	2.5
1,1-DCA	11
1,2-DCA	3.9
1,1,1-TCA	7.8
1,1,2-TCA	ND(0.5)
TCE	ND(0.5)



- Explanation**
- . . . - Approximate Property Boundary
 - x - Fence
 - Soil Only Boring
 - Soil/Grab Groundwater Location
 - Grab Groundwater Only Boring
 - Boring Advanced by PIERS Environmental Services, Inc. in January 2008.

Notes:
 Concentrations are expressed in micrograms per liter (µg/L)
 ND(0.5) = Not detected at or above the indicated laboratory reporting limit
 1,1-DCE = 1,1-Dichloroethene
 1,1-DCA = 1,1-Dichloroethane
 1,2-DCA = 1,2-Dichloroethane
 1,1,1-TCA = 1,1,1-Trichloroethane
 1,1,2-TCA = 1,1,2-Trichloroethane
 TCE = Trichloroethylene



APPENDIX C

**VERIFICATION AND WASTE CHARACTERIZATION SAMPLING AND
ANALYSIS PLAN**

APPENDIX C

Verification and Waste Characterization Sampling and Analysis Plan Corrective Action Plan 4600-4700 Coliseum Way Oakland, California

C1.0 INTRODUCTION

This *Verification and Waste Characterization Sampling and Analysis Plan* is an element of the Corrective Action Plan (CAP) for the property located at 4600-4700 Coliseum Way, Oakland, California. The CAP describes procedures for removal and disposal of soil that contains 1,1-dichloroethane (1,1-DCA) and 1,1,1-trichloroethane (1,1,1-TCA) in excess of target soil cleanup goals (i.e., California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) risk-based Environmental Screening Level (ESL) concentrations for shallow soil (less than 3 meters [9.84 feet] below ground surface [bgs]) in a commercial/industrial setting where groundwater is not a current or potential drinking water source).

The objective of the verification sampling is to confirm that the target cleanup goals have been met, as described in the CAP. The objective of the waste characterization sampling is to generate analytical data to accurately characterize the stockpiled soil for off-Site disposal or recycling.

C2.0 PERFORMANCE STANDARDS AND GUIDANCE

Sampling and analyses will be performed in accordance with applicable guidance and requirements set forth pursuant to the Comprehensive Environmental Response Compensation Liability Act (CERCLA), as amended by the Superfund Amendment and Reauthorization Act (SARA); the National Contingency Plan (NCP); and local, State and Federal practices in effect at the time of performance of the work.

C3.0 VERIFICATION SAMPLE LOCATIONS

Soil affected with concentrations of volatile organic compounds (VOCs) in excess of target cleanup goals will be excavated from an area having plan dimensions of approximately 220 square feet. Following soil removal activities, verification soil samples will be collected from excavation bottom and sidewalls to confirm that the cleanup goals are achieved. Verification soil samples will be collected from excavation sidewalls at a minimum frequency of one sample per 20 linear feet of sidewall and one bottom sample per 200 square feet of excavation bottom. Based on this minimum frequency of sampling, the following verification soil samples are anticipated:

- One from the midpoint of each sidewall of the excavation at about 3 feet bgs (i.e., vertical midpoint of sidewall); and
- Two from the bottom of the excavation.

The locations of the verification samples may need to be modified based on field observations. Therefore, if necessary, the verification samples will be moved or additional samples will be collected to target areas of the excavation where VOC concentrations appeared to be highest.

C4.0 SAMPLING PROCEDURES AND ANALYSES

C4.1 Verification and Stockpile Sampling Procedures and Analyses

Soil from the sidewalls and bottom of the excavation will be obtained using the excavator bucket and Encore[®] soil sampling devices will be pushed directly into fresh, undisturbed soil in the excavator bucket to collect verification samples for laboratory analysis. The Encore[®] sampler head will then be cleaned, and the sampler cap tightly secured. Three 5-gram Encore[®] samplers will be prepared for submittal to the analytical laboratory for each sampling location. The Encore[®] soil samples will be collected in accordance with U.S. Environmental Protection Agency (USEPA) Method 5035. Following sample collection, the sample containers will be labeled for identification and each set of samplers will be placed in a resealable plastic bag and immediately placed in a chilled, thermally insulated cooler (containing “blue-ice” packs or ice packaged in doubled plastic bags). Samples will be delivered, under chain-of-custody protocol, to a state-certified laboratory. The soil samples will be processed by the analytical laboratory in accordance with USEPA Method 5035 within 48 hours of sample collection. Verification soil samples will be analyzed for VOCs on the USEPA Test Method 8010 list using USEPA Test Method 8260B.

Upon completion of remediation activities, four-point composite samples will be collected from the stockpiled soil for analyses of VOCs using USEPA Test Method 8260B to characterize the soil for disposal or recycling purposes. The four-point composite soil samples will be laboratory composited to achieve a minimum sampling frequency of one sample per 200 cubic yards of soil generated. The composite soil samples will be collected in accordance with USEPA Method 5035. The composite samples will be collected either in pre-cleaned, lab-supplied, glass sample jars or stainless-steel sleeves sealed with Teflon liners and plastic end caps. The sample containers will be completely filled so that no head space remains. Following sample collection, the sample containers will be labeled for identification and each set of samplers will be placed in a resealable plastic bag and immediately placed in a chilled, thermally insulated cooler (containing “blue-ice” packs or ice packaged in doubled plastic bags).

The following is a summary of equipment that may be used during verification and stockpiled sampling activities:

- Hand trowel;

- Hand-held Encore[®] t-bar sampling tool;
- Tape line (in feet and inches or tenths of a foot for locating sampling points);
- 5-gram disposable Encore[®] sample containers;
- Pre-cleaned, lab-supplied, glass sample jars, if needed;
- Pre-cleaned stainless-steel soil sample sleeve;
- Re-sealable plastic bags;
- Personal protective equipment;
- Ice or “blue-ice” packs, insulated cooler and appropriate packing supplies;
- Buckets, brushes and detergents for equipment decontamination;
- Sample labels;
- Chain-of-custody forms; and
- Sample collection log, sub-area field map, water-resistant ink pen, and daily field report forms.

C4.2 Decontamination Fluid Sampling Procedures and Analyses

Decontamination fluids generated during remedial action activities, which will be stored in Department of Transportation (DOT)-approved 55-gallon drums pending characterization, will be sampled by lowering a new disposable plastic bailer into the drums to collect representative samples. The sample will then be transferred directly from the bailer into the appropriate laboratory supplied sample bottles. The sample bottles will be filled slowly to minimize sample volatilization and to ensure that the sample is free of trapped air.

Each sample container will be labeled for identification and placed in a re-sealable plastic bag and immediately placed in a chilled, thermally insulated cooler (containing “blue-ice” packs or ice packaged in doubled plastic bags) for delivery, under chain-of-custody protocol, to a state-certified laboratory. Decontamination fluid samples will be analyzed for VOCs using USEPA Test Method 8260B.

C5.0 DECONTAMINATION AND SAMPLE HANDLING PROCEDURES

The sample collection equipment will be cleaned with a mild phosphate-free detergent solution and double rinsed with deionized water between sample locations. As indicated above, decontamination fluids will be stored in DOT-approved 55-gallon drums pending

characterization for off-Site disposal and/or recycling. Solid waste materials (i.e., gloves, paper towels, etc.) will be stored in drums pending disposal.

Sample containers will be labeled and placed in a thermally insulated cooler that is chilled to a temperature of approximately four degrees Centigrade for transport to the project analytical laboratory under chain-of-custody protocol.

Decontamination fluid characterization samples will be identified using an identification system that will consist of: (1) the letters “RDWW” to indicate remedial action activities derived wastewater; and (2) the date the sample was collected. Samples will be identified with a label affixed to the sample container. The following information will be specified on each label:

- Project name;
- Project number;
- Date and time of sample collection; and
- Sample identification number.

Individual sample containers will be placed in sealed plastic bags to prevent intrusion of moisture into sample containers and damage to sample labels. The coolers will be chilled using “blue-ice” packs or ice packaged in doubled plastic bags. Coolers will be transported to the laboratory either by laboratory couriers or field sampling personnel.

Samples will be accompanied by 3-copy, pressure sensitive chain-of-custody documents. The form will accompany every sample shipment to the analytical laboratory to document sample possession from the time of collection. The form will contain the following information:

- Sample identification number;
- Name and signature of collector;
- Date and time of collection;
- Site name and project number;
- Sample matrix;
- Sample container description;
- Analyses requested;
- Special analytical procedures requested;

- Remarks (expected interferences, hazards, unusual events at the time of sampling, if applicable);
- Preservatives added (if any);
- Any special sample preparation (if applicable);
- Destination of samples (laboratory name);
- Signature of persons involved in chain of possession (relinquished by and received by); and
- Date and time of sample receipt at laboratory.

The two top sheets of the chain-of-custody form will be placed in a watertight plastic bag that will be placed in the cooler for transport.

When transferring samples, the individuals relinquishing and receiving the samples will sign, date, and record the time on the chain-of-custody form. A separate chain-of-custody form will accompany each sample shipment. The method of shipment and courier name(s) will be entered on the chain-of-custody form.

Daily field activities will be recorded on daily field report forms which indicate the date and time of field observations made by field personnel. Field forms will be signed by field personnel.

Original data recorded in field logs, chain-of-custody forms, and on other forms will be written in water-resistant ink. None of these documents will be destroyed or discarded, even if they are illegible or contain inaccuracies that require a replacement document.

If an error is made on a document assigned to one individual, that individual will make corrections by drawing a single line through the error, entering the correct information, and initialing and dating the change. The erroneous information should not be obliterated. If possible, any subsequent error(s) discovered on a document will be corrected by the person who made the entry.

C6.0 LABORATORY PROCEDURES

Samples will be analyzed by a laboratory that is certified by the California Department of Health Services for performing the analyses specified in the CAP. Sample handling procedures used by the laboratory may vary from the procedures specified herein as long as they fulfill the objective of maintaining sample integrity and traceability.

C6.1 Chain-of-Custody Procedures

The sample custodian at the laboratory accepts custody of delivered samples and verifies the following information:

- All samples are present;
- All samples are in good condition;
- All samples are accompanied by a properly completed chain-of-custody form;
- The sample identification is complete and corresponds to the chain-of-custody form; and
- The condition of custody seals, if used, and temperature of the chest interior.

If sample integrity is questionable, the sample custodian will immediately notify the laboratory's project administrator, who in turn will notify the PES project manager. The sample custodian will document the sample condition on the sample custody log and sign the chain-of-custody form.

C6.2 Logging of Laboratory Samples

After chain-of-custody procedures are complete and acceptable, the sample custodian will assign laboratory identification numbers to the samples. Laboratory sample identification numbers may be written on the chain-of-custody form for tracing purposes. The custodian will transfer the samples to the proper analyst(s) or store the samples in an appropriate secure area.

Laboratory personnel are responsible for the care and custody of samples from the time they are received until the sample is exhausted. Data sheets and laboratory records are retained by the laboratory as part of the permanent documentation for at least three years.

C6.3 Sample Preparation and Analysis

Samples collected for verification and waste characterization will be prepared for analysis by the laboratory in accordance with USEPA-approved methods. The program for the analyses of concrete, soil, and decontamination fluids for VOCs by USEPA Method 8260B will be conducted following the procedures outlined in USEPA's Methods for Evaluating Solid Waste (SW-846).

C6.4 Sample Storage

Samples and extracts are retained by the analytical laboratory for up to 180 days after the data are reported by the laboratory. Unless notified by the program managers, excess or unused samples will be disposed by the laboratory in a manner consistent with appropriate government regulations.

DISTRIBUTION

**CORRECTIVE ACTION PLAN
4600-4700 COLISEUM WAY
OAKLAND, CALIFORNIA**

SEPTEMBER 23, 2008

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