SITE INVESTIGATION REPORT

Pier 94 Backlands Improvement and Amador Street Sanitary Pump Station San Francisco, California

Port of San Francisco
and
San Francisco Public Utilities Commission
San Francisco, California

15 June 2012
Project No. 730509401

T&R / RYCG
A Joint Venture

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Ms. Carol Bach
Port of San Francisco
Pier 1 - The Embarcadero
San Francisco, California 94111

Subject: Site Investigation Report
Pier 94 Backlands Improvement and
Amador Street Sanitary Pump Station
San Francisco, California

Dear Ms. Bach:

T&R/RYCG, a Joint Venture (T&R/RYCG) has prepared this Site Investigation Report for the Pier 94 Backlands Improvement and Amador Street Sanitary Pump Station Project located at Pier 94 in San Francisco, California.

Our scope of services for this project satisfies the soil and groundwater sampling and analysis requirements set forth in Article 22A of the San Francisco Public Health Code for developments where more than 50 cubic yards (cy) of soil will be disturbed during construction activities. T&R/RYCG certifies that this Site Investigation Report was prepared by qualified persons as outlined in Section 12289(a) of Article 22A of the San Francisco Public Health Code. In preparing the Site Investigation Report, we have observed that degree of care and skill generally exercised by other similar environmental consultants undertaking similar studies at the same time, under similar circumstances and conditions, and in the same geographical area.

We appreciate the opportunity of assisting you with this project. If you have any questions, please contact us.

Sincerely yours,
T&R/RYCG, A Joint Venture

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Attachments

cc: Elyse Heilshorn – San Francisco Department of Environmental Health

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SAN FRANCISCO, CALIFORNIA

1.0 INTRODUCTION AND SCOPE

This report presents the results of T&R/RYCG, a Joint Venture's (T&R/RYCG's) Site Investigation for the Backlands Site Improvements and Amador Street Sanitary Pump Station project, located at Pier 94 in San Francisco, California ("Site"). This report has been prepared to support the San Francisco Public Utilities Commission (SFPUC), the Port of San Francisco (the Port), and the Department of Public Works (DPW), for proposed improvements at Pier 94 and along Amador Street.

This Site Investigation was performed in accordance with our proposal to the SFPUC dated 25 January 2011, to satisfy the requirements of the San Francisco Public Health Code Article 22A (Maher Ordinance)[1]. The Site is bayward of the original historic shoreline and is thus subject to the requirements of Article 22A. This Site Investigation Report satisfies the Subsurface Soil Quality Assessment requirements set forth in Article 22A of the San Francisco Public Health Code for developments where more than 50 cubic yards (cy) of soil will be disturbed during construction activities. The Site History Evaluation requirements of Article 22A were previously satisfied by the Site History Report and Sampling and Analysis Plan by T&R/RYCG, dated 11 July 2011.

2.0 SITE DESCRIPTION

2.1 Project Site

The "Pier 94 Backlands" is an approximately 47-acre site, consisting generally of the land bounded by Amador Street and Cargo Way, extending east to the Amador Street Extension (Figure 1). The Port is developing plans to improve approximately 23 acres of the vacant land at the Pier 94 Backlands into 19

[1] Article 22A states that construction projects in San Francisco which are bayward of the historic 1852 high tide line and disturb more than 50 cubic yards of soil require site history and subsurface soil quality assessments. Previous investigations of properties bayward of the Article 22A boundary have found fill material with elevated levels of metals and petroleum hydrocarbons as a result of the 1906 earthquake and fire. If fill materials that contain contaminants exceeding hazardous waste threshold concentrations are encountered and more that 50 cubic yards of soil will be disposed off-site, they will require special handling and disposal. Site mitigation and health and safety plans will also be required before construction and off-haul of the fill materials to designated landfills.

acres of leasable property, with remaining acreage to be improved with roads, stormwater management features, and landscaping. The project will include grading and leveling the area to accommodate leasing, installing new infrastructure (an access road and stormwater collection and treatment system), new water and sanitary sewer utilities for the tenant parcels, and a new common restroom facility. This Site Investigation Report addresses areas that will be graded or excavated during construction (Figure 2). Specifically:

- Amador Street, where the future forcemain will be installed. The excavation of the future forcemain will be about 3 feet wide by 5 feet deep.
- At the proposed Amador Street sanitary pump station, which will replace the existing Amador Street sanitary pump station. The proposed Amador Street sanitary pump station will be located on Pier 92, at the property currently leased by the Cemex concrete plant. It will have a footprint of about 10 feet by 20 feet and require an excavation depth of about 12 to 15 feet below grade surface (bgs).
- Proposed vegetated swale areas around the perimeter of the proposed Pier 94 Backlands improvement. The western part of the proposed vegetated swale areas are currently vegetated swales which will be improved as part of the development plans. Eastern portions are currently the "shoulders" of the Amador Street extension, and are either gravel-covered or unpaved and covered in low-lying grasses. The eastern portion of the proposed swales is located within the Pier 94 landfill area (described in Section 2.2). The proposed vegetated swale areas will be excavated to about 5 feet bgs and will be roughly trapezoidal in shape with a 4:1 slope. The excavation will vary in width from about 1 to 3 feet wide at its base to about 10 to 25 feet wide near the surface (based on the necessary excavation and existing topography).
- In the area of the proposed new stormwater outfall pipe to Islais Creek. The proposed outfall pipe will run in a north-south alignment, just east of the Bode Gravel facility. This area is largely unimproved, unpaved, and covered in low-lying grasses and brush. The excavation for the proposed outfall pipe will be about 8 to 14 feet wide and vary in depth from about 8 to 14 feet bgs.

2.2 Site Background

The "Pier 94 Backlands" area was created during the 1960s and early 1970s by constructing a perimeter debris dike in the bay from Pier 92 in the north to Pier 96 in the south and placing fill within the dike (a map depicting the historic shoreline is presented in Appendix A). The debris dike was constructed in 1961 and was comprised of wood, brick, metal, and concrete with sandy gravel, silty sand, and clay. In 1964, about 2.5 million cubic yards of Bay Mud dredge spoil from Pier 80 were placed within the dike. From 1965 to 1975, an unknown quantity of construction debris and municipal waste were placed over the Bay Mud dredge spoils (The Mark Group, 1989 and Geo/Resource Consultants, Inc. [Geo/Resource], 1990).

The debris layer ranges from about 9 feet to 29 feet and is comprised of a heterogeneous mixture of wood, brick, concrete, roots, terra cotta, metal, plastic, and household debris, mixed with silty sandy clay and silty clayey sand. In 1977, a 1- to 5-foot layer of rocky soil with minor amounts of debris was placed over the debris layer. Municipal refuse within the debris layer has been encountered in an approximately 14 to 17-acre portion of the Pier 94 Backlands. This portion of the Backlands where debris was encountered as well as additional areas to the north and southeast of the Backlands boundary are collectively identified as the "landfill" area (shown in Figure 2). Since 1987, the landfill portion of Pier 94 has been regulated under Waste Discharge Requirements (WDR) issued by the San Francisco Bay Regional Water Quality Control Board (RWQCB) as a Class III solid waste disposal site. In 2003, the RWQCB adopted revised WDR that required quarterly visual inspection and approved the excavation and/or construction within the landfill area (The Mark Group, 1989 and Geo/Resource, 1990).

Since its construction, most of the Pier 94 Backlands has remained vacant and undeveloped, except for the construction of Amador Street, the radio transmission tower and associated building, the tallow works facility south of Amador Street, the Sustainable Crushing concrete recycling plant located on the southern portion of the Pier 94 Backlands, the American Storage Unlimited, Inc. facility located southeast of the Amador Street and Cargo Way, and the area southwest of the Amador Street and Amador Street extension which serves as a parking and staging area for the Bode Gravel facility (T&R/RYCG, 2011).

Previous investigations at the Site have identified soluble lead above the California hazardous waste criteria of 5 milligrams per liter (mg/L) in soil. Other compounds detected in soil included up to 770 milligrams per kilogram (mg/kg) Total Recoverable Petroleum Hydrocarbons (TRPH), volatile organic compounds (VOCs) at concentrations ranging from 0.051 to 1.61 mg/kg, semivolatile organic compounds

(SVOCs) at concentrations ranging from 0.17 to 1,290 mg/kg, 0.005 to 0.007 mg/kg of the pesticide endosulfan II, and up to 5% asbestos fibers. Up to 0.16 mg/L Total Petroleum Hydrocarbons in the gasoline range (TPHg), 84 mg/L Total Petroleum Hydrocarbons in the diesel range (TPHd), 56 mg/L Total Petroleum Hydrocarbons in the motor oil range (TPHmo), and several metals have been detected in groundwater (Geo/Resource, 1989; SCS Corporation, 2000; and Harlan Tait Associates (Harlan), 2002).

Additional information on the Site's history and previous investigations conducted at the Site are presented in the Site History Report and Sampling and Analysis Plan by T&R/RYCG, dated 11 July 2011.

3.0 SCOPE OF WORK

The purpose of this Site Investigation was to collect soil and groundwater samples for chemical analysis according to the requirements of Article 22A, and to assess the potential for soil and/or groundwater contamination resulting from past and/or present Site activities and nearby off-site operations. The scope of this investigation was presented in the Site History Report and Sampling and Analysis Plan dated 11 July 2011 and Sampling and Analysis Plan Addendum dated 24 August 2011. The San Francisco Department of Public Health (SFDPH) approved the Sampling and Analysis Plan and Addendum in their letter dated 14 September 2011.

Our work included drilling nine soil borings to 5 to 15 feet bgs for soil and groundwater sampling, chemical testing of selected samples, and evaluating the results.

4.0 FIELD INVESTIGATION

Prior to field work, a drilling permit was obtained from the SFDPH for the borings. Additionally, Underground Services Alert was contacted, and utility clearances were conducted at the boring locations by OHJ Subsurface Utility Locator of Oakland, California. Utility clearances, drilling of exploratory borings, and test pit excavations were overseen by AEW Engineering, Inc.

4.1 Amador Street Forcemain and Pump Station Areas

On 9 December 2011, five exploratory borings, E-1 through E-5, were advanced at the locations shown on Figure 2. Four of the borings, E-1, E-2, E-3, and E-5, were drilled along the proposed location of the Amador Street forcemain. At boring locations E-1 and E-2, refusal was encountered at about 2 feet bgs; each boring location was off-set once in an attempt to reach 5.0 feet bgs. Soil samples were collected

from borings E-1 and E-2 at approximately 2.0 feet bgs. Borings E-3 and E-5 were drilled to 5.0 feet bgs, and soil samples were collected from these borings at approximately 2.5 and 5.0 feet bgs. One of the borings, E-4, was drilled to 16 feet bgs at the proposed location of the Amador Street pump station. The approved Sampling and Analysis Plan previously proposed two borings at the proposed Amador Street pump station location (denoted as proposed borings E-4 and E-5 in the Sampling and Analysis Plan and Addendum). However, only one boring was advanced in this area due to access restrictions; a large concrete detention basin operated by the Cemex concrete plant was located in this area.

Samples were collected from 2.5, 5.0, 10, and 15 feet bgs at boring E-4. All drilling activities were performed by Gregg Drilling and Testing, Inc. of Martinez, California.

All soil samples collected during the boring activities were classified according to the Unified Soil Classification System (USCS) and screened in the field with an organic vapor monitor and methane meter. Soil samples were obtained with an acetate-lined, 2-inch diameter, continuous core barrel. The sample ends were covered with Teflon, sealed with plastic end caps, labeled, and stored in an ice-cooled chest for delivery to the laboratory under chain-of-custody control. Boring logs from this investigation are presented in Appendix B. The material encountered was classified according to the Unified Soil Classification System described in Appendix B.

Upon completion of the soil sampling, the boreholes were backfilled to the ground surface with neat cement grout using the tremie method under the supervision of a SFDPH grout inspector.

Additional information for the portion of the investigation conducted for the Amador Street Forcemain and Pump Station Areas is presented in the report by AEW Engineering, Inc., provided in Appendix C.

4.2 Vegetated Swale and Outfall Pipe Areas

On 9 December 2011, Gregg Drilling and Testing, Inc. also advanced four exploratory borings, E-6 through E-9, to depths of 10 to 14 feet bgs at the locations shown on Figure 2. The locations of the soil borings were based on the proposed new stormwater line towards the outfall. Soil samples were collected at approximately 2.5 feet bgs, 5 feet bgs, and 10 or 14 feet bgs, depending on the boring termination depth, from each boring location.

Additionally, three soil samples were collected from the geotechnical boring B-12 at the location of the new outfall pipe (see Figure 2). The geotechnical boring was drilled to about 43.5 feet bgs with hollow-stem augers by Pitcher Drilling Company of East Palo Alto, California, on 25 May 2011. Soil samples from the geotechnical boring were collected at approximately 3.0, 5.0, and 10 feet bgs.

All soil samples were classified according to the USCS and screened in the field with an organic vapor monitor and methane meter. Soil samples were obtained with an acetate-lined, 2-inch diameter, continuous core barrel or 2-inch diameter stainless steel liners. The sample ends were covered with Teflon, sealed with plastic end caps, labeled, and stored in an ice-cooled chest for delivery to the laboratory under chain-of-custody control. Boring logs are presented in Appendix B.

At boring E-9, the boring was advanced to about 14 feet bgs and a temporary casing was installed to the bottom of the boring to facilitate collecting groundwater samples. The temporary casing was 1-inch diameter, Schedule 40 polyvinyl chloride (PVC), with a section of 0.010-inch screened interval. A groundwater sample was collected directly into laboratory-supplied sample containers, using a clean, small diameter bailer. The groundwater sample was then stored in an ice-cooled chest for delivery to the laboratory under chain-of-custody control.

Upon completion of the soil and groundwater sampling, the boreholes were backfilled to the ground surface with neat cement grout using the tremie method under the supervision of a SFDPH grout inspector.

Additionally, seven exploratory test pits, TP-1 through TP-7, were excavated along the proposed vegetated swale locations, as depicted on Figure 2. The test pits were excavated to between 5 and 6 feet bgs with a backhoe. Test pits were excavated on 8 December 2011 by Pacific States Environmental Contractors, Inc. Soil samples were collected at approximately 2.5 feet bgs and 5 feet bgs from test pits TP-1 through TP-6. Wood/old timber was encountered between about 3 feet bgs and the bottom of the test pit TP-7 at 6 feet bgs; therefore, samples were collected at approximately 2.5 and 3.0 feet bgs from test pit TP-7. Soil encountered in test pits was classified according to the USCS and screened in the field with an organic vapor monitor and methane meter. A total of 12 soil samples were collected from the test pits, contained in stainless-steel tubes, their ends covered with Teflon, sealed with plastic end caps, labeled, and stored in an ice-cooled chest for delivery to the laboratory under chain-of-custody control. Test pit logs are presented in Appendix B. Upon completion of the soil sampling activities, the test pits

were backfilled with the excavated soil to the maximum extent possible and compacted by rolling the excavator over the test pit locations.

5.0 SUBSURFACE CONDITIONS

Subsurface conditions summarized below are based on results of this Site Investigation, the geotechnical investigation performed by T&R/RYCG in May 2011, and several geotechnical and environmental investigations completed by Treadwell & Rollo and others throughout the area of Piers 92 through 96.

5.1 Regulated Landfill Area

The regulated landfill area is located east of the 1961 shoreline (see Appendix A) and is blanketed by a soil cap consisting of loose to very dense sands and gravels with variable amounts of clay and silt and occasional concrete, brick, and serpentinite fragments. Where explored, the soil cap bottom is encountered at about 2.5 to 8 feet bgs.

The soil cap is underlain by construction debris consisting of construction and municipal wastes mixed with soil. The debris layer consists of an estimated 50/50 mixture of construction waste (wood, concrete, asphalt, brick, rock fragments, metal, plastic, foam, vegetation, and refuse) and soil (silty sandy clay). The soil content and composition is highly variable. This fill layer extends to about 19 to 34 feet bgs.

Beneath the construction debris is dredged spoils consisting of very soft to stiff clay with variable amounts of sand. Where explored, variable amounts of wood, concrete, and brick are embedded within the dredge spoils. The dredge spoils extend to about 38 feet bgs.

The dredge spoils layer is underlain by medium stiff to stiff clay, locally known as Bay Mud. The Bay Mud extends to about 89 feet bgs and is underlain by medium to very dense sand (Bayside Sand).

5.2 Project Site beyond Regulated Landfill Area

The project area west of the 1961 shoreline (see Appendix A) is outside of the regulated landfill area and is generally comprised of fill to depths of 25 to 40 feet bgs. The fill, placed prior to 1961, is heterogeneous and consists of variable mixture of clay, silt, sand, and gravel, with occasional brick, concrete, and asphalt debris. The fill is underlain by soft to stiff clay (Bay Mud) to depths between 70

and 75 feet bgs (Parsons Brinckerhoff Quade & Douglas, Inc. [PBQD], 2005). Beneath the Bay Mud is about 15 feet of dense sand (Bayside Sand) underlain by stiff to hard clay (Old Bay Clay) (PBQD, 2005).

At boring B-12, located near the bank of the Islais Creek Channel, we encountered debris dike fill to about 41 feet bgs. The debris dike fill, placed in 1961 (The Mark Group, 1989 and Geo/Resource, 1990), consists of loose to medium dense sand with variable amounts of clay and is mixed with variable amounts of construction waste (wood, concrete, brick, and glass). The debris dike is underlain by medium stiff clay (Bay Mud).

5.3 Groundwater

Groundwater has generally been encountered within the fill unit between about 3.5 feet bgs and 30 feet bgs. During the May 2011 geotechnical investigation and this Site Investigation, groundwater was measured at a depth of about 10 feet bgs; however these measurements were obtained before the groundwater was allowed to stabilize. Groundwater was measured in geotechnical boring B-11 at a depth of about 17.5 feet bgs, after allowing the groundwater to stabilize overnight (see Figure 2). We expect the groundwater level at the Site to fluctuate based on seasonal variations in rainfall. The groundwater level may be influenced by changes in sea level and fluctuations of tides in areas closer to Islais Creek Channel and the bay.

6.0 SAMPLE SELECTION AND ANALYTICAL TESTING

As described in the approved Sampling and Analysis Plan, soil samples were composited at the laboratory at a rate of one composite sample per boring or test pit location. Generally, the soil samples were analyzed for some or all of the compounds listed below:

- TPHg, TPHd, and TPHmo by Modified Environmental Protection Agency (EPA) Method 8015B;
- TRPH by EPA Method 418.1;
- VOCs by EPA Method 8260B;
- SVOCs by EPA Method 8270C;
- Polychlorinated biphenyls (PCBs) by EPA Method 8082;
- California assessment manual (CAM) 17 metals by EPA Method 6020:
- Leaking underground fuel tank (LUFT) 5 metals by EPA Method 6010B;

- Total lead by EPA Method 6010;
- pH by EPA Method 9045D;
- Cyanide by Standard Method 4500CN;
- Sulfide by EPA Method 9030A/E376.2; and
- Asbestos by California Air Resources Board (CARB) Method 435.

Soil samples analyzed for metals were initially compared to total threshold limit concentration (TTLC) criteria. Selected soil samples were additionally analyzed for soluble threshold limit concentration (STLC) by California waste extraction test (WET) method and/or Toxicity Characteristic Leaching Procedure (TCLP), based on their initial total metal concentrations. The STLC and TCLP analyses were run to assess if metal concentrations in soil were at State of California or Federal hazardous waste levels, respectively.

The groundwater sample from boring E-9 was tested for TPHg, TPHd and TPHmo (with silica gel cleanup), VOCs, SVOCs, and dissolved metals to evaluate if special handling of the groundwater will be required during construction of the stormwater line.

All samples were analyzed by McCampbell Analytical, Inc., a California Department of Health Services certified analytical laboratory in Pittsburg, California.

7.0 LABORATORY TEST RESULTS AND EVALUATION

The laboratory analytical results are summarized on Tables 1 through 4. Copies of the laboratory analytical reports are presented in Appendix D. The analytical results are discussed in the following section.

7.1 Soil Results

Soil analytical results are summarized in Tables 1 and 2.

7.1.1 Amador Street Forcemain and Pump Station Areas

Borings E-1 through E-5 were advanced at the proposed Amador Street forcemain and pump station areas (see Figure 2).

Non Metal Compounds

TPHg was detected above the laboratory reporting limit (1 mg/kg) in 2 of the 5 samples analyzed at concentrations of 1.3 mg/kg (E-4) and 1.4 mg/kg (E-5). TPHd and TPHmo were detected above the laboratory reporting limit in all 5 samples analyzed at concentrations ranging from 7 mg/kg to 59 mg/kg and 100 mg/kg to 540 mg/kg, respectively.

The VOC tetrachloroethene (PCE) was detected in 1 of the 5 samples analyzed, E-4, at a concentration of 0.0095 mg/kg. Other VOCs, PCBs, and SVOCs were not detected at or above their respective laboratory reporting limits.

pH ranged from 9.36 standard units to 12.24 standard units in the 3 samples analyzed. The Federal hazardous waste criteria for corrosivity is pH less 2.5 and greater than 12.5 standard units. Cyanide was detected in 1 of 3 samples, at a concentration of 0.14 mg/kg, and sulfide was not detected above the laboratory reporting limit of 10 mg/kg in any of the 3 samples. The Federal hazardous waste criteria for cyanide and sulfide are 250 mg/kg and 500 mg/kg, respectively. A concentration of 2% chrysotile asbestos was detected at the sample collected from E-2; the other 2 samples analyzed for asbestos either detected trace amounts of asbestos or did not detect asbestos above the laboratory reporting limits. The Federal hazardous waste criteria for friable asbestos is 1%. Asbestos at these concentrations is typical in serpentinite-derived soil and serpentinite rock (serpentinite fragments have been observed in the soil cap). Friable asbestos was not observed in soil cuttings during field activities by AEW. Soil at boring location E-2 would not be considered Federal hazardous waste for disposal based on asbestos concentrations, assuming it is non-friable.

Metal Compounds

Several metals were detected in soil samples collected throughout the Site; however, chromium, lead, and nickel were the only metals detected at concentrations (about 10 times the soluble hazardous waste criteria) warranting additional analyses. The remaining metals concentrations were within normal[2] background ranges found in the western United States.

Elevated concentrations of chromium (greater than 50 mg/kg), lead (greater than 50 mg/kg), and/or nickel (greater than 200 mg/kg) were detected at 4 of the 5 samples. The samples were analyzed for

[2] From the *U.S.G.S. Professional Paper 1270, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States*, dated 1984.

soluble concentrations of the pertinent metal using the STLC by WET method. Concentrations detected were below the State hazardous waste criteria of 5 mg/L for STLC chromium, 5 mg/L for STLC lead, and 20 mg/L for STLC nickel.

7.1.2 Vegetated Swale and Outfall Pipe Areas

Borings E-6 through E-9 and B-12 were advanced at the area of the proposed future stormwater line towards the outfall pipe and the outfall pipe. Test Pits E-1 through E-7 were advanced at the proposed area of the vegetated swales. Figure 2 depicts the boring and test pit locations.

Non Metal Compounds

TPHg was detected above the laboratory reporting limit (1 mg/kg) in 7 of the 12 samples analyzed at concentrations ranging from 1.1 mg/kg to 7.7 mg/kg. TPHd and TPHmo were detected above the laboratory reporting limit in all 12 samples analyzed at concentrations ranging from 13 mg/kg to 130 mg/kg and 63 mg/kg to 370 mg/kg, respectively.

The PCB Aroclor 1254 was detected in 2 of the 12 samples analyzed at concentrations of 0.2 mg/kg (TP-4) and 16 mg/kg (E-6). Material containing PCBs that equal or exceed 50 mg/kg require disposal at a Toxic Substances Control Act (TSCA)-permitted landfill.

Several VOCs, including acetone, 4-isopropyltoluene, naphthalene, and xylene, were detected in 3 of the 12 samples analyzed, at concentrations ranging from 0.0051 mg/kg to 0.29 mg/kg. Several SVOCs, including benzo(a)anthracene, benzo(k)anthracene, benzo(a)pyrene, chrysene, fluoranthene, indeno(1,2,3-c,d)pyrene, benzo(a)fluoranthene, benzo(g,h,i)perylene, phenanthrene, and pyrene were detected in 2 of the 12 samples analyzed, at concentrations ranging from 1.7 mg/kg to 20 mg/kg. Other VOCs and SVOCs were not detected at or above their respective laboratory reporting limits.

pH ranged from 7.45 standard units to 11.97 standard units in the 6 samples analyzed. The Federal hazardous waste criteria for corrosivity is pH less 2.5 and greater than 12.5 standard units. Cyanide was detected in 4 of 6 samples, at concentrations ranging from 0.15 mg/kg to 0.47 mg/kg, and sulfide was detected in 2 of 6 samples, at concentrations of 35 mg/kg and 110 mg/kg. The Federal hazardous waste criteria for cyanide and sulfide are 250 mg/kg and 500 mg/kg, respectively. Only trace asbestos was detected at 1 of the 6 samples analyzed. The Federal hazardous waste criteria for friable asbestos is 1%.

Metal Compounds

Several metals were detected in soil samples collected throughout the Site; however, chromium, lead, and nickel were the only metals detected at concentrations (about 10 times the soluble hazardous waste criteria) warranting additional analyses. The remaining metals concentrations were within normal background ranges found in the western United States.

Elevated concentrations of chromium (greater than 50 mg/kg) were detected at all 12 samples analyzed, at concentrations ranging from 51 mg/kg to 400 mg/kg. Eleven of the 12 samples were analyzed for soluble chromium using the STLC by WET method. Concentrations detected were below the State hazardous waste criteria of 5 mg/L for STLC chromium. The sample at B-12, with a total chromium concentration of 260 mg/kg, was not additionally analyzed for chromium since the sample was outside of its hold time for laboratory analysis. Based on soluble chromium concentrations detected in other samples, it is unlikely soils in the area of boring B-12 would have soluble chromium concentrations above 5 mg/L.

Elevated concentrations of lead (greater than 50 mg/kg) were detected at 8 of the 12 samples analyzed, at concentrations ranging from 64 mg/kg to 1,200 mg/kg. Six samples with concentrations of total lead greater than 50 mg/kg, but less than 350 mg/kg, were analyzed for soluble lead using the STLC by WET method. Additionally, two samples with concentrations of total lead greater than 350 mg/kg (disposal limit for non-hazardous solid waste in California landfills) and four samples with concentrations of STLC lead greater than 5 milligram per liter (mg/L) (hazardous waste limit in California) were analyzed by TCLP. Of the samples analyzed, all were below the Federal hazardous waste criteria of 5 mg/L for TCLP lead.

Elevated concentrations of nickel (greater than 200 mg/kg) were detected at 5 of the 12 samples, at concentrations ranging from 240 mg/kg to 1,100 mg/kg. Four of the five samples were analyzed for soluble nickel using the STLC by WET method. A concentration of 21 mg/L nickel was detected at the sample collected from TP-1; the State hazardous waste criteria for STLC nickel is 20 mg/L. The sample at B-12, with a total nickel concentration of 1,100 mg/kg, was not additionally analyzed for nickel since the sample was outside of its hold time for laboratory analysis. Based on soluble nickel concentrations detected in other samples, there is a potential that soluble nickel exceeds the State hazardous waste criteria of 20 mg/L in the area of boring B-12.

Based on the laboratory results, soil near locations EB-6, EB-7, TP-1, TP-3, TP-5, and TP-6 requiring off-site disposal would be classified as a Class I non-Resource Conservation and Recovery Act (RCRA) hazardous waste, or, a State hazardous waste. Since the sample at B-12 was not analyzed for soluble nickel, soil requiring off-site disposal near sampling location B-12 should be re-sampled prior to disposal, or managed as a possible Class I non-RCRA hazardous waste.

7.2 Groundwater Results

Outfall Pipe Area

One groundwater sample was collected at location E-9 at about 10 feet bgs and analyzed for TPHg, TPHd, TPHmo, VOCs, SVOCs, and dissolved metals. The groundwater analytical results are presented in Tables 3 and 4.

TPHd and TPHmo were detected at concentrations of 2,400 micrograms per liter (µg/L) and 2,800 µg/L, respectively. TPHg, VOCs, and SVOCs were not detected above laboratory reporting limits.

Metals antimony, arsenic, barium, chromium, cobalt, mercury, molybdenum, nickel, selenium, and vanadium were detected at concentrations ranging from 0.074 µg/L to 1,100 µg/L. The metals beryllium, cadmium, copper, lead, silver, thallium, and zinc were not detected above laboratory reporting limits.

Detected concentrations of the above compounds were significantly lower than established Regulatory Limits for Batch Wastewater Discharges to the City of San Francisco Water, Power, and Sewer (formerly the Public Utilities Commission) combined sanitary sewer and storm water system [3].

8.0 CONCLUSIONS AND RECOMMENDATIONS

Results of this Site Investigation and the May 2011 geotechnical investigation by T&R/RYCG indicate that the Site is underlain by a debris layer consisting of construction waste and soil to about 19 to 34 feet bgs in the regulated landfill areas east of the 1961 shoreline, and approximately 25 to 40 feet of heterogeneous fill soil with fragments of brick, concrete, and asphalt debris at portions of the Site west of the 1961 shoreline. Field screening for organic vapors and methane did not detect organic vapors or methane above the instrument detection limits.

[3] Regulatory Limits for Batch Wastewater Discharges cited from *Requirements for Batch Wastewater Discharges, Appendix 1,* by the San Francisco Public Utilities Commission, dated July 2008.

Laboratory analytical results indicate that soil at boring and test pit locations EB-6, EB-7, TP-3, TP-5, and TP-6 would be considered a non-RCRA or California hazardous waste for disposal based on total or soluble lead concentrations, and soil at test pit location TP-1 would be considered California hazardous waste for disposal based on soluble nickel concentrations. Since the sample at B-12 was not analyzed for soluble nickel, soil requiring off-site disposal near sampling location B-12 should be re-sampled prior to disposal, or managed as a possible Class I non-RCRA hazardous waste.

A combination of TPHg, TPHd, TPHmo, PCBs, VOCs, and SVOCs were detected in soil samples collected from all boring locations. These compounds in soil may be related to former and current light industrial use at the Site as well as on-site fill and buried debris. These results are consistent with conditions previously found at the Site and other properties in the area.

A Site Mitigation Plan (SMP) should be prepared per Article 22a. The SMP would outline proper soil handling procedures to be implemented during construction and provide recommended measures to mitigate short-term and long-term environmental or health and safety risks caused by the presence of hazardous materials in the soil that will be encountered during excavation activities at the Site. The SMP would also contain contingency plans to be implemented during soil excavation if unanticipated hazardous materials are encountered. Additionally, a Health and Safety (H&S) Plan and Dust Monitoring Plan should be prepared and followed by the project contractors to outline and implement proper construction worker health and safety and monitoring procedures during soil excavation tasks.

During the May 2011 geotechnical investigation and this Site Investigation, groundwater was measured at a depth, before stabilization, of about 10 feet bgs, and a depth of about 17.5 feet bgs, after allowing the groundwater to stabilize overnight. Groundwater has been encountered at depths of up to 30 feet bgs in previous investigations. The groundwater level likely fluctuates seasonally based on rainfall, and is likely influenced by changes in sea level and fluctuations of tides.

TPHd, TPHmo, and several metals detected in groundwater samples collected from the Site were generally consistent with conditions encountered during previous investigations at the Site and surrounding areas. Since the groundwater beneath the Site is not a potential source of drinking water, additional testing or groundwater remediation will not be required. At this time, it is not anticipated that construction dewatering will be necessary as part of Site development, except for possibly at the proposed pump station and deepest part of the outfall line. Additional groundwater sampling would be

required if construction dewatering were to be conducted and the pumped groundwater disposed of into the City's combined sanitary/storm water sewer system.

9.0 LIMITATIONS

Descriptions of specific field activities and historical events are based on our observations and on information provided by others. The opinions and information presented in this report apply to Site conditions and the information that was available at the time the work was performed and do not apply to changes of which we are not aware or have not had the opportunity to evaluate. T&R/RYCG makes no guarantees or warranties with respect to the accuracy or completeness of this information.

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TABLES

Table 1
Soil Analytical Results - Non Metals
Pier 94 Backlands Improvement and
Amador Street Sanitary Pump Station
San Francisco, California
Project: 730509401

Area	Sample ID	Depth (feet) [1.]	Date Sampled	TPHg	TPHd	TPHmo	PCBs [2.]	Acetone	4-isopropyl toluene	Napthalene	Tetra-chloroethene	Total Xylenes	Other VOCs	Benzo(a) anthracene	Benzo(k) anthracene	Benzo(a)pyrene	Chrysene	Fluoranthene	Indeno (1,2,3-c,d) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Phenanthrene	Pyrene	Other SVOCs	Cyanide	Sulfide	Asbestos	pH
				(mg/kg)																							(%)	(pH Units)
Amador Street Force Main Area	E-1	2.0*	12/09/11	<1.0	35	350	<0.25	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ND	--	--	--	--
	E-2	2.0*	12/09/11	<1.0	8.1	100	<0.25	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ND	<0.1	<10	2 (Chrysotile)	9.36
	E-3	2.5, 5.0*	12/09/11	<1.0	7.0	130	<0.25	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ND	--	--	--	--
Pump Station Area	E-4	2.5*, 5.0, 10.0, 15.0	12/09/11	1.3	59	540	<0.5	<0.05	<0.005	<0.005	0.0095	<0.005	ND	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	ND	<0.4	<10	Trace (Chrysotile)	9.83
Amador Street Force Main Area	E-5	2.5*, 5.0	12/09/11	1.4	30	120	<0.5	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ND	0.14	<10	ND	12.24
New Stormwater Line	E-6	2.5, 5.0*, 10.0	12/09/11	3.9	58	320	16	0.11	<0.005	0.0051	<0.005	0.025	ND	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	ND	--	--	--	--
	E-7	2.5*, 5.0, 10.0	12/09/11	2.7	32	170	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ND	0.15	110	ND	11.97
	E-8	2.5, 5.0*, 10.0, 14.0	12/09/11	<1.0	130	300	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	ND	3.9	4.4	7.4	5.5	16	5.2	4.7	7.4	8.6	20	ND	--	--	--	--
	E-9	2.5*, 5.0, 10.0, 14.0	12/09/11	7.7	37	310	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	ND	<0.1	35	Trace (Chrysotile)	8.99
New Outfall	B-12	3.0, 5.0*, 10.0	05/25/11	1.1	58	340	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	ND	--	--	--	--
Vegetated Swales	TP-1	2.5*, 5.0	12/08/11	<1.0	26	74	<0.25	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<1.6	<1.6	1.7	<1.6	2.7	<1.6	<1.6	2.0	<1.6	5.0	ND	--	--	--	--
	TP-2	2.5, 5.0*	12/08/11	1.2	15	76	<0.25	<0.05	0.022	<0.005	<0.005	<0.005	ND	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	ND	0.23	<10	ND	7.94
	TP-3	2.5*, 5.0	12/08/11	<1.0	13	63	<0.25	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ND	--	--	--	--
	TP-4	2.5, 5.0*	12/08/11	3.0	63	120	0.2	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	ND	0.47	<10	ND	7.45
	TP-5	2.5*, 5.0	12/08/11	<1.0	30	220	<0.5	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	ND	--	--	--	--
	TP-6	2.5, 5.0*	12/08/11	<1.0	25	240	<0.5	<0.05	<0.005	<0.005	<0.005	<0.005	ND	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	ND	0.20	<10	ND	7.77
	TP-7	3.0*	12/08/11	3.9	44	370	<0.5	0.29	<0.005	<0.005	<0.005	<0.005	ND	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	ND	<0.1	<10	ND	7.98
Hazardous Waste Criteria																												
TTLC (mg/kg)				NE	NE	NE	50 [3.]	NE	NE	NE	NE	NE	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NA	250	500	1 (%) Friable	2<pH<12.5

Notes:

1.) " * " denotes at which sample depth discrete grab sample analyzed for VOCs. Samples collected at multiple depths were composited at laboratory and analyzed for remaining compounds.

2.) PCB detected was Aroclor 1254.

3.) Material containing PCBs that equal or exceed 50 mg/kg require disposal at a Toxic Substances Control Act (TSCA)-permitted landfill. Title 40 Code of Federal Regulations (CFR), Chapter I, Subchapter R Part 761 governs the uses, investigation, remediation, and disposal of PCB wastes and materials under the TSCA of 1976.

mg/kg - milligrams per kilograms

TPHg - Total Petroleum Hydrocarbons as Gasoline

TPHd - Total Petroleum Hydrocarbons as Diesel

TPHmo - Total Petroleum Hydrocarbons as Motor Oil

PCBs - Polychlorinated Biphenyls

VOCs - Volatile Organic Compounds

SVOCs - Semi-volatile Organic Compounds

< - Analyte was not detected at or above the laboratory reporting limit

-- Not Analyzed

NA - Not applicable

ND - Not detected at or above the laboratory reporting limit

NE - Not established

TTLC - California Total Threshold Limit Concentration - State hazardous waste criterion

Table 2
Soil Analytical Results - Metals
Pier 94 Backlands Improvement and
Amador Street Sanitary Pump Station
San Francisco, California
Project: 730509401

Area	Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	STLC Chromium	Cobalt	Copper	Lead	STLC Lead	TCLP Lead	Mercury	Molybdenum	Nickel	STLC Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
				(mg/kg)						(mg/L)	(mg/kg)			(mg/L)		(mg/kg)								
Amador Street Force Main Area	E-1	2.0	12/09/11	0.90	3.6	580	<0.5	<0.25	49	--	10	38	13	--	--	<0.05	<0.50	25	--	<0.50	<0.50	<0.50	34	270
	E-2	2.0	12/09/11	<0.5	1.7	100	<0.5	<0.25	800	0.094	57	31	6.4	--	--	0.051	<0.50	830	1.0	<0.50	<0.50	<0.50	55	44
	E-3	2.5, 5.0	12/09/11	<0.5	1.6	89	<0.5	<0.25	620	1.7	53	30	6	--	--	<0.05	<0.50	970	7.0	<0.50	<0.50	<0.50	42	40
Pump Station Area	E-4	2.5, 5.0, 10.0, 15.0	12/09/11	<0.5	4.8	260	<0.5	<0.25	150	0.75	40	39	76	2.4	--	1.2	0.94	520	5.1	<0.50	<0.50	<0.50	48	56
Amador Street Force Main Area	E-5	2.5, 5.0	12/09/11	0.78	4.6	200	<0.50	<0.25	62	0.63	7.7	31	39	--	--	0.098	0.89	58	--	<0.50	<0.50	<0.50	45	140
New Stormwater Line	E-6	2.5, 5.0, 10.0	12/09/11	1.7	18	100	<0.50	0.40	130	0.40	21	47	160	**21**	4.0	0.31	1.1	310	1.2	<0.50	<0.50	<0.50	58	120
	E-7	2.5, 5.0, 10.0	12/09/11	1.5	5.5	140	<0.50	0.29	51	0.75	7.9	41	67	**6.8**	<0.2	0.25	1.6	61	--	<0.50	<0.50	<0.50	41	100
	E-8	2.5, 5.0, 10.0, 14.0	12/09/11	0.57	9.2	62	<0.50	<0.25	400	0.65	15	38	39	--	--	0.16	3.4	160	--	<0.50	<0.50	<0.50	46	68
	E-9	2.5, 5.0, 10.0, 14.0	12/09/11	0.84	7.4	74	<0.50	<0.25	110	0.51	19	22	64	2.4	--	0.30	0.69	240	2.6	<0.50	<0.50	<0.50	44	99
New Outfall	B-12	3.0, 5.0, 10.0	05/25/11	0.63	2.9	54	<0.5	<0.25	260	--	51	20	34	--	--	0.077	0.59	1,100	--	<0.50	<0.50	<0.50	44	59
Vegetated Swales	TP-1	2.5, 5.0	12/08/11	0.55	3.9	31	<0.5	<0.25	290	4.3	43	26	33	--	--	0.14	<0.50	700	**21**	<0.50	<0.50	<0.50	36	63
	TP-2	2.5, 5.0	12/08/11	1.7	4.8	200	0.51	0.5	53	0.16	9.8	75	98	2.8	--	0.42	<0.50	130	--	<0.50	<0.50	<0.50	37	180
	TP-3	2.5, 5.0	12/08/11	3.5	9.7	540	0.55	0.61	110	0.17	24	110	150	**5.5**	<0.2	0.65	1.0	110	--	<0.50	<0.50	<0.50	100	230
	TP-4	2.5, 5.0	12/08/11	6.7	12	480	0.51	2.0	71	0.51	21	110	390	--	0.21	0.97	1.3	87	--	<0.50	<0.50	<0.50	48	670
	TP-5	2.5, 5.0	12/08/11	1.9	6.2	190	<0.5	0.5	100	0.35	14	52	150	**11**	0.28	0.54	0.53	120	--	<0.50	<0.50	<0.50	100	340
	TP-6	2.5, 5.0	12/08/11	6.7	10	480	<0.5	2.2	77	0.40	12	160	**1,200**	--	1.2	0.88	1.4	83	--	<0.50	0.62	<0.50	47	960
	TP-7	2.5, 5.0	12/08/11	<0.5	3.2	65	<0.5	<0.25	150	0.38	55	19	37	--	--	0.21	<0.5	1,000	5.9	<0.50	<0.50	<0.50	42	61
Hazardous Waste Criteria																								
TTLC (mg/kg)				500	500	10,000	75	100	2,500	NA	8,000	2,500	1,000	NA	NA	20	3,500	2,000	NA	100	500	700	2,400	5,000
STLC (mg/L)				15	5.0	100	0.75	1.0	NA	5	80	25	NA	5.0	NA	0.2	350	NA	20	1.0	5	7.0	24	250
TCLP (mg/L)				NE	5.0	100	NE	1.0	NA	5	NE	NE	NA	NA	5.0	0.2	NE	NA	NE	1.0	5	NE	NE	NE

Notes:
1.) Samples were collected at multiple depths, composited at laboratory, and analyzed for metals.
mg/kg - milligrams per kilograms
mg/L - milligrams per Liter
< - Analyte was not detected at or above the laboratory reporting limit
-- Not analyzed
NA - Not applicable
NE - Not established
TTLC - California Total Threshold Limit Concentration - State hazardous waste criterion
STLC - California Soluble Threshold Limit Concentration - State hazardous waste criterion
TCLP - Federal Toxicity Characteristic Leaching Potential Analysis - Federal hazardous waste criterion
Bold Result with Gray Shading indicates result exceeds Hazardous Waste Criteria

Table 3
Groundwater Analytical Results - Non Metals
Pier 94 Backlands Improvement and
Amador Street Sanitary Pump Station
San Francisco, California
Project: 730509401

Area	Sample ID	Date Sampled	TPHg	TPHd	TPHmo	VOCs	SVOCs
			(µg/L)				
New Stormwater Line	E-9-GW	12/09/11	<50	2,400	2,800	ND	ND
Regulatory Limit							
Regulatory Limit for Batch Wastewater Discharges (µg/L)			NE	NE	100,000 [1.)]	NA	NA

Notes:

1.) Regulatory Limit shown for TPHmo is the Regulatory Limit for Hydrocarbon Oil and Grease; the Regulatory Limit for Total Recoverable Oil and Grease is 300,000 µg/L.

µg/L - micrograms per Liter

TPHg - Total Petroleum Hydrocarbons as Gasoline

TPHd - Total Petroleum Hydrocarbons as Diesel

TPHmo - Total Petroleum Hydrocarbons as Motor Oil

VOCs - Volatile Organic Compounds

SVOCs - Semi-volatile Organic Compounds

< - Analyte was not detected at or above the laboratory reporting limit

NA - Not applicable

ND - Not detected at or above the laboratory reporting limit

NE - Not established

Regulatory Limits for Batch Wastewater Discharges cited from *Requirements for Batch Wastewater Discharges, Appendix 1,* by the San Francisco Public Utilities Commission, dated July 2008.

Table 4
Groundwater Analytical Results - Metals
Pier 94 Backlands Improvement and
Amador Street Sanitary Pump Station
San Francisco, California
Project: 730509401

Area	Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			(µg/L)																
New Stormwater Line	E-9-GW	12/09/11	2.9	2.3	1,100	<0.5	<0.25	1.4	3.3	<0.5	<0.5	0.074	9.9	14	2.8	<0.19	<0.5	1.4	<5.0
Regulatory Limit																			
Regulatory Limit for Batch Wastewater Discharges (µg/L)			NE	4,000	NE	NE	500	5,000	NE	4,000	1,500	50	NE	2,000	NE	600	NE	NE	7,000

Notes:
µg/L - micrograms per Liter
< - Analyte was not detected at or above the laboratory reporting limit
NE - Not established

Regulatory Limits for Batch Wastewater Discharges cited from *Requirements for Batch Wastewater Discharges, Appendix 1,* by the San Francisco Public Utilities Commission, dated July 2008.

FIGURES

Base map: The Thomas Guide
San Francisco County
1999

0 1/4 1/2 Mile

Approximate scale

PIER 94 BACKLANDS IMPROVEMENT AND AMADOR STREET SANITARY PUMP STATION
San Francisco, California

T&R / RYCG
A Joint Venture

SITE LOCATION MAP

Date 04/12/11	Project No. 730509401	Figure 1

Reference: Base map from a drawing and electronic file provided by the Port of San Francisco, delivered 04/08/11 and Google Earth Pro, 2011.

EXPLANATION

- Approximate location of proposed Amador Street forcemain and pump station
- Approximate location of proposed vegetated swales and outfall pipe
- Approximate lateral extent of regulated landfill
- E-1 — Approximate location of environmental boring
- TP-1 — Approximate location of test pit
- B-12 — Approximate location of geotechnical boring

0 300 Feet

Approximate scale

PIER 94 BACKLANDS IMPROVEMENT AND AMADOR STREET SANITARY PUMP STATION
San Francisco, California

ENVIRONMENTAL SAMPLING LOCATIONS

Date 12/23/11	Project No. 730509401	Figure 2

T&R / RYCG
A Joint Venture

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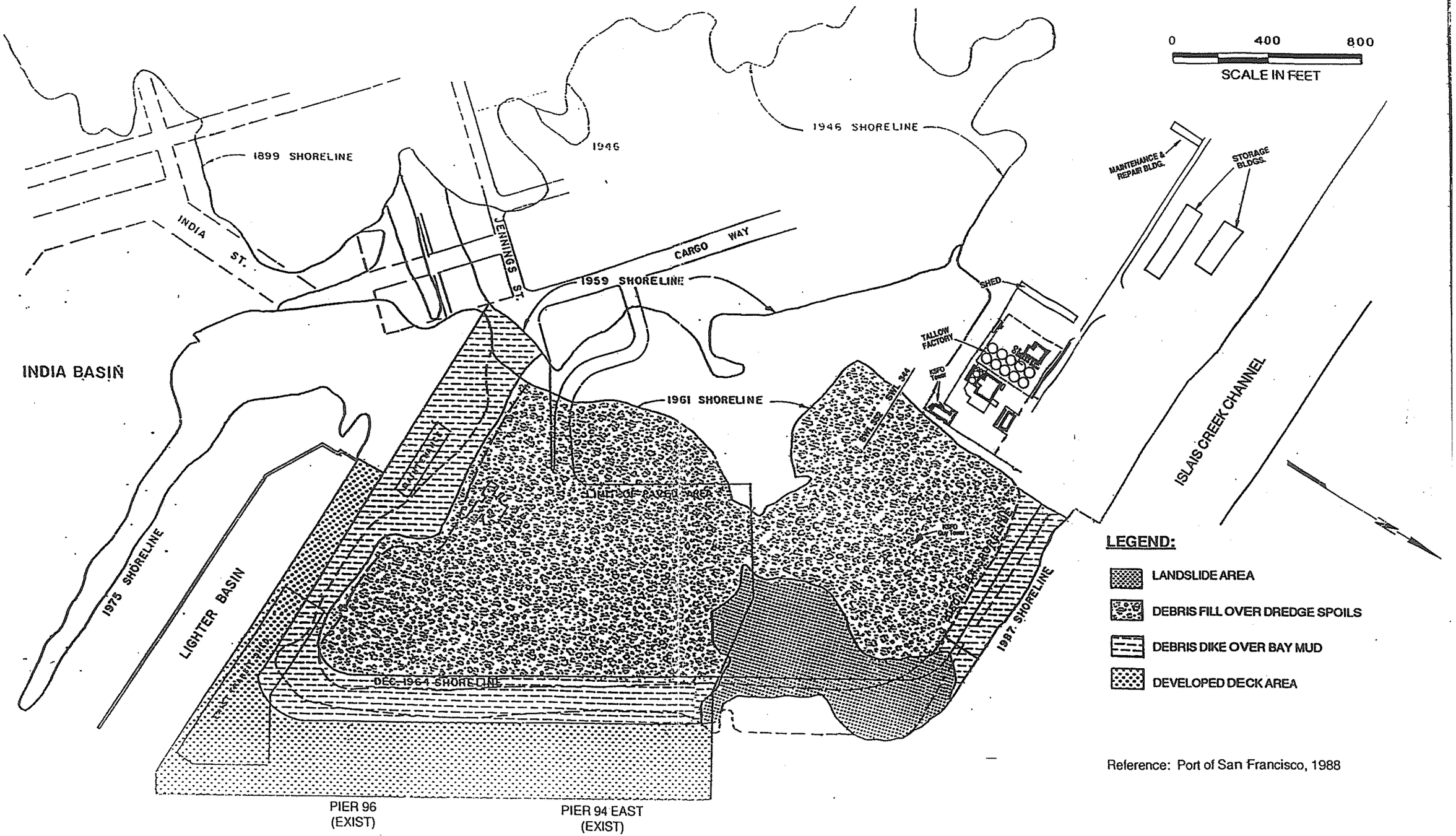
APPENDIX A

Historical Shoreline Map



Reference: Port of San Francisco, 1988

Geo/ Resource Consultants, Inc.
GEOLOGISTS / ENGINEERS / ENVIRONMENTAL SCIENTISTS
851 HARRISON STREET, SAN FRANCISCO, CALIFORNIA 94107

Job No. 1419-094 Appr. _____ Date 11/27/89

LANDFILL AREAS ACCORDING TO THE PORT OF SAN FRANCISCO
PIER 94 SOLID WASTE DISPOSAL SITE
SUBCHAPTER 15 COMPLIANCE
PORT OF SAN FRANCISCO
SAN FRANCISCO, CALIFORNIA

FIGURE 6

T&R / RYCG
A Joint Venture

APPENDIX B

Exploratory Boring and Test Pit Logs

PROJECT: **PIER 94 BACKLANDS IMPROVEMENTS**
San Francisco, California

Log of Boring B-12

Boring location: See Site Plan, Figure 2
Logged by: M. McKee
Date started: 5/25/11 Date finished: 5/25/11
Drilling method: Hollow Stem Auger
Hammer weight/drop: 140 lbs./30 inches Hammer type: Automatic
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT), Dames & Moore (D&M)

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
						Ground Surface Elevation: 1.5 feet[2]						
1					SM	SILTY SAND with GRAVEL (SM) brown, loose, moist, with fine-grained gravel, trace wood, brick, and concrete fragments						
2	GRAB											
3	S&H		9 7 7	10	GP-GC	GRAVEL with SAND and CLAY (GP-GC) bluish-gray and green, loose to medium dense, moist, serpentinite fragments						
4												
5			4			CLAYEY SAND (SC) greenish-gray, loose to medium dense, moist, trace angular fine-grained gravel trace asphalt						
6	S&H		5 9	10								
7	SPT		2 4 4	10		grades olive, trace concrete at 6.5 feet grades bluish-gray at 7 feet						
8												
9												
10			3			▽ (05/25/11) grades dark gray to black, loose to medium dense, with clasts of dark gray clay, brick and wood, trace glass, wet						
11	S&H		5 6	8								
12	SPT		2 6 9	18	SC							
13												
14												
15			24									
16	S&H		16 20	25								
17	SPT		10 21 36	68		wood (65%)						
18												
19												
20			12		SP	SAND (SP) gray, wet, fine-grained						
21	S&H		11 12	16		SAND with CLAY (SP-SC) black and olive, medium dense, wet						
22												
23												
24												
25			18		SP-SC	wood (95%)						
26	S&H		7 9	11								
27						grades to black clayey sand and wood at 27 feet						
28												
29												
30												

DEBRIS DIKE

T&R / RYCG
A Joint Venture

Project No.: 730509401
Figure: A-12a

TEST GEOTECH LOG 730509401.GPJ TR.GDT 11/22/11

PROJECT: **PIER 94 BACKLANDS IMPROVEMENTS**
San Francisco, California

Log of Boring B-12

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ 6"	SAMPLES: SPT N-Value[1]	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	S&H		12 7 9	11	SP-SC	SAND with CLAY (SP-SC) (continued)						
32	SPT		1 2 1	4		very loose to loose, trace glass fragments, less clayey						
33												
34												
35			20			DEBRIS DIKE						
36	S&H		14 12	18		medium dense, black sand (5 - 10%) and wood (90 - 95%)						
37												
38												
39												
40			7			loose						
41	S&H		4 3	5			TV		1,000			
42					CH	CLAY (CH) gray, medium stiff, wet, high plasticity, some shells						
43	D&M		14	200 psi		BAY MUD	TV		1,000			
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

Boring terminated at a depth of 43.5 feet below ground surface.
Boring backfilled with cement grout.
Groundwater measured at 10 feet below ground surface during drilling.
TV = torvane

[1] S&H and SPT blow counts for the last two increments were converted to SPT N-Values using factors of 0.7 and 1.2, respectively to account for sampler type and hammer energy.
[2] Elevations based on San Francisco City Datum.

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Project No.: 730509401
Figure: A-12b

TEST GEOTECH LOG 730509401.GPJ TR.GDT 11/22/11

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-1	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J.MEDLEY	TIME	
							Surface Conditions: Asphalt roadway	START	FINISH
								07:20	07:30
1				0 ppm VOCs 0 % LEL					
2			E-1-2.0			SP	Sand (SP) with clay and subrounded gravel, fill, greenish gray		
3							Refusal at 2 feet - possible concrete slab at 2 feet bgs		
4							Borehole backfilled with cement grout to the surface		
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
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21									
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23									
24									
25									

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Drawn By:	BORING LOG E-1	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-2	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J.MEDLEY	TIME	
							Surface Conditions: Asphalt roadway	START	FINISH
								08:00	08:15
1				0 ppm VOCs 0 % LEL					
2			E-2-2.0			SP	SAND (SP) with clay and subrounded gravel, fill, brownish gray		
3							Refusal at 2 feet - possible concrete slab at 2 feet bgs		
4							Borehole backfilled with cement grout to the surface		
5									
6									
7									
8									
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11									
12									
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Drawn By:	BORING LOG E-2	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-3	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J. Medley	TIME	
							Surface Conditions: Asphalt	START	FINISH
							4 inches asphalt	08:28	08:45
1									
2			E-3-2.5		48/25	SP	SAND(SP) fill with trace gravel, greenish gray		
3				0 ppm VOCs					
4				0 % LEL					
5			E-3-5.0		12/12				
6							Borehole terminated at 5 feet bgs		
7							Backfilled with cement grout to surface		
8									
9									
10									
11									
12									
13									
14									
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24									
25									

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Drawn By:	BORING LOG E-3	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RSY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-4	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J. Medley	TIME	
							Surface Conditions: Concrete	START	FINISH
							6 inches concrete	0853	0915
1						SP	SAND (SP) fill with trace gravel, reddish brown		
2	■		E-4-2.5		48/24				
3				0 ppm VOCs					
4				0 % LEL		SP	SAND (SP) fill with trace gravel, color change to greenish gray		
5	■		E-4-5.0						
6							▽Moisture at 6.5 feet		
7				0 ppm VOCs	48/44	SP	SAND (SP) with trace amounts of clay petroleum odor observed at 7 feet bgs		
8				0 % LEL					
9									
10	■		E-4-10		48/24				
11				0 ppm VOCs		CL	CLAY (CL) with sand, brown		
12				0 % LEL					
13						CL	CLAY (CL) with silt and some sand; Bay Mud, wet, dark greenish		
14				0 ppm VOCs 0 % LEL	48/48				
15	■		E-4-14						
16							Boring terminated at 16 feet bgs Borehole backfilled with cement grout to surface		
17									
18									
19									
20									
21									
22									
23									
24									
25									

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Drawn By:	BORING LOG E-4	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RSY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-5	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J. Medley	TIME	
							Surface Conditions: Concrete	START	FINISH
							6 inches concrete	09:25	09:45
1						SP	SAND (SP) fill with some clay and trace gravel, greenish gray		
2			E-5-2.5		48/40				
3				0 ppm VOCs					
4				0 % LEL					
5			E-5-5.0		12/12				
6							Borehole terminated at 5 feet bgs		
7							Borehole backfilled with cement grout to surface		
8									
9									
10									
11									
12									
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Drawn By:	BORING LOG E-5	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RSY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-6
							DRILLING METHOD: Geoprobe	
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J Medley
							SAMPLER(S): J. Medley	TIME
							Surface Conditions: Concrete	START 09:52 / FINISH 10:15
							6 inches concrete	
1						SP	SAND (SP), fill, dark brown	
2			E-6-2.5		48/24			
3				0 ppm VOCs 0 % LEL				
4								
5			E-6-5.0					
6					48/30			
7				0 ppm VOCs 0 % LEL				
8						CL	CLAY (CL) with trace sand, brown	
9								
10			E-6-10		48/44		▽ Moist at 10 feet	
11				0 ppm VOCs 0 % LEL				
12						CL	CLAY (CL) with sand, dark brown	
13					24/20		Petroleum odor observed	
14							Boring terminated at 14 feet below ground surface Borehole backfilled with cement grout to surface	
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

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Drawn By: JHM	BORING LOG E-6 Amador Street Pump Station Environmental Investigation	Project No. 2011-011
Reviewed By: RSY		Sheet 1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-7
							DRILLING METHOD: Geoprobe	
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J Medley
							SAMPLER(S): J. Medley	TIME
							Surface Conditions: Asphalt	START: 10:30 / FINISH: 1048
1						SP	SAND (SP) fill with gravel, grayish brown	
2					48/24			
2			E-7-2.5			SP	SAND (SP) with trace fines	
3				0 ppm VOCs				
4				0 % LEL				
5			E-7--5.0		36/32			
6								
7				0 ppm VOCs			FILL, very hard material, concrete pieces, sand	
8				0 % LEL				
8					36/24		Wood debris, concrete rubble	
9								
10			E-7-10					
10							Boring terminated at 10 feet below ground surface Borehole backfilled with cement grout to surface	
11								
12								
13								
14								
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22								
23								
24								
25								

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Drawn By:	BORING LOG E-7	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RSY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-8
							DRILLING METHOD: Geoprobe	
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J Medley
							SAMPLER(S): J Medley	TIME
							Surface Conditions: Grass	START 11:40 / FINISH 12:08
1						SP	SAND (SP) fill with gravel, brownish gray	
2					48/36			
			E-8-2.5				Pieces of glass, concrete rubble	
3				0 ppm VOCs				
4				0 % LEL				
5			E-8-5.0					
6					48/30			
7								
8				0 ppm VOCs				
				0 % LEL		SP	SAND (SP) fill with clay, wood debris	
9								
10			E-8-10		48/44			
11							▽ Moist at approximately 10.5 feet	
12				0 ppm VOCs				
				0 % LEL				
13						SP	SAND (SP) fill with clay	
14			E-8-14		24/20			
							Boring terminated at 14 feet below ground surface Borehole backfilled with cement grout to surface	
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

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Drawn By: JHM	BORING LOG E-8 Amador Street Pump Station Environmental Investigation	Project No. 2011-011
Reviewed By: RSY		Sheet 1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-9
							DRILLING METHOD: Geoprobe	
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J Medley
							SAMPLER(S): J. Medley	TIME
							Surface Conditions: Grass	START 10:57 / FINISH 11:38
1						SP	SAND (SP) with gravel, grayish brown fill	
2			E-9-2.5		48/36			
3								
4				0 ppm VOCs 0 % LEL		SP	SAND (SP) fill with clay	
5			E-9-5.0					
6					48/40	SP	SAND (SP) Fill with clay, trace gravel; wood debris	
7								
8				0 ppm VOCs 0 % LEL				
9					48/42			
10			E-9-10			SP	▽SAND (SP) fill with gravel and wood debris, concrete rubble dark brown; wet at 10 feet	
11								
12								
13				0 ppm VOCs 0 % LEL				
14			E-9-14		24/20		Boring terminated at 14 feet below ground surface Borehole backfilled with cement grout to surface Grab groundwater sample collected at 11:18	
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

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Drawn By: JHM	BORING LOG E-9 Amador Street Pump Station Environmental Investigation	Project No. 2011-011
Reviewed By: RSY		Sheet 1 of 1

Depth (feet)	Sample	Sample No.	Time	Air Monitoring Results	U.S.C.S. Classification	DATE DRILLED: 12/8/2011	Log of Boring: **TP-1**	
						TEST PIT METHOD: Backhoe		
						HAMMER WEIGHT: --	DROP: --	LOGGED BY: RNBM
						SAMPLER(S): J. Medley	TIME START: 7:50	TIME FINISH: 8:05
						Surface Conditions: Grass/Brush		
1					SP	Brown, dry, poorly sorted fine SAND, trace silt, trace medium sand, little medium to coarse sub-rounded gravel. Some brick fragments		
2					SP	Brown, damp, poorly sorted fine SAND, trace silt, trace medium sand, little medium to coarse sub-rounded gravel. Some brick and wood fragments		
		TP-1-2.5	7:58	0 ppm VOC 0 % LEL	CL	Grey-green damp CLAY, some fine sand		
3								
					CL	Grey-green damp CLAY, some fine sand, trace medium sand		
4					SP	Grey, poorly-sorted medium SAND, little fine sand, trace clay, trace fine to coarse sub-angular gravel		
		TP-1-5	8:02	0 ppm VOC 0 % LEL				
5						Test pit advanced to 5 feet below grade surface		
6								
7								
8								
9								
10								
11								

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Drawn By: RNBM

Reviewed By: JM

37°44.737' N 122°22.765'W

Project No. 2011-11

Sheet 1 of 7

Depth (feet)	Sample	Sample No.	Time	Air Monitoring Results	U.S.C.S. Classification	
						DATE DRILLED: 12/8/2011 — **Log of Boring: TP-2**
						TEST PIT METHOD: Backhoe
						HAMMER WEIGHT: -- DROP: -- LOGGED BY: RNBM
						SAMPLER(S): J. Medley
						Surface Conditions: Grass/Brush
						TIME: START 8:20 FINISH 8:28
						Topsoil, roots
1					SP	Brown, dry, poorly sorted fine SAND, trace medium sand, little fine to coarse sub-rounded gravel, some brick fragments
2					SP	Red-brown, dry, poorly sorted fine SAND, trace medium sand, little fine to coarse sub-rounded gravel, some brick fragments, trace medium angular cobbles.
		TP-2-2.5	8:24	0 ppm VOC 0 % LEL	SP	Brown-black, dry, poorly sorted fine SAND, trace medium sand, little fine to coarse sub-rounded gravel, trace medium cobbles.
3						
					SP	Brown-black, dry, poorly sorted fine SAND, trace medium sand, little fine to coarse sub-rounded gravel, trace medium cobbles trace brick debris
4					SP	
						Tan-green, poorly sorted fine SAND, trace silt, trace medium sand, little fine to coarse sub-rounded gravel, trace fine cobbles, no odor
		TP-2-5	8:27	0 ppm VOC 0 % LEL		
5						Test pit advanced to 5 feet below grade surface
6						
7						
8						
9						
10						
11						

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Drawn By: RNBM

Reviewed By: JM

37°44.693' N 122°22.859'W

Project No. 2011-11

Sheet 2 of 7

Depth (feet)	Sample	Sample No.	Time	Air Monitoring Results	U.S.C.S. Classification	DATE DRILLED: 12/8/2011	Log of Boring: TP-3		
						TEST PIT METHOD: Backhoe			
						HAMMER WEIGHT: --	DROP: --	LOGGED BY: RNBM	
						SAMPLER(S): J. Medley		TIME	
						Surface Conditions: Grass/Brush		START	FINISH
						Topsoil		8:37	8:46
1					SP	Brown, dry, poorly-sorted fine SAND, trace silt, trace medium sand, little fine to medium sub-rounded gravel, trace coarse gravel,trace wood and brick pieces, trace large cobbles			
2									
3		TP-3-2.5	8:41	0 ppm VOC 0 % LEL					
4					SP	Brown, dry, poorly-sorted fine SAND, trace silt, trace medium sand, little fine to medium sub-rounded gravel, trace coarse gravel,little wood and brick pieces, trace large cobbles			
5		TP-3-5	8:45	0 ppm VOC 0 % LEL					
6						Test pit advanced to 5 feet below grade surface			
7									
8									
9									
10									
11									

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Drawn By:		Project No.
RNBM	37°44.685' N 122°22.909'W	2011-11
Reviewed By:		Sheet
JM		3 of 7

Depth (feet)	Sample	Sample No.	Time	Air Monitoring Results	U.S.C.S. Classification	DATE DRILLED: 12/8/2011	Log of Boring: TP-4		
						TEST PIT METHOD: Backhoe			
						HAMMER WEIGHT: --	DROP: --	LOGGED BY: RNBM	
						SAMPLER(S): J. Medley		TIME	
						Surface Conditions: Grass/Brush		START	FINISH
						Topsoil		8:57	9:08
1					SP	Brown, dry, poorly-sorted fine SAND, little medium sand, little fine to coarse sub-rounded gravel, trace silt			
2				0 ppm VOC	SP	Brown-black, wet, poorly-sorted fine SAND, trace silt, some wood fragments, trace plastic and other debris, trace fine to medium sub-rounded gravel			
		TP-4-2.5	9:01	0 % LEL					
3					SP	Brown-grey, wet, poorly-sorted fine SAND, trace silt, some wood fragments, trace plastic and other debris, trace fine to medium sub-rounded gravel			
4					SP	Brown-grey, wet, poorly-sorted fine SAND, little silt, gments, trace wood and other debris, little fine to coarse sub-rounded gravel, hydrocarbon odor			
				0 ppm VOC					
5		TP-4-5	9:07	0 % LEL					
6						Test pit advanced to 5 feet below grade surface			
7									
8									
9									
10									
11									

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Drawn By:		Project No.
RNBM	37°44.657' N 122°22.952'W	2011-11
Reviewed By:		Sheet
JM		4 of 7

Depth (feet)	Sample	Sample No.	Time	Air Monitoring Results	U.S.C.S. Classification	DATE DRILLED: 12/8/2011	Log of Boring: TP-5	
						TEST PIT METHOD: Backhoe		
						HAMMER WEIGHT: --	DROP: --	LOGGED BY: RNBM
						SAMPLER(S): J. Medley	TIME START	TIME FINISH
						Surface Conditions: Grass		
						Topsoil	9:15	9:26
1					SP	Brown, dry, poorly-sorted fine SAND, trace medium sand, little fine to medium sub-rounded gravel and brick fragments, trace large concrete cobbles		
2				0 ppm VOC				
		TP-5-2.5	9:19	0 % LEL	SP	Brown, dry, poorly-sorted fine SAND, trace medium sand, little fine to medium sub-rounded gravel and brick fragments, trace large concrete cobbles, metal, plastic, and brick debris		
3								
4					SP	Brown, dry, poorly-sorted fine SAND, trace medium sand, little fine to coarse sub-rounded gravel and brick fragments, trace large concrete cobbles, metal, plastic, and brick debris		
				0 ppm VOC				
5		TP-5-5	9:23	0 % LEL				
6						Test pit advanced to 5 feet below grade surface		
7								
8								
9								
10								
11								

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Drawn By:		Project No.
RNBM	37°44.626' N 122°22.897'W	2011-11
Reviewed By:		Sheet
JM		5 of 7

Depth (feet)	Sample	Sample No.	Time	Air Monitoring Results	U.S.C.S. Classification	DATE DRILLED: 12/8/2011	Log of Boring: TP-6		
						TEST PIT METHOD: Backhoe			
						HAMMER WEIGHT: --	DROP: --	LOGGED BY: RNBM	
						SAMPLER(S): J. Medley		TIME	
						Surface Conditions: Grass		START	FINISH
						Topsoil		9:33	9:41
1					SP	Brown, dry, poorly-sorted fine SAND, trace medium sand, trace fine to coarse sub-rounded gravel, trace wood fragments			
2				0 ppm VOC					
		TP-6-2.5	9:35	0 % LEL	SP	Brown, dry, poorly-sorted fine SAND, trace medium sand, trace fine to coarse sub-rounded gravel, little wood fragments, trace small cobbles			
3									
4									
					SP	Brown, dry, poorly-sorted fine SAND, trace medium sand, trace fine to coarse sub-rounded gravel, some brick, wood, concrete, plastic fragments, trace small cobbles			
		TP-6-5	9:38	0 ppm VOC 0 % LEL					
5						Test pit advanced to 5 feet below grade surface			
6									
7									
8									
9									
10									
11									

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Drawn By:		Project No.
RNBM	37°44.581' N 122°22.816'W	2011-11
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JM		6 of 7

Depth (feet)	Sample	Sample No.	Time	Air Monitoring Results	U.S.C.S. Classification	DATE DRILLED: 12/8/2011	Log of Boring: TP-7		
						TEST PIT METHOD: Backhoe			
						HAMMER WEIGHT: --	DROP: --	LOGGED BY: RNBM	
						SAMPLER(S): J. Medley		TIME	
						Surface Conditions: Grass		START	FINISH
								9:50	10:10
1					SP	Brown, dry, poorly-sorted fine SAND, trace medium sand, trace coarse sand, little sub-rounded fine to medium gravel			
2				0 ppm VOC	SP	Brown-grey, dry, poorly-sorted fine SAND, trace silt, trace medium sand, trace coarse sand, little sub-rounded fine to coarse gravel			
		TP-7-2.5	9:53	0 % LEL					
3		TP-7-3	10:05		SP	Grey-green, dry, poorly-sorted fine SAND, trace silt, trace medium sand, trace coarse sand, little sub-rounded fine to coarse gravel, some wood, brick, ceramic, concrete, rubber, and metal debris			
4						Wood debris, some concrete, brick, trace fine sand, trace silt, trace medium sand, trace sub-rounded fine to medium gravel			
5				0 ppm VOC 5 % LEL					
6									
7						Test pit advanced to 6 feet below grade surface			
8									
9									
10									
11									

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Drawn By: RNBM	37°44.671' N 122°22.663'W	Project No. 2011-11
Reviewed By: JM		Sheet 7 of 7

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APPENDIX C

Environmental Site Characterization Report,
Amador Street Sanitary Pump Station, San Francisco, California
by AEW Engineering, Inc., dated February 2012
(on CD-ROM)

ENVIRONMENTAL SITE CHARACTERIZATION REPORT
AMADOR STREET SANITARY PUMP STATION
SAN FRANCISCO, CALIFORNIA

PREPARED FOR

PORT OF SAN FRANCISCO, SAN FRANCISCO PUBLIC UTILITIES COMMISSION

AND

T&R/RYCG

FEBRUARY 2012

SUBMITTED BY
AEW ENGINEERING, INC.
55 NEW MONTGOMERY STREET, SUITE 722 ● SAN FRANCISCO ● CALIFORNIA ● 94105
www.aewengineering.com

Version 0

ENVIRONMENTAL SITE CHARACTERIZATION REPORT
AMADOR STREET SANITARY PUMP STATION

SAN FRANCISCO, CALIFORNIA

FEBRUARY 2012

PREPARED FOR:

PORT OF SAN FRANCISCO, SAN FRANCISCO PUBLIC UTILITIES COMMISSION

AND

T&R/RYCG

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1 INTRODUCTION

This Environmental Site Characterization Report (the Report) presents the results of the environmental site investigation conducted in December 2011 (the Site Investigation) at the proposed location of the Amador Street sanitary pump station, in San Francisco, California (the Site) which is located in an area known as by the Port of San Francisco (the Port) as Pier 94 Backlands. The Site Investigation was conducted for the Port under a task order to T&R/RYCG JV (T&R/RYCG). The proposed Amador Street force main and sanitary pump station is located on Amador Street in San Francisco. The location of the Site is shown on Figure 1.

The environmental site investigation was conducted in accordance with the following work plan:

- Site History Report and Sampling and Analysis Plan, Pier 94 Backlands Improvement and Amador Street Sanitary Pump Station, San Francisco, California, prepared by T&R/RYCG, dated July 11, 2011 (the Work Plan) approved by San Francisco Department of Public Health (SFDPH) on September 14, 2011.

1.1 PROJECT DESCRIPTION

The "Pier 94 Backlands" is an approximately 47-acre site, consisting generally of the land bounded by Amador Street and Cargo Way, extending east to the Amador Street Extension (Figure 1). The Port is developing plans to improve approximately 23 acres of the vacant land at the Pier 94 Backlands into 19 acres of leasable property, with remaining acreage to be improved with roads, stormwater management features, and landscaping. The project will include grading and leveling the area to accommodate leasing, installing new infrastructure (an access road and stormwater collection and treatment system), new water and sanitary sewer utilities for the tenant parcels, and a new common restroom facility (T&R/RYCG, 2011). The future force main will be installed along Amador Street, with the excavation expected to be approximately 3 feet wide by 5 feet deep. The proposed Amador Street sanitary pump station will be located on Pier 92, at the property currently leased by the Cemex concrete plant. The pump station is expected to have a footprint of about 10 feet by 20 feet and require an excavation depth of about 12 to 15 feet below ground surface (bgs).

1.2 SITE HISTORY

The western portion of Amador Street was constructed in its general current configuration in 1968. The eastern portion of the road remained as either vacant, undeveloped land or unpaved, dirt road until Amador Street was extended in 2005. The area of the proposed pump station is located at Pier 92. Based on available aerials, this area was vacant, undeveloped land until the concrete plant was constructed in this area in 2005. Other portions of Pier 92, adjacent to the north of Amador Street have historically been occupied by canneries, fisheries, warehouses, and a truck maintenance shop with fuel underground storage tanks (USTs) and aboveground storage tanks (ASTs) (T&R/RYCG, 2011). Detailed descriptions of the site history were provided in the Work Plan.

1.3 SITE INVESTIGATION OBJECTIVES

The objectives of the site investigation are to meet the soil sampling and analysis requirements set forth in Article 22A of the San Francisco Public Health Code for developments where more than 50 yards of soil will be disturbed during construction activities and in accordance with the approved Work Plan. Specifically, the objectives of this soil investigation are as follows:

- Evaluation of chemical conditions in subsurface soil to be disturbed within the Site for compliance with the Article 22A requirement;
- Determination of whether site mitigation activities would be required for the to-be-excavated soil; and
- Waste classification evaluation of soil that may require off-site disposal within the project area.

1.4 REPORT ORGANIZATION

The remainder of this Report is organized into the following sections:

- Section 2 - Field Sampling Protocols describing the sampling method, equipment, chain-of-custody documentation, and sample shipment employed for this site investigation;
- Section 3 - Laboratory Analysis Protocols describing the analyses, including methods performed on the soil samples;
- Section 4 – Results of the Investigation describing the results of chemical analyses performed on soil samples;
- Section 5 – Conclusions and Recommendations presenting the conclusions and recommendations derived from the results of the site investigation; and
- Section 6 – References listing the references cited in this Report.

2 FIELD SAMPLING PROTOCOLS

2.1 PERMITS AND PRE-SAMPLING ACTIVITIES

Prior to field sampling, notifications were made to Underground Services Alert (USA) at least 48-hours prior to the start of the field sampling activities in December 2011 (USA Numbers: 0402255). Copy of the USA notification is included in Appendix A. Underground utility clearances were also performed by utility subcontractor prior to soil sampling on December 7, 2011.

The following permit was obtained from SFDPH:

- Application for Well Construction, Well Destruction or Soil Borings approved by SFDPH on May 18, 2011 (SFDPH Project number 4695).

The following encroachment permit was also obtained from the Port for the drilling of soil borings along Amador Street:

- Application for encroachment permit approved by the Port on December 6, 2011 (Port of SF encroachment permit number 0095E-1940-2011).

Copies of the USA notification, approved soil boring permit and the encroachment permit are included in Appendix A.

2.2 SOIL SAMPLING FROM SOIL BORINGS E-1 THROUGH E-5

The subsurface soil sampling activities for this site investigation included collection of soil samples from five soil borings (E-1 through E-5) for chemical analyses on December 9, 2011. The approximate locations of these soil borings are shown on Figure 2. The total depths of the borings were 2 feet bgs (E-1 and E-2), 5 feet bgs (E-3 and E-5), and 16 feet bgs (E-4), respectively. Soil samples were collected at varying depths and analyzed at the laboratory in accordance with the composite scheme and chemical analyses as listed on Table 1 and in accordance with the approved Work Plan.

Each boring was drilled at the selected location using direct push geoprobe equipment by Gregg Drilling & Testing, Inc., Martinez, California. Soil samples were collected using 4 feet sections of 2-inch diameter acetate liners. At the designated soil sampling depth, a 0.5 feet section of the extruded acetate liner was cut to collect the soil sample for chemical analyses. Soil not scheduled for chemical analyses was reviewed for geologic logging. A boring log was prepared for each boring during the field investigation using the Unified Soil Classification System (USCS) visual-manual procedures (ASTM D-2488-90). Copies of the boring logs are included in Appendix B. Each end of the soil samples was capped immediately with Teflon sheets and plastic caps and labeled with a minimum of the following information:

- Unique Sample Identification in the format of B-DD where B=unique location identification, and DD=sample depth in feet at top of the sample;
- Date and time of collection;
- Samplers' initials; and
- Project number.

The samples were placed in a cooler with double-bagged ice at approximately 4 degrees Celsius (^{o}C) for transportation to McCampbell Analytical Inc. (McCampbell), Pittsburg, California, a certified California laboratory, for chemical analyses. Table 1 presents the list of samples collected for the soil investigation, and the laboratory analyses conducted on the samples. Immediately after sampling, Chain-of-Custody (COC) documentation was prepared in accordance with the procedure described in Section 2.4. In addition, a field-sampling log was prepared and contained, at a minimum, the following information:

- Type of sampling equipment used;
- Sample appearance;
- Sample Identification; and
- Date and time of collection.

No quality assurance/quality control field samples (i.e. duplicates, trip blank, and equipment blank) were collected in accordance with the approved Work Plan.

2.3 GROUNDWATER SAMPLING

Groundwater characterization at the Site was proposed to be conducted by collecting groundwater from boring location E-1 using screened PVC casing and stainless steel bailer sampling equipment at depths below where groundwater was first encountered. However, during the drilling activities at E-1, groundwater was not encountered due to refusal at 2 feet bgs. A step-out boring was attempted at an approximate distance of 5 feet west of E-1; however refusal was also encountered in the step-out at the same depth (2 feet bgs). Additional step-outs were not attempted because drilling was only conducted within the five foot by five foot square area that had been previously cleared for underground utilities.

2.4 CHAIN-OF-CUSTODY DOCUMENTATION

COC documentation was completed by the field sampler immediately following sample collection. The COC documentation is required and necessary to physically trace sample possession from the time of collection to its ultimate disposition. The COC documentation was signed as relinquished or received each time the sample changes possession. The COC documentation, at a minimum, contained the following elements:

- Project name and number;
- Project contact and phone number;
- Name of field samplers;
- Sample identification numbers;
- Sample date and time of collection;
- Sample matrix;
- Number of containers submitted for each sample;
- Sample container type;
- Analyses requested;

- Turnaround time requested for analyses;
- Preservation of sample containers (if applicable);
- Name and address of analytical laboratory; and
- Comments if applicable.

The samples were shipped to McCampbell for chemical analyses. The samples were transported with COC documentation.

3 LABORATORY ANALYSES PROTOCOLS

3.1 SOIL SAMPLES

Soil samples were submitted to McCampbell for chemical analyses. Soil samples from each sampling location were composited as required and analyzed at the laboratory in accordance with the composite scheme and chemical analyses as listed in Table 1.

Because one of the project objectives was to evaluate chemical conditions for potential classification for off-site disposal on the to be excavated soil (TBE Soil), additional leaching tests (California Waste Extraction Test [WET] and United States Environmental Protection Agency's Toxicity Characteristic Leaching Procedure Limits [TCLP]) were proposed to be performed on the analytes for the composites when the total concentration of any metal analyte equaled or exceeded any of the following two criteria:

- ***Ten Times of California's Soluble Threshold Limit Concentrations (STLCs)***. Soil with a total concentration of analyte above its corresponding ten times of STLC but below the respective TTLC is considered as potentially hazardous and would require WET to be conducted to determine whether it is considered as California Class I non-Resource Conservation and Recovery Act (non-RCRA) hazardous material. Soil with total concentration of a metal analyte above its corresponding TTLC is classified as hazardous and would not require WET analyses; or
- ***Twenty Times the United States Environmental Protection Agency's Toxicity Characteristics Leaching Procedure Limits (TCLP Limits)***. Soil with a total concentration of any metal analyte greater than twenty times the corresponding TCLP limit is considered as potentially hazardous under federal regulations and would require TCLP to be conducted to determine whether it is considered as a federal RCRA hazardous material.

The leaching tests conducted on the samples, as listed in Table 1, was determined and requested by Treadwell and Rollo. A list of soil composite samples and analytes requiring WET or TCLP tests is included on Table 1.

3.2 GROUNDWATER SAMPLES

As described in Section 2.3, groundwater was not collected from the proposed borehole E-1 due to refusal encountered in both boring E-1 and the step-out to boring E-1.

3.3 LABORATORY QA/QC PROCEDURES

The following laboratory QA/QC elements were performed by McCampbell for each analytical method utilized on this project:

- Method Blank;
- Laboratory Control Spike;
- Laboratory Control Spike Duplicate;

- Matrix Spike; and
- Matrix Spike Duplicate.

Analytical data reports from the laboratory were reviewed for compliance with laboratory QA/QC criteria for this project. The reported laboratory QA/QC results were within acceptable control limits. Items reviewed include holding time in the laboratory prior to extraction; and percent recovery for laboratory QC samples. Laboratory reports for these QA/QC controls are included in Appendix C of this report.

The laboratory reported date of sample extraction indicates that all samples were extracted and analyzed within their respective EPA recommended holding times. Dates of sample collection, extraction and analysis are included in the laboratory analytical reports provided in Appendix C.

4 RESULTS OF INVESTIGATION

4.1 SITE GEOLOGY

Interpretations of the geology at the Site were developed based on the geologic information observed in the field during this investigation. Copies of the boring logs are included in Appendix B. The surface of the areas investigated is covered by concrete or asphalt road surface, and underlain by sand fill with trace gravel and clay. Bay mud was encountered in the deep boring (E-4) at approximately 13 feet bgs.

4.2 DATA VALIDATION AND REPORTING

Data validation is the systematic process for reviewing a set of data against pre-established criteria to determine the quality of the data. McCampbell reviewed their data for nonconformance and consistency. Upon receipt of the analytical data package from McCampbell, the following items were evaluated and concluded by AEW:

- Data package included all requested deliverables;
- Samples were analyzed as requested;
- Sample holding times were met;
- QC sample results were within established laboratory control limits;
- Appropriate detection limits were obtained;
- Preservation/Temperature;
- Chain of Custody;
- Sample integrity;
- Calibration criteria; and
- Blank sample results.

A systematic effort was made to identify any outliers and/or errors prior to the reporting of the data. Outliers (data values that are significantly different from the population) can result from improper sampling or analytical methodology, matrix interference, errors in data transcription, and real but extreme changes in analytical parameters.

Based on the data validation, no outliers or errors were identified and that the data can be used for its intended purpose.

4.3 RESULTS OF CHEMICAL ANALYSES – SOIL SAMPLES

This section presents summary of the results of chemical analyses performed on the soil samples collected at the site. Laboratory analytical reports are presented in Appendix C. Results of the chemical analyses performed on the soil samples collected during this environmental site investigation are presented in the following tables:

- Table 2 for Volatile Organic Chemicals (VOCs), Semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPHs) as gasoline, diesel and motor oil, benzene/toluene/ethylbenzene/xylenes (BTEX), methyl tert-butyl ether (MTBE), polychlorinated biphenyls (PCBs), cyanide, sulfide and asbestos in soil samples; and
- Table 3 for California Codes of Regulations Title 22 metals (Title 22 Metals) and pH in soil samples;

4.3.1 Soil Analytical Result Evaluation Criteria

Results of the chemical analyses were evaluated using the following regulatory criteria:

- ***California Regional Water Quality Control Board (RWQCB) – San Francisco Bay Region's Environmental Screening Levels for Shallow Soil (less than 3 meters deep) under Commercial/Industrial Scenario and with No Potential Use of Groundwater as Drinking Water (ESLs), (Table B), May 2008***. This criterion is employed to evaluate whether potential contamination is present in shallow soil at the site that may require further investigation. This criterion is employed for this evaluation because the project area is located within an industrial area along Amador Street and there is no anticipated groundwater use as drinking water. Chemicals with concentrations below the commercial criteria are considered as not posing a risk of adverse effects to humans and the environment, and therefore additional site investigation or remediation would not be required for the respective chemical by the RWQCB – San Francisco Region. Soil below this criterion and within the area of contamination can be reused onsite if needed;
- ***RWQCB – San Francisco Bay Region's Environmental Screening Levels for Deep Soil (greater than 3 meters deep) under Commercial/Industrial Scenario and with No Potential Use of Groundwater as Drinking Water (ESLs), (Table D), May 2008***. This criterion is employed to evaluate whether potential contamination is present in deeper soil at the site that may require further investigation. This criterion is employed for this evaluation because the project area is located within the VA hospital grounds and there is no anticipated groundwater use as drinking water. Chemicals with concentrations below the commercial criteria are considered as not posing a risk of adverse effects to humans and the environment, and therefore additional site investigation or remediation would not be required for the respective chemical by the RWQCB – San Francisco Region. Soil below this criterion and within the area of contamination can be reused onsite if needed;
- ***RWQCB – San Francisco Bay Region's ESLs Direct Exposure Construction/Trench Worker Exposure Scenario, (Table K-3), May 2008.*** This criterion is employed to evaluate whether exposure of soil at the Site is at risk of adverse effects to site workers during construction. Chemicals with concentrations below the respective ESLs are not considered to pose a significant risk to site workers, and therefore additional health and safety protocols may not be necessary for the respective chemical for worker protection. However, actual requirements of the appropriate health and safety protocols for worker protection for the chemicals in soil during the construction of the project at the site shall be evaluated, identified, and developed by the entity who will prepare the site specific health and safety plans for this project;

- ***Integrated Risk Assessment Branch, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency –California Human Health Screening Levels (CHHSLs) – Residential Scenario, September 2010.*** This criterion is employed to evaluate whether exposure of chemicals in soil at the site is at risk of adverse effects to human health. Concentrations below the CHHSL are not considered to pose a significant human health risk based on a commercial/industrial scenario;
- ***California Total Threshold Limit Concentrations (TTLCs)***. Soil with concentration of any analyte exceeding the corresponding TTLC value is considered as a minimum as California Class I non-Resource Conservation and Recovery Act (non-RCRA) hazardous material for disposal purposes;
- ***California Soluble Threshold Limit Concentrations (STLCs)***. Soil with soluble concentrations of any analyte, as determined by California's Waste Extraction Test (WET), exceeding the corresponding STLCs value is considered as a minimum as California Class I non-RCRA hazardous material for disposal purposes;
- ***Ten Times of STLCs***. Soil with a total concentration of any analyte above the corresponding ten times of STLC is considered as potentially hazardous and would require WET to be conducted on the respective analyte to determine whether it is considered as a California Class I non-RCRA hazardous material for disposal purposes;
- ***Twenty Times United States Environmental Protection Agency's (USEPA's) Toxicity Characteristics Leaching Procedure Limits (TCLPs)***. Soil with a total concentration of any analyte above twenty times over the corresponding TCLP is considered as potentially hazardous and would require TCLP to be conducted on the respective analyte to determine whether it is considered as a federal RCRA hazardous material for disposal purposes; and
- ***TCLPs***. Soil with a soluble concentration of an analyte, as determined by USEPA's TCLP test, exceeding the corresponding TCLP criteria is considered as a federal RCRA hazardous material for disposal purposes.

4.3.2 Results - Soil Samples from Soil Borings E-1 through E-5

Results of the chemical analyses performed on the composites of soil samples collected from soil borings E-1 through E-5 are listed in Tables 2 and 3. During the field sampling, no odors or discoloration was observed in the soil cuttings of these five borings. Results of the soil analyses are described below:

- ***Volatile Organic Compounds (VOCs)***. Results of the VOCs analyses from the subsurface soil samples are listed in Table 2 and are described below:
  - Tetrachloroethene was detected at concentrations ranging from below the detection limit of 0.005 milligrams per kilogram (mg/Kg) to 0.0095 mg/Kg. These concentrations were all below the ESLs for commercial/industrial use and construction worker scenarios; and
  - All other analyzed VOCs were reported below their respective detection limits from discrete and composite samples from borings E-1 through E-5.
- ***Semi-Volatile Organic Compounds (SVOCs)***. As listed in Table 2, all analyzed SVOCs were reported below their respective detection limits for discrete samples collected

from borings E-1 and E-2, and for composite samples collected from borings E-3, E-4 and E-5;

- ***TPHs***. Results of the TPHs analyses from the subsurface soil samples are listed in Table 2 and are described below:
  - TPHs as gasoline was reported in the discrete and composite soil samples at concentrations ranging from below the detection limit of 1 milligram per kilogram (mg/Kg) to 1.4 mg/Kg. These concentrations were all below the ESLs for commercial/industrial use and construction worker scenarios;
  - TPHs as diesel was reported in the soil composites at concentrations ranging from 7.0 mg/Kg to 59 mg/Kg.. The concentrations were all below the ESLs for commercial/industrial use and construction worker scenarios;
  - TPHs as motor oil was reported in the soil composites at concentrations ranging from 100 mg/Kg to 540 mg/Kg. The concentrations were all below the ESLs for commercial/industrial use and construction worker scenarios; and
  - No BTEX and MTBE were detected in any soil composites above the respective detection limits.
- ***Polychlorinated Biphenyls (PCBs).*** As listed in Table 2, PCBs were reported at concentrations below the detection limits of 0.25 mg/Kg to 0.5 mg/Kg in each sample;
- ***Cyanide.*** Cyanide was reported at concentrations ranging from below the detection limit of 0.1 mg/Kg to 0.14 mg/Kg. The detected concentration of 0.14 mg/Kg exceeded the ESLs for commercial/industrial scenario.
- ***Sulfide.*** Sulfide was reported at concentrations below the detection limit of 10 mg/Kg in all samples.
- ***Asbestos.*** Asbestos was reported as chrysotile asbestos in percentages ranging from none detected to 2 percent as chrysotile asbestos. The detection of 2% asbestos in the soil sample exceeds the EPA criteria for a hazardous waste if the material is friable. Based on field observation on the soil cutting in the field, no friable asbestos-containing material was observed;
- ***Title 22 Metals***. Results of Title 22 Metals analyses on the subsurface soil composite samples are listed in Table 3. A summary of the chemical results are described below:
  - Antimony was reported in the discrete samples and soil composites at concentrations ranging from below the detection limit of < 0.5 mg/Kg to 0.90 mg/Kg;
  - Arsenic was detected in soil composite samples at concentrations ranging from 1.6 mg/kg to 4.8 mg/kg. The detected concentrations of arsenic were above the respective ESL for industrial use (1.6 mg/Kg) and the respective CHHSL (0.24 mg/Kg), but below the ESLs for commercial/industrial use scenario and construction worker scenario (15 mg/Kg). Based on the following rationale, it is believed that the detected concentrations of arsenic in soil are likely representative of background concentration of arsenic at the site:

- The spatial distribution of arsenic observed in the soil samples from and near the site all within similar magnitude of concentrations suggesting that the reported concentrations are likely due to natural occurring arsenic at the site; and
- According to Section 6.4 of the RWQCB's ***Screening for Environmental concerns at Sites with Contaminated Soil and Groundwater***, naturally-occurring concentrations of arsenic in soil typically exceed ESLs and therefore alternative screening levels based on regionally-specific established background levels may represent a more appropriate screening level criteria. A search of potential background concentration ranges of arsenic in soil within the San Francisco Bay Area indicated arsenic in soil for the San Francisco Bay Area are listed at concentrations ranging from 5 mg/Kg to 20 mg/kg (City of Emeryville 2005, RWQCB 2001, and CH2MHill 2008). The range of arsenic observed in soil samples at the site is within the general range of arsenic background concentration in soil within the San Francisco Bay Area based on the referenced documents reviewed. Because the range of arsenic concentrations for the samples is similar to the background concentration range cited above for the San Francisco Bay Area, it is not anticipated that additional site characterization or remediation will be required for arsenic.

- Barium was detected at concentrations ranging from 89 mg/Kg to 580 mg/Kg. The detected concentrations were below the ESLs and the respective CHHSL;
- Beryllium was reported at concentrations below the detection limit of 0.5 mg/Kg;
- Cadmium was reported at concentrations below the detection limit of 0.25 mg/Kg;
- Chromium was detected at concentrations ranging from 49 mg/Kg to 800 mg/Kg. The detected concentration of 800 mg/Kg chromium exceeds the ESL for industrial use (750 mg/Kg), however all detected concentrations were below the respective CHHSL. The soluble chromium concentrations for WET extraction were below the respective STLC of 5 mg/L. TCLP analysis of the soluble chromium concentrations was determined by T&R as not required and therefore, not conducted;
- Cobalt was detected at concentrations ranging from 7.7 mg/Kg to 57 mg/Kg. These concentrations were all below the ESLs and the respective CHHSL ;
- Copper was detected at concentrations ranging from 30 mg/Kg to 39 mg/Kg. These concentrations were all below the ESLs and the respective CHHSL;
- Lead was detected at concentrations ranging from 6 mg/Kg to 76 mg/Kg. These concentrations were all below the ESLs and the respective CHHSL. The soluble lead concentrations for WET extraction were below the respective STLC of 5 mg/L;
- Mercury was reported at concentrations ranging from below the detection limit of 0.05 mg/Kg to 1.2 mg/Kg;

- Molybdenum was detected at concentrations ranging from below the detection limit of 0.5 mg/Kg to 0.94 mg/Kg. The detected concentrations were all below the ESLs and the respective CHHSL;
- Nickel was reported at concentrations ranging from 25 mg/Kg to 970 mg/Kg. Detected concentrations of nickel exceeded the ESLs and the respective CHHSL. The soluble nickel concentrations for WET extraction were below the respective STLC of 20 mg/L;
- Selenium, silver, and thallium were reported at concentrations below the detection limit of 0.5 mg/Kg;
- Vanadium was reported at concentrations ranging from 34 mg/Kg to 55 mg/Kg. The detected concentrations were below the ESLs and the respective CHHSL.
- Zinc was reported at concentrations ranging from 40 mg/Kg to 270 mg/Kg. These concentrations were all below the ESLs and the respective CHHSL.
- Results of the leaching tests (presented on Table 3) indicated that none of the soil samples were reported to have concentrations above the respective TTLC value or STLC value. TCLP analyses were not conducted on samples whose total concentration of chromium was greater than twenty times over the corresponding TCLP. It is likely that the soil represented by these samples can be considered as non-hazardous waste. However, the landfill disposal facility may require TCLP analyses on chromium due to the concentrations of total chromium in three soil samples exceeding the 20 times TCLP limits (100 mg/Kg).

- ***pH***. pH ranged from 9.36 to 12.24 in the soil samples analyzed for pH in the laboratory.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

5.1.1 Subsurface Soil Samples from Soil Borings E-1 through E-5

Results of the chemical analyses performed on the subsurface soil samples indicated the following:

- Tetrachloroethene was detected in one discrete soil sample at a concentration of 0.0095 mg/Kg. This detected concentration is below ESLs and the respective CHHSL;
- All other VOCs were reported below their respective detection limits;
- TPHs as gasoline was reported in the discrete soil samples and soil composites at concentrations ranging from below the detection limit of 1 mg/Kg to 1.4 mg/Kg. These concentrations were all below the ESLs for commercial/industrial use and construction worker scenarios;
- TPHs as diesel was reported in the discrete soil samples and soil composites at concentrations ranging from 7.0 mg/Kg to 59 mg/Kg. The concentrations were all below the ESLs for commercial/industrial use and construction worker scenarios;
- TPHs as motor oil was reported in the discrete soil samples and soil composites at concentrations ranging from 100 mg/Kg to 540 mg/Kg. The concentrations were all below the ESLs for commercial/industrial use and construction worker scenarios;
- No BTEX and MTBE were detected in any discrete soil samples or composites above the respective detection limits;
- PCBs were reported at concentrations below the detection limits of 0.25 mg/Kg to 0.5 mg/Kg in each sample;
- Cyanide was detected in one composite sample at a concentration of 0.14 mg/Kg exceeded the ESLs for commercial/industrial scenario. Cyanide is not anticipated to pose a threat to human health or the environment since the future site construction activities will include capping the soil with asphalt, construction of the pump station and/or placement clean fill material, thereby eliminating the exposure pathway. Direct contact with surface and subsurface soil is not anticipated upon completion of construction activities;
- Sulfide was reported at concentrations below the detection limit of 10 mg/Kg in all samples;
- Asbestos was reported as chrysotile asbestos in percentages ranging from none detected to 2 percent as chrysotile asbestos. The detection of 2% asbestos in the soil sample exceeds the EPA criteria for a hazardous waste if the material is friable. Based on field observation on the soil cutting in the field, no friable asbestos-containing material was observed;

- Results of the subsurface soil analyses indicated that with the exception of arsenic, chromium and nickel, all metals results were detected below their respective ESL and CHHSL values. Arsenic was detected in one discrete sample and two composite samples at concentrations above the ESL Industrial land use scenario. Based on the rationale presented in Section 4.3.2, it is believed that the detected concentrations of arsenic in soil are likely representative of background concentration of arsenic at the site. Chromium was detected in one discrete soil sample and one composite sample at concentrations above the ESL for industrial land use scenario. Chromium was detected in one discrete shallow sample (2 feet bgs) at a concentration exceeding the shallow soil ESLs under commercial scenario. Nickel was detected in one discrete shallow sample (2 feet bgs) and two composite samples at concentrations exceeding the ESLs for industrial use (for both shallow and deep soils) and construction worker scenarios. The concentrations of metals in the soil that exceed ESLs are not anticipated to pose a threat to human health or the environment since the future site construction activities will include capping the soil with asphalt, construction of the pump station and/or placement clean fill material, or will involve the removal of subsurface soil for the construction, thereby eliminating the potential human exposure pathway. Direct contact with surface and subsurface soil is not anticipated upon completion of construction activities; and
- Results of the leaching tests (presented on Table 3) indicated that none of the soil samples were reported to have concentrations above the respective TTLC value or STLC value. TCLP analyses were not conducted on samples whose total concentration of chromium was greater than twenty times over the corresponding TCLP. It is likely that the soil represented by these samples can be considered as non-hazardous waste. However, the landfill disposal facility may require TCLP analyses on chromium due to the concentrations of total chromium in three soil samples exceeding the 20 times TCLP limits (100 mg/Kg) .

Based on the conclusions of this site investigation, it is anticipated that additional site characterization will not be required for soil with the exception of the landfill disposal facility may require TCLP analyses on chromium in soil for waste profile approval of disposing the to-be excavated soil at its facility.

5.2 RECOMMENDATIONS

Based on the results of the soil investigation, the following recommendations are proposed for the planned site of the pump station:

- No site mitigation would be required at the site on chemicals with reported concentrations in soil exceeding the ESLs for the following reasons:

Arsenic was found at concentrations slightly above the ESLs but within the range of arsenic background concentration in soil within the San Francisco Bay Area based on the referenced documents reviewed (see Section 5.1);

For the remaining analytes including metals (chromium and nickel) and cyanide reported to have concentrations above the ESLs, these chemicals are not expected to pose significant impact to human and the environment for the following reasons:

  - The associated soil will either be removed during construction or be located underneath paved surface for the entire site as part of the development. Currently the site is paved with asphalt. Therefore, the anticipated exposure of chemicals with concentrations exceeding the ESLs in soil, currently or in the future, is considered to be insignificant;
  - Low potential migration of these chemicals are expected to the bay via groundwater due to general low mobility and solubility of these chemicals; and
  - No current and anticipated beneficial use of groundwater.

- Development and implementation of dust mitigation protocols shall be required to comply with the SFDPH Article 22B;
- To ensure the safety of personnel during construction, a health and safety program shall be developed and implemented to protect workers from exposure to chemicals above the applicable federal and state Occupational Safety and Health Administration's (OSHA) Permissible Exposure Limits (PELs). Such protocols should include personal protective equipment requirements, worker decontamination procedures, and air monitoring strategies to ensure that the workers are adequately protected; and
- Depending on the final design of the pump station, a waste management plan and/or a groundwater dewatering plan may be required for the pump station construction by the construction contractor. This will help to ensure compliance of proper waste classification by applicable regulations and waste acceptance requirements by the landfill facility, and the city of San Francisco for wastewater discharge.

6 REFERENCES

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Regional Water Quality Control Board, 2001, "Executive Officer's Report", dated April 11, 2001.

RWQCB, 2008. "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater", dated May 2008.

T&R/RYCG, 2011, Site History Report and Sampling and Analysis Plan, Pier 94 Backlands Improvement and Amador Street Sanitary Pump Station, San Francisco, California", dated July 11, 2011 and prepared by T&R/RYCG.

TABLES

TABLE 1
LIST OF CHEMICAL ANALYSES
AMADOR STREET SANITARY PUMP STATION
SAN FRANCISCO, CALIFORNIA

Soil Borings	Sample ID	Sampling Location	Sample Depth (ft bgs) (1)	VOCs (2)	Composite Number	SVOCs (3)	TPHs-G, BTEX, and MTBE (4)	TPH-D & MO (5)	PCBs (6)	Title 22 Metals (7)	WET (8) Chromium	WET Lead	WET Nickel	Cyanide	Sulfides	Asbestos	pH
Soil Samples																	
E-1	E-1-2.0	E-1	2.0	✓	NA (9)	✓	✓	✓	✓	✓	NR (9)	NR	NR	NR	NR	NR	NR
E-2	E-2-2.0	E-2	2.0	✓	NA	✓	✓	✓	✓	✓	✓	NR	✓	✓	✓	✓	✓
E-3	E-3-2.5	E-3	2.5		Composite E-3	✓	✓	✓	✓	✓	✓	NR	✓	NR	NR	NR	NR
	E-3-5.0	E-3	5.0	✓													
E-4	E-4-2.5	E-4	2.5	✓	Composite E-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	E-4-5.0	E-4	5.0														
	E-4-10	E-4	10														
	E-4-15	E-4	15														
E-5	E-5-2.5	E-5	2.5	✓	Composite E-5	✓	✓	✓	✓	✓	✓	NR	NR	✓	✓	✓	✓
	E-5-5.0	E-5	5.0														

Notes **:**

1. ft bgs = feet below ground surface
2. VOCs = Volatile Organic Compounds by USEPA Method 8260;
3. SVOCs = Semi-Volatile Organic Compounds by USEPA Method 8270;
4. TPHs-G, BTEX, MTBE = Total petroleum hydrocarbons as gasoline, benzene/toluene/ethylbenzene/xylenes, and methyl tertiary butyl ether by USEPA Method 8015 modified;
5. TPH-D & MO = Total petroleum hydrocarbons as diesel and motor oil by USEPA Method 8015 modified with silica gel cleanup;
6. PCBs = Polychlorinated Biphenyls by USEPA Method 8082;
7. Title 22 Metals = California Code of Regulations Title 22 metals by USEPA Methods 6000/7000 series;
8. WET = California Waste Extraction Test
9. NA = Not applicable; NR = Analysis not required

TABLE 2
RESULTS OF TOTAL PETROLEUM HYDROCARBONS, VOCs, SVOCs, BTEX, MTBE, PCBs, CYANIDE, SULFIDES, and ASEBESTOS ANALYSES ON SOIL SAMPLES
AMADOR STREET SANITARY PUMP STATION
SAN FRANCISCO, CALIFORNIA

	VOCs (1)	SVOCs (1)	TPH (1) as Gasoline	TPH as Diesel	TPH as Motor Oil	MTBE (1)	Benzene	Ethyl benzene	Toluene	Xylenes	PCBs (1)	Cyanide	Sulfide	Asbestos
Unit (2)	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	percent (%)
REGULATORY CRITERIA (3)														
ESLs - Table B Commercial	NA (4)	NA	180	180	2500	8.4	0.27	4.7	9.3	11	0.74	0.0036	NA	NA
ESLs - Table D Commercial	NA	NA	180	180	5000	8.4	2	4.7	9.3	11	6.3	0.0036	NA	NA
ESLs - Table K-3 Construction Workers	NA	NA	4200	4200	12000	2800	12	210	650	420	6.7	1300	NA	NA
CHHSLs - Commercial	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	NA	NA	NA
TTLCs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50	NA	NA	1% Friable
10 x STLCs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50	NA	NA	NA
STLC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5	NA	NA	NA
20 x TCLPs	NA	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA
TCLPs	NA	NA	NA	NA	NA	NA	0.5	NA	NA	NA	NA	NA	NA	NA
Sample Identification														
E-1-2.0	ND (4)	ND	ND	35	350	<0.05	<0.005	<0.005	<0.005	<0.005	< 0.25	NR (4)	NR	NR
E-2-2.0	ND	ND	ND	8.1	100	<0.05	<0.005	<0.005	<0.005	<0.005	< 0.25	<0.1	<10	2%
Composite of E-3-2.5, E-3-5.0	NR	ND	ND	7.0	130	<0.05	<0.005	<0.005	<0.005	<0.005	< 0.25	NR	NR	NR
Composite of E-4-2.5, E-4-5.0, E-4-10, E-4-15	NR	ND	1.3	59	540	<0.05	<0.005	<0.005	<0.005	<0.005	< 0.50	<0.1	<10	Trace
Composite of E-5-2.5, E-5-5.0	NR	ND	1.4	30	120	<0.05	<0.005	<0.005	<0.005	<0.005	< 0.50	0.14	<10	ND
E-3-5.0	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
E-4-2.5	0.0095 (6)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
E-5-2.5	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Notes :

1. VOCs = Volatile Organic Compounds, SVOCs = Semi-Volatile Organic Compounds, TPH = Total Petroleum Hydrocarbons, MTBE = Methyl tertiary butyl ether, PCBs = Polychlorinated Biphenyls (Aroclors).

2. mg/Kg = Milligrams per Kilogram.

   ESL = California Regional Water Quality Control Board - San Francisco Region's Environmental Screening Criteria as listed in Table B (ESLs for Shallow Soils and Groundwater is not a Current or Potential Source of Drinking Water) under Commercial/Industrial Land Use scenario.

   ESLs - Table D Commercial = ESLs for Deep Soil and Groundwater is NOT a Current or Potential Source of Drinking Water Under Commercial/Industrial Land Use Scenario (Table D).

   ESLs - Table K-3 Construction Worker = ESLs for Direct Exposure Soil Screening Levels Construction/Trench Worker Exposure Scenario (Table K-3).

   TTLC = California Total Threshold Limit Concentration.

   STLC = California Souble Threshold Limit Concentration.

   TCLP = United States Environmental Protection Agency's Toxicity Characteristic Leaching Procedure.

4. NA = Not Available; ND = analyte detected at concentrationbelow the laboratory detection limits; NR = analysis not required per the Sampling and Analysis Plan.

5. Individual PCB arochlors were reported at concentrations of below the detection limits of 0.25 mg/Kg to 0.5 mg/Kg in each sample.

6. Tetrachloroethene was the only analyte detected for VOCs at a concentration of 0.0095 mg/kg.

TABLE 3
RESULTS OF TITLE 22 METALS AND pH ANALYSES ON SOIL SAMPLES
AMADOR STREET SANITARY PUMP STATION
SAN FRANCISCO, CALIFORNIA

	Sb	As	Ba	Be	Cd	Total Cr as III	WET Total Cr	Co	Cu	Pb	WET Pb	Hg	Mo	Ni	WET Ni	Se	Ag	Tl	V	Zn	pH
Unit (1)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
REGULATORY LIMITS (2)																					
ESLs - Table B Commercial	40	1.6	1500	8	7.4	750	NA (3)	80	230	750	NA	10	40	150	NA	10	40	16	200	600	NA
ESLs - Table D Commercial	310	15	2600	98	39	5000	NA	94	5000	750	NA	58	3900	260	NA	3900	3900	62	770	5000	NA
ESLs - Table K-3 Construction Workers	310	15	2600	98	39	1200000	NA	94	310000	750	NA	58	3900	260	NA	3900	3900	62	770	230000	NA
CHHSLs - Commercial	380	0.24	63000	190	7.5	100000	NA	3200	38000	320	NA	180	4800	16000	NA	4800	4800	63	6700	100000	NA
TTLCs	500	500	10000	75	100	500	NA	8000	2500	1000	NA	20	3500	2000	NA	100	500	700	2400	5000	NA
10 x STLCs	150	50	1000	7.5	10	50	NA	800	250	50	NA	2	3500	200	NA	10	50	70	240	2500	NA
STLC	NA	NA	NA	NA	NA	NA	5	NA	NA	NA	5	NA	NA	NA	20	NA	NA	NA	NA	NA	NA
20 x TCLPs	NA	100	2000	NA	20	100	NA	NA	NA	100	NA	4	NA	NA	NA	20	100	NA	NA	NA	NA
TCLPs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Concentrations in California Benchmark Soil	NA	3.5	509	1.28	0.36	122	NA	14.9	28.7	23.9	NA	0.26	1.3	57	NA	0.058	0.8	15.7	112	149	NA
Sample Identification																					
E-1-2.0	0.9	3.6	580	<0.5	<0.25	49	NR (3)	10	38	13	NR	<0.05	<0.5	25	NR	<0.5	<0.5	<0.5	34	270	NR
E-2-2.0	<0.5	1.7	100	<0.5	<0.25	800	0.094	57	31	6.4	NR	0.051	<0.5	830	1	<0.5	<0.5	<0.5	55	44	9.36
Composite of E-3-2.5, E-3-5.0	<0.5	1.6	89	<0.5	<0.25	620	1.7	53	30	6	NR	<0.05	<0.5	970	7	<0.5	<0.5	<0.5	42	40	NR
Composite of E-4-2.5, E-4-5.0, E-4-10, E-4-15	<0.5	4.8	260	<0.5	<0.25	150	0.75	40	39	76	2.4	1.2	0.94	520	5.1	<0.5	<0.5	<0.5	48	56	9.83
Composite of E-5-2.5, E-5-5.0	0.78	4.6	200	<0.5	<0.25	62	0.63	7.7	31	39	NR	0.098	0.89	58	NR	<0.5	<0.5	<0.5	45	140	12.24

Notes :

1. mg/Kg = Milligrams per Kilogram, and mg/L = Milligrams per Liter
2. ESL = California Regional Water Quality Control Board - San Francisco Region's Environmental Screening Criteria as listed in Table B (ESL for shallow soils and groundwater is not a current or potential source of drinking water under Industrial/Commercial Land use)
   ESLs - Table D Commercial = ESLs for Deep Soil and Groundwater is NOT a Current or Potential Source of drinking water under Commercial/Industrial Land Use Scenario (Table D).
   ESLs - Table K-3 Construction Worker = ESLs for Direct Exposure Soil Screening Levels Construction/Trench Worker Exposure Scenario (Table K-3).
   CHHSLs = California Human Health Screening Levels (CHHSLs) for commercial scenario, September 2010
   STLC = California Souble Threshold Limit Concentration
   TTLC = California Total Threshold Limit Concentration
   TCLP = United States Environmental Protection Agency's Toxicity Characteristic Leaching Procedure
   Concentrations in California benchmark soils is the result of a comprehensive, scientific evaluation of soil samples collected from 50 locations within California. The study was conducted by the Kearny Foundation of Soil Science, Division of Agricultural and Natural Resources, University of California at Riverside
3. NA = Not Available; NR = Analysis Not required

FIGURES

Base map: The Thomas Guide
San Francisco County
1999

0 1/4 1/2 Mile

Approximate scale

PIER 94 BACKLANDS IMPROVEMENT AND AMADOR STREET SANITARY PUMP STATION
San Francisco, California

T&R / RYCG
A Joint Venture

SITE LOCATION MAP

Date 04/12/11	Project No. 730509401	Figure 1

Reference: Base map from a drawing and electronic file provided by the Port of San Francisco, delivered 04/08/11 and Google Earth Pro, 2011.

EXPLANATION

- Approximate location of proposed Amador Street forcemain and pump station
- Approximate location of proposed vegetated swales and outfall pipe
- Approximate lateral extent of regulated landfill
- E-1 — Approximate location of environmental boring
- TP-1 — Approximate location of test pit
- B-12 — Approximate location of geotechnical boring

N

0 300 Feet

Approximate scale

PIER 94 BACKLANDS IMPROVEMENT AND AMADOR STREET SANITARY PUMP STATION
San Francisco, California

ENVIRONMENTAL SAMPLING LOCATIONS

Date 12/23/11	Project No. 730509401	Figure 2

T&R / RYCG
A Joint Venture

\\angan.com\data\SF\data4\730509401\Cadd Data - 730509401\2D-DesignFiles\Environmental\730509401 Proposed Environmental Sampling Locations.dwg 12/28/11

APPENDIX A

PERMITS

San Francisco City and County
Department of Public Health
Environmental Health Section
Monitoring Wells Program

Edwin M. Lee, *Mayor*
Barbara A. Garcia, MPA, *Director of Health*
Rajiv Bhatia, M.D., M.P.H.
Director of Environmental Health

Application for Monitoring Well Construction /Destruction or Soil Borings

Application Date: 05 / 16 / 11 Starting Date: 05 / 23 / 11 Completion Date: 05 / 27 / 11

Job Address/Location: Amador Street, Pier 92 to 94, San Francisco

TO BE COMPLETED BY OWNER, CONSULTANT OR DRILLER

Property Owner	Well Owner (If Different)	Consultant / Engineer & Geologist Name
SFPUC		Robert Y. Chew Geotechnical
Address: 1155 Market Street	Address:	Address: 55 New Montgomery St,Ste.222
City, State, Zip: San Francisco, CA 94102	City, State, Zip:	City, State, Zip: San Francisco, CA 94105
Telephone Number: (415)554-3289	Telephone Number:	Telephone Number: (510)376-9038
Fax Number:	Fax Number:	Fax Number: (510)783-1912

Please indicate **Type and Number** of Proposed Wells/Borings

Geotechnical Investigation:
[X] Exploratory Wells/borings
[ ] Cathodic Wells
[ ] Cone Penetrometer Test
[ ] Shallow Anodes
[ ] Other

Environmental Investigation:
[X] Exploratory borings
[ ] Water / Vapor Extraction Wells
[ ] Hydropunch
[ ] LOP Workplan

Monitoring Wells Construction:
[ ] Chemical Leaks
[ ] Compliance Well
[ ] Baseline Study
[ ] Well Destruction
[ ] LOP Workplan

Topographic Features – Well to be constructed:
[ ] In a Public Sidewalk [ ] In a Public Road [ ] On Private Property [X] On City Property

Construction Specifications:
Diameter of Well Casing: _____ Annular Seal Depth: _____
Gauge of Casing: _____ Annular Seal Material: _____
Casing Depth: _____ Other Information: _____

Destruction Specifications: Well Diameter: _____ Approximate Depth: _____

Materials and Procedures to be Used: Borings will be drilled by Mud-Rotary, Hollow-Stem Auger and direct push method. Ten environmental borings to 10 feet;Fourteen geotechnical borings (Eleven to 15 ft and three to 30,50 and 75-100 ft). All borings backfilled with cement grout.

WELL LOCATION: On the following site plan accurately draw the well location. (Recommend Assessor's Map)
1. Sketch well location to scale, show dimensions to nearest foot.
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named street, road or highway.
3. Show location of any existing wells.

(See attached plan)

CERTIFICATION BY WELL OWNER/AGENT AND DRILLER/AGENT:
I certify the information above is correct to the best of my knowledge. I certify that the well will be constructed in compliance with the conditions this permit, the San Francisco Health Code and, if applicable, the Hazardous Materials Permit & Disclosure Ordinance of the City/County. It is my responsibility as the responsible party to notify this Section of any changes in the purpose of this well from that which is indicated on this application form.

If proposed well is to meet compliance with a Hazardous Materials Permit & Disclosure Ordinance, has the Hazardous Materials Unified Program been contacted? [ ] Yes [ ] No

Pitcher Drilling / Exploration Geoservices Name and Address of Well Driller/Company		263085 / 484288 C-57 Driller's License Number
[signature] Signature of Responsible Professional (NO substitution of Signature will be accepted)	5/16/11 Date	G.E. 2897 Civil Engineer Registration Number or Engineering Geologist Certificate Number

Based on information on the application and attachment(s) hereto (if any) and subject to approval noted below, permission is hereby granted to commence the described project. Permission to start may be withheld until a field check verifies all statements made on application by Permittee and is also subject to any "General" and "Special" conditions attached.

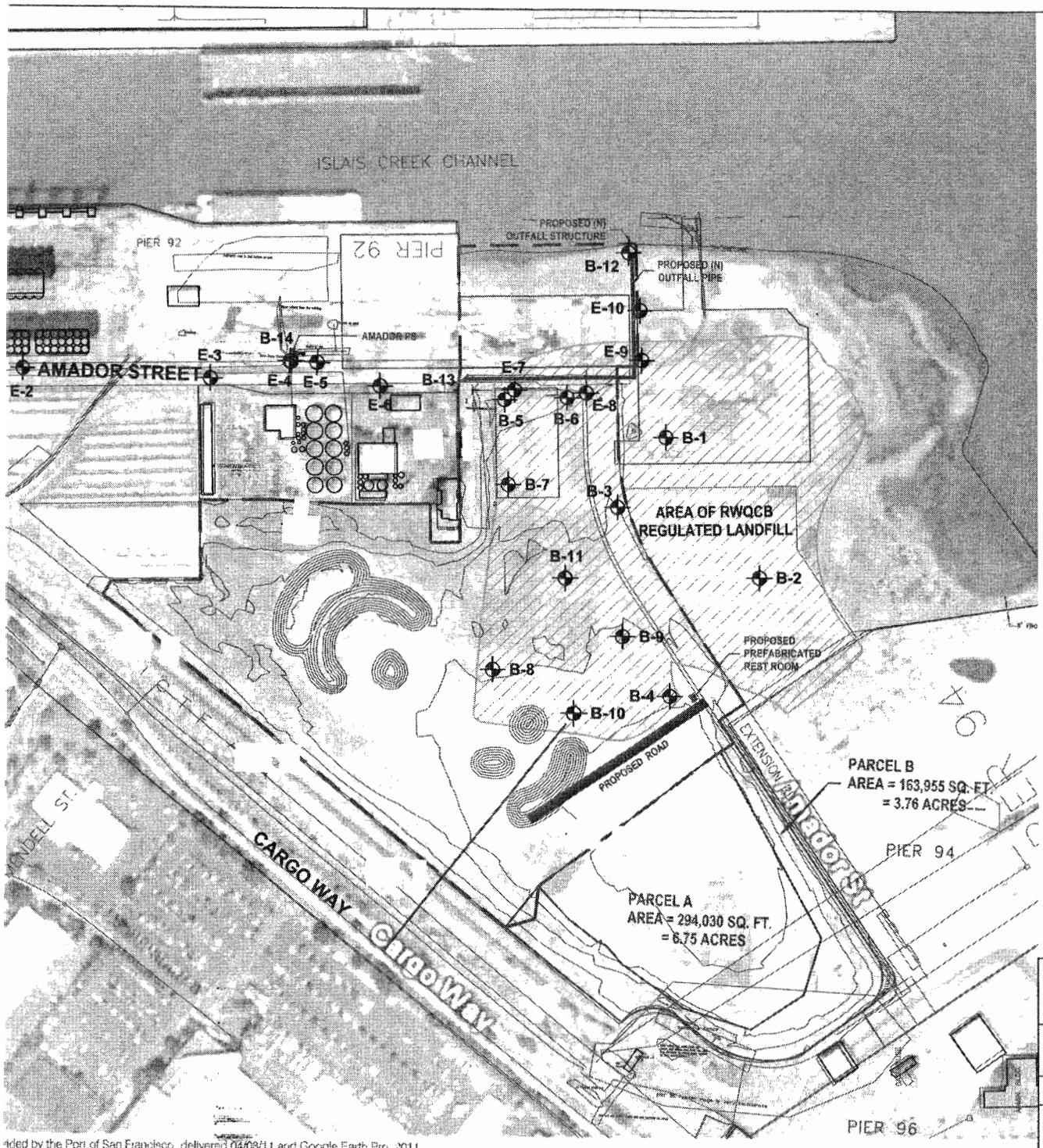
To be Completed by Well Section Staff: Project # 4695 Date Approved 5/18/11

Number of Wells: 10 Number of Soil Borings: 24

This project to construct/destruct is APPROVED ☒
This project to construct/destruct is DISAPPROVED ☐

[signature]
Inspector

Monitoring Wells Program | 1390 Market Street, Suite 210, San Francisco, Ca 94102 | Phone (415) 252-3800 Fax (415) 252-3894



ided by the Port of San Francisco, delivered 04/08/11 and Google Earth Pro, 2011.

EXPLANATION

B-1 ⊕ Approximate location of proposed boring by Treadwell & Rollo

E-1 ⊕ Approximate location of proposed environmental boring by Treadwell & Rollo

N

0 300 Feet

Approximate scale

PIER 94 BACKLANDS IMPROVEMENT AND AMADOR STREET SANITARY PUMP STATION
San Francisco, California

PROPOSED BORING LOCATIONS

Date 04/27/11	Project No. 730509401	Figure 1

T&R / RYCG
A Joint Venture

SAN FRANCISCO PORT COMMISSION

Permit No: 0095E-1940-2011

APPLICATION FOR ENCROACHMENT PERMIT

APPLICANT: Langan Engineering & Environmental Svcs (formerly Treadwell & Rollo) Date: 12/5/11

Applicant Address 555 Montgomery St., Suite 1300

Contact person: Veronica Tiglao Phone: 415.955.5242

Email: vtiglao@langan.com

Port Tenant: No Phone:

Design/Construction:

( ) Engineer ( ) Architect (X) Contractor ( ) Other

Name: same as above Phone:

Address:

License Type and #: PE# 089664-1 (NY) S.F Business license #: City Vendor # 836960

Inspection required:

Call (415)274-0540

24 Hours prior to inspection

LOCATION OF WORK: Pier/ Seawall Lot/ Block: Pier 94/96 Backlands

Address see attached site plan

Is plot plan attached? Y Yes; ____ No. Work in Franchise Area? ____ Yes; ____ No (Permit to Enter req'd).

DESCRIPTION OF WORK: (Reference to plans is not sufficient) Drill soil borings E-1 through E10 to collect soil samples; Excavate test pits TP-1 through TP-7 to max depth of 5ft. below grade for soil sampling.

TOTAL ESTIMATED COST FOR ALL WORK: $ 106,500 for environmental; By: ~~Still Need Performance Bond. 12/6/11~~

CHECK ITEMS SUBMITTED WITH THE APPLICATION:

fees $ ~~deposit waived~~ b/c work is under contract to Port

(X) Endorsed Certificate of Liability Insurance

(X) Performance Bond/Deposit - $25,000 for Excavation or $2,500 for other. Inspection sign off required to release.

(X) Worker's Compensation – Refer to Labor Code section in General Conditions.

In consideration of the Permit being issued for the work described in the application, Permittee on its behalf and that of any successor, and on behalf of any lessee, promises and agrees to perform all the terms of the Permit including and not limited to attached "General Conditions for Encroachment Permit" and to comply with all applicable laws, ordinances and regulations.

Signature(s) - Applicant/Contractor

12/5/11

Date

CAROL BACH, Port project manager

THIS PERMIT IS NOT VALID UNLESS OFFICIAL S.F. PORT ENGINEERING REVIEW SHEET IS ATTACHED

NO WORK SHALL COMMENCE PRIOR TO PAYMENT OF PERMIT FEES AND ISSUANCE OF THIS PERMIT.
A COPY OF THIS PERMIT AND THE JOB CARD MUST BE POSTED AT THE JOBSITE.
FEE SCHEDULE AVAILABLE UPON REQUEST

Official Use:
Received By: Jennifer Chen Permit Lead: David Hu Date: 12/6/11

From: support@usan.org
To: jmedley@aewengineering.com
Subject: USAN 2011/11/30 #00000 0402255-000 NORM NEW
Date: Wednesday, November 30, 2011 1:07:12 PM

00000 USAN 11/30/11 13:04:30 0402255 NORMAL NOTICE

Message Number: 0402255 Received by USAN at 12:56 on 11/30/11 by JDR

Work Begins: 12/08/11 at 08:00 Notice: 055 hrs Priority: 2
Night Work: N Weekend Work: N

Expires: 12/28/11 at 23:59 Update By: 12/23/11 at 16:59

Caller: JAMES MEDLEY
Company: A.E.W. ENGINEERING
Address: 55 NEW MONTGOMERY ST STE 720
City: SAN FRANCISCO State: CA Zip: 94105
Business Tel: 415-713-7598 Fax:
Email Address: JMEDLEY@AEWENGINEERING.COM

Nature of Work: BORING FOR SOIL SAMPLES
Done for: PORT OF SAN FRANCISCO Explosives: N
Foreman: CALLER
Field Tel: Cell Tel: 415-716-7598
Area Premarked: Y Premark Method: WHITE PAINT
Permit Type: COUNTY Number: UNKNOWN
Vac / Pwr Equip Use In The Approx Location Of Member Facilities Requested: N
Excavation Enters Into Street Or Sidewalk Area: Y

Location:

N/SI/O AMADOR ST FR CARGO WAY GO 1800' E (TO ADDR 480 AMADOR ST), TURN & GO 300' N, TURN & GO APP 600' W, TURN & GO 250' S, TURN & GO 1200' W, TURN & GO 50' S BK TO BEG PT & INCL ENT AREA WITHIN

Place: SAN FRANCISCO County: SAN FRANCISCO State: CA

Long/Lat Long: -122.387116 Lat: 37.745187 Long: -122.37947 Lat: 37.747477

Sent to:
CTYSFO = CITY SAN FRAN PRKG & TRF CTYSF3 = CITY SAN FRANCISCO PW
CTYSF2 = CITY SAN FRANCISCO WTR CTYSF4 = CITY SFO HEAT/PWR/LIGHT
COMSFO = COMCAST-SAN FRANCISCO PBTSFO = PACIFIC BELL SAN FRAN
PGESFO = PGE DISTR SAN FRANCISCO

Member Contact Information

Member Utility	Main Contact #	Vacuum Contact #	Emergency #	After hours #
CITY SAN FRAN	(415)550-2922		(415)550-2736	(415)550-2736
CITY SAN FRANC	(415)554-8276			
CITY SAN FRANC	(415)550-4950	(415)550-4949	(415)550-4956	(415)550-4956
	(415)279-9002			
	(415)559-8584			
CITY SFO HEAT/	(415)227-8509		(415)227-8513	(415)558-3265
COMCAST-SAN FR	(415)747-2695		(888)824-8399	(888)824-8399
	(415)798-4776			
PACIFIC BELL S	(510)645-2929	(510)645-2929	(510)645-2929	(800)332-1321x011

PGE DISTR SAN (800)743-5000x00 (800)743-5000 (800)743-5000 (800)743-5000

APPENDIX B

BORING LOGS

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-1	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J.MEDLEY	TIME	
							Surface Conditions: Asphalt roadway	START	FINISH
								07:20	07:30
1				0 ppm VOCs 0 % LEL					
2			E-1-2.0			SP	Sand (SP) with clay and subrounded gravel, fill, greenish gray		
3							Refusal at 2 feet - possible concrete slab at 2 feet bgs		
4							Borehole backfilled with cement grout to the surface		
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

AEW Engineering, Inc.
55 New Montgomery Street, Suite 722
San Francisco, CA 94105

Drawn By:	BORING LOG E-1	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-2	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J.MEDLEY	TIME	
							Surface Conditions: Asphalt roadway	START	FINISH
								08:00	08:15
1				0 ppm VOCs 0 % LEL					
2			E-2-2.0			SP	SAND (SP) with clay and subrounded gravel, fill, brownish gray		
3							Refusal at 2 feet - possible concrete slab at 2 feet bgs		
4							Borehole backfilled with cement grout to the surface		
5									
6									
7									
8									
9									
10									
11									
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AEW Engineering, Inc.
55 New Montgomery Street, Suite 722
San Francisco, CA 94105

Drawn By:	BORING LOG E-2	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-3	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J. Medley	TIME	
							Surface Conditions: Asphalt	START	FINISH
							4 inches asphalt	08:28	08:45
1									
2			E-3-2.5		48/25	SP	SAND(SP) fill with trace gravel, greenish gray		
3				0 ppm VOCs					
4				0 % LEL					
5			E-3-5.0		12/12				
6							Borehole terminated at 5 feet bgs		
7							Backfilled with cement grout to surface		
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
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25									

AEW Engineering, Inc.
55 New Montgomery Street, Suite 722
San Francisco, CA 94105

Drawn By:	BORING LOG E-3	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RSY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-4	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J. Medley	TIME	
							Surface Conditions: Concrete	START	FINISH
							6 inches concrete	0853	0915
1						SP	SAND (SP) fill with trace gravel, reddish brown		
2	■		E-4-2.5		48/24				
3				0 ppm VOCs					
4				0 % LEL		SP	SAND (SP) fill with trace gravel, color change to greenish gray		
5	■		E-4-5.0						
6							▽Moisture at 6.5 feet		
7					48/44	SP	SAND (SP) with trace amounts of clay		
8				0 ppm VOCs 0 % LEL			petroleum odor observed at 7 feet bgs		
9									
10	■		E-4-10		48/24				
11				0 ppm VOCs		CL	CLAY (CL) with sand, brown		
12				0 % LEL					
13						CL	CLAY (CL) with silt and some sand; Bay Mud, wet, dark greenish		
14				0 ppm VOCs 0 % LEL	48/48				
15	■		E-4-14						
16							Boring terminated at 16 feet bgs		
17							Borehole backfilled with cement grout to surface		
18									
19									
20									
21									
22									
23									
24									
25									

AEW Engineering, Inc.
55 New Montgomery Street, Suite 722
San Francisco, CA 94105

Drawn By:	BORING LOG E-4	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RSY		1 of 1

Depth (feet)	Sample	Sample Type	Sample No.	Air Monitoring Results	Inches Driven/ Inches Recovered	U.S.C.S. Classification	DATE DRILLED: 12/9/2011	Log of Boring: E-5	
							DRILLING METHOD: Geoprobe		
							HAMMER WEIGHT: NA	DROP: NA	LOGGED BY: J. Medley
							SAMPLER(S): J. Medley	TIME	
							Surface Conditions: Concrete	START	FINISH
							6 inches concrete	09:25	09:45
1						SP	SAND (SP) fill with some clay and trace gravel, greenish gray		
2			E-5-2.5		48/40				
3				0 ppm VOCs					
4				0 % LEL					
5			E-5-5.0		12/12				
6							Borehole terminated at 5 feet bgs		
7							Borehole backfilled with cement grout to surface		
8									
9									
10									
11									
12									
13									
14									
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25									

AEW Engineering, Inc.
55 New Montgomery Street, Suite 722
San Francisco, CA 94105

Drawn By:	BORING LOG E-5	Project No.
JHM	Amador Street Pump Station	2011-011
Reviewed By:	Environmental Investigation	Sheet
RSY		1 of 1

APPENDIX C

LABORATORY REPORTS

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Reported: 12/21/11
	Client P.O.:	Date Completed: 12/21/11

WorkOrder: 1112307

December 21, 2011

Dear James:

Enclosed within are:

1) The results of the **10** analyzed samples from your project: **#2011-011; T&R RYCG Pier 94 Backlands,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112307

AEW ENGINEERING, INC.

55 New Montgomery Street, Suite 722, San Francisco, CA 94105

Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 1 of 2

Date: December 9, 2011

TURN AROUND TIME	☐	☐	☐	☒ Others:
LABORATORY:	24	48	1	
McCampbell Analytical	HOURS	HOURS	WEEK	Normal

Report To: James Medley **eMail:** jmedley@aewengineering.com

Company: AEW Engineering, Inc. **Project No.:** 2011-011

Project Name: T&R RYCG Pier 94 Backlands **Location:** T&R RYCG Pier 94 Backlands

Sampler: James Medley **Project No.:** 2011-011

Sampler: Signature: James Medley **Bill To:** Kenneth Leung

Reporting Requirement: Hard Copy : Yes ☐ No ☐

PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	Other	Comments
E-1-2.0		12/9/2011	0744	1	AL		X				X				X	X	X	X	X	X							
E-2-2.0		12/9/2011	0807	1	AL		X				X				X	X	X	X	X	X	X	X	X	X			
E-3-2.5		12/9/2011	0838	1	AL		X				X					X	X	X	X	X							E-3 COMPOSITE
E-3-5.0		12/9/2011	0840	1	AL		X				X				X												
E-4-2.5		12/9/2011	0900	1	AL		X				X				X	X	X	X	X	X	X	X	X	X			E-4 COMPOSITE
E-4-5.0		12/9/2011	0903	1	AL		X				X																
E-4-10		12/9/2011	0905	1	AL		X				X																
E-4-15		12/9/2011	0908	1	AL		X				X																
E-5-2.5		12/9/2011	0940	1	AL		X				X				X	X	X	X	X	X	X	X	X	X			E-5 COMPOSITE
E-5-5.0		12/9/2011	0941	1	AL		X				X																
E-6-2.5		12/9/2011	1000	1	AL		X				X					X	X	X	X	X							E-6 COMPOSITE
E-6-5.0		12/9/2011	1005	1	AL		X				X				X												
E-6-10		12/9/2011	1008	1	AL		X				X																

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:
AL = Acetate liner

ICE/T° 5.0 ☐
GOOD CONDITION ✓ ☐
HEAD SPACE ABSENT ✓ ☐
DECHLORINATED IN LAB ☐
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ☐

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓			

Please hold samples in laboratory for 6 months before disposal

Call James with questions

AEW ENGINEERING, INC.

55 New Montgomery Street, Suite 722, San Francisco, CA 94105

Telephone: (415) 495-8400 Fax: (415) 358-5598

Date: December 9, 2011

CHAIN OF CUSTODY RECORD Page 2 of 2

TURN AROUND TIME	☐	☐	☐	☒	Others:
LABORATORY:	24	48	1		
McCampbell Analytical	HOURS	HOURS	WEEK	Normal	

Report To: James Medley eMail: jmedley@aewengineering.com

Company: AEW Engineering, Inc. Project No.: 2011-011

Project Name: T&R RYCG Pier 94 Backlands Location: T&R RYCG Pier 94 Backlands

Sampler: James Medley Project No.: 2011-011

Sampler: Signature: James Medley Bill To: Kenneth Leung

Reporting Requirement: Hard Copy : Yes ☐ No ☐

PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	Analysis Request: VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	Other	Comments
E-7-2.5		12/9/2011	1036	1	AL		X				X				X												E-7 COMPOSITE
E-7-5.0		12/9/2011	1042	1	AL		X				X																
E-7-10		12/9/2011	1046	1	AL		X				X																
E-8-2.5		12/9/2011	1148	1	AL		X				X																E-8 COMPOSITE
E-8-5.0		12/9/2011	1150	1	AL		X				X				X												
E-8-10		12/9/2011	1152	1	AL		X				X																
E-8-14		12/9/2011	1155	1	AL		X				X																
E-9-2.5		12/9/2011	1103	1	AL		X				X				X												E-9 COMPOSITE
E-9-5.0		12/9/2011	1105	1	AL		X				X																
E-9-10		12/9/2011	1108	1	AL		X				X																
E-9-14		12/9/2011	1113	1	AL		X				X																
#5 E-9-GW		12/9/2011	1118	7	--	X					X	X	X		X		X	X	X						X		

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:

AL = Acetate liner

Voas for VOCs, TPH-gas are unpreserved

Dissolved metals on the water sample

Please hold samples in laboratory for 6 months before disposal

Call James with questions

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: **5 days**

Date Received: **12/09/2011**
Date Printed: **12/16/2011**

					Requested Tests (See legend below)											
Lab ID	**Client ID**	**Matrix**	**Collection Date**	**Hold**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1112307-001	E-1-2.0	Soil	12/9/2011 7:44	☐	A	A		A				A				
1112307-002	E-2-2.0	Soil	12/9/2011 8:07	☐	A	A		A		A		A	A		A	
1112307-003	E-3 Composite	Soil	12/9/2011	☐	A			A				A				
1112307-003	E-3-5.0	Soil	12/9/2011 8:40	☐		B										
1112307-004	E-4 Composite	Soil	12/9/2011	☐	A			A		A		A	A		A	
1112307-004	E-4-2.5	Soil	12/9/2011 9:00	☐		B										
1112307-005	E-5 Composite	Soil	12/9/2011	☐	A			A		A		A	A		A	
1112307-005	E-5-2.5	Soil	12/9/2011 9:40	☐		B										
1112307-006	E-6 Composite	Soil	12/9/2011	☐	A			A				A				
1112307-006	E-6-5.0	Soil	12/9/2011 10:05	☐		B										
1112307-007	E-7 Composite	Soil	12/9/2011	☐	A			A		A		A	A		A	
1112307-007	E-7-2.5	Soil	12/9/2011 10:36	☐		B										
1112307-008	E-8 Composite	Soil	12/9/2011	☐	A			A				A				
1112307-008	E-8-5.0	Soil	12/9/2011 11:50	☐		B										

Test Legend:

1	8082A_PCB_S	2	8260B_S	3	8260B_W	4	8270D_S	5	8270D_W
6	SBESTOSPLM_FORENSIC_	7	CAM17MS_DISS	8	CAM17MS_S	9	CN_TOTAL_S	10	G-MBTEX_W
11	PH_S	12	PRDISSOLVED						

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Maria Venegas

Comments:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: **5 days**

Date Received: **12/09/2011**
Date Printed: **12/16/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1112307-009	E-9 Composite	Soil	12/9/2011	☐	A			A		A		A	A		A	
1112307-009	E-9-2.5	Soil	12/9/2011 11:03	☐		B										
1112307-010	E-9-GW	Water	12/9/2011 11:18	☐			B		D		C			A		C

Test Legend:

1	8082A_PCB_S	2	8260B_S	3	8260B_W	4	8270D_S	5	8270D_W
6	ASBESTOSPLM_FORENSIC_	7	CAM17MS_DISS	8	CAM17MS_S	9	CN_TOTAL_S	10	G-MBTEX_W
11	PH_S	12	PRDISSOLVED						

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Maria Venegas

Comments:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: 5 days

Date Received: **12/09/2011**
Date Printed: **12/16/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					13	14	15	16	17	18	19	20	21	22	23	24
1112307-001	E-1-2.0	Soil	12/9/2011 7:44	☐		A										
1112307-002	E-2-2.0	Soil	12/9/2011 8:07	☐	A	A										
1112307-003	E-3 Composite	Soil	12/9/2011	☐		A										
1112307-003	E-3-5.0	Soil	12/9/2011 8:40	☐												
1112307-004	E-4 Composite	Soil	12/9/2011	☐	A	A										
1112307-004	E-4-2.5	Soil	12/9/2011 9:00	☐												
1112307-005	E-5 Composite	Soil	12/9/2011	☐	A	A										
1112307-005	E-5-2.5	Soil	12/9/2011 9:40	☐												
1112307-006	E-6 Composite	Soil	12/9/2011	☐		A										
1112307-006	E-6-5.0	Soil	12/9/2011 10:05	☐												
1112307-007	E-7 Composite	Soil	12/9/2011	☐	A	A										
1112307-007	E-7-2.5	Soil	12/9/2011 10:36	☐												
1112307-008	E-8 Composite	Soil	12/9/2011	☐		A										
1112307-008	E-8-5.0	Soil	12/9/2011 11:50	☐												

Test Legend:

13	SULFIDE_S	14	TPH(DMO)WSG_S	15		16		17	
18		19		20		21		22	
23		24							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Maria Venegas

Comments:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: 5 days

Date Received: **12/09/2011**
Date Printed: **12/16/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					13	14	15	16	17	18	19	20	21	22	23	24
1112307-009	E-9 Composite	Soil	12/9/2011	☐	A	A										
1112307-009	E-9-2.5	Soil	12/9/2011 11:03	☐												
1112307-010	E-9-GW	Water	12/9/2011 11:18	☐												

Test Legend:

13	SULFIDE_S	14	TPH(DMO)WSG_S	15		16		17	
18		19		20		21		22	
23		24							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Maria Venegas

Comments:

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

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **AEW Engineering, Inc.** Date and Time Received: **12/9/2011 4:21:59 PM**

Project Name: **#2011-011; T&R RYCG Pier 94 Backlands** Checklist completed and reviewed by: Maria Venegas

WorkOrder N°: **1112307** Matrix: Soil/Water Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

Custody seals intact on 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: 5.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/12/11-12/16/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B | Analytical Method: SW8082 | Work Order: 1112307

Lab ID	1112307-001A	1112307-002A	1112307-003A	1112307-004A	Reporting Limit for DF =1	
Client ID	E-1-2.0	E-2-2.0	E-3 Composite	E-4 Composite		
Matrix	S	S	S	S		
DF	5	5	5	10	S	W
Compound	**Concentration**				mg/kg	ug/L
Aroclor1016	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1221	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1232	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1242	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1248	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1254	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1260	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
PCBs, total	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Surrogate Recoveries (%)						
%SS:	122	127	124	119		
Comments	a3,h4	a3,h4	a3,h4	a3,h4		

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a1) sample diluted due to matrix interference
a3) sample diluted due to high organic content.
h4) sulfuric acid permanganate (EPA 3665) cleanup

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/12/11-12/16/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B | Analytical Method: SW8082 | Work Order: 1112307

Lab ID	1112307-005A	1112307-006A	1112307-007A	1112307-008A	Reporting Limit for DF =1	
Client ID	E-5 Composite	E-6 Composite	E-7 Composite	E-8 Composite		
Matrix	S	S	S	S		
DF	10	100	100	20	S	W
Compound	**Concentration**				mg/kg	ug/L
Aroclor1016	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1221	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1232	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1242	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1248	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1254	ND<0.50	16	ND<5.0	ND<1.0	0.05	NA
Aroclor1260	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
PCBs, total	ND<0.50	16	ND<5.0	ND<1.0	0.05	NA
Surrogate Recoveries (%)						
%SS:	118	---#	115	---#		
Comments	a3,h4		a1,h4	a3,h4		

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a1) sample diluted due to matrix interference
a3) sample diluted due to high organic content.
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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/12/11-12/16/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B | Analytical Method: SW8082 | Work Order: 1112307

					Reporting Limit for DF =1	
Lab ID	1112307-009A					
Client ID	E-9 Composite					
Matrix	S					
DF	100				S	W
Compound	**Concentration**				mg/kg	ug/L
Aroclor1016	ND<5.0				0.05	NA
Aroclor1221	ND<5.0				0.05	NA
Aroclor1232	ND<5.0				0.05	NA
Aroclor1242	ND<5.0				0.05	NA
Aroclor1248	ND<5.0				0.05	NA
Aroclor1254	ND<5.0				0.05	NA
Aroclor1260	ND<5.0				0.05	NA
PCBs, total	ND<5.0				0.05	NA
Surrogate Recoveries (%)						
%SS:	---#					
Comments	a1,h4					

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a1) sample diluted due to matrix interference
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h4) sulfuric acid permanganate (EPA 3665) cleanup

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-001A
Client ID	E-1-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	94	%SS2:	114
%SS3:	112		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-002A
Client ID	E-2-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	97	%SS2:	108
%SS3:	108		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-003B
Client ID	E-3-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	117	%SS2:	117
%SS3:	100		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-004B
Client ID	E-4-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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	0.0095	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	95	%SS2:	117
%SS3:	110		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-005B
Client ID	E-5-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	97	%SS2:	117
%SS3:	113		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-006B
Client ID	E-6-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	0.11	1.0	0.05	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	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	0.0051	1.0	0.005	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, Total	0.025	1.0	0.005

Surrogate Recoveries (%)

%SS1:	115	%SS2:	125
%SS3:	109		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-007B
Client ID	E-7-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	114	%SS2:	126
%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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-008B
Client ID	E-8-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	115	%SS2:	119
%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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-009B
Client ID	E-9-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	99	%SS2:	113
%SS3:	108		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/15/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/15/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-010B
Client ID	E-9-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	10	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 Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	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	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	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	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, Total	ND	1.0	0.5

Surrogate Recoveries (%)

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

Comments: b1

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-001A
Client ID	E-1-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	72	%SS2:	50
%SS3:	71	%SS4:	61
%SS5:	67	%SS6:	62

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-002A
Client ID	E-2-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	73	%SS2:	---#
%SS3:	76	%SS4:	67
%SS5:	59	%SS6:	68

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-003A
Client ID	E-3 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	66	%SS2:	---#
%SS3:	74	%SS4:	65
%SS5:	---#	%SS6:	64

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-004A
Client ID	E-4 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<6.6	20	0.33	Acenaphthylene	ND<6.6	20	0.33
Acetochlor	ND<6.6	20	0.33	Anthracene	ND<6.6	20	0.33
Benzidine	ND<32	20	1.6	Benzoic Acid	ND<32	20	1.6
Benzo (a) anthracene	ND<6.6	20	0.33	Benzo (b) fluoranthene	ND<6.6	20	0.33
Benzo (k) fluoranthene	ND<6.6	20	0.33	Benzo (g,h,i) perylene	ND<6.6	20	0.33
Benzo (a) pyrene	ND<6.6	20	0.33	Benzyl Alcohol	ND<32	20	1.6
1,1-Biphenyl	ND<6.6	20	0.33	Bis (2-chloroethoxy) Methane	ND<6.6	20	0.33
Bis (2-chloroethyl) Ether	ND<6.6	20	0.33	Bis (2-chloroisopropyl) Ether	ND<6.6	20	0.33
Bis (2-ethylhexyl) Phthalate	ND<6.6	20	0.33	4-Bromophenyl Phenyl Ether	ND<6.6	20	0.33
Butylbenzyl Phthalate	ND<6.6	20	0.33	4-Chloroaniline	ND<13	20	0.66
4-Chloro-3-methylphenol	ND<6.6	20	0.33	2-Chloronaphthalene	ND<6.6	20	0.33
2-Chlorophenol	ND<6.6	20	0.33	4-Chlorophenyl Phenyl Ether	ND<6.6	20	0.33
Chrysene	ND<6.6	20	0.33	Dibenzo (a,h) anthracene	ND<6.6	20	0.33
Dibenzofuran	ND<6.6	20	0.33	Di-n-butyl Phthalate	ND<6.6	20	0.33
1,2-Dichlorobenzene	ND<6.6	20	0.33	1,3-Dichlorobenzene	ND<6.6	20	0.33
1,4-Dichlorobenzene	ND<6.6	20	0.33	3,3-Dichlorobenzidine	ND<13	20	0.66
2,4-Dichlorophenol	ND<6.6	20	0.33	Diethyl Phthalate	ND<6.6	20	0.33
2,4-Dimethylphenol	ND<6.6	20	0.33	Dimethyl Phthalate	ND<6.6	20	0.33
4,6-Dinitro-2-methylphenol	ND<32	20	1.6	2,4-Dinitrophenol	ND<32	20	1.6
2,4-Dinitrotoluene	ND<6.6	20	0.33	2,6-Dinitrotoluene	ND<6.6	20	0.33
Di-n-octyl Phthalate	ND<6.6	20	0.33	1,2-Diphenylhydrazine	ND<6.6	20	0.33
Fluoranthene	ND<6.6	20	0.33	Fluorene	ND<6.6	20	0.33
Hexachlorobenzene	ND<6.6	20	0.33	Hexachlorobutadiene	ND<6.6	20	0.33
Hexachlorocyclopentadiene	ND<32	20	1.6	Hexachloroethane	ND<6.6	20	0.33
Indeno (1,2,3-cd) pyrene	ND<6.6	20	0.33	Isophorone	ND<6.6	20	0.33
2-Methylnaphthalene	ND<6.6	20	0.33	2-Methylphenol (o-Cresol)	ND<6.6	20	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<6.6	20	0.33	Naphthalene	ND<6.6	20	0.33
2-Nitroaniline	ND<32	20	1.6	3-Nitroaniline	ND<32	20	1.6
4-Nitroaniline	ND<32	20	1.6	Nitrobenzene	ND<6.6	20	0.33
2-Nitrophenol	ND<32	20	1.6	4-Nitrophenol	ND<32	20	1.6
N-Nitrosodiphenylamine	ND<6.6	20	0.33	N-Nitrosodi-n-propylamine	ND<6.6	20	0.33
Pentachlorophenol	ND<32	20	1.6	Phenanthrene	ND<6.6	20	0.33
Phenol	ND<6.6	20	0.33	Pyrene	ND<6.6	20	0.33
1,2,4-Trichlorobenzene	ND<6.6	20	0.33	2,4,5-Trichlorophenol	ND<6.6	20	0.33
2,4,6-Trichlorophenol	ND<6.6	20	0.33				

Surrogate Recoveries (%)

%SS1:	53	%SS2:	---#
%SS3:	66	%SS4:	63
%SS5:	---#	%SS6:	68

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/17/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-005A
Client ID	E-5 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	---#	%SS2:	---#
%SS3:	74	%SS4:	64
%SS5:	---#	%SS6:	66

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-006A
Client ID	E-6 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<3.3	10	0.33	Acenaphthylene	ND<3.3	10	0.33
Acetochlor	ND<3.3	10	0.33	Anthracene	ND<3.3	10	0.33
Benzidine	ND<16	10	1.6	Benzoic Acid	ND<16	10	1.6
Benzo (a) anthracene	ND<3.3	10	0.33	Benzo (b) fluoranthene	ND<3.3	10	0.33
Benzo (k) fluoranthene	ND<3.3	10	0.33	Benzo (g,h,i) perylene	ND<3.3	10	0.33
Benzo (a) pyrene	ND<3.3	10	0.33	Benzyl Alcohol	ND<16	10	1.6
1,1-Biphenyl	ND<3.3	10	0.33	Bis (2-chloroethoxy) Methane	ND<3.3	10	0.33
Bis (2-chloroethyl) Ether	ND<3.3	10	0.33	Bis (2-chloroisopropyl) Ether	ND<3.3	10	0.33
Bis (2-ethylhexyl) Phthalate	ND<3.3	10	0.33	4-Bromophenyl Phenyl Ether	ND<3.3	10	0.33
Butylbenzyl Phthalate	ND<3.3	10	0.33	4-Chloroaniline	ND<6.6	10	0.66
4-Chloro-3-methylphenol	ND<3.3	10	0.33	2-Chloronaphthalene	ND<3.3	10	0.33
2-Chlorophenol	ND<3.3	10	0.33	4-Chlorophenyl Phenyl Ether	ND<3.3	10	0.33
Chrysene	ND<3.3	10	0.33	Dibenzo (a,h) anthracene	ND<3.3	10	0.33
Dibenzofuran	ND<3.3	10	0.33	Di-n-butyl Phthalate	ND<3.3	10	0.33
1,2-Dichlorobenzene	ND<3.3	10	0.33	1,3-Dichlorobenzene	ND<3.3	10	0.33
1,4-Dichlorobenzene	ND<3.3	10	0.33	3,3-Dichlorobenzidine	ND<6.6	10	0.66
2,4-Dichlorophenol	ND<3.3	10	0.33	Diethyl Phthalate	ND<3.3	10	0.33
2,4-Dimethylphenol	ND<3.3	10	0.33	Dimethyl Phthalate	ND<3.3	10	0.33
4,6-Dinitro-2-methylphenol	ND<16	10	1.6	2,4-Dinitrophenol	ND<16	10	1.6
2,4-Dinitrotoluene	ND<3.3	10	0.33	2,6-Dinitrotoluene	ND<3.3	10	0.33
Di-n-octyl Phthalate	ND<3.3	10	0.33	1,2-Diphenylhydrazine	ND<3.3	10	0.33
Fluoranthene	ND<3.3	10	0.33	Fluorene	ND<3.3	10	0.33
Hexachlorobenzene	ND<3.3	10	0.33	Hexachlorobutadiene	ND<3.3	10	0.33
Hexachlorocyclopentadiene	ND<16	10	1.6	Hexachloroethane	ND<3.3	10	0.33
Indeno (1,2,3-cd) pyrene	ND<3.3	10	0.33	Isophorone	ND<3.3	10	0.33
2-Methylnaphthalene	ND<3.3	10	0.33	2-Methylphenol (o-Cresol)	ND<3.3	10	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<3.3	10	0.33	Naphthalene	ND<3.3	10	0.33
2-Nitroaniline	ND<16	10	1.6	3-Nitroaniline	ND<16	10	1.6
4-Nitroaniline	ND<16	10	1.6	Nitrobenzene	ND<3.3	10	0.33
2-Nitrophenol	ND<16	10	1.6	4-Nitrophenol	ND<16	10	1.6
N-Nitrosodiphenylamine	ND<3.3	10	0.33	N-Nitrosodi-n-propylamine	ND<3.3	10	0.33
Pentachlorophenol	ND<16	10	1.6	Phenanthrene	ND<3.3	10	0.33
Phenol	ND<3.3	10	0.33	Pyrene	ND<3.3	10	0.33
1,2,4-Trichlorobenzene	ND<3.3	10	0.33	2,4,5-Trichlorophenol	ND<3.3	10	0.33
2,4,6-Trichlorophenol	ND<3.3	10	0.33				

Surrogate Recoveries (%)

%SS1:	64	%SS2:	---#
%SS3:	68	%SS4:	59
%SS5:	55	%SS6:	63

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/21/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-007A
Client ID	E-7 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	48	%SS2:	95
%SS3:	98	%SS4:	113
%SS5:	---#	%SS6:	97

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/19/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-008A
Client ID	E-8 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<3.3	10	0.33	Acenaphthylene	ND<3.3	10	0.33
Acetochlor	ND<3.3	10	0.33	Anthracene	ND<3.3	10	0.33
Benzidine	ND<16	10	1.6	Benzoic Acid	ND<16	10	1.6
Benzo (a) anthracene	3.9	10	0.33	Benzo (b) fluoranthene	4.7	10	0.33
Benzo (k) fluoranthene	4.4	10	0.33	Benzo (g,h,i) perylene	7.4	10	0.33
Benzo (a) pyrene	7.4	10	0.33	Benzyl Alcohol	ND<16	10	1.6
1,1-Biphenyl	ND<3.3	10	0.33	Bis (2-chloroethoxy) Methane	ND<3.3	10	0.33
Bis (2-chloroethyl) Ether	ND<3.3	10	0.33	Bis (2-chloroisopropyl) Ether	ND<3.3	10	0.33
Bis (2-ethylhexyl) Phthalate	ND<3.3	10	0.33	4-Bromophenyl Phenyl Ether	ND<3.3	10	0.33
Butylbenzyl Phthalate	ND<3.3	10	0.33	4-Chloroaniline	ND<6.6	10	0.66
4-Chloro-3-methylphenol	ND<3.3	10	0.33	2-Chloronaphthalene	ND<3.3	10	0.33
2-Chlorophenol	ND<3.3	10	0.33	4-Chlorophenyl Phenyl Ether	ND<3.3	10	0.33
Chrysene	5.5	10	0.33	Dibenzo (a,h) anthracene	ND<3.3	10	0.33
Dibenzofuran	ND<3.3	10	0.33	Di-n-butyl Phthalate	ND<3.3	10	0.33
1,2-Dichlorobenzene	ND<3.3	10	0.33	1,3-Dichlorobenzene	ND<3.3	10	0.33
1,4-Dichlorobenzene	ND<3.3	10	0.33	3,3-Dichlorobenzidine	ND<6.6	10	0.66
2,4-Dichlorophenol	ND<3.3	10	0.33	Diethyl Phthalate	ND<3.3	10	0.33
2,4-Dimethylphenol	ND<3.3	10	0.33	Dimethyl Phthalate	ND<3.3	10	0.33
4,6-Dinitro-2-methylphenol	ND<16	10	1.6	2,4-Dinitrophenol	ND<16	10	1.6
2,4-Dinitrotoluene	ND<3.3	10	0.33	2,6-Dinitrotoluene	ND<3.3	10	0.33
Di-n-octyl Phthalate	ND<3.3	10	0.33	1,2-Diphenylhydrazine	ND<3.3	10	0.33
Fluoranthene	16	10	0.33	Fluorene	ND<3.3	10	0.33
Hexachlorobenzene	ND<3.3	10	0.33	Hexachlorobutadiene	ND<3.3	10	0.33
Hexachlorocyclopentadiene	ND<16	10	1.6	Hexachloroethane	ND<3.3	10	0.33
Indeno (1,2,3-cd) pyrene	5.2	10	0.33	Isophorone	ND<3.3	10	0.33
2-Methylnaphthalene	ND<3.3	10	0.33	2-Methylphenol (o-Cresol)	ND<3.3	10	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<3.3	10	0.33	Naphthalene	ND<3.3	10	0.33
2-Nitroaniline	ND<16	10	1.6	3-Nitroaniline	ND<16	10	1.6
4-Nitroaniline	ND<16	10	1.6	Nitrobenzene	ND<3.3	10	0.33
2-Nitrophenol	ND<16	10	1.6	4-Nitrophenol	ND<16	10	1.6
N-Nitrosodiphenylamine	ND<3.3	10	0.33	N-Nitrosodi-n-propylamine	ND<3.3	10	0.33
Pentachlorophenol	ND<16	10	1.6	Phenanthrene	8.6	10	0.33
Phenol	ND<3.3	10	0.33	Pyrene	20	10	0.33
1,2,4-Trichlorobenzene	ND<3.3	10	0.33	2,4,5-Trichlorophenol	ND<3.3	10	0.33
2,4,6-Trichlorophenol	ND<3.3	10	0.33				

Surrogate Recoveries (%)

%SS1:	75	%SS2:	78
%SS3:	76	%SS4:	66
%SS5:	59	%SS6:	61

Comments:

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/17/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-009A
Client ID	E-9 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<6.6	20	0.33	Acenaphthylene	ND<6.6	20	0.33
Acetochlor	ND<6.6	20	0.33	Anthracene	ND<6.6	20	0.33
Benzidine	ND<32	20	1.6	Benzoic Acid	ND<32	20	1.6
Benzo (a) anthracene	ND<6.6	20	0.33	Benzo (b) fluoranthene	ND<6.6	20	0.33
Benzo (k) fluoranthene	ND<6.6	20	0.33	Benzo (g,h,i) perylene	ND<6.6	20	0.33
Benzo (a) pyrene	ND<6.6	20	0.33	Benzyl Alcohol	ND<32	20	1.6
1,1-Biphenyl	ND<6.6	20	0.33	Bis (2-chloroethoxy) Methane	ND<6.6	20	0.33
Bis (2-chloroethyl) Ether	ND<6.6	20	0.33	Bis (2-chloroisopropyl) Ether	ND<6.6	20	0.33
Bis (2-ethylhexyl) Phthalate	ND<6.6	20	0.33	4-Bromophenyl Phenyl Ether	ND<6.6	20	0.33
Butylbenzyl Phthalate	ND<6.6	20	0.33	4-Chloroaniline	ND<13	20	0.66
4-Chloro-3-methylphenol	ND<6.6	20	0.33	2-Chloronaphthalene	ND<6.6	20	0.33
2-Chlorophenol	ND<6.6	20	0.33	4-Chlorophenyl Phenyl Ether	ND<6.6	20	0.33
Chrysene	ND<6.6	20	0.33	Dibenzo (a,h) anthracene	ND<6.6	20	0.33
Dibenzofuran	ND<6.6	20	0.33	Di-n-butyl Phthalate	ND<6.6	20	0.33
1,2-Dichlorobenzene	ND<6.6	20	0.33	1,3-Dichlorobenzene	ND<6.6	20	0.33
1,4-Dichlorobenzene	ND<6.6	20	0.33	3,3-Dichlorobenzidine	ND<13	20	0.66
2,4-Dichlorophenol	ND<6.6	20	0.33	Diethyl Phthalate	ND<6.6	20	0.33
2,4-Dimethylphenol	ND<6.6	20	0.33	Dimethyl Phthalate	ND<6.6	20	0.33
4,6-Dinitro-2-methylphenol	ND<32	20	1.6	2,4-Dinitrophenol	ND<32	20	1.6
2,4-Dinitrotoluene	ND<6.6	20	0.33	2,6-Dinitrotoluene	ND<6.6	20	0.33
Di-n-octyl Phthalate	ND<6.6	20	0.33	1,2-Diphenylhydrazine	ND<6.6	20	0.33
Fluoranthene	ND<6.6	20	0.33	Fluorene	ND<6.6	20	0.33
Hexachlorobenzene	ND<6.6	20	0.33	Hexachlorobutadiene	ND<6.6	20	0.33
Hexachlorocyclopentadiene	ND<32	20	1.6	Hexachloroethane	ND<6.6	20	0.33
Indeno (1,2,3-cd) pyrene	ND<6.6	20	0.33	Isophorone	ND<6.6	20	0.33
2-Methylnaphthalene	ND<6.6	20	0.33	2-Methylphenol (o-Cresol)	ND<6.6	20	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<6.6	20	0.33	Naphthalene	ND<6.6	20	0.33
2-Nitroaniline	ND<32	20	1.6	3-Nitroaniline	ND<32	20	1.6
4-Nitroaniline	ND<32	20	1.6	Nitrobenzene	ND<6.6	20	0.33
2-Nitrophenol	ND<32	20	1.6	4-Nitrophenol	ND<32	20	1.6
N-Nitrosodiphenylamine	ND<6.6	20	0.33	N-Nitrosodi-n-propylamine	ND<6.6	20	0.33
Pentachlorophenol	ND<32	20	1.6	Phenanthrene	ND<6.6	20	0.33
Phenol	ND<6.6	20	0.33	Pyrene	ND<6.6	20	0.33
1,2,4-Trichlorobenzene	ND<6.6	20	0.33	2,4,5-Trichlorophenol	ND<6.6	20	0.33
2,4,6-Trichlorophenol	ND<6.6	20	0.33				

Surrogate Recoveries (%)

%SS1:	60	%SS2:	---#
%SS3:	69	%SS4:	63
%SS5:	---#	%SS6:	69

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3510C | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-010D
Client ID	E-9-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<200	20	10	Acenaphthylene	ND<200	20	10
Acetochlor	ND<200	20	10	Anthracene	ND<200	20	10
Benzidine	ND<1000	20	50	Benzoic Acid	ND<1000	20	50
Benzo (a) anthracene	ND<200	20	10	Benzo (b) fluoranthene	ND<200	20	10
Benzo (k) fluoranthene	ND<200	20	10	Benzo (g,h,i) perylene	ND<200	20	10
Benzo (a) pyrene	ND<200	20	10	Benzyl Alcohol	ND<1000	20	50
1,1-Biphenyl	ND<200	20	10	Bis (2-chloroethoxy) Methane	ND<200	20	10
Bis (2-chloroethyl) Ether	ND<200	20	10	Bis (2-chloroisopropyl) Ether	ND<200	20	10
Bis (2-ethylhexyl) Phthalate	ND<400	20	20	4-Bromophenyl Phenyl Ether	ND<200	20	10
Butylbenzyl Phthalate	ND<200	20	10	4-Chloroaniline	ND<400	20	20
4-Chloro-3-methylphenol	ND<200	20	10	2-Chloronaphthalene	ND<200	20	10
2-Chlorophenol	ND<200	20	10	4-Chlorophenyl Phenyl Ether	ND<200	20	10
Chrysene	ND<200	20	10	Dibenzo (a,h) anthracene	ND<200	20	10
Dibenzofuran	ND<200	20	10	Di-n-butyl Phthalate	ND<200	20	10
1,2-Dichlorobenzene	ND<200	20	10	1,3-Dichlorobenzene	ND<200	20	10
1,4-Dichlorobenzene	ND<200	20	10	3,3-Dichlorobenzidine	ND<400	20	20
2,4-Dichlorophenol	ND<200	20	10	Diethyl Phthalate	ND<200	20	10
2,4-Dimethylphenol	ND<200	20	10	Dimethyl Phthalate	ND<200	20	10
4,6-Dinitro-2-methylphenol	ND<1000	20	50	2,4-Dinitrophenol	ND<1000	20	50
2,4-Dinitrotoluene	ND<200	20	10	2,6-Dinitrotoluene	ND<200	20	10
Di-n-octyl Phthalate	ND<200	20	10	1,2-Diphenylhydrazine	ND<200	20	10
Fluoranthene	ND<200	20	10	Fluorene	ND<200	20	10
Hexachlorobenzene	ND<200	20	10	Hexachlorobutadiene	ND<200	20	10
Hexachlorocyclopentadiene	ND<1000	20	50	Hexachloroethane	ND<200	20	10
Indeno (1,2,3-cd) pyrene	ND<200	20	10	Isophorone	ND<200	20	10
2-Methylnaphthalene	ND<200	20	10	2-Methylphenol (o-Cresol)	ND<200	20	10
3 &/or 4-Methylphenol (m,p-Cresol)	ND<200	20	10	Naphthalene	ND<200	20	10
2-Nitroaniline	ND<1000	20	50	3-Nitroaniline	ND<1000	20	50
4-Nitroaniline	ND<1000	20	50	Nitrobenzene	ND<200	20	10
2-Nitrophenol	ND<1000	20	50	4-Nitrophenol	ND<1000	20	50
N-Nitrosodiphenylamine	ND<200	20	10	N-Nitrosodi-n-propylamine	ND<200	20	10
Pentachlorophenol	ND<1000	20	50	Phenanthrene	ND<200	20	10
Phenol	ND<200	20	10	Pyrene	ND<200	20	10
1,2,4-Trichlorobenzene	ND<200	20	10	2,4,5-Trichlorophenol	ND<200	20	10
2,4,6-Trichlorophenol	ND<200	20	10				

Surrogate Recoveries (%)

%SS1:	---#	%SS2:	---#
%SS3:	54	%SS4:	59
%SS5:	---#	%SS6:	86

Comments: a3,b1

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor; #) surrogate diluted out of range or surrogate coelutes with another peak.

a3) sample diluted due to high organic content.
b1) aqueous sample that contains greater than ~1 vol. % sediment

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/10/11-12/14/11

CAM / CCR 17 Metals*

					Reporting Limit for DF =1; ND means not detected above the reporting limit	
Lab ID	1112307-010C					
Client ID	E-9-GW					
Matrix	W				S	W
Extraction Type	DISS.				mg/kg	µg/L

ICP-MS Metals, Concentration*

Analytical Method: E200.8 Extraction Method: E200.8 Work Order: 1112307

Dilution Factor	1				1	1
Antimony	2.9				NA	0.5
Arsenic	2.3				NA	0.5
Barium	1100				NA	5.0
Beryllium	ND				NA	0.5
Cadmium	ND				NA	0.25
Chromium	1.4				NA	0.5
Cobalt	3.3				NA	0.5
Copper	ND				NA	0.5
Lead	ND				NA	0.5
Mercury	0.074				NA	0.025
Molybdenum	9.9				NA	0.5
Nickel	14				NA	0.5
Selenium	2.8				NA	0.5
Silver	ND				NA	0.19
Thallium	ND				NA	0.5
Vanadium	1.4				NA	0.5
Zinc	ND				NA	5.0
%SS:	N/A					
Comments	b1					

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

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

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/12/11-12/13/11

CAM / CCR 17 Metals*

Lab ID	1112307-001A	1112307-002A	1112307-003A	1112307-004A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	E-1-2.0	E-2-2.0	E-3 Composite	E-4 Composite		
Matrix	S	S	S	S	S	W
Extraction Type	TOTAL	TOTAL	TOTAL	TOTAL	mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1112307

Dilution Factor	1	1	1	1	1	1
Antimony	0.90	ND	ND	ND	0.5	NA
Arsenic	3.6	1.7	1.6	4.8	0.5	NA
Barium	580	100	89	260	5.0	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	ND	ND	ND	ND	0.25	NA
Chromium	49	800	620	150	0.5	NA
Cobalt	10	57	53	40	0.5	NA
Copper	38	31	30	39	0.5	NA
Lead	13	6.4	6.0	76	0.5	NA
Mercury	ND	0.051	ND	1.2	0.05	NA
Molybdenum	ND	ND	ND	0.94	0.5	NA
Nickel	25	830	970	520	0.5	NA
Selenium	ND	ND	ND	ND	0.5	NA
Silver	ND	ND	ND	ND	0.5	NA
Thallium	ND	ND	ND	ND	0.5	NA
Vanadium	34	55	42	48	0.5	NA
Zinc	270	44	40	56	5.0	NA
%SS:	108	124	126	123		

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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		Date Received 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/12/11-12/13/11

CAM / CCR 17 Metals*

Lab ID	1112307-005A	1112307-006A	1112307-007A	1112307-008A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	E-5 Composite	E-6 Composite	E-7 Composite	E-8 Composite		
Matrix	S	S	S	S	S	W
Extraction Type	TOTAL	TOTAL	TOTAL	TOTAL	mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1112307

Dilution Factor	1	1	1	1	1	1
Antimony	0.78	1.7	1.5	0.57	0.5	NA
Arsenic	4.6	18	5.5	9.2	0.5	NA
Barium	200	100	140	62	5.0	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	ND	0.40	0.29	ND	0.25	NA
Chromium	62	130	54	100	0.5	NA
Cobalt	7.7	21	7.9	15	0.5	NA
Copper	31	47	41	38	0.5	NA
Lead	39	160	67	39	0.5	NA
Mercury	0.098	0.31	0.25	0.13	0.05	NA
Molybdenum	0.89	1.1	1.6	3.4	0.5	NA
Nickel	58	310	61	160	0.5	NA
Selenium	ND	ND	ND	ND	0.5	NA
Silver	ND	ND	ND	ND	0.5	NA
Thallium	ND	ND	ND	ND	0.5	NA
Vanadium	45	58	41	46	0.5	NA
Zinc	140	120	100	68	5.0	NA
%SS:	114	119	103	124		

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/12/11-12/13/11

CAM / CCR 17 Metals*

					Reporting Limit for DF =1; ND means not detected above the reporting limit	
Lab ID	1112307-009A					
Client ID	E-9 Composite					
Matrix	S				S	W
Extraction Type	TOTAL				mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1112307

Dilution Factor	1				1	1
Antimony	0.84				0.5	NA
Arsenic	7.4				0.5	NA
Barium	74				5.0	NA
Beryllium	ND				0.5	NA
Cadmium	ND				0.25	NA
Chromium	110				0.5	NA
Cobalt	19				0.5	NA
Copper	22				0.5	NA
Lead	64				0.5	NA
Mercury	0.30				0.05	NA
Molybdenum	0.69				0.5	NA
Nickel	240				0.5	NA
Selenium	ND				0.5	NA
Silver	ND				0.5	NA
Thallium	ND				0.5	NA
Vanadium	44				0.5	NA
Zinc	99				5.0	NA
%SS:	123					

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/15/11

Cyanide, Total*^

Analytical Method: SM4500-CN⁻ ABCE | Work Order: 1112307

Lab ID	Client ID	Matrix	Total Cyanide	DF	Comments
1112307-002A	E-2-2.0	S	ND	1	
1112307-004A	E-4 Composite	S	ND	1	
1112307-005A	E-5 Composite	S	0.14	1	
1112307-007A	E-7 Composite	S	0.15	1	
1112307-009A	E-9 Composite	S	ND	1	

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	0.1 mg/Kg	

* water samples are reported in µg/L; soil/sludge/solid samples in mg/kg; wipe samples in µg/wipe.

^All soil samples are treated to remove sulfide, nitrate and nitrite interference prior to analysis.

DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted 12/09/11-12/14/11
	Client P.O.:	Date Analyzed 12/11/11-12/14/11

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Bm/SW8021B/8015Bm Work Order: 1112307

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	0.005
1112307-001A	E-1-2.0	S	ND	1	96	
1112307-002A	E-2-2.0	S	ND	1	92	
1112307-003A	E-3 Composite	S	ND	1	92	
1112307-004A	E-4 Composite	S	1.3	1	101	d7
1112307-005A	E-5 Composite	S	1.4	1	110	d7
1112307-006A	E-6 Composite	S	3.9	1	89	d7
1112307-007A	E-7 Composite	S	2.7	1	90	d7
1112307-008A	E-8 Composite	S	ND	1	104	
1112307-009A	E-9 Composite	S	7.7	1	93	d7
1112307-010A	E-9-GW	W	ND	1	100	b1

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

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

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/13/11
	Client P.O.:	Date Analyzed: 12/13/11

pH*

Analytical Method: SW9045D — Work Order: 1112307

Lab ID	Client ID	Matrix	pH	DF	Comments
1112307-002A	E-2-2.0	S	9.36 @ 20.7°C	1	
1112307-004A	E-4 Composite	S	9.83 @ 20.9°C	1	
1112307-005A	E-5 Composite	S	12.24 @ 21.0°C	1	
1112307-007A	E-7 Composite	S	11.97 @ 21.1°C	1	
1112307-009A	E-9 Composite	S	8.99 @ 21.5°C	1	

Method Accuracy and Reporting Units	W	NA	
	S	±0.05, pH units @ °C	

* EPA method 9045; pH = -log(aH+) @ _°C; ± 0.1 units

DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/15/11
	Client P.O.:	Date Analyzed: 12/15/11

Acid Soluble Sulfide*

Analytical Method: SW9030A/E376.2 Work Order: 1112307

Lab ID	Client ID	Matrix	Sulfide	DF	Comments
1112307-002A	E-2-2.0	S	ND	1	
1112307-004A	E-4 Composite	S	ND	1	
1112307-005A	E-5 Composite	S	ND	1	
1112307-007A	E-7 Composite	S	110	5	
1112307-009A	E-9 Composite	S	35	1	

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	10 mg/Kg	

*water samples are reported in mg/L, soil samples are reported in mg/kg.

DF = Dilution Factor

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		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/11/11-12/15/11

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C/3630C/SW3550B/3630C Analytical methods: SW8015B Work Order: 1112307

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1112307-001A	E-1-2.0	S	35	350	10	95	e7,e2
1112307-002A	E-2-2.0	S	8.1	100	2	96	e7,e2
1112307-003A	E-3 Composite	S	7.0	130	2	102	e7,e2
1112307-004A	E-4 Composite	S	59	540	20	104	e7,e2
1112307-005A	E-5 Composite	S	30	120	10	82	e7,e2
1112307-006A	E-6 Composite	S	58	320	20	93	e7,e2
1112307-007A	E-7 Composite	S	32	170	5	101	e7,e2
1112307-008A	E-8 Composite	S	130	300	10	87	e7,e2,e6
1112307-009A	E-9 Composite	S	37	310	20	93	e7,e2
1112307-010A	E-9-GW	W	2400	2800	1	103	e7,e2,e4,b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	1.0	5.0	mg/Kg

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

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

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
e2) diesel range compounds are significant; no recognizable pattern
e4) gasoline range compounds are significant.
e6) one to a few isolated peaks present in the THP(d/mo) chromatogram
e7) oil range compounds are significant

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QC SUMMARY REPORT FOR SW8082

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63298 | WorkOrder: 1112307

EPA Method: SW8082 | **Extraction: SW3550B** | **Spiked Sample ID: 1112219-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/kg	mg/kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Aroclor1260	ND	0.15	95.8	96	0.225	101	70 - 130	20	70 - 130
%SS:	102	0.050	102	104	1.79	92	70 - 130	20	70 - 130

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

BATCH 63298 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/12/11 9:36 PM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/12/11 10:30 PM
1112307-003A	12/09/11	12/09/11	12/12/11 11:25 PM	1112307-004A	12/09/11	12/09/11	12/13/11 12:19 AM
1112307-005A	12/09/11	12/09/11	12/13/11 5:15 AM	1112307-006A	12/09/11	12/09/11	12/16/11 5:24 AM
1112307-007A	12/09/11	12/09/11	12/14/11 7:52 PM	1112307-008A	12/09/11	12/09/11	12/13/11 8:00 AM
1112307-009A	12/09/11	12/09/11	12/15/11 2:16 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.

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

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63365 | WorkOrder: 1112307

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1112307-009B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	0.050	92.9	90.1	3.05	128	70 - 130	30	70 - 130
Benzene	ND	0.050	99.9	97.3	2.65	100	70 - 130	30	70 - 130
t-Butyl alcohol (TBA)	ND	0.20	97.6	101	3.41	83.1	70 - 130	30	70 - 130
Chlorobenzene	ND	0.050	103	100	3.23	99	70 - 130	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	98.1	96.9	1.23	98.3	70 - 130	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	99.2	97.5	1.73	94.9	70 - 130	30	70 - 130
1,1-Dichloroethene	ND	0.050	111	105	4.89	117	70 - 130	30	70 - 130
Diisopropyl ether (DIPE)	ND	0.050	124	121	2.48	89.2	70 - 130	30	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	0.050	98	93.9	4.34	92	70 - 130	30	70 - 130
Methyl-t-butyl ether (MTBE)	ND	0.050	99.3	95.8	3.56	97.3	70 - 130	30	70 - 130
Toluene	ND	0.050	108	103	4.24	106	70 - 130	30	70 - 130
Trichloroethene	ND	0.050	110	106	2.93	111	70 - 130	30	70 - 130
%SS1:	99	0.12	115	114	0.454	104	70 - 130	30	70 - 130
%SS2:	113	0.12	128	127	0.321	108	70 - 130	30	70 - 130
%SS3:	108	0.012	111	113	2.22	107	70 - 130	30	70 - 130

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

BATCH 63365 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/14/11 7:19 AM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/14/11 7:59 AM
1112307-003B	12/09/11 8:40 AM	12/09/11	12/14/11 6:55 AM	1112307-004B	12/09/11 9:00 AM	12/09/11	12/14/11 12:43 PM
1112307-005B	12/09/11 9:40 AM	12/09/11	12/14/11 1:24 PM	1112307-006B	12/09/11 10:05 AM	12/09/11	12/14/11 1:35 PM
1112307-007B	12/09/11 10:36 AM	12/09/11	12/14/11 2:14 PM	1112307-008B	12/09/11 11:50 AM	12/09/11	12/14/11 12:50 PM
1112307-009B	12/09/11 11:03 AM	12/09/11	12/14/11 2:08 PM				

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

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

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

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

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

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

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63335 | WorkOrder: 1112307

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1112262-002C**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	114	112	1.44	101	70 - 130	30	70 - 130
Benzene	ND	10	99.2	97.6	1.66	111	70 - 130	30	70 - 130
t-Butyl alcohol (TBA)	ND	40	94.5	100	5.96	77.6	70 - 130	30	70 - 130
Chlorobenzene	ND	10	96.6	94.9	1.73	108	70 - 130	30	70 - 130
1,2-Dibromoethane (EDB)	ND	10	105	101	3.48	103	70 - 130	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	95.7	94.9	0.843	104	70 - 130	30	70 - 130
1,1-Dichloroethene	ND	10	97.2	97.2	0	128	70 - 130	30	70 - 130
Diisopropyl ether (DIPE)	ND	10	101	99.1	1.72	106	70 - 130	30	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	101	101	0	107	70 - 130	30	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	101	100	0.994	107	70 - 130	30	70 - 130
Toluene	ND	10	96.1	94.4	1.77	107	70 - 130	30	70 - 130
Trichloroethene	0.58	10	102	97.8	4.01	115	70 - 130	30	70 - 130
%SS1:	102	25	112	114	1.29	109	70 - 130	30	70 - 130
%SS2:	102	25	108	108	0	99	70 - 130	30	70 - 130
%SS3:	99	2.5	104	104	0	95	70 - 130	30	70 - 130

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

BATCH 63335 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010B	12/09/11 11:18 AM	12/15/11	12/15/11 9:36 PM				

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

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

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

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

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

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

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

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QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63258 | WorkOrder: 1112307

EPA Method: SW8270C **Extraction: SW3550B** **Spiked Sample ID: 1112222-008A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acenaphthene	ND<0.66	2	52.5	59.1	11.7	84.5	30 - 130	30	30 - 130
4-Chloro-3-methylphenol	ND<0.66	4	59.2	64.6	8.87	78.5	30 - 130	30	30 - 130
2-Chlorophenol	ND<0.66	4	61.4	68.5	10.9	94	30 - 130	30	30 - 130
1,4-Dichlorobenzene	ND<0.66	2	66.5	73.1	9.48	86.8	30 - 130	30	30 - 130
2,4-Dinitrotoluene	ND<0.66	2	42.7	48	11.8	96.7	30 - 130	30	30 - 130
4-Nitrophenol	ND<3.2	4	43.2	52.5	19.5	76.2	30 - 130	30	30 - 130
N-Nitrosodi-n-propylamine	ND<0.66	2	60.4	71.2	16.5	95.8	30 - 130	30	30 - 130
Pentachlorophenol	ND<3.2	4	34.8	37.2	6.59	59.8	30 - 130	30	30 - 130
Phenol	ND<0.66	4	83.3	85.4	2.52	102	30 - 130	30	30 - 130
Pyrene	ND<0.66	2	49.1	54.5	10.5	83.4	30 - 130	30	30 - 130
1,2,4-Trichlorobenzene	ND<0.66	2	64.3	70.7	9.51	88.6	30 - 130	30	30 - 130
%SS1:	84	200	68	78	13.4	88	30 - 130	30	30 - 130
%SS2:	75	200	71	69	4.00	89	30 - 130	30	30 - 130
%SS3:	81	200	71	79	10.5	90	30 - 130	30	30 - 130
%SS4:	75	200	85	93	8.26	82	30 - 130	30	30 - 130
%SS5:	52	200	76	82	7.98	78	30 - 130	30	30 - 130
%SS6:	72	200	75	82	8.83	79	30 - 130	30	30 - 130

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

BATCH 63258 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/18/11 5:10 PM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/16/11 9:44 PM
1112307-003A	12/09/11	12/09/11	12/16/11 10:58 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 = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.

#) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.

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

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QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63364 | WorkOrder: 1112307

EPA Method: SW8270C **Extraction: SW3550B** **Spiked Sample ID: 1112307-009A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acenaphthene	ND<6.6	2	NR	NR	NR	84.7	30 - 130	30	30 - 130
4-Chloro-3-methylphenol	ND<6.6	4	NR	NR	NR	76.3	30 - 130	30	30 - 130
2-Chlorophenol	ND<6.6	4	NR	NR	NR	90.2	30 - 130	30	30 - 130
1,4-Dichlorobenzene	ND<6.6	2	NR	NR	NR	87.3	30 - 130	30	30 - 130
2,4-Dinitrotoluene	ND<6.6	2	NR	NR	NR	96.1	30 - 130	30	30 - 130
4-Nitrophenol	ND<32	4	NR	NR	NR	61.3	30 - 130	30	30 - 130
N-Nitrosodi-n-propylamine	ND<6.6	2	NR	NR	NR	91.2	30 - 130	30	30 - 130
Pentachlorophenol	ND<32	4	NR	NR	NR	37.7	30 - 130	30	30 - 130
Phenol	ND<6.6	4	NR	NR	NR	96.5	30 - 130	30	30 - 130
Pyrene	ND<6.6	2	NR	NR	NR	85.6	30 - 130	30	30 - 130
1,2,4-Trichlorobenzene	ND<6.6	2	NR	NR	NR	89.6	30 - 130	30	30 - 130
%SS1:	60	200	57	52	10.7	87	30 - 130	30	30 - 130
%SS2:	---#	200	---#	---#	---#	88	30 - 130	30	30 - 130
%SS3:	69	200	69	66	3.69	90	30 - 130	30	30 - 130
%SS4:	63	200	66	64	3.80	83	30 - 130	30	30 - 130
%SS5:	---#	200	---#	---#	---#	74	30 - 130	30	30 - 130
%SS6:	69	200	69	65	6.75	82	30 - 130	30	30 - 130

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

BATCH 63364 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-004A	12/09/11	12/09/11	12/18/11 10:30 PM	1112307-005A	12/09/11	12/09/11	12/17/11 12:10 AM
1112307-006A	12/09/11	12/09/11	12/18/11 6:33 PM	1112307-007A	12/09/11	12/09/11	12/21/11 12:56 AM
1112307-008A	12/09/11	12/09/11	12/19/11 7:52 PM	1112307-009A	12/09/11	12/09/11	12/17/11 1:23 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 = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.

#) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.

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

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QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63297 | WorkOrder: 1112307

EPA Method: SW8270C **Extraction: SW3510C** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acenaphthene	N/A	50	N/A	N/A	N/A	76.9	N/A	N/A	30 - 130
4-Chloro-3-methylphenol	N/A	100	N/A	N/A	N/A	65.6	N/A	N/A	30 - 130
2-Chlorophenol	N/A	100	N/A	N/A	N/A	82.4	N/A	N/A	30 - 130
1,4-Dichlorobenzene	N/A	50	N/A	N/A	N/A	69	N/A	N/A	30 - 130
2,4-Dinitrotoluene	N/A	50	N/A	N/A	N/A	89.1	N/A	N/A	30 - 130
4-Nitrophenol	N/A	100	N/A	N/A	N/A	59.5	N/A	N/A	30 - 130
N-Nitrosodi-n-propylamine	N/A	50	N/A	N/A	N/A	116	N/A	N/A	30 - 130
Pentachlorophenol	N/A	100	N/A	N/A	N/A	69.3	N/A	N/A	30 - 130
Phenol	N/A	100	N/A	N/A	N/A	86.9	N/A	N/A	30 - 130
Pyrene	N/A	50	N/A	N/A	N/A	73.9	N/A	N/A	30 - 130
1,2,4-Trichlorobenzene	N/A	50	N/A	N/A	N/A	69.6	N/A	N/A	30 - 130
%SS1:	N/A	5000	N/A	N/A	N/A	100	N/A	N/A	30 - 130
%SS2:	N/A	5000	N/A	N/A	N/A	100	N/A	N/A	30 - 130
%SS3:	N/A	5000	N/A	N/A	N/A	107	N/A	N/A	30 - 130
%SS4:	N/A	5000	N/A	N/A	N/A	95	N/A	N/A	30 - 130
%SS5:	N/A	5000	N/A	N/A	N/A	111	N/A	N/A	30 - 130
%SS6:	N/A	5000	N/A	N/A	N/A	100	N/A	N/A	30 - 130

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

BATCH 63297 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010D	12/09/11 11:18 AM	12/09/11	12/18/11 11:43 PM				

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

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

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

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

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

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

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QC SUMMARY REPORT FOR E200.8

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63343 | WorkOrder: 1112307

EPA Method: E200.8 **Extraction: E200.8** **Spiked Sample ID: 1112092-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Antimony	ND	50	92.1	92.2	0.0651	105	70 - 130	20	85 - 115
Arsenic	2.1	50	101	100	0.861	110	70 - 130	20	85 - 115
Barium	34	500	99.6	99.4	0.150	94.1	70 - 130	20	85 - 115
Beryllium	ND	50	92.1	92.3	0.260	111	70 - 130	20	85 - 115
Cadmium	ND	50	96.2	95.6	0.542	108	70 - 130	20	85 - 115
Chromium	ND	50	95.6	96.2	0.620	107	70 - 130	20	85 - 115
Cobalt	ND	50	95.1	95	0.0210	102	70 - 130	20	85 - 115
Copper	28	50	101	100	0.742	111	70 - 130	20	85 - 115
Lead	ND	50	95.1	95.2	0.0841	107	70 - 130	20	85 - 115
Mercury	ND	1.25	90.6	93	2.53	101	70 - 130	20	85 - 115
Molybdenum	3.5	50	99	98.1	0.853	104	70 - 130	20	85 - 115
Nickel	0.59	50	94.6	94	0.670	109	70 - 130	20	85 - 115
Selenium	0.60	50	96.6	97.8	1.30	112	70 - 130	20	85 - 115
Silver	ND	50	89.7	89.1	0.626	106	70 - 130	20	85 - 115
Thallium	ND	50	97.2	93.9	3.45	107	70 - 130	20	85 - 115
Vanadium	2.5	50	98.6	99	0.462	107	70 - 130	20	85 - 115
Zinc	5.8	500	94.8	95.3	0.582	111	70 - 130	20	85 - 115
%SS:	99	750	99	98	0.473	107	70 - 130	20	70 - 130

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

BATCH 63343 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010C	12/09/11 11:18 AM	12/09/11	12/10/11 10:37 AM	1112307-010C	12/09/11 11:18 AM	12/09/11	12/13/11 3:05 AM
1112307-010C	12/09/11 11:18 AM	12/09/11	12/14/11 8:32 PM				

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

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

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

N/A = not applicable to this method.

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

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QC SUMMARY REPORT FOR SW6020

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63355 | WorkOrder: 1112307

EPA Method: SW6020 **Extraction: SW3050B** **Spiked Sample ID: 1112274-010A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Antimony	ND	50	93.9	91.8	2.33	91.3	75 - 125	20	75 - 125
Arsenic	6.3	50	98.1	97.6	0.435	98.1	75 - 125	20	75 - 125
Barium	200	500	105	101	2.92	100	75 - 125	20	75 - 125
Beryllium	0.52	50	89.7	88.8	1.06	98.3	75 - 125	20	75 - 125
Cadmium	ND	50	99	96.9	2.12	98	75 - 125	20	75 - 125
Chromium	85	50	NR	NR	NR	94.3	75 - 125	20	75 - 125
Cobalt	14	50	98.9	96.3	2.10	102	75 - 125	20	75 - 125
Copper	29	50	96.6	94.4	1.42	98.4	75 - 125	20	75 - 125
Lead	7.9	50	102	98.8	2.36	96.2	75 - 125	20	75 - 125
Mercury	ND	1.25	102	101	1.29	96	75 - 125	20	75 - 125
Molybdenum	0.71	50	97.2	95	2.26	95.3	75 - 125	20	75 - 125
Nickel	110	50	NR	NR	NR	95.4	75 - 125	20	75 - 125
Selenium	ND	50	98.1	96.4	1.70	98	75 - 125	20	75 - 125
Silver	ND	50	92.7	91.1	1.74	100	75 - 125	20	75 - 125
Thallium	ND	50	103	101	2.04	99.5	75 - 125	20	75 - 125
Vanadium	56	50	NR	NR	NR	95.4	75 - 125	20	75 - 125
Zinc	60	500	96.7	95	1.56	97	75 - 125	20	75 - 125
%SS:	107	500	106	102	3.04	106	70 - 130	20	70 - 130

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

BATCH 63355 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/12/11 9:05 PM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/12/11 9:11 PM
1112307-002A	12/09/11 8:07 AM	12/09/11	12/13/11 3:38 PM	1112307-003A	12/09/11	12/09/11	12/12/11 9:17 PM
1112307-003A	12/09/11	12/09/11	12/13/11 4:03 PM	1112307-004A	12/09/11	12/09/11	12/12/11 9:42 PM
1112307-004A	12/09/11	12/09/11	12/13/11 4:09 PM	1112307-005A	12/09/11	12/09/11	12/12/11 9:48 PM
1112307-006A	12/09/11	12/09/11	12/12/11 9:55 PM	1112307-006A	12/09/11	12/09/11	12/13/11 4:16 PM
1112307-007A	12/09/11	12/09/11	12/12/11 10:01 PM	1112307-008A	12/09/11	12/09/11	12/12/11 10:07 PM
1112307-008A	12/09/11	12/09/11	12/13/11 4:22 PM	1112307-009A	12/09/11	12/09/11	12/12/11 10:13 PM
1112307-009A	12/09/11	12/09/11	12/13/11 4:28 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 applicable to this method.

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 SM4500-CN⁻ ABCE

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63341 | WorkOrder: 1112307

EPA Method: SM4500-CN⁻ ABCE **Extraction: SM4500-CN⁻ E** **Spiked Sample ID: 1112267-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Total Cyanide	0.23	0.80	92.6	90.6	1.70	90.1	80 - 120	20	90 - 110

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

BATCH 63341 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	12/09/11	12/15/11 10:42 AM	1112307-004A	12/09/11	12/09/11	12/15/11 10:46 AM
1112307-005A	12/09/11	12/09/11	12/15/11 10:49 AM	1112307-007A	12/09/11	12/09/11	12/15/11 10:53 AM
1112307-009A	12/09/11	12/09/11	12/15/11 10:57 AM				

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

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

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

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

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

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63347 | WorkOrder: 1112307

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1112279-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	0.60	76.9	78.5	2.07	76.7	70 - 130	20	70 - 130
MTBE	ND	0.10	98.2	104	5.48	102	70 - 130	20	70 - 130
Benzene	ND	0.10	87.2	93.7	7.19	94.1	70 - 130	20	70 - 130
Toluene	ND	0.10	89.3	96	7.22	96.2	70 - 130	20	70 - 130
Ethylbenzene	ND	0.10	93.2	101	7.59	100	70 - 130	20	70 - 130
Xylenes	ND	0.30	94	101	6.78	100	70 - 130	20	70 - 130
%SS:	93	0.10	86	87	1.16	93	70 - 130	20	70 - 130

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

BATCH 63347 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/11/11 7:42 PM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/11/11 7:12 PM
1112307-003A	12/09/11	12/09/11	12/11/11 6:42 PM	1112307-004A	12/09/11	12/09/11	12/13/11 11:22 PM
1112307-005A	12/09/11	12/09/11	12/14/11 12:21 AM	1112307-006A	12/09/11	12/09/11	12/11/11 10:04 PM
1112307-007A	12/09/11	12/09/11	12/12/11 12:29 AM	1112307-008A	12/09/11	12/09/11	12/14/11 1:20 AM
1112307-009A	12/09/11	12/09/11	12/11/11 11:02 PM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63326 | WorkOrder: 1112307

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1112247-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	121	117	2.79	125	70 - 130	20	70 - 130
MTBE	ND	10	102	92.5	9.52	91.8	70 - 130	20	70 - 130
Benzene	ND	10	103	96.7	6.42	93.1	70 - 130	20	70 - 130
Toluene	ND	10	100	93.7	6.73	97.2	70 - 130	20	70 - 130
Ethylbenzene	ND	10	102	94.3	7.52	91.7	70 - 130	20	70 - 130
Xylenes	ND	30	102	95.5	7.10	93.8	70 - 130	20	70 - 130
%SS:	114	10	100	100	0	101	70 - 130	20	70 - 130

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

BATCH 63326 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010A	12/09/11 11:18 AM	12/14/11	12/14/11 7:43 PM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: **SW9045D (pH)** **Matrix:** **S** **WorkOrder:** **1112307**

Method Name: SW9045D | Units: ±, pH units @ °C | BatchID: 63284

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	Precision	Acceptance Criteria
1112307-002A	9.36 @ 20.7°C	1	9.38 @ 20.8°C	1	0.02	0.1
1112307-004A	9.83 @ 20.9°C	1	9.84 @ 21.0°C	1	0.01	0.1
1112307-005A	12.24 @ 21.0°C	1	12.25 @ 21.2°C	1	0.01	0.1
1112307-007A	11.97 @ 21.1°C	1	11.97 @ 21.2°C	1	0	0.1
1112307-009A	8.99 @ 21.5°C	1	9.00 @ 21.5°C	1	0.01	0.1

BATCH 63284 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	12/13/11	12/13/11 2:07 PM	1112307-004A	12/09/11	12/13/11	12/13/11 2:13 PM
1112307-005A	12/09/11	12/13/11	12/13/11 2:19 PM	1112307-007A	12/09/11	12/13/11	12/13/11 2:25 PM
1112307-009A	12/09/11	12/13/11	12/13/11 2:31 PM				

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.

Precision = Absolute Value (Sample - Duplicate)

RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]

%RPD is calculated using results of up to 10 significant figures, however the reported results are rounded to 2 or 3 significant figures. Therefore there may be a slight discrepancy between the %RPD displayed above and %RPD calculated using the reported results. MAI considers %RPD based upon more significant figures to be more accurate.

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QC SUMMARY REPORT FOR SW9030A/EPA376.2

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63342 | WorkOrder: 1112307

EPA Method: SW9030A/E376.2 **Extraction: SM4500-S^{-2} D** **Spiked Sample ID: 1112267-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Sulfide	ND	50	75.7	84.9	11.5	90.3	75 - 125	20	80 - 120

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

BATCH 63342 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	12/15/11	12/15/11 4:50 PM	1112307-004A	12/09/11	12/15/11	12/15/11 4:56 PM
1112307-005A	12/09/11	12/15/11	12/15/11 5:02 PM	1112307-007A	12/09/11	12/15/11	12/15/11 5:08 PM
1112307-009A	12/09/11	12/15/11	12/15/11 5:14 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 applicable to this method.

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 SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63330 | WorkOrder: 1112307

EPA Method: SW8015B | **Extraction: SW3550B/3630C** | **Spiked Sample ID: 1112248-010B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	30	40	102	106	2.58	103	70 - 130	30	70 - 130
%SS:	99	25	98	100	2.56	90	70 - 130	30	70 - 130

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

BATCH 63330 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/13/11 7:34 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 SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63363 | WorkOrder: 1112307

EPA Method: SW8015B | **Extraction: SW3550B/3630C** | **Spiked Sample ID: 1112307-009A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	37	40	101	91.9	4.89	96.5	70 - 130	30	70 - 130
%SS:	93	25	87	102	15.8	102	70 - 130	30	70 - 130

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

BATCH 63363 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	12/09/11	12/15/11 7:45 PM	1112307-003A	12/09/11	12/09/11	12/14/11 11:54 PM
1112307-003A	12/09/11	12/09/11	12/15/11 3:50 PM	1112307-004A	12/09/11	12/09/11	12/13/11 8:47 AM
1112307-004A	12/09/11	12/09/11	12/15/11 1:29 PM	1112307-005A	12/09/11	12/09/11	12/11/11 12:31 AM
1112307-006A	12/09/11	12/09/11	12/11/11 4:59 AM	1112307-007A	12/09/11	12/09/11	12/12/11 11:24 PM
1112307-007A	12/09/11	12/09/11	12/15/11 4:03 PM	1112307-008A	12/09/11	12/09/11	12/11/11 8:24 AM
1112307-009A	12/09/11	12/09/11	12/15/11 1:00 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 SW8015B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63332 | WorkOrder: 1112307

EPA Method: SW8015B **Extraction: SW3510C/3630C** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	95	N/A	N/A	70 - 130
%SS:	N/A	625	N/A	N/A	N/A	101	N/A	N/A	70 - 130

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

BATCH 63332 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010A	12/09/11 11:18 AM	12/09/11	12/13/11 3:50 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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QA/QC Officer

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Analytical Report

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Reported: 12/21/11
	Client P.O.:	Date Completed: 01/09/12

WorkOrder: 1112307 A

January 09, 2012

Dear James:

Enclosed within are:

1) The results of the **8** analyzed samples from your project: **#2011-011; T&R RYCG Pier 94 Backlands,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112307

AEW ENGINEERING, INC.
55 New Montgomery Street, Suite 722, San Francisco, CA 94105
Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 1 of 2

TURN AROUND TIME: ☐ 24 HOURS ☐ 48 HOURS ☐ 1 WEEK ☒ Others: Normal

LABORATORY: McCampbell Analytical

Date: December 9, 2011

Report To: James Medley eMail: jmedley@aewengineering.com
Company: AEW Engineering, Inc. Project No.: 2011-011
Project Name: T&R RYCG Pier 94 Backlands Location: T&R RYCG Pier 94 Backlands
Sampler: James Medley Project No.: 2011-011
Sampler: Signature: James Medley Bill To: Kenneth Leung
Reporting Requirement: Hard Copy : Yes ☐ No ☐
PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	STLC Cr 2 added 1/4/12	STLC Ni 5 day	STLC Pb 5 day	Comments
E-1-2.0		12/9/2011	0744	1	AL		X				X				X	X	X	X	X	X									
E-2-2.0		12/9/2011	0807	1	AL		X				X				X	X	X	X	X	X	X	X	X	X		X	X		
E-3-2.5		12/9/2011	0838	1	AL		X				X																		E-3 COMPOSITE
E-3-5.0		12/9/2011	0840	1	AL		X				X				X														
E-4-2.5		12/9/2011	0900	1	AL		X				X				X														
E-4-5.0		12/9/2011	0903	1	AL		X				X																		E-4 COMPOSITE
E-4-10		12/9/2011	0905	1	AL		X				X																		
E-4-15		12/9/2011	0908	1	AL		X				X																		
E-5-2.5		12/9/2011	0940	1	AL		X				X				X														E-5 COMPOSITE
E-5-5.0		12/9/2011	0941	1	AL		X				X																		
E-6-2.5		12/9/2011	1000	1	AL		X				X																		E-6 COMPOSITE
E-6-5.0		12/9/2011	1005	1	AL		X				X				X														
E-6-10		12/9/2011	1008	1	AL		X				X																		

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:
AL = Acetate liner

ICE/T° 5.0 GOOD CONDITION ✓ APPROPRIATE ✓
HEAD SPACE ABSENT ✓ CONTAINERS ✓
DECHLORINATED IN LAB ____ PRESERVED IN LAB ____

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓			

Please hold samples in laboratory for 6 months before disposal
Call James with questions

AEW ENGINEERING, INC.
55 New Montgomery Street, Suite 722, San Francisco, CA 94105
Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 2 of 2

Date: December 9, 2011

TURN AROUND TIME	24 HOURS	48 HOURS	1 WEEK	Normal	Others:
LABORATORY: McCampbell Analytical	☐	☐	☐	☒	

Report To: James Medley eMail: jmedley@aewengineering.com
Company: AEW Engineering, Inc. Project No.: 2011-011
Project Name: T&R RYCG Pier 94 Backlands Location: T&R RYCG Pier 94 Backlands
Sampler: James Medley Project No.: 2011-011
Sampler: Signature: James Medley Bill To: Kenneth Leung
Reporting Requirement: Hard Copy : Yes ☐ No ☐
PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	Analysis Request: VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas (EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	STLC Cr added 1/4/12	STLC Pb 5 day	STLC Ni	Other	Comments
E-7-2.5		12/9/2011	1036	1	AL		X				X				x														E-7 COMPOSITE
E-7-5.0		12/9/2011	1042	1	AL		X				X																		
E-7-10		12/9/2011	1046	1	AL		X				X																		
E-8-2.5		12/9/2011	1148	1	AL		X				X																		E-8 COMPOSITE
E-8-5.0		12/9/2011	1150	1	AL		X				X				x														
E-8-10		12/9/2011	1152	1	AL		X				X																		
E-8-14		12/9/2011	1155	1	AL		X				X																		
E-9-2.5		12/9/2011	1103	1	AL		X				X				x														E-9 COMPOSITE
E-9-5.0		12/9/2011	1105	1	AL		X				X																		
E-9-10		12/9/2011	1108	1	AL		X				X																		
E-9-14		12/9/2011	1113	1	AL		X				X																		
#5 E-9-GW		12/9/2011	1118	7	--	X					X	X	X		x		X	X	X						x				

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:
AL = Acetate liner
Voas for VOCs, TPH-gas are unpreserved
Dissolved metals on the water sample
Please hold samples in laboratory for 6 months before disposal
Call James with questions

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 A **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Veronica Tiglao
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Requested TAT: 5 days
Date Received: **12/09/2011**
Date Add-On: **01/04/2012**
Date Printed: **01/04/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1112307-002	E-2-2.0	Soil	12/9/2011 8:07	☐	A											
1112307-003	E-3 Composite	Soil	12/9/2011	☐	A											
1112307-004	E-4 Composite	Soil	12/9/2011	☐	A											
1112307-005	E-5 Composite	Soil	12/9/2011	☐	A											
1112307-006	E-6 Composite	Soil	12/9/2011	☐	A											
1112307-007	E-7 Composite	Soil	12/9/2011	☐		A										
1112307-008	E-8 Composite	Soil	12/9/2011	☐	A											
1112307-009	E-9 Composite	Soil	12/9/2011	☐	A											

Test Legend:

1	STLC_METALS_S	2	STLC_PBCR_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments: STLC's added 1/4/12 5d.

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

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 01/04/12-01/06/12
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 01/06/12

ICP Metals*

Extraction method: CA Title 22 Analytical methods: SW6010B Work Order: 1112307

Lab ID	Client ID	Matrix	Extraction Type	Chromium	Lead	Nickel	DF	% SS	Comments
002A	E-2-2.0	S	WET	0.094	---	1.0	1	N/A	
003A	E-3 Composite	S	WET	1.7	---	7.0	1	N/A	
004A	E-4 Composite	S	WET	0.75	2.4	5.1	1	N/A	
005A	E-5 Composite	S	WET	0.63	---	---	1	N/A	
006A	E-6 Composite	S	WET	0.40	21	1.2	1	N/A	
008A	E-8 Composite	S	WET	0.65	---	---	1	N/A	
009A	E-9 Composite	S	WET	0.51	2.4	2.6	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	NA	NA	NA
	S	WET	0.05	0.2	0.05	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

WET = Waste Extraction Test, i.e., STLC (Soluble Threshold Limit Concentration).
DI WET = Waste Extraction Test using DI water (DI STLC).

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 01/04/12-01/06/12
	Client P.O.:	Date Analyzed: 01/06/12

Lead & Chromium*

Extraction method: CA Title 22 Analytical methods: SW6010B Work Order: 1112307

Lab ID	Client ID	Matrix	Extraction Type	Chromium	Lead	DF	% SS	Comments
007A	E-7 Composite	S	WET	0.75	6.8	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	NA	NA
	S	WET	0.05	0.2	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

WET = Waste Extraction Test, i.e., STLC (Soluble Threshold Limit Concentration).
DI WET = Waste Extraction Test using DI water (DI STLC).

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW6010B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63800 | WorkOrder: 1112307

EPA Method: SW6010B **Extraction: CA Title 22** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chromium	N/A	1	N/A	N/A	N/A	100	N/A	N/A	75 - 125
Lead	N/A	1	N/A	N/A	N/A	91.7	N/A	N/A	75 - 125
Nickel	N/A	1	N/A	N/A	N/A	95	N/A	N/A	75 - 125

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

BATCH 63800 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	01/04/12	01/06/12 7:44 PM	1112307-003A	12/09/11	01/04/12	01/06/12 8:05 PM
1112307-004A	12/09/11	01/04/12	01/06/12 7:10 PM	1112307-005A	12/09/11	01/04/12	01/06/12 6:59 PM
1112307-006A	12/09/11	01/04/12	01/06/12 7:05 PM	1112307-007A	12/09/11	01/04/12	01/06/12 7:26 PM
1112307-008A	12/09/11	01/04/12	01/06/12 7:55 PM	1112307-009A	12/09/11	01/04/12	01/06/12 7:23 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 applicable to this method.

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

DHS ELAP Certification 1644

QA/QC Officer

Forensic Analytical Laboratories

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

McCampbell Analytical, Inc.
Account Payable
1534 Wilow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: B157442
Date Received: 12/12/11
Date Analyzed: 12/15/11
Date Printed: 12/15/11
First Reported: 12/15/11

Job ID/Site: 2011-011 - T & R RYCG, Pier 94, Backlands

Date(s) Collected: 12/09/2011

FALI Job ID: A31409
Total Samples Submitted: 5
Total Samples Analyzed: 5

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
E-2-2.0	11198104						
Layer: Green/Grey Soil		Chrysotile	**2 %**				
Total Composite Values of Fibrous Components:		**Asbestos (2%)**					
E-4 Composite	11198105						
Layer: Brown Soil		Chrysotile	**Trace**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
E-5 Composite	11198106						
Layer: Tan Soil			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
E-7 Composite	11198107						
Layer: Tan Soil			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
E-9 Composite	11198108						
Layer: Dark Green Soil		Chrysotile	**Trace**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					

Tad Thrower

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

T&R / RYCG
A Joint Venture

APPENDIX D

Analytical Laboratory Reports
(on CD-ROM)

McCampbell Analytical, Inc.
"When Quality Counts"

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

Treadwell & Rollo	Client Project ID: #730509401; Pier 94 Backlands Improvements and Ama	Date Sampled: 05/25/11
		Date Received: 05/31/11
501 14th Street, 3rd Floor	Client Contact: Linda Liang	Date Reported: 06/13/11
Oakland, CA 94612	Client P.O.:	Date Completed: 06/13/11

WorkOrder: 1106265

June 13, 2011

Dear Linda:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#730509401; Pier 94 Backlands Improvements and**
2) A QC report for the above sample,
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

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

1106265

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

LINDA LIANG AND

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: VERONICA TIGLAO Bill To: TREADWELL & ROLLO - A/C

Company: TREADWELL & ROLLO - A LANGAN COMPANY

501 14TH STREET, 3RD FLOOR

OAKLAND, CA 94612 E-Mail: LHLIANG@TREADWELLROLLO.COM

Tele: (510) 874-7040 (LINDA) Fax: ( )

Project #: 730509401 Project Name: PIER 94 BACKLANDS

Project Location: PIER 94, AMADOR ST. SE IMPROVEMENT AND AMADOR ST. SANITARY PUMP STATION

Sampler Signature:

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	TPH as Diesel (8015) + MO + GAS	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Other: Filter sample for DISSOLVED metals analysis	Other: asbestos	Comments
B-12-3 ~~SAMPLE SA@3'~~	B-12	5-25-11	0900	1	STEEL TUBE		/				/					X						X			X		X						X	HOLD SAMPLES
B-12-5 ~~SAMPLE 3@5'~~	B-12	5-25-11	0910	1	"		/				/					X						X			X		X						X	CONTACT LINDA LIANG OR VERONICA TIGLAO FOR TESTING TO BE PERFORMED.
B-12-10 ~~SAMPLE SA@10'~~ per email	B-12	5-25-11	0915	1	"		/				/					X						X			X		X						X	

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By:	Date:	Time:	Received By:
	5/31/11	1100	
Relinquished By:	Date:	Time:	Received By:
	5/31/11	1772	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 3.0
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1106265 **ClientCode: TWRK**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Linda Liang
Treadwell & Rollo
501 14th Street, 3rd Floor
Oakland, CA 94612
(510) 874-4500 FAX (510) 874-4507

Email: lhliang@treadwellrollo.com
cc: vtiglao@Langan.com
PO:
ProjectNo: #730509401; Pier 94 Backlands Improvements and Amador St.

Bill to:
Accounts Payable
Treadwell & Rollo
501 14th Street, 3rd Floor
Oakland, CA 94612
SEND HARDCOPY

Requested TAT: 5 days

Date Received: **05/31/2011**
Date Printed: **06/08/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1106265-001	B-12-3,B-12-5,B-12-10	Soil	5/25/2011 9:00	☐	A		A	A	A	A						
1106265-001	B-12-5	Soil	5/25/2011 9:00	☐		B										

Test Legend:

1	8082A_PCB_S	2	8260B_S	3	8270D_S	4	ASBEST (435 CARB)_S	5	CAM17MS_S
6	G-MBTEX_S	7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Melissa Valles

Comments:

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

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

Sample Receipt Checklist

Client Name: **Treadwell & Rollo**
Date and Time Received: **5/31/2011 5:30:00 PM**
Project Name: **#730509401; Pier 94 Backlands Improvements and**
Checklist completed and reviewed by: Melissa Valles
WorkOrder N°: **1106265** Matrix Soil
Carrier: Derik Cartan (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: 3.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Client contacted: Date contacted: Contacted by:

Comments:

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

Treadwell & Rollo	Client Project ID: #730509401; Pier 94 Backlands Improvements and Ama	Date Sampled: 05/25/11
		Date Received: 05/31/11
501 14th Street, 3rd Floor	Client Contact: Linda Liang	Date Extracted: 06/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed: 06/09/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B Analytical Method: SW8082 Work Order: 1106265

Lab ID	1106265-001A				Reporting Limit for DF =1		
Client ID	B-12-3,B-12-5,B-12-10						
Matrix	S						
DF	100				S	W	
Compound	**Concentration**				mg/kg	ug/L	
Aroclor1016	ND<5.0				0.05	NA	
Aroclor1221	ND<5.0				0.05	NA	
Aroclor1232	ND<5.0				0.05	NA	
Aroclor1242	ND<5.0				0.05	NA	
Aroclor1248	ND<5.0				0.05	NA	
Aroclor1254	ND<5.0				0.05	NA	
Aroclor1260	ND<5.0				0.05	NA	
PCBs, total	ND<5.0				0.05	NA	
Surrogate Recoveries (%)							
%SS:	---#						
Comments	a3,h4						

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.
h4) sulfuric acid permanganate (EPA 3665) cleanup

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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

Treadwell & Rollo	Client Project ID: #730509401; Pier 94 Backlands Improvements and Ama	Date Sampled: 05/25/11
		Date Received: 05/31/11
501 14th Street, 3rd Floor	Client Contact: Linda Liang	Date Extracted: 06/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed: 06/08/11

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1106265

Lab ID	1106265-001B
Client ID	B-12-5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS:	90	%SS2:	102
%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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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Treadwell & Rollo	Client Project ID: #730509401; Pier 94 Backlands Improvements and Ama	Date Sampled: 05/25/11
		Date Received: 05/31/11
501 14th Street, 3rd Floor	Client Contact: Linda Liang	Date Extracted: 06/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed: 06/11/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B Analytical Method: SW8270C Work Order: 1106265

Lab ID	1106265-001A
Client ID	B-12-3,B-12-5,B-12-10
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<6.6	20	0.33	Acenaphthylene	ND<6.6	20	0.33
Acetochlor	ND<6.6	20	0.33	Anthracene	ND<6.6	20	0.33
Benzidine	ND<32	20	1.6	Benzoic Acid	ND<32	20	1.6
Benzo(a)anthracene	ND<6.6	20	0.33	Benzo(b)fluoranthene	ND<6.6	20	0.33
Benzo(k)fluoranthene	ND<6.6	20	0.33	Benzo(g,h,i)perylene	ND<6.6	20	0.33
Benzo(a)pyrene	ND<6.6	20	0.33	Benzyl Alcohol	ND<32	20	1.6
1,1-Biphenyl	ND<6.6	20	0.33	Bis (2-chloroethoxy) Methane	ND<6.6	20	0.33
Bis (2-chloroethyl) Ether	ND<6.6	20	0.33	Bis (2-chloroisopropyl) Ether	ND<6.6	20	0.33
Bis (2-ethylhexyl) Phthalate	ND<6.6	20	0.33	4-Bromophenyl Phenyl Ether	ND<6.6	20	0.33
Butylbenzyl Phthalate	ND<6.6	20	0.33	4-Chloroaniline	ND<13	20	0.66
4-Chloro-3-methylphenol	ND<6.6	20	0.33	2-Chloronaphthalene	ND<6.6	20	0.33
2-Chlorophenol	ND<6.6	20	0.33	4-Chlorophenyl Phenyl Ether	ND<6.6	20	0.33
Chrysene	ND<6.6	20	0.33	Dibenzo(a,h)anthracene	ND<6.6	20	0.33
Dibenzofuran	ND<6.6	20	0.33	Di-n-butyl Phthalate	ND<6.6	20	0.33
1,2-Dichlorobenzene	ND<6.6	20	0.33	1,3-Dichlorobenzene	ND<6.6	20	0.33
1,4-Dichlorobenzene	ND<6.6	20	0.33	3,3-Dichlorobenzidine	ND<13	20	0.66
2,4-Dichlorophenol	ND<6.6	20	0.33	Diethyl Phthalate	ND<6.6	20	0.33
2,4-Dimethylphenol	ND<6.6	20	0.33	Dimethyl Phthalate	ND<6.6	20	0.33
4,6-Dinitro-2-methylphenol	ND<32	20	1.6	2,4-Dinitrophenol	ND<32	20	1.6
2,4-Dinitrotoluene	ND<6.6	20	0.33	2,6-Dinitrotoluene	ND<6.6	20	0.33
Di-n-octyl Phthalate	ND<6.6	20	0.33	1,2-Diphenylhydrazine	ND<6.6	20	0.33
Fluoranthene	ND<6.6	20	0.33	Fluorene	ND<6.6	20	0.33
Hexachlorobenzene	ND<6.6	20	0.33	Hexachlorobutadiene	ND<6.6	20	0.33
Hexachlorocyclopentadiene	ND<32	20	1.6	Hexachloroethane	ND<6.6	20	0.33
Indeno (1,2,3-cd) pyrene	ND<6.6	20	0.33	Isophorone	ND<6.6	20	0.33
2-Methylnaphthalene	ND<6.6	20	0.33	2-Methylphenol (o-Cresol)	ND<6.6	20	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<6.6	20	0.33	Naphthalene	ND<6.6	20	0.33
2-Nitroaniline	ND<32	20	1.6	3-Nitroaniline	ND<32	20	1.6
4-Nitroaniline	ND<32	20	1.6	Nitrobenzene	ND<6.6	20	0.33
2-Nitrophenol	ND<32	20	1.6	4-Nitrophenol	ND<32	20	1.6
N-Nitrosodiphenylamine	ND<6.6	20	0.33	N-Nitrosodi-n-propylamine	ND<6.6	20	0.33
Pentachlorophenol	ND<32	20	1.6	Phenanthrene	ND<6.6	20	0.33
Phenol	ND<6.6	20	0.33	Pyrene	ND<6.6	20	0.33
1,2,4-Trichlorobenzene	ND<6.6	20	0.33	2,4,5-Trichlorophenol	ND<6.6	20	0.33
2,4,6-Trichlorophenol	ND<6.6	20	0.33				

Surrogate Recoveries (%)

%SS1:	94	%SS2:	94
%SS3:	89	%SS4:	107
%SS5:	77	%SS6:	91

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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Treadwell & Rollo	Client Project ID: #730509401; Pier 94 Backlands Improvements and Ama	Date Sampled: 05/25/11
		Date Received 05/31/11
501 14th Street, 3rd Floor	Client Contact: Linda Liang	Date Extracted 06/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed 06/10/11

CAM / CCR 17 Metals*

Lab ID	1106265-001A				Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	B-12-3,B-12-5,B-12-10					
Matrix	S				S	W
Extraction Type	TOTAL				mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1106265

Dilution Factor	1				1	1
Antimony	0.63				0.5	NA
Arsenic	2.9				0.5	NA
Barium	54				5.0	NA
Beryllium	ND				0.5	NA
Cadmium	ND				0.25	NA
Chromium	260				0.5	NA
Cobalt	51				0.5	NA
Copper	20				0.5	NA
Lead	34				0.5	NA
Mercury	0.077				0.05	NA
Molybdenum	0.59				0.5	NA
Nickel	1100				0.5	NA
Selenium	ND				0.5	NA
Silver	ND				0.5	NA
Thallium	ND				0.5	NA
Vanadium	44				0.5	NA
Zinc	59				5.0	NA
%SS:	108					

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Treadwell & Rollo	Client Project ID: #730509401; Pier 94 Backlands Improvements and Ama	Date Sampled: 05/25/11
		Date Received: 05/31/11
501 14th Street, 3rd Floor	Client Contact: Linda Liang	Date Extracted 06/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed 06/10/11

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline *

Extraction method: SW5030B Analytical methods: SW8015Bm Work Order: 1106265

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	B-12-3,B-12-5,B-12-10	S	1.1	1	86	d7

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

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

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram

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Angela Rydelius, Lab Manager

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Treadwell & Rollo	Client Project ID: #730509401; Pier 94 Backlands Improvements and Ama	Date Sampled: 05/25/11
		Date Received: 05/31/11
501 14th Street, 3rd Floor	Client Contact: Linda Liang	Date Extracted: 06/08/11
Oakland, CA 94612	Client P.O.:	Date Analyzed: 06/10/11

Total Extractable Petroleum Hydrocarbons*

Extraction method: SW3550B Analytical methods: SW8015B Work Order: 1106265

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1106265-001A	B-12-3,B-12-5,B-12-10	S	58	340	10	100	e7,e2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	ug/L
	S	1.0	5.0	mg/Kg

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
e2) diesel range compounds are significant; no recognizable pattern
e7) oil range compounds are significant

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Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 58870 WorkOrder: 1106265

EPA Method: SW8270C **Extraction: SW3550B** **Spiked Sample ID: 1106205-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Acenaphthene	ND	2	97.3	90.2	7.61	83.5	82.3	1.42	30 - 130	30	30 - 130	30
4-Chloro-3-methylphenol	ND	4	129	122	5.70	78.5	78	0.646	30 - 130	30	30 - 130	30
2-Chlorophenol	ND	4	127	124	2.73	96.3	96.5	0.130	30 - 130	30	30 - 130	30
1,4-Dichlorobenzene	ND	2	100	95	5.33	93.3	92	1.34	30 - 130	30	30 - 130	30
2,4-Dinitrotoluene	ND	2	118	111	6.87	78.9	78.3	0.700	30 - 130	30	30 - 130	30
4-Nitrophenol	ND	4	75.5	72.7	3.79	72.3	73	0.895	30 - 130	30	30 - 130	30
N-Nitrosodi-n-propylamine	ND	2	98.9	94	5.10	59.6	58.2	2.53	30 - 130	30	30 - 130	30
Pentachlorophenol	ND	4	108	93	15.0	42.8	44.1	2.93	30 - 130	30	30 - 130	30
Phenol	ND	4	124	117	5.80	92.2	92	0.152	30 - 130	30	30 - 130	30
Pyrene	ND	2	90.2	83.3	7.97	80.6	80.8	0.359	30 - 130	30	30 - 130	30
1,2,4-Trichlorobenzene	ND	2	122	113	8.02	90.2	88.9	1.55	30 - 130	30	30 - 130	30
%SS1:	109	200	101	101	0	101	101	0	30 - 130	30	30 - 130	30
%SS2:	110	200	101	101	0	112	112	0	30 - 130	30	30 - 130	30
%SS3:	106	200	111	106	5.33	111	109	1.34	30 - 130	30	30 - 130	30
%SS4:	97	200	95	95	0	104	102	1.59	30 - 130	30	30 - 130	30
%SS5:	112	200	125	114	9.20	94	96	2.18	30 - 130	30	30 - 130	30
%SS6:	91	200	91	87	4.89	91	91	0	30 - 130	30	30 - 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 58870 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1106265-001A	05/25/11 9:00 AM	06/08/11	06/11/11 3:23 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 = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.

#) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.

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

DHS ELAP Certification 1644 QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 58884 WorkOrder: 1106265

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1106217-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	111	106	4.25	106	112	5.59	70 - 130	20	70 - 130	20
MTBE	ND	0.10	95.4	96.7	1.37	97	102	4.74	70 - 130	20	70 - 130	20
Benzene	ND	0.10	92.3	92.2	0.111	89	97.3	8.86	70 - 130	20	70 - 130	20
Toluene	ND	0.10	94.8	94	0.893	90.7	99.5	9.26	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	99.7	98.5	1.21	94.8	103	8.60	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	98.6	97.3	1.34	94.4	104	9.68	70 - 130	20	70 - 130	20
%SS:	78	0.10	96	93	3.37	97	99	1.56	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 58884 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1106265-001A	05/25/11 9:00 AM	06/08/11	06/10/11 10:02 PM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 58905 WorkOrder: 1106265

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1106245-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	82.6	80.9	2.12	78.9	80.5	2.02	70 - 130	30	70 - 130	30
Benzene	ND	0.050	111	111	0	106	107	1.06	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	94.4	92.2	2.34	94.9	95.9	1.01	70 - 130	30	70 - 130	30
Chlorobenzene	ND	0.050	113	113	0	101	103	2.33	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	98.4	96.6	1.77	97.4	96.9	0.553	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	99.3	96.9	2.37	91.7	99.2	7.90	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	0.050	110	110	0	104	106	1.37	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	109	109	0	108	109	1.37	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	102	101	1.54	98.5	101	2.45	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	106	104	1.69	103	104	0.240	70 - 130	30	70 - 130	30
Toluene	ND	0.050	120	118	1.64	112	113	1.01	70 - 130	30	70 - 130	30
Trichloroethene	ND	0.050	114	112	1.94	101	103	2.61	70 - 130	30	70 - 130	30
%SS2:	101	0.12	107	107	0	105	105	0	70 - 130	30	70 - 130	30
%SS3:	102	0.012	100	96	4.69	103	98	4.71	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 58905 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1106265-001B	05/25/11 9:00 AM	06/08/11	06/08/11 5:55 PM				

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

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

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

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

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

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

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8082

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 58922 WorkOrder: 1106265

EPA Method: SW8082 **Extraction: SW3550B** **Spiked Sample ID: 1106265-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/kg	mg/kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Aroclor1260	ND<5.0	0.15	NR	NR	NR	92.2	89.7	2.68	70 - 130	20	70 - 130	20
%SS:	---#	0.050	121	124	3.05	75	72	4.24	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 58922 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1106265-001A	05/25/11 9:00 AM	06/08/11	06/09/11 4:31 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.

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

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW6020

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 1106265

EPA Method: SW6020		Extraction: SW3050B			BatchID: 58923			Spiked Sample ID: 1106265-001A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	Spiked	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	mg/Kg	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Antimony	0.63	50	104	103	1.05	10	94	95	1.10	75 - 125	20	75 - 125	20
Arsenic	2.9	50	102	101	1.23	10	96.8	98.5	1.82	75 - 125	20	75 - 125	20
Barium	54	500	106	105	0.754	100	102	103	1.07	75 - 125	20	75 - 125	20
Beryllium	ND	50	101	98.1	2.55	10	102	104	2.24	75 - 125	20	75 - 125	20
Cadmium	ND	50	102	99.6	1.95	10	94.5	94.7	0.190	75 - 125	20	75 - 125	20
Chromium	260	50	NR	NR	NR	10	101	106	4.63	75 - 125	20	75 - 125	20
Cobalt	51	50	86.5	87.1	0.308	10	99.1	102	3.15	75 - 125	20	75 - 125	20
Copper	20	50	104	102	1.34	10	104	109	4.51	75 - 125	20	75 - 125	20
Lead	34	50	103	102	0.950	10	94.8	96.8	2.00	75 - 125	20	75 - 125	20
Mercury	0.077	1.25	97.3	94.8	2.50	0.25	94	93	1.07	75 - 125	20	75 - 125	20
Molybdenum	0.59	50	94	92.7	1.33	10	85.5	87.2	1.99	75 - 125	20	75 - 125	20
Nickel	1100	50	NR	NR	NR	10	97.7	100	2.82	75 - 125	20	75 - 125	20
Selenium	ND	50	101	98.7	2.24	10	99.8	105	4.84	75 - 125	20	75 - 125	20
Silver	ND	50	106	105	0.700	10	106	106	0	75 - 125	20	75 - 125	20
Thallium	ND	50	102	99.7	2.55	10	91.8	93	1.29	75 - 125	20	75 - 125	20
Vanadium	44	50	90.5	88.2	1.33	10	97.3	102	4.66	75 - 125	20	75 - 125	20
Zinc	59	500	109	106	2.34	100	102	107	4.21	75 - 125	20	75 - 125	20
%SS:	108	500	101	103	1.88	500	99	100	1.11	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 58923 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1106265-001A	05/25/11 9:00 AM	06/08/11	06/10/11 12:08 AM	1106265-001A	05/25/11 9:00 AM	06/08/11	06/10/11 4:03 PM

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

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

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

N/A = not applicable to this method.

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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QA/QC Officer

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 58921 WorkOrder: 1106265

EPA Method: SW8015B **Extraction: SW3550B** **Spiked Sample ID: 1106265-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	58	40	81.9	120	15.8	98	97.6	0.348	70 - 130	30	70 - 130	30
%SS:	100	25	101	117	14.9	84	84	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 58921 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1106265-001A	05/25/11 9:00 AM	06/08/11	06/10/11 12:36 AM				

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

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

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

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

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

DHS ELAP Certification 1644

QA/QC Officer

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Reported: 12/20/11
	Client P.O.:	Date Completed: 01/09/12

WorkOrder: 1112267 A

January 10, 2012

Dear James:

Enclosed within are:

1) The results of the **7** analyzed samples from your project: **#2011-011; T&R RYCG Pier 94 Backlands,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112267

AEW ENGINEERING, INC.
55 New Montgomery Street, Suite 722, San Francisco, CA 94105
Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 1 of 1

Date: December 8, 2011

TURN AROUND TIME ☐ 24 HOURS ☐ 48 HOURS ☐ 1 WEEK ☒ Others: Norma

LABORATORY: McCampbell Analytical

Report To: James Medley **eMail:** jmedley@aewengineering.com
Company: AEW Engineering, Inc. **Project No.:** 2011-011
Project Name: T&R RYCG Pier 94 Backlands **Location:** T&R RYCG Pier 94 Backlands
Sampler: James Medley **Project No.:** 2011-011
Sampler: Signature: James Medley **Bill To:** Kenneth Leung
Reporting Requirement: Hard Copy: Yes ☐ No ☐
PDF File: Yes ☑ No ☐ Electronic: Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas, (EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	STLC Cr, added 1/4/12	STLC Pb	STLC Ni, 5 day	TCLP Pb	Comments
TP-1-2.5	TP-1	12/8/2011	0758	1	ss		X				X				X														COMPOSITE TP-1
TP-1-5.0	TP-1	12/8/2011	0802	1	ss		X				X																		
TP-2-2.5	TP-2	12/8/2011	0824	1	ss		X				X																		COMPOSITE TP-2
TP-2-5.0	TP-2	12/8/2011	0827	1	ss		X				X				X														
TP-3-2.5	TP-3	12/8/2011	0841	1	ss		X				X				X														COMPOSITE TP-3
TP-3-5.0	TP-3	12/8/2011	0845	1	ss		X				X																		
TP-4-2.5	TP-4	12/8/2011	0901	1	ss		X				X																		COMPOSITE TP-4
TP-4-5.0	TP-4	12/8/2011	0907	1	ss		X				X				X														
TP-5-2.5	TP-5	12/8/2011	0919	1	ss		X				X				X														COMPOSITE TP-5
TP-5-5.0	TP-5	12/8/2011	0923	1	ss		X				X																		
TP-6-2.5	TP-6	12/8/2011	0935	1	ss		X				X																		COMPOSITE TP-6
TP-6-5.0	TP-6	12/8/2011	0938	1	ss		X				X				X														
TP-7-2.5	TP-7	12/8/2011	0953	1	ss		X				X																		COMPOSITE TP-7
TP-7-3.0	TP-7	12/8/2011	1005	1	ss		X				X				X														

Relinquished By:	Date:	Time:	Received By:
James Medley	12/8/2011	1400	
	12/8/11	1850	

Remarks: ICE/T ✓ GOOD CONDITION ✓ APPROPRIATE
HEAD SPACE ABSENT ✓ CONTAINERS ✓
DECHLORINATED IN LAB ✓ PRESERVED IN LAB ✓
VOAS | O & G | METALS | OTHER
PRESERVATION

Please hold samples in laboratory for 6 months before disposal

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112267 A **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Veronica Tiglao
Treadwell & Rollo
555 Montgomery St, Ste 1300
San Francisco, CA 94111

Requested TAT: 5 days
Date Received: **12/08/2011**
Date Add-On: **01/04/2012**
Date Printed: **01/04/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1112267-001	Composite TP-1	Soil	12/8/2011 7:58	☐	A											
1112267-002	Composite TP-2	Soil	12/8/2011 8:24	☐		A										
1112267-003	Composite TP-3	Soil	12/8/2011 8:41	☐		A										
1112267-004	Composite TP-4	Soil	12/8/2011 9:01	☐	A		A									
1112267-005	Composite TP-5	Soil	12/8/2011 9:19	☐		A										
1112267-006	Composite TP-6	Soil	12/8/2011 9:35	☐	A		A									
1112267-007	Composite TP-7	Soil	12/8/2011 9:53	☐	A											

Test Legend:

1	STLC_METALS_S	2	STLC_PBCR_S	3	TCLP_PB_S	4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments: Invoice updated 12/20/11. STLC's & TCLP Pb added 1/4/3 5d.

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

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 01/04/12-01/06/12
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 01/06/12-01/09/12

ICP Metals*

Extraction method: CA Title 22 Analytical methods: SW6010B Work Order: 1112267

Lab ID	Client ID	Matrix	Extraction Type	Chromium	Lead	Nickel	DF	% SS	Comments
001A	Composite TP-1	S	WET	4.3	---	21	1	N/A	
002A	Composite TP-2	S	WET	0.16	2.8	---	1	N/A	
003A	Composite TP-3	S	WET	0.17	5.5	---	1	N/A	
004A	Composite TP-4	S	WET	0.51	---	---	1	N/A	
005A	Composite TP-5	S	WET	0.35	11	---	1	N/A	
006A	Composite TP-6	S	WET	0.40	---	---	1	N/A	
007A	Composite TP-7	S	WET	0.38	---	5.9	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	NA	NA	NA
	S	WET	0.05	0.2	0.05	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

WET = Waste Extraction Test, i.e., STLC (Soluble Threshold Limit Concentration).
DI WET = Waste Extraction Test using DI water (DI STLC).

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted: 01/04/12-01/05/12
	Client P.O.:	Date Analyzed: 01/05/12

Lead by ICP*

Extraction method: SW1311/SW3050B Analytical methods: SW6010B Work Order: 1112267

Lab ID	Client ID	Matrix	Extraction Type	Lead	DF	% SS	Comments
1112267-004A	Composite TP-4	S	TCLP	0.21	1	N/A	
1112267-006A	Composite TP-6	S	TCLP	1.2	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	µg/L
	S	TCLP	0.2	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TCLP = Toxicity Characteristic Leaching Procedure.
DI TCLP = Toxicity Characteristic Leaching Procedure using DI water.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW6010B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63800 | WorkOrder: 1112267

EPA Method: SW6010B **Extraction: CA Title 22** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chromium	N/A	1	N/A	N/A	N/A	100	N/A	N/A	75 - 125
Lead	N/A	1	N/A	N/A	N/A	91.7	N/A	N/A	75 - 125
Nickel	N/A	1	N/A	N/A	N/A	95	N/A	N/A	75 - 125

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

BATCH 63800 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-001A	12/08/11 7:58 AM	01/04/12	01/09/12 1:18 PM	1112267-002A	12/08/11 8:24 AM	01/04/12	01/06/12 7:57 PM
1112267-003A	12/08/11 8:41 AM	01/04/12	01/06/12 7:28 PM	1112267-004A	12/08/11 9:01 AM	01/04/12	01/06/12 7:34 PM
1112267-005A	12/08/11 9:19 AM	01/04/12	01/06/12 7:39 PM	1112267-006A	12/08/11 9:35 AM	01/04/12	01/06/12 7:31 PM
1112267-007A	12/08/11 9:53 AM	01/04/12	01/06/12 8:00 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 applicable to this method.

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

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SW6010B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63767 | WorkOrder: 1112267

EPA Method: SW6010B | **Extraction: SW1311/SW3050B** | **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Lead	N/A	1	N/A	N/A	N/A	103	N/A	N/A	75 - 125

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

BATCH 63767 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-004A	12/08/11 9:01 AM	01/04/12	01/05/12 4:46 PM	1112267-006A	12/08/11 9:35 AM	01/04/12	01/05/12 4:48 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 applicable to this method.

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

DHS ELAP Certification 1644

QA/QC Officer

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Reported: 12/20/11
	Client P.O.:	Date Completed: 01/19/12

WorkOrder: 1112267 **B**

January 19, 2012

Dear James:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#2011-011; T&R RYCG Pier 94 Backlands,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112267

AEW ENGINEERING, INC.
55 New Montgomery Street, Suite 722, San Francisco, CA 94105
Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 1 of 1

Date: December 8, 2011

TURN AROUND TIME ☐ 24 HOURS ☐ 48 HOURS ☐ 1 WEEK ☒ Others: Norma

LABORATORY: McCampbell Analytical

Report To: James Medley **eMail:** jmedley@aewengineering.com
Company: AEW Engineering, Inc. **Project No.:** 2011-011
Project Name: T&R RYCG Pier 94 Backlands **Location:** T&R RYCG Pier 94 Backlands
Sampler: James Medley **Project No.:** 2011-011
Sampler: Signature: James Medley **Bill To:** Kenneth Leung
Reporting Requirement: Hard Copy: Yes ☐ No ☐
PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other
TP-1-2.5	TP-1	12/8/2011	0758	1	SS		X				X			
TP-1-5.0	TP-1	12/8/2011	0802	1	SS		X				X			
TP-2-2.5	TP-2	12/8/2011	0824	1	SS		X				X			
TP-2-5.0	TP-2	12/8/2011	0827	1	SS		X				X			
TP-3-2.5	TP-3	12/8/2011	0841	1	SS		X				X			
TP-3-5.0	TP-3	12/8/2011	0845	1	SS		X				X			
TP-4-2.5	TP-4	12/8/2011	0901	1	SS		X				X			
TP-4-5.0	TP-4	12/8/2011	0907	1	SS		X				X			
TP-5-2.5	TP-5	12/8/2011	0919	1	SS		X				X			
TP-5-5.0	TP-5	12/8/2011	0923	1	SS		X				X			
TP-6-2.5	TP-6	12/8/2011	0935	1	SS		X				X			
TP-6-5.0	TP-6	12/8/2011	0938	1	SS		X				X			
TP-7-2.5	TP-7	12/8/2011	0953	1	SS		X				X			
TP-7-3.0	TP-7	12/8/2011	1005	1	SS		X				X			

Analysis Request: VOCs (EPA 8260); CAM 17 Title 22 Metals (EPA 6000/7000 Series); TPH-gas,(EPA 8015); TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015); SVOCs (EPA 8270); PCBs (EPA 8082); Cyanide; Sulfides; Asbestos; pH; STLC Cr; STLC Pb; STLC Ni; TCLP Pb; TCLP Pb 1/13/12 5day

Other: STLC Cr added 1/4/12; STLC Pb added 1/4/12; STLC Ni 5day; TCLP Pb; TCLP Pb 1/13/12 5day

Comments: COMPOSITE TP-1; COMPOSITE TP-2; COMPOSITE TP-3; COMPOSITE TP-4; COMPOSITE TP-5; COMPOSITE TP-6; COMPOSITE TP-7

Relinquished By:	Date:	Time:	Received By:
James Medley	12/8/2011	1400	
	12/8/11	1550	

Remarks:
ICE/T° GOOD CONDITION ✓ APPROPRIATE ✓
HEAD SPACE ABSENT ____ CONTAINERS ____
DECHLORINATED IN LAB ____ PRESERVED IN LAB ____
VOAS | O&G | METALS | OTHER
PRESERVATION

Please hold samples in laboratory for 6 months before disposal

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112267 B **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8409 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc: vtiglao@Langan.com
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Veronica Tiglao
Treadwell & Rollo
555 Montgomery St, Ste 1300
San Francisco, CA 94111

Requested TAT: 5 days
Date Received: **12/08/2011**
Date Add-On: **01/13/2012**
Date Printed: **01/13/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
1112267-003	Composite TP-3	Soil	12/8/2011 8:41	☐	A											
1112267-005	Composite TP-5	Soil	12/8/2011 9:19	☐	A											

Test Legend:

1	TCLP_PB_S	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments: Invoice updated 12/20/11. STLC's & TCLP Pb added 1/4/3 5d. TCLP Pb added on 003 & 005 1/13/12 5d.

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

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted: 01/17/12-01/18/12
	Client P.O.:	Date Analyzed: 01/18/12

Lead by ICP*

Extraction method: SW1311/SW3050B Analytical methods: SW6010B Work Order: 1112267

Lab ID	Client ID	Matrix	Extraction Type	Lead	DF	% SS	Comments
1112267-003A	Composite TP-3	S	TCLP	ND	1	N/A	
1112267-005A	Composite TP-5	S	TCLP	0.28	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	µg/L
	S	TCLP	0.2	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TCLP = Toxicity Characteristic Leaching Procedure.
DI TCLP = Toxicity Characteristic Leaching Procedure using DI water.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SW6010B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 64030 | WorkOrder: 1112267

EPA Method: SW6010B | **Extraction: SW1311/SW3050B** | **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Lead	N/A	1	N/A	N/A	N/A	102	N/A	N/A	75 - 125

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

BATCH 64030 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-003A	12/08/11 8:41 AM	01/17/12	01/18/12 8:00 PM	1112267-005A	12/08/11 9:19 AM	01/17/12	01/18/12 8:04 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 applicable to this method.

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

DHS ELAP Certification 1644

QA/QC Officer

Forensic Analytical Laboratories

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

McCampbell Analytical, Inc.
Account Payable
1534 Wilow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: B157398
Date Received: 12/09/11
Date Analyzed: 12/14/11
Date Printed: 12/14/11
First Reported: 12/14/11

Job ID/Site: 2011-011 - T & R RYCG Pier 94 Backlands

Date(s) Collected: 12/08/2011

FALI Job ID: A31409
Total Samples Submitted: 4
Total Samples Analyzed: 4

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
Composite TP-2	11197761						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
Composite TP-4	11197762						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
Composite TP-6	11197763						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
Composite TP-7	11197764						
Layer: Brown Soil			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Reported: 12/20/11
	Client P.O.:	Date Completed: 12/20/11

WorkOrder: 1112267

December 20, 2011

Dear James:

Enclosed within are:

1) The results of the **7** analyzed samples from your project: **#2011-011; T&R RYCG Pier 94 Backlands,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112267

AEW ENGINEERING, INC.
55 New Montgomery Street, Suite 722, San Francisco, CA 94105
Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 1 of 1

Date: December 8, 2011

TURN AROUND TIME ☐ 24 HOURS ☐ 48 HOURS ☐ 1 WEEK ☒ Others: Norma

LABORATORY: McCampbell Analytical

Report To: James Medley **eMail:** jmedley@aewengineering.com
Company: AEW Engineering, Inc. **Project No.:** 2011-011
Project Name: T&R RYCG Pier 94 Backlands **Location:** T&R RYCG Pier 94 Backlands
Sampler: James Medley **Project No.:** 2011-011
Sampler: Signature: James Medley **Bill To:** Kenneth Leung
Reporting Requirement: Hard Copy: Yes ☐ No ☐
PDF File: Yes ☑ No ☐ Electronic: Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Other	Comments
TP-1-2.5	TP-1	12/8/2011	0758	1	SS		X				X				X											COMPOSITE TP-1
TP-1-5.0	TP-1	12/8/2011	0802	1	SS		X				X															
TP-2-2.5	TP-2	12/8/2011	0824	1	SS		X				X															
TP-2-5.0	TP-2	12/8/2011	0827	1	SS		X				X				X											COMPOSITE TP-2
TP-3-2.5	TP-3	12/8/2011	0841	1	SS		X				X				X											
TP-3-5.0	TP-3	12/8/2011	0845	1	SS		X				X															COMPOSITE TP-3
TP-4-2.5	TP-4	12/8/2011	0901	1	SS		X				X															
TP-4-5.0	TP-4	12/8/2011	0907	1	SS		X				X				X											COMPOSITE TP-4
TP-5-2.5	TP-5	12/8/2011	0919	1	SS		X				X				X											
TP-5-5.0	TP-5	12/8/2011	0923	1	SS		X				X															COMPOSITE TP-5
TP-6-2.5	TP-6	12/8/2011	0935	1	SS		X				X															
TP-6-5.0	TP-6	12/8/2011	0938	1	SS		X				X				X											COMPOSITE TP-6
TP-7-2.5	TP-7	12/8/2011	0953	1	SS		X				X															
TP-7-3.0	TP-7	12/8/2011	1005	1	SS		X				X				X											COMPOSITE TP-7

Relinquished By:	Date:	Time:	Received By:
James Medley	12/8/2011	1400	
	12/8/11	1550	

Remarks:
GOOD CONDITION ___ APPROPRIATE
HEAD SPACE ABSENT ___ CONTAINERS ___
DECHLORINATED IN LAB ___ PRESERVED IN LAB ___
VOAS | O&G | METALS | OTHER
PRESERVATION

Please hold samples in laboratory for 6 months before disposal

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112267 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8409 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: 5 days

Date Received: **12/08/2011**
Date Printed: **12/08/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1112267-001	Composite TP-1	Soil	12/8/2011 7:58	☐	A		A		A				A			
1112267-001	TP-1-2.5	Soil	12/8/2011 7:58	☐		B										
1112267-002	Composite TP-2	Soil	12/8/2011 8:24	☐	A		A	A	A	A	A	A	A			
1112267-002	TP-2-5.0	Soil	12/8/2011 8:27	☐		B										
1112267-003	Composite TP-3	Soil	12/8/2011 8:41	☐	A		A		A				A			
1112267-003	TP-3-2.5	Soil	12/8/2011 8:41	☐		B										
1112267-004	Composite TP-4	Soil	12/8/2011 9:01	☐	A		A	A	A	A	A	A	A			
1112267-004	TP-4-5.0	Soil	12/8/2011 9:07	☐		B										
1112267-005	Composite TP-5	Soil	12/8/2011 9:19	☐	A		A		A				A			
1112267-005	TP-5-2.5	Soil	12/8/2011 9:19	☐		B										
1112267-006	Composite TP-6	Soil	12/8/2011 9:35	☐	A		A	A	A	A	A	A	A			
1112267-006	TP-6-5.0	Soil	12/8/2011 9:38	☐		B										
1112267-007	Composite TP-7	Soil	12/8/2011 9:53	☐	A		A	A	A	A	A	A	A			
1112267-007	TP-7-3.0	Soil	12/8/2011 10:05	☐		B										

Test Legend:

1	8082A_PCB_S	2	8260B_S	3	8270D_S	4	ASBESTOS_S	5	CAM17MS_S
6	CN_TOTAL_S	7	PH_S	8	SULFIDE_S	9	TPH(DMO)WSG_S	10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A contain testgroup.

Prepared by: Melissa Valles

Comments:

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

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Sample Receipt Checklist

Client Name: **AEW Engineering, Inc.**
Date and Time Received: **12/8/2011 6:33:29 PM**

Project Name: **#2011-011; T&R RYCG Pier 94 Backlands**
Checklist completed and reviewed by: Melissa Valles

WorkOrder N°: **1112267** Matrix: Soil
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: 5.6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted: 12/08/11
	Client P.O.:	Date Analyzed: 12/11/11-12/12/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B | Analytical Method: SW8082 | Work Order: 1112267

Lab ID	1112267-001A	1112267-002A	1112267-003A	1112267-004A	Reporting Limit for DF =1	
Client ID	Composite TP-1	Composite TP-2	Composite TP-3	Composite TP-4		
Matrix	S	S	S	S		
DF	5	5	5	2	S	W
Compound	**Concentration**				mg/kg	ug/L
Aroclor1016	ND<0.25	ND<0.25	ND<0.25	ND<0.10	0.05	NA
Aroclor1221	ND<0.25	ND<0.25	ND<0.25	ND<0.10	0.05	NA
Aroclor1232	ND<0.25	ND<0.25	ND<0.25	ND<0.10	0.05	NA
Aroclor1242	ND<0.25	ND<0.25	ND<0.25	ND<0.10	0.05	NA
Aroclor1248	ND<0.25	ND<0.25	ND<0.25	ND<0.10	0.05	NA
Aroclor1254	ND<0.25	ND<0.25	ND<0.25	0.20	0.05	NA
Aroclor1260	ND<0.25	ND<0.25	ND<0.25	ND<0.10	0.05	NA
PCBs, total	ND<0.25	ND<0.25	ND<0.25	0.20	0.05	NA
Surrogate Recoveries (%)						
%SS:	125	98	100	83		
Comments	a3,h4	a3,h4	a3,h4	h4		

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.
h4) sulfuric acid permanganate (EPA 3665) cleanup

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted: 12/08/11
	Client P.O.:	Date Analyzed: 12/11/11-12/12/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B | Analytical Method: SW8082 | Work Order: 1112267

Lab ID	1112267-005A	1112267-006A	1112267-007A		Reporting Limit for DF =1	
Client ID	Composite TP-5	Composite TP-6	Composite TP-7			
Matrix	S	S	S		S	W
DF	10	10	10		mg/kg	ug/L
Compound	**Concentration**					
Aroclor1016	ND<0.50	ND<0.50	ND<0.50		0.05	NA
Aroclor1221	ND<0.50	ND<0.50	ND<0.50		0.05	NA
Aroclor1232	ND<0.50	ND<0.50	ND<0.50		0.05	NA
Aroclor1242	ND<0.50	ND<0.50	ND<0.50		0.05	NA
Aroclor1248	ND<0.50	ND<0.50	ND<0.50		0.05	NA
Aroclor1254	ND<0.50	ND<0.50	ND<0.50		0.05	NA
Aroclor1260	ND<0.50	ND<0.50	ND<0.50		0.05	NA
PCBs, total	ND<0.50	ND<0.50	ND<0.50		0.05	NA
Surrogate Recoveries (%)						
%SS:	102	114	103			
Comments	a3,h4	a3,h4	a3,h4			

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.
h4) sulfuric acid permanganate (EPA 3665) cleanup

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/12/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112267

Lab ID	1112267-001B
Client ID	TP-1-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	102	%SS2:	97
%SS3:	95		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/12/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112267

Lab ID	1112267-002B
Client ID	TP-2-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	0.022	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	95	%SS2:	113
%SS3:	118		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/12/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112267

Lab ID	1112267-003B
Client ID	TP-3-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

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

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/13/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112267

Lab ID	1112267-004B
Client ID	TP-4-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	97	%SS2:	115
%SS3:	116		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted: 12/08/11
	Client P.O.:	Date Analyzed: 12/12/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112267

Lab ID	1112267-005B
Client ID	TP-5-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	118	%SS2:	119
%SS3:	107		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/12/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112267

Lab ID	1112267-006B
Client ID	TP-6-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	118	%SS2:	117
%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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/12/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112267

Lab ID	1112267-007B
Client ID	TP-7-3.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	0.29	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	116	%SS2:	119
%SS3:	109		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112267

Lab ID	1112267-001A
Client ID	Composite TP-1
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	2.0	5.0	0.33
Benzo (a) pyrene	1.7	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	2.7	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	5.0	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	80	%SS2:	---#
%SS3:	99	%SS4:	79
%SS5:	---#	%SS6:	91

Comments:

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112267

Lab ID	1112267-002A
Client ID	Composite TP-2
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<0.66	2.0	0.33	Acenaphthylene	ND<0.66	2.0	0.33
Acetochlor	ND<0.66	2.0	0.33	Anthracene	ND<0.66	2.0	0.33
Benzidine	ND<3.2	2.0	1.6	Benzoic Acid	ND<3.2	2.0	1.6
Benzo (a) anthracene	ND<0.66	2.0	0.33	Benzo (b) fluoranthene	ND<0.66	2.0	0.33
Benzo (k) fluoranthene	ND<0.66	2.0	0.33	Benzo (g,h,i) perylene	ND<0.66	2.0	0.33
Benzo (a) pyrene	ND<0.66	2.0	0.33	Benzyl Alcohol	ND<3.2	2.0	1.6
1,1-Biphenyl	ND<0.66	2.0	0.33	Bis (2-chloroethoxy) Methane	ND<0.66	2.0	0.33
Bis (2-chloroethyl) Ether	ND<0.66	2.0	0.33	Bis (2-chloroisopropyl) Ether	ND<0.66	2.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<0.66	2.0	0.33	4-Bromophenyl Phenyl Ether	ND<0.66	2.0	0.33
Butylbenzyl Phthalate	ND<0.66	2.0	0.33	4-Chloroaniline	ND<1.3	2.0	0.66
4-Chloro-3-methylphenol	ND<0.66	2.0	0.33	2-Chloronaphthalene	ND<0.66	2.0	0.33
2-Chlorophenol	ND<0.66	2.0	0.33	4-Chlorophenyl Phenyl Ether	ND<0.66	2.0	0.33
Chrysene	ND<0.66	2.0	0.33	Dibenzo (a,h) anthracene	ND<0.66	2.0	0.33
Dibenzofuran	ND<0.66	2.0	0.33	Di-n-butyl Phthalate	ND<0.66	2.0	0.33
1,2-Dichlorobenzene	ND<0.66	2.0	0.33	1,3-Dichlorobenzene	ND<0.66	2.0	0.33
1,4-Dichlorobenzene	ND<0.66	2.0	0.33	3,3-Dichlorobenzidine	ND<1.3	2.0	0.66
2,4-Dichlorophenol	ND<0.66	2.0	0.33	Diethyl Phthalate	ND<0.66	2.0	0.33
2,4-Dimethylphenol	ND<0.66	2.0	0.33	Dimethyl Phthalate	ND<0.66	2.0	0.33
4,6-Dinitro-2-methylphenol	ND<3.2	2.0	1.6	2,4-Dinitrophenol	ND<3.2	2.0	1.6
2,4-Dinitrotoluene	ND<0.66	2.0	0.33	2,6-Dinitrotoluene	ND<0.66	2.0	0.33
Di-n-octyl Phthalate	ND<0.66	2.0	0.33	1,2-Diphenylhydrazine	ND<0.66	2.0	0.33
Fluoranthene	ND<0.66	2.0	0.33	Fluorene	ND<0.66	2.0	0.33
Hexachlorobenzene	ND<0.66	2.0	0.33	Hexachlorobutadiene	ND<0.66	2.0	0.33
Hexachlorocyclopentadiene	ND<3.2	2.0	1.6	Hexachloroethane	ND<0.66	2.0	0.33
Indeno (1,2,3-cd) pyrene	ND<0.66	2.0	0.33	Isophorone	ND<0.66	2.0	0.33
2-Methylnaphthalene	ND<0.66	2.0	0.33	2-Methylphenol (o-Cresol)	ND<0.66	2.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<0.66	2.0	0.33	Naphthalene	ND<0.66	2.0	0.33
2-Nitroaniline	ND<3.2	2.0	1.6	3-Nitroaniline	ND<3.2	2.0	1.6
4-Nitroaniline	ND<3.2	2.0	1.6	Nitrobenzene	ND<0.66	2.0	0.33
2-Nitrophenol	ND<3.2	2.0	1.6	4-Nitrophenol	ND<3.2	2.0	1.6
N-Nitrosodiphenylamine	ND<0.66	2.0	0.33	N-Nitrosodi-n-propylamine	ND<0.66	2.0	0.33
Pentachlorophenol	ND<3.2	2.0	1.6	Phenanthrene	ND<0.66	2.0	0.33
Phenol	ND<0.66	2.0	0.33	Pyrene	ND<0.66	2.0	0.33
1,2,4-Trichlorobenzene	ND<0.66	2.0	0.33	2,4,5-Trichlorophenol	ND<0.66	2.0	0.33
2,4,6-Trichlorophenol	ND<0.66	2.0	0.33				

Surrogate Recoveries (%)

%SS1:	74	%SS2:	84
%SS3:	106	%SS4:	73
%SS5:	91	%SS6:	57

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112267

Lab ID	1112267-003A
Client ID	Composite TP-3
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	85	%SS2:	---#
%SS3:	85	%SS4:	74
%SS5:	64	%SS6:	74

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112267

Lab ID	1112267-004A
Client ID	Composite TP-4
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<3.3	10	0.33	Acenaphthylene	ND<3.3	10	0.33
Acetochlor	ND<3.3	10	0.33	Anthracene	ND<3.3	10	0.33
Benzidine	ND<16	10	1.6	Benzoic Acid	ND<16	10	1.6
Benzo (a) anthracene	ND<3.3	10	0.33	Benzo (b) fluoranthene	ND<3.3	10	0.33
Benzo (k) fluoranthene	ND<3.3	10	0.33	Benzo (g,h,i) perylene	ND<3.3	10	0.33
Benzo (a) pyrene	ND<3.3	10	0.33	Benzyl Alcohol	ND<16	10	1.6
1,1-Biphenyl	ND<3.3	10	0.33	Bis (2-chloroethoxy) Methane	ND<3.3	10	0.33
Bis (2-chloroethyl) Ether	ND<3.3	10	0.33	Bis (2-chloroisopropyl) Ether	ND<3.3	10	0.33
Bis (2-ethylhexyl) Phthalate	ND<3.3	10	0.33	4-Bromophenyl Phenyl Ether	ND<3.3	10	0.33
Butylbenzyl Phthalate	ND<3.3	10	0.33	4-Chloroaniline	ND<6.6	10	0.66
4-Chloro-3-methylphenol	ND<3.3	10	0.33	2-Chloronaphthalene	ND<3.3	10	0.33
2-Chlorophenol	ND<3.3	10	0.33	4-Chlorophenyl Phenyl Ether	ND<3.3	10	0.33
Chrysene	ND<3.3	10	0.33	Dibenzo (a,h) anthracene	ND<3.3	10	0.33
Dibenzofuran	ND<3.3	10	0.33	Di-n-butyl Phthalate	ND<3.3	10	0.33
1,2-Dichlorobenzene	ND<3.3	10	0.33	1,3-Dichlorobenzene	ND<3.3	10	0.33
1,4-Dichlorobenzene	ND<3.3	10	0.33	3,3-Dichlorobenzidine	ND<6.6	10	0.66
2,4-Dichlorophenol	ND<3.3	10	0.33	Diethyl Phthalate	ND<3.3	10	0.33
2,4-Dimethylphenol	ND<3.3	10	0.33	Dimethyl Phthalate	ND<3.3	10	0.33
4,6-Dinitro-2-methylphenol	ND<16	10	1.6	2,4-Dinitrophenol	ND<16	10	1.6
2,4-Dinitrotoluene	ND<3.3	10	0.33	2,6-Dinitrotoluene	ND<3.3	10	0.33
Di-n-octyl Phthalate	ND<3.3	10	0.33	1,2-Diphenylhydrazine	ND<3.3	10	0.33
Fluoranthene	ND<3.3	10	0.33	Fluorene	ND<3.3	10	0.33
Hexachlorobenzene	ND<3.3	10	0.33	Hexachlorobutadiene	ND<3.3	10	0.33
Hexachlorocyclopentadiene	ND<16	10	1.6	Hexachloroethane	ND<3.3	10	0.33
Indeno (1,2,3-cd) pyrene	ND<3.3	10	0.33	Isophorone	ND<3.3	10	0.33
2-Methylnaphthalene	ND<3.3	10	0.33	2-Methylphenol (o-Cresol)	ND<3.3	10	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<3.3	10	0.33	Naphthalene	ND<3.3	10	0.33
2-Nitroaniline	ND<16	10	1.6	3-Nitroaniline	ND<16	10	1.6
4-Nitroaniline	ND<16	10	1.6	Nitrobenzene	ND<3.3	10	0.33
2-Nitrophenol	ND<16	10	1.6	4-Nitrophenol	ND<16	10	1.6
N-Nitrosodiphenylamine	ND<3.3	10	0.33	N-Nitrosodi-n-propylamine	ND<3.3	10	0.33
Pentachlorophenol	ND<16	10	1.6	Phenanthrene	ND<3.3	10	0.33
Phenol	ND<3.3	10	0.33	Pyrene	ND<3.3	10	0.33
1,2,4-Trichlorobenzene	ND<3.3	10	0.33	2,4,5-Trichlorophenol	ND<3.3	10	0.33
2,4,6-Trichlorophenol	ND<3.3	10	0.33				

Surrogate Recoveries (%)

%SS1:	69	%SS2:	---#
%SS3:	83	%SS4:	77
%SS5:	---#	%SS6:	78

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112267

Lab ID	1112267-005A
Client ID	Composite TP-5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	88	%SS2:	---#
%SS3:	113	%SS4:	77
%SS5:	---#	%SS6:	73

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112267

Lab ID	1112267-006A
Client ID	Composite TP-6
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<3.3	10	0.33	Acenaphthylene	ND<3.3	10	0.33
Acetochlor	ND<3.3	10	0.33	Anthracene	ND<3.3	10	0.33
Benzidine	ND<16	10	1.6	Benzoic Acid	ND<16	10	1.6
Benzo (a) anthracene	ND<3.3	10	0.33	Benzo (b) fluoranthene	ND<3.3	10	0.33
Benzo (k) fluoranthene	ND<3.3	10	0.33	Benzo (g,h,i) perylene	ND<3.3	10	0.33
Benzo (a) pyrene	ND<3.3	10	0.33	Benzyl Alcohol	ND<16	10	1.6
1,1-Biphenyl	ND<3.3	10	0.33	Bis (2-chloroethoxy) Methane	ND<3.3	10	0.33
Bis (2-chloroethyl) Ether	ND<3.3	10	0.33	Bis (2-chloroisopropyl) Ether	ND<3.3	10	0.33
Bis (2-ethylhexyl) Phthalate	ND<3.3	10	0.33	4-Bromophenyl Phenyl Ether	ND<3.3	10	0.33
Butylbenzyl Phthalate	ND<3.3	10	0.33	4-Chloroaniline	ND<6.6	10	0.66
4-Chloro-3-methylphenol	ND<3.3	10	0.33	2-Chloronaphthalene	ND<3.3	10	0.33
2-Chlorophenol	ND<3.3	10	0.33	4-Chlorophenyl Phenyl Ether	ND<3.3	10	0.33
Chrysene	ND<3.3	10	0.33	Dibenzo (a,h) anthracene	ND<3.3	10	0.33
Dibenzofuran	ND<3.3	10	0.33	Di-n-butyl Phthalate	ND<3.3	10	0.33
1,2-Dichlorobenzene	ND<3.3	10	0.33	1,3-Dichlorobenzene	ND<3.3	10	0.33
1,4-Dichlorobenzene	ND<3.3	10	0.33	3,3-Dichlorobenzidine	ND<6.6	10	0.66
2,4-Dichlorophenol	ND<3.3	10	0.33	Diethyl Phthalate	ND<3.3	10	0.33
2,4-Dimethylphenol	ND<3.3	10	0.33	Dimethyl Phthalate	ND<3.3	10	0.33
4,6-Dinitro-2-methylphenol	ND<16	10	1.6	2,4-Dinitrophenol	ND<16	10	1.6
2,4-Dinitrotoluene	ND<3.3	10	0.33	2,6-Dinitrotoluene	ND<3.3	10	0.33
Di-n-octyl Phthalate	ND<3.3	10	0.33	1,2-Diphenylhydrazine	ND<3.3	10	0.33
Fluoranthene	ND<3.3	10	0.33	Fluorene	ND<3.3	10	0.33
Hexachlorobenzene	ND<3.3	10	0.33	Hexachlorobutadiene	ND<3.3	10	0.33
Hexachlorocyclopentadiene	ND<16	10	1.6	Hexachloroethane	ND<3.3	10	0.33
Indeno (1,2,3-cd) pyrene	ND<3.3	10	0.33	Isophorone	ND<3.3	10	0.33
2-Methylnaphthalene	ND<3.3	10	0.33	2-Methylphenol (o-Cresol)	ND<3.3	10	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<3.3	10	0.33	Naphthalene	ND<3.3	10	0.33
2-Nitroaniline	ND<16	10	1.6	3-Nitroaniline	ND<16	10	1.6
4-Nitroaniline	ND<16	10	1.6	Nitrobenzene	ND<3.3	10	0.33
2-Nitrophenol	ND<16	10	1.6	4-Nitrophenol	ND<16	10	1.6
N-Nitrosodiphenylamine	ND<3.3	10	0.33	N-Nitrosodi-n-propylamine	ND<3.3	10	0.33
Pentachlorophenol	ND<16	10	1.6	Phenanthrene	ND<3.3	10	0.33
Phenol	ND<3.3	10	0.33	Pyrene	ND<3.3	10	0.33
1,2,4-Trichlorobenzene	ND<3.3	10	0.33	2,4,5-Trichlorophenol	ND<3.3	10	0.33
2,4,6-Trichlorophenol	ND<3.3	10	0.33				

Surrogate Recoveries (%)

%SS1:	69	%SS2:	---#
%SS3:	80	%SS4:	71
%SS5:	---#	%SS6:	68

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112267

Lab ID	1112267-007A
Client ID	Composite TP-7
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<3.3	10	0.33	Acenaphthylene	ND<3.3	10	0.33
Acetochlor	ND<3.3	10	0.33	Anthracene	ND<3.3	10	0.33
Benzidine	ND<16	10	1.6	Benzoic Acid	ND<16	10	1.6
Benzo (a) anthracene	ND<3.3	10	0.33	Benzo (b) fluoranthene	ND<3.3	10	0.33
Benzo (k) fluoranthene	ND<3.3	10	0.33	Benzo (g,h,i) perylene	ND<3.3	10	0.33
Benzo (a) pyrene	ND<3.3	10	0.33	Benzyl Alcohol	ND<16	10	1.6
1,1-Biphenyl	ND<3.3	10	0.33	Bis (2-chloroethoxy) Methane	ND<3.3	10	0.33
Bis (2-chloroethyl) Ether	ND<3.3	10	0.33	Bis (2-chloroisopropyl) Ether	ND<3.3	10	0.33
Bis (2-ethylhexyl) Phthalate	ND<3.3	10	0.33	4-Bromophenyl Phenyl Ether	ND<3.3	10	0.33
Butylbenzyl Phthalate	ND<3.3	10	0.33	4-Chloroaniline	ND<6.6	10	0.66
4-Chloro-3-methylphenol	ND<3.3	10	0.33	2-Chloronaphthalene	ND<3.3	10	0.33
2-Chlorophenol	ND<3.3	10	0.33	4-Chlorophenyl Phenyl Ether	ND<3.3	10	0.33
Chrysene	ND<3.3	10	0.33	Dibenzo (a,h) anthracene	ND<3.3	10	0.33
Dibenzofuran	ND<3.3	10	0.33	Di-n-butyl Phthalate	ND<3.3	10	0.33
1,2-Dichlorobenzene	ND<3.3	10	0.33	1,3-Dichlorobenzene	ND<3.3	10	0.33
1,4-Dichlorobenzene	ND<3.3	10	0.33	3,3-Dichlorobenzidine	ND<6.6	10	0.66
2,4-Dichlorophenol	ND<3.3	10	0.33	Diethyl Phthalate	ND<3.3	10	0.33
2,4-Dimethylphenol	ND<3.3	10	0.33	Dimethyl Phthalate	ND<3.3	10	0.33
4,6-Dinitro-2-methylphenol	ND<16	10	1.6	2,4-Dinitrophenol	ND<16	10	1.6
2,4-Dinitrotoluene	ND<3.3	10	0.33	2,6-Dinitrotoluene	ND<3.3	10	0.33
Di-n-octyl Phthalate	ND<3.3	10	0.33	1,2-Diphenylhydrazine	ND<3.3	10	0.33
Fluoranthene	ND<3.3	10	0.33	Fluorene	ND<3.3	10	0.33
Hexachlorobenzene	ND<3.3	10	0.33	Hexachlorobutadiene	ND<3.3	10	0.33
Hexachlorocyclopentadiene	ND<16	10	1.6	Hexachloroethane	ND<3.3	10	0.33
Indeno (1,2,3-cd) pyrene	ND<3.3	10	0.33	Isophorone	ND<3.3	10	0.33
2-Methylnaphthalene	ND<3.3	10	0.33	2-Methylphenol (o-Cresol)	ND<3.3	10	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<3.3	10	0.33	Naphthalene	ND<3.3	10	0.33
2-Nitroaniline	ND<16	10	1.6	3-Nitroaniline	ND<16	10	1.6
4-Nitroaniline	ND<16	10	1.6	Nitrobenzene	ND<3.3	10	0.33
2-Nitrophenol	ND<16	10	1.6	4-Nitrophenol	ND<16	10	1.6
N-Nitrosodiphenylamine	ND<3.3	10	0.33	N-Nitrosodi-n-propylamine	ND<3.3	10	0.33
Pentachlorophenol	ND<16	10	1.6	Phenanthrene	ND<3.3	10	0.33
Phenol	ND<3.3	10	0.33	Pyrene	ND<3.3	10	0.33
1,2,4-Trichlorobenzene	ND<3.3	10	0.33	2,4,5-Trichlorophenol	ND<3.3	10	0.33
2,4,6-Trichlorophenol	ND<3.3	10	0.33				

Surrogate Recoveries (%)

%SS1:	69	%SS2:	---#
%SS3:	107	%SS4:	82
%SS5:	---#	%SS6:	69

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/12/11-12/13/11

CAM / CCR 17 Metals*

Lab ID	1112267-001A	1112267-002A	1112267-003A	1112267-004A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	Composite TP-1	Composite TP-2	Composite TP-3	Composite TP-4		
Matrix	S	S	S	S	S	W
Extraction Type	TOTAL	TOTAL	TOTAL	TOTAL	mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1112267

Dilution Factor	1	1	1	1	1	1
Antimony	0.55	1.7	3.5	6.7	0.5	NA
Arsenic	3.9	4.8	9.7	12	0.5	NA
Barium	31	200	540	480	5.0	NA
Beryllium	ND	0.51	0.55	0.51	0.5	NA
Cadmium	ND	0.50	0.61	2.0	0.25	NA
Chromium	290	53	110	71	0.5	NA
Cobalt	43	9.8	24	21	0.5	NA
Copper	26	75	110	110	0.5	NA
Lead	33	98	150	390	0.5	NA
Mercury	0.14	0.42	0.65	0.97	0.05	NA
Molybdenum	ND	ND	1.0	1.3	0.5	NA
Nickel	700	130	110	87	0.5	NA
Selenium	ND	ND	ND	ND	0.5	NA
Silver	ND	ND	ND	ND	0.5	NA
Thallium	ND	ND	ND	ND	0.5	NA
Vanadium	36	37	100	48	0.5	NA
Zinc	63	180	230	670	5.0	NA
%SS:	122	107	115	127		

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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Angela Rydelius, Lab Manager

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/12/11-12/13/11

CAM / CCR 17 Metals*

Lab ID	1112267-005A	1112267-006A	1112267-007A		Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	Composite TP-5	Composite TP-6	Composite TP-7			
Matrix	S	S	S		S	W
Extraction Type	TOTAL	TOTAL	TOTAL		mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1112267

Dilution Factor	1	1	1		1	1
Antimony	1.9	6.7	ND		0.5	NA
Arsenic	6.2	10	3.2		0.5	NA
Barium	190	480	65		5.0	NA
Beryllium	ND	ND	ND		0.5	NA
Cadmium	0.50	2.2	ND		0.25	NA
Chromium	100	77	150		0.5	NA
Cobalt	14	12	55		0.5	NA
Copper	52	160	19		0.5	NA
Lead	150	1200	37		0.5	NA
Mercury	0.54	0.88	0.21		0.05	NA
Molybdenum	0.53	1.4	ND		0.5	NA
Nickel	120	83	1000		0.5	NA
Selenium	ND	ND	ND		0.5	NA
Silver	ND	0.62	ND		0.5	NA
Thallium	ND	ND	ND		0.5	NA
Vanadium	100	47	42		0.5	NA
Zinc	340	960	61		5.0	NA
%SS:	129	122	118			

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted: 12/08/11
	Client P.O.:	Date Analyzed: 12/14/11

Cyanide, Total*^

Analytical Method: SM4500-CN⁻ ABCE | Work Order: 1112267

Lab ID	Client ID	Matrix	Total Cyanide	DF	Comments
1112267-002A	Composite TP-2	S	0.23	1	
1112267-004A	Composite TP-4	S	0.47	1	
1112267-006A	Composite TP-6	S	0.20	1	
1112267-007A	Composite TP-7	S	ND	1	

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	0.1 mg/Kg	

* water samples are reported in µg/L; soil/sludge/solid samples in mg/kg; wipe samples in µg/wipe.

^All soil samples are treated to remove sulfide, nitrate and nitrite interference prior to analysis.

DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted 12/08/11
	Client P.O.:	Date Analyzed 12/10/11-12/13/11

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline *

Extraction method: SW5030B Analytical methods: SW8015Bm Work Order: 1112267

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	Composite TP-1	S	ND	1	90	
002A	Composite TP-2	S	1.2	1	105	d2
003A	Composite TP-3	S	ND	1	107	
004A	Composite TP-4	S	3.0	1	88	d7
005A	Composite TP-5	S	ND	1	94	
006A	Composite TP-6	S	ND	1	98	
007A	Composite TP-7	S	3.9	1	107	d7

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

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

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
d2) heavier gasoline range compounds are significant (aged gasoline?)
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/09/11

pH*

Analytical Method: SW9045D — Work Order: 1112267

Lab ID	Client ID	Matrix	pH	DF	Comments
1112267-002A	Composite TP-2	S	7.94 @ 22.1°C	1	
1112267-004A	Composite TP-4	S	7.45 @ 21.9°C	1	
1112267-006A	Composite TP-6	S	7.77 @ 21.9°C	1	
1112267-007A	Composite TP-7	S	7.98 @ 22.0°C	1	

Method Accuracy and Reporting Units	W	NA	
	S	±0.05, pH units @ °C	

* EPA method 9045; pH = -log(aH+) @ _°C; ± 0.1 units

DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
	Client Contact: James Medley	Date Extracted: 12/14/11
	Client P.O.:	Date Analyzed: 12/14/11

Acid Soluble Sulfide*

Analytical Method: SW9030A/E376.2 Work Order: 1112267

Lab ID	Client ID	Matrix	Sulfide	DF	Comments
1112267-002A	Composite TP-2	S	ND	1	
1112267-004A	Composite TP-4	S	ND	1	
1112267-006A	Composite TP-6	S	ND	1	
1112267-007A	Composite TP-7	S	ND	1	

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	10 mg/Kg	

*water samples are reported in mg/L, soil samples are reported in mg/kg.

DF = Dilution Factor

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/08/11
		Date Received: 12/08/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/08/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/10/11-12/15/11

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3550B/3630C Analytical methods: SW8015B Work Order: 1112267

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1112267-001A	Composite TP-1	S	26	74	5	94	e7,e2
1112267-002A	Composite TP-2	S	15	76	1	107	e7,e2
1112267-003A	Composite TP-3	S	13	63	5	114	e7,e2
1112267-004A	Composite TP-4	S	63	120	10	91	e7,e2
1112267-005A	Composite TP-5	S	30	220	10	89	e7,e2
1112267-006A	Composite TP-6	S	25	240	10	101	e7,e2
1112267-007A	Composite TP-7	S	44	370	20	102	e7,e2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	ug/L
	S	1.0	5.0	mg/Kg

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

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

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
e2) diesel range compounds are significant; no recognizable pattern
e7) oil range compounds are significant

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QC SUMMARY REPORT FOR SW8082

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63298 | WorkOrder: 1112267

EPA Method: SW8082 | **Extraction: SW3550B** | **Spiked Sample ID: 1112219-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/kg	mg/kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Aroclor1260	ND	0.15	95.8	96	0.225	101	70 - 130	20	70 - 130
%SS:	102	0.050	102	104	1.79	92	70 - 130	20	70 - 130

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

BATCH 63298 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-001A	12/08/11 7:58 AM	12/08/11	12/12/11 4:09 PM	1112267-002A	12/08/11 8:24 AM	12/08/11	12/12/11 4:21 AM
1112267-003A	12/08/11 8:41 AM	12/08/11	12/12/11 3:27 AM	1112267-004A	12/08/11 9:01 AM	12/08/11	12/12/11 2:32 AM
1112267-005A	12/08/11 9:19 AM	12/08/11	12/12/11 1:37 AM	1112267-006A	12/08/11 9:35 AM	12/08/11	12/12/11 12:43 AM
1112267-007A	12/08/11 9:53 AM	12/08/11	12/11/11 11:48 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.

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

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63309 | WorkOrder: 1112267

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1112222-008A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	0.050	98.6	104	4.96	70.5	70 - 130	30	70 - 130
Benzene	ND	0.050	106	106	0	98	70 - 130	30	70 - 130
t-Butyl alcohol (TBA)	ND	0.25	71.5	72	0.804	95.6	70 - 130	30	70 - 130
Chlorobenzene	ND	0.050	102	101	0.551	103	70 - 130	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	94.5	95.8	1.40	88.6	70 - 130	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	102	102	0	93.3	70 - 130	30	70 - 130
1,1-Dichloroethene	ND	0.050	113	111	2.08	105	70 - 130	30	70 - 130
Diisopropyl ether (DIPE)	ND	0.050	102	102	0	99.9	70 - 130	30	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	0.050	90.5	90.5	0	93.6	70 - 130	30	70 - 130
Methyl-t-butyl ether (MTBE)	ND	0.050	96.9	97.8	0.936	99.4	70 - 130	30	70 - 130
Toluene	ND	0.050	108	107	0.858	113	70 - 130	30	70 - 130
Trichloroethene	ND	0.050	108	106	2.09	104	70 - 130	30	70 - 130
%SS1:	97	0.12	118	116	1.57	97	70 - 130	30	70 - 130
%SS2:	112	0.12	122	120	1.42	114	70 - 130	30	70 - 130
%SS3:	115	0.012	110	106	3.79	113	70 - 130	30	70 - 130

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

BATCH 63309 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-001B	12/08/11 7:58 AM	12/08/11	12/12/11 5:01 PM	1112267-002B	12/08/11 8:27 AM	12/08/11	12/12/11 4:16 PM
1112267-003B	12/08/11 8:41 AM	12/08/11	12/12/11 5:41 PM	1112267-004B	12/08/11 9:07 AM	12/08/11	12/13/11 2:22 PM
1112267-005B	12/08/11 9:19 AM	12/08/11	12/12/11 2:38 PM	1112267-006B	12/08/11 9:38 AM	12/08/11	12/12/11 3:16 PM
1112267-007B	12/08/11 10:05 AM	12/08/11	12/12/11 6:11 PM				

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

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

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

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

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

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

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63258 | WorkOrder: 1112267

EPA Method: SW8270C **Extraction: SW3550B** **Spiked Sample ID: 1112222-008A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acenaphthene	ND<0.66	2	52.5	59.1	11.7	84.5	30 - 130	30	30 - 130
4-Chloro-3-methylphenol	ND<0.66	4	59.2	64.6	8.87	78.5	30 - 130	30	30 - 130
2-Chlorophenol	ND<0.66	4	61.4	68.5	10.9	94	30 - 130	30	30 - 130
1,4-Dichlorobenzene	ND<0.66	2	66.5	73.1	9.48	86.8	30 - 130	30	30 - 130
2,4-Dinitrotoluene	ND<0.66	2	42.7	48	11.8	96.7	30 - 130	30	30 - 130
4-Nitrophenol	ND<3.2	4	43.2	52.5	19.5	76.2	30 - 130	30	30 - 130
N-Nitrosodi-n-propylamine	ND<0.66	2	60.4	71.2	16.5	95.8	30 - 130	30	30 - 130
Pentachlorophenol	ND<3.2	4	34.8	37.2	6.59	59.8	30 - 130	30	30 - 130
Phenol	ND<0.66	4	83.3	85.4	2.52	102	30 - 130	30	30 - 130
Pyrene	ND<0.66	2	49.1	54.5	10.5	83.4	30 - 130	30	30 - 130
1,2,4-Trichlorobenzene	ND<0.66	2	64.3	70.7	9.51	88.6	30 - 130	30	30 - 130
%SS1:	84	200	68	78	13.4	88	30 - 130	30	30 - 130
%SS2:	75	200	71	69	4.00	89	30 - 130	30	30 - 130
%SS3:	81	200	71	79	10.5	90	30 - 130	30	30 - 130
%SS4:	75	200	85	93	8.26	82	30 - 130	30	30 - 130
%SS5:	52	200	76	82	7.98	78	30 - 130	30	30 - 130
%SS6:	72	200	75	82	8.83	79	30 - 130	30	30 - 130

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

BATCH 63258 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-001A	12/08/11 7:58 AM	12/08/11	12/16/11 4:01 AM	1112267-002A	12/08/11 8:24 AM	12/08/11	12/16/11 1:22 AM
1112267-003A	12/08/11 8:41 AM	12/08/11	12/16/11 8:22 PM	1112267-004A	12/08/11 9:01 AM	12/08/11	12/16/11 4:46 AM
1112267-005A	12/08/11 9:19 AM	12/08/11	12/16/11 2:41 AM	1112267-006A	12/08/11 9:35 AM	12/08/11	12/18/11 9:14 PM
1112267-007A	12/08/11 9:53 AM	12/08/11	12/16/11 5:19 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 = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.

#) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.

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

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QA/QC Officer

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QC SUMMARY REPORT FOR SW6020

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63325 | WorkOrder: 1112267

EPA Method: SW6020 **Extraction: SW3050B** **Spiked Sample ID: 1112248-010B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Antimony	0.57	50	107	111	4.16	110	75 - 125	20	75 - 125
Arsenic	9.5	50	110	115	3.46	114	75 - 125	20	75 - 125
Barium	210	500	125	132, F1	4.37	110	75 - 125	20	75 - 125
Beryllium	0.52	50	88.6	90.9	2.55	106	75 - 125	20	75 - 125
Cadmium	6.3	50	109	114	3.83	113	75 - 125	20	75 - 125
Chromium	68	50	112	118	2.64	113	75 - 125	20	75 - 125
Cobalt	11	50	93.1	96.5	2.95	109	75 - 125	20	75 - 125
Copper	39	50	108	119	5.48	113	75 - 125	20	75 - 125
Lead	28	50	113	120	3.74	113	75 - 125	20	75 - 125
Mercury	0.23	1.25	116	121	3.68	117	75 - 125	20	75 - 125
Molybdenum	0.60	50	106	112	5.10	110	75 - 125	20	75 - 125
Nickel	63	50	113	124	4.41	111	75 - 125	20	75 - 125
Selenium	ND	50	109	114	4.30	119	75 - 125	20	75 - 125
Silver	ND	50	105	109	3.75	108	75 - 125	20	75 - 125
Thallium	ND	50	107	110	3.50	111	75 - 125	20	75 - 125
Vanadium	60	50	113	117	1.96	113	75 - 125	20	75 - 125
Zinc	95	500	106	111	3.75	116	75 - 125	20	75 - 125
%SS:	95	500	107	113	4.91	117	70 - 130	20	70 - 130

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

F1 = MS / MSD outside of acceptance criteria. LCS validate prep batch.

BATCH 63325 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-001A	12/08/11 7:58 AM	12/08/11	12/12/11 10:26 PM	1112267-001A	12/08/11 7:58 AM	12/08/11	12/13/11 4:53 PM
1112267-002A	12/08/11 8:24 AM	12/08/11	12/12/11 10:32 PM	1112267-002A	12/08/11 8:24 AM	12/08/11	12/13/11 4:59 PM
1112267-003A	12/08/11 8:41 AM	12/08/11	12/12/11 10:38 PM	1112267-003A	12/08/11 8:41 AM	12/08/11	12/13/11 5:24 PM
1112267-004A	12/08/11 9:01 AM	12/08/11	12/12/11 11:03 PM	1112267-004A	12/08/11 9:01 AM	12/08/11	12/13/11 5:30 PM
1112267-005A	12/08/11 9:19 AM	12/08/11	12/13/11 5:36 PM	1112267-005A	12/08/11 9:19 AM	12/08/11	12/13/11 5:42 PM
1112267-006A	12/08/11 9:35 AM	12/08/11	12/12/11 11:15 PM	1112267-006A	12/08/11 9:35 AM	12/08/11	12/13/11 4:40 PM
1112267-007A	12/08/11 9:53 AM	12/08/11	12/12/11 11:21 PM	1112267-007A	12/08/11 9:53 AM	12/08/11	12/13/11 4:47 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 applicable to this method.

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/8015Bm

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63331 | WorkOrder: 1112267

EPA Method: SW8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1112248-008B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	0.60	78.1	77.5	0.730	77.2	70 - 130	20	70 - 130
MTBE	ND	0.10	98.4	96.9	1.51	99.7	70 - 130	20	70 - 130
Benzene	ND	0.10	93.7	93.6	0.107	94.5	70 - 130	20	70 - 130
Toluene	ND	0.10	95.7	95.8	0.190	96.5	70 - 130	20	70 - 130
Ethylbenzene	ND	0.10	100	100	0	100	70 - 130	20	70 - 130
Xylenes	ND	0.30	100	99.9	0.537	102	70 - 130	20	70 - 130
%SS:	105	0.10	94	89	5.91	93	70 - 130	20	70 - 130

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

BATCH 63331 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-001A	12/08/11 7:58 AM	12/08/11	12/11/11 4:42 PM	1112267-002A	12/08/11 8:24 AM	12/08/11	12/13/11 7:52 PM
1112267-003A	12/08/11 8:41 AM	12/08/11	12/13/11 10:52 PM	1112267-004A	12/08/11 9:01 AM	12/08/11	12/13/11 8:22 PM
1112267-005A	12/08/11 9:19 AM	12/08/11	12/11/11 2:18 PM	1112267-006A	12/08/11 9:35 AM	12/08/11	12/10/11 3:58 PM
1112267-007A	12/08/11 9:53 AM	12/08/11	12/10/11 4:29 PM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

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QC SUMMARY REPORT FOR SM4500-CN⁻ ABCE

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63341 | WorkOrder: 1112267

EPA Method: SM4500-CN⁻ ABCE **Extraction: SM4500-CN⁻ E** **Spiked Sample ID: 1112267-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Total Cyanide	0.23	0.80	92.6	90.6	1.70	90.1	80 - 120	20	90 - 110

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

BATCH 63341 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-002A	12/08/11 8:24 AM	12/08/11	12/14/11 11:57 AM	1112267-004A	12/08/11 9:01 AM	12/08/11	12/14/11 12:01 PM
1112267-006A	12/08/11 9:35 AM	12/08/11	12/14/11 12:04 PM	1112267-007A	12/08/11 9:53 AM	12/08/11	12/14/11 12:08 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.

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QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: **SW9045D (pH)** **Matrix:** **S** **WorkOrder:** **1112267**

Method Name: SW9045D | Units: ±, pH units @ °C | BatchID: 63284

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	Precision	Acceptance Criteria
1112267-002A	7.94 @ 22.1°C	1	7.95 @ 22.1°C	1	0.01	0.1
1112267-004A	7.45 @ 21.9°C	1	7.45 @ 22.0°C	1	0	0.1
1112267-006A	7.77 @ 21.9°C	1	7.78 @ 22.0°C	1	0.01	0.1
1112267-007A	7.98 @ 22.0°C	1	8.00 @ 22.0°C	1	0.02	0.1

BATCH 63284 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-002A	12/08/11 8:24 AM	12/09/11	12/09/11 8:30 PM	1112267-004A	12/08/11 9:01 AM	12/09/11	12/09/11 8:36 PM
1112267-006A	12/08/11 9:35 AM	12/09/11	12/09/11 8:48 PM	1112267-007A	12/08/11 9:53 AM	12/09/11	12/09/11 8:42 PM

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.

Precision = Absolute Value (Sample - Duplicate)

RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]

%RPD is calculated using results of up to 10 significant figures, however the reported results are rounded to 2 or 3 significant figures. Therefore there may be a slight discrepancy between the %RPD displayed above and %RPD calculated using the reported results. MAI considers %RPD based upon more significant figures to be more accurate.

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QC SUMMARY REPORT FOR SW9030A/EPA376.2

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63342 | WorkOrder: 1112267

EPA Method: SW9030A/E376.2 **Extraction: SM4500-S^{-2} D** **Spiked Sample ID: 1112267-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Sulfide	ND	50	75.7	84.9	11.5	90.3	75 - 125	20	80 - 120

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

BATCH 63342 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-002A	12/08/11 8:24 AM	12/14/11	12/14/11 4:10 PM	1112267-004A	12/08/11 9:01 AM	12/14/11	12/14/11 4:16 PM
1112267-006A	12/08/11 9:35 AM	12/14/11	12/14/11 4:22 PM	1112267-007A	12/08/11 9:53 AM	12/14/11	12/14/11 4:28 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 applicable to this method.

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 SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63330 | WorkOrder: 1112267

EPA Method: SW8015B **Extraction: SW3550B/3630C** **Spiked Sample ID: 1112248-010B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	30	40	102	106	2.58	103	70 - 130	30	70 - 130
%SS:	99	25	98	100	2.56	90	70 - 130	30	70 - 130

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

BATCH 63330 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112267-001A	12/08/11 7:58 AM	12/08/11	12/12/11 6:44 PM	1112267-002A	12/08/11 8:24 AM	12/08/11	12/13/11 8:22 AM
1112267-003A	12/08/11 8:41 AM	12/08/11	12/15/11 1:11 PM	1112267-004A	12/08/11 9:01 AM	12/08/11	12/10/11 4:43 AM
1112267-005A	12/08/11 9:19 AM	12/08/11	12/14/11 8:19 PM	1112267-006A	12/08/11 9:35 AM	12/08/11	12/12/11 11:35 AM
1112267-007A	12/08/11 9:53 AM	12/08/11	12/15/11 11:53 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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Analytical Report

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Reported: 12/21/11
	Client P.O.:	Date Completed: 01/09/12

WorkOrder: 1112307 A

January 09, 2012

Dear James:

Enclosed within are:

1) The results of the **8** analyzed samples from your project: **#2011-011; T&R RYCG Pier 94 Backlands,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112307

AEW ENGINEERING, INC.
55 New Montgomery Street, Suite 722, San Francisco, CA 94105
Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 1 of 2

TURN AROUND TIME: ☐ 24 HOURS ☐ 48 HOURS ☐ 1 WEEK ☒ Others: Normal

LABORATORY: McCampbell Analytical

Date: December 9, 2011

Report To: James Medley eMail: jmedley@aewengineering.com
Company: AEW Engineering, Inc. Project No.: 2011-011
Project Name: T&R RYCG Pier 94 Backlands Location: T&R RYCG Pier 94 Backlands
Sampler: James Medley Project No.: 2011-011
Sampler: Signature: James Medley Bill To: Kenneth Leung
Reporting Requirement: Hard Copy : Yes ☐ No ☐
PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	STLC Cr 2 added 1/4/12	STLC Ni 5 day	STLC Pb 5 day	Comments
E-1-2.0		12/9/2011	0744	1	AL		X				X				X	X	X	X	X	X									
E-2-2.0		12/9/2011	0807	1	AL		X				X				X	X	X	X	X	X	X	X	X	X		X	X		
E-3-2.5		12/9/2011	0838	1	AL		X				X																		E-3 COMPOSITE
E-3-5.0		12/9/2011	0840	1	AL		X				X				X														
E-4-2.5		12/9/2011	0900	1	AL		X				X				X														
E-4-5.0		12/9/2011	0903	1	AL		X				X																		E-4 COMPOSITE
E-4-10		12/9/2011	0905	1	AL		X				X																		
E-4-15		12/9/2011	0908	1	AL		X				X																		
E-5-2.5		12/9/2011	0940	1	AL		X				X				X														E-5 COMPOSITE
E-5-5.0		12/9/2011	0941	1	AL		X				X																		
E-6-2.5		12/9/2011	1000	1	AL		X				X																		E-6 COMPOSITE
E-6-5.0		12/9/2011	1005	1	AL		X				X				X														
E-6-10		12/9/2011	1008	1	AL		X				X																		

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:
AL = Acetate liner

ICE/T° 5.0 GOOD CONDITION ✓ APPROPRIATE ✓
HEAD SPACE ABSENT ✓ CONTAINERS ✓
DECHLORINATED IN LAB ____ PRESERVED IN LAB ____

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓			

Please hold samples in laboratory for 6 months before disposal
Call James with questions

AEW ENGINEERING, INC.
55 New Montgomery Street, Suite 722, San Francisco, CA 94105
Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 2 of 2

Date: December 9, 2011

TURN AROUND TIME	24 HOURS	48 HOURS	1 WEEK	Normal	Others:
LABORATORY: McCampbell Analytical	☐	☐	☐	☒	

Report To: James Medley eMail: jmedley@aewengineering.com
Company: AEW Engineering, Inc. Project No.: 2011-011
Project Name: T&R RYCG Pier 94 Backlands Location: T&R RYCG Pier 94 Backlands
Sampler: James Medley Project No.: 2011-011
Sampler: Signature: James Medley Bill To: Kenneth Leung
Reporting Requirement: Hard Copy : Yes ☐ No ☐
PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	Analysis Request: VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas (EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	STLC Cr added 1/4/12	STLC Pb 5 day	STLC Ni	Other	Comments
E-7-2.5		12/9/2011	1036	1	AL		X				X				x														E-7 COMPOSITE
E-7-5.0		12/9/2011	1042	1	AL		X				X																		
E-7-10		12/9/2011	1046	1	AL		X				X																		
E-8-2.5		12/9/2011	1148	1	AL		X				X																		E-8 COMPOSITE
E-8-5.0		12/9/2011	1150	1	AL		X				X				x														
E-8-10		12/9/2011	1152	1	AL		X				X																		
E-8-14		12/9/2011	1155	1	AL		X				X																		
E-9-2.5		12/9/2011	1103	1	AL		X				X				x														E-9 COMPOSITE
E-9-5.0		12/9/2011	1105	1	AL		X				X																		
E-9-10		12/9/2011	1108	1	AL		X				X																		
E-9-14		12/9/2011	1113	1	AL		X				X																		
#5 E-9-GW		12/9/2011	1118	7	--	X					X	X	X		x		X	X	X						x				

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:
AL = Acetate liner
Voas for VOCs, TPH-gas are unpreserved
Dissolved metals on the water sample
Please hold samples in laboratory for 6 months before disposal
Call James with questions

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 A **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Veronica Tiglao
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Requested TAT: 5 days
Date Received: **12/09/2011**
Date Add-On: **01/04/2012**
Date Printed: **01/04/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1112307-002	E-2-2.0	Soil	12/9/2011 8:07	☐	A											
1112307-003	E-3 Composite	Soil	12/9/2011	☐	A											
1112307-004	E-4 Composite	Soil	12/9/2011	☐	A											
1112307-005	E-5 Composite	Soil	12/9/2011	☐	A											
1112307-006	E-6 Composite	Soil	12/9/2011	☐	A											
1112307-007	E-7 Composite	Soil	12/9/2011	☐		A										
1112307-008	E-8 Composite	Soil	12/9/2011	☐	A											
1112307-009	E-9 Composite	Soil	12/9/2011	☐	A											

Test Legend:

1	STLC_METALS_S	2	STLC_PBCR_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments: STLC's added 1/4/12 5d.

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

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 01/04/12-01/06/12
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 01/06/12

ICP Metals*

Extraction method: CA Title 22 Analytical methods: SW6010B Work Order: 1112307

Lab ID	Client ID	Matrix	Extraction Type	Chromium	Lead	Nickel	DF	% SS	Comments
002A	E-2-2.0	S	WET	0.094	---	1.0	1	N/A	
003A	E-3 Composite	S	WET	1.7	---	7.0	1	N/A	
004A	E-4 Composite	S	WET	0.75	2.4	5.1	1	N/A	
005A	E-5 Composite	S	WET	0.63	---	---	1	N/A	
006A	E-6 Composite	S	WET	0.40	21	1.2	1	N/A	
008A	E-8 Composite	S	WET	0.65	---	---	1	N/A	
009A	E-9 Composite	S	WET	0.51	2.4	2.6	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	NA	NA	NA
	S	WET	0.05	0.2	0.05	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

WET = Waste Extraction Test, i.e., STLC (Soluble Threshold Limit Concentration).
DI WET = Waste Extraction Test using DI water (DI STLC).

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 01/04/12-01/06/12
	Client P.O.:	Date Analyzed: 01/06/12

Lead & Chromium*

Extraction method: CA Title 22 Analytical methods: SW6010B Work Order: 1112307

Lab ID	Client ID	Matrix	Extraction Type	Chromium	Lead	DF	% SS	Comments
007A	E-7 Composite	S	WET	0.75	6.8	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	NA	NA
	S	WET	0.05	0.2	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

WET = Waste Extraction Test, i.e., STLC (Soluble Threshold Limit Concentration).
DI WET = Waste Extraction Test using DI water (DI STLC).

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SW6010B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63800 | WorkOrder: 1112307

EPA Method: SW6010B **Extraction: CA Title 22** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chromium	N/A	1	N/A	N/A	N/A	100	N/A	N/A	75 - 125
Lead	N/A	1	N/A	N/A	N/A	91.7	N/A	N/A	75 - 125
Nickel	N/A	1	N/A	N/A	N/A	95	N/A	N/A	75 - 125

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

BATCH 63800 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	01/04/12	01/06/12 7:44 PM	1112307-003A	12/09/11	01/04/12	01/06/12 8:05 PM
1112307-004A	12/09/11	01/04/12	01/06/12 7:10 PM	1112307-005A	12/09/11	01/04/12	01/06/12 6:59 PM
1112307-006A	12/09/11	01/04/12	01/06/12 7:05 PM	1112307-007A	12/09/11	01/04/12	01/06/12 7:26 PM
1112307-008A	12/09/11	01/04/12	01/06/12 7:55 PM	1112307-009A	12/09/11	01/04/12	01/06/12 7:23 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 applicable to this method.

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

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Reported: 12/21/11
	Client P.O.:	Date Completed: 01/19/12

WorkOrder: 1112307 **B**

January 19, 2012

Dear James:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#2011-011; T&R RYCG Pier 94 Backlands,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112307

AEW ENGINEERING, INC.
55 New Montgomery Street, Suite 722, San Francisco, CA 94105
Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 1 of 2

Date: December 9, 2011

TURN AROUND TIME: ☐ 24 HOURS ☐ 48 HOURS ☐ 1 WEEK ☒ Others: Normal

LABORATORY: McCampbell Analytical

Report To: James Medley eMail: jmedley@aewengineering.com
Company: AEW Engineering, Inc. Project No.: 2011-011
Project Name: T&R RYCG Pier 94 Backlands Location: T&R RYCG Pier 94 Backlands
Sampler: James Medley Project No.: 2011-011
Sampler: Signature: James Medley Bill To: Kenneth Leung
Reporting Requirement: Hard Copy: Yes ☐ No ☐
PDF File: Yes ☑ No ☐ Electronic: Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	STLC Cr added 1/4/12	STLC Ni ✓ 1/5/12	STLC Pb ✓ 1/13/12	TCLP Pb 1/13/12 ✓	Comments
E-1-2.0		12/9/2011	0744	1	AL		X				X				X	X	X	X	X	X										
E-2-2.0		12/9/2011	0807	1	AL		X				X				X	X	X	X	X	X	X	X	X	X						
E-3-2.5		12/9/2011	0838	1	AL		X				X																			E-3 COMPOSITE
E-3-5.0		12/9/2011	0840	1	AL		X				X				X															
E-4-2.5		12/9/2011	0900	1	AL		X				X				X															
E-4-5.0		12/9/2011	0903	1	AL		X				X																			E-4 COMPOSITE
E-4-10		12/9/2011	0905	1	AL		X				X																			
E-4-15		12/9/2011	0908	1	AL		X				X																			
E-5-2.5		12/9/2011	0940	1	AL		X				X				X															E-5 COMPOSITE
E-5-5.0		12/9/2011	0941	1	AL		X				X																			
E-6-2.5		12/9/2011	1000	1	AL		X				X																			E-6 COMPOSITE
E-6-5.0		12/9/2011	1005	1	AL		X				X				X															
E-6-10		12/9/2011	1008	1	AL		X				X																			

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:
AL = Acetate liner

ICE/T° 5.0 ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓			

Please hold samples in laboratory for 6 months before disposal
Call James with questions

AEW ENGINEERING, INC.

55 New Montgomery Street, Suite 722, San Francisco, CA 94105

Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 2 of 2

Date: December 9, 2011

TURN AROUND TIME	☐	☐	☐	☒ Others:
LABORATORY:	24	48	1	
McCampbell Analytical	HOURS	HOURS	WEEK	Normal

Report To: James Medley **eMail:** jmedley@aewengineering.com

Company: AEW Engineering, Inc. **Project No.:** 2011-011

Project Name: T&R RYCG Pier 94 Backlands **Location:** T&R RYCG Pier 94 Backlands

Sampler: James Medley **Project No.:** 2011-011

Sampler: Signature: James Medley **Bill To:** Kenneth Leung

Reporting Requirement: Hard Copy : Yes ☐ No ☐

PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	Other	Comments
																										STLC Cr added 1/4/12	
																										STLC Pb 5day	
																										STLC Ni 5day	
																										TCLP Pb 1/13/12 5day	
E-7-2.5		12/9/2011	1036	1	AL		X				X				X												E-7 COMPOSITE
E-7-5.0		12/9/2011	1042	1	AL		X				X																
E-7-10		12/9/2011	1046	1	AL		X				X																
E-8-2.5		12/9/2011	1148	1	AL		X				X																E-8 COMPOSITE
E-8-5.0		12/9/2011	1150	1	AL		X				X				X												
E-8-10		12/9/2011	1152	1	AL		X				X																
E-8-14		12/9/2011	1155	1	AL		X				X																
E-9-2.5		12/9/2011	1103	1	AL		X				X				X												E-9 COMPOSITE
E-9-5.0		12/9/2011	1105	1	AL		X				X																
E-9-10		12/9/2011	1108	1	AL		X				X																
E-9-14		12/9/2011	1113	1	AL		X				X																
#5 E-9-GW		12/9/2011	1118	7	--	X					X	X	X		X		X	X	X						X		

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:

AL = Acetate liner

Voas for VOCs, TPH-gas are unpreserved

Dissolved metals on the water sample

Please hold samples in laboratory for 6 months before disposal

Call James with questions

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 B **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8409 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc: vtiglao@Langan.com
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Veronica Tiglao
Treadwell & Rollo
555 Montgomery St., Suite 1300
San Francisco, CA 94111

Requested TAT: 5 days
Date Received: **12/09/2011**
Date Add-On: **01/13/2012**
Date Printed: **01/13/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
1112307-006	E-6 Composite	Soil	12/9/2011	☐	A											
1112307-007	E-7 Composite	Soil	12/9/2011	☐	A											

Test Legend:

1	TCLP_PB_S	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments: STLC's added 1/4/12 5d. TCLP Pb added on 006 & 007 1/13/12 5d.

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

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 01/17/12-01/18/12
	Client P.O.:	Date Analyzed: 01/18/12

Lead by ICP*

Extraction method: SW1311/SW3050B Analytical methods: SW6010B Work Order: 1112307

Lab ID	Client ID	Matrix	Extraction Type	Lead	DF	% SS	Comments
1112307-006A	E-6 Composite	S	TCLP	4.0	1	N/A	
1112307-007A	E-7 Composite	S	TCLP	ND	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	µg/L
	S	TCLP	0.2	mg/L

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TCLP = Toxicity Characteristic Leaching Procedure.
DI TCLP = Toxicity Characteristic Leaching Procedure using DI water.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW6010B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 64030 | WorkOrder: 1112307

EPA Method: SW6010B | **Extraction: SW1311/SW3050B** | **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Lead	N/A	1	N/A	N/A	N/A	102	N/A	N/A	75 - 125

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

BATCH 64030 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-006A	12/09/11	01/17/12	01/18/12 8:07 PM	1112307-007A	12/09/11	01/17/12	01/18/12 8:11 PM

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

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

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

N/A = not applicable to this method.

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

DHS ELAP Certification 1644

QA/QC Officer

Forensic Analytical Laboratories

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

McCampbell Analytical, Inc.
Account Payable
1534 Wilow Pass Rd

Pittsburg, CA 94565

Client ID: A31409
Report Number: B157442
Date Received: 12/12/11
Date Analyzed: 12/15/11
Date Printed: 12/15/11
First Reported: 12/15/11

Job ID/Site: 2011-011 - T & R RYCG, Pier 94, Backlands

Date(s) Collected: 12/09/2011

FALI Job ID: A31409
Total Samples Submitted: 5
Total Samples Analyzed: 5

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
E-2-2.0	11198104						
Layer: Green/Grey Soil		Chrysotile	**2 %**				
Total Composite Values of Fibrous Components:		**Asbestos (2%)**					
E-4 Composite	11198105						
Layer: Brown Soil		Chrysotile	**Trace**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
E-5 Composite	11198106						
Layer: Tan Soil			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
E-7 Composite	11198107						
Layer: Tan Soil			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
E-9 Composite	11198108						
Layer: Dark Green Soil		Chrysotile	**Trace**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					

Tad Thrower

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Reported: 12/21/11
	Client P.O.:	Date Completed: 12/21/11

WorkOrder: 1112307

December 21, 2011

Dear James:

Enclosed within are:

1) The results of the **10** analyzed samples from your project: **#2011-011; T&R RYCG Pier 94 Backlands,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112307

AEW ENGINEERING, INC.

55 New Montgomery Street, Suite 722, San Francisco, CA 94105

Telephone: (415) 495-8400 Fax: (415) 358-5598

CHAIN OF CUSTODY RECORD Page 1 of 2

Date: December 9, 2011

TURN AROUND TIME	☐	☐	☐	☒ Others:
LABORATORY:	24	48	1	
McCampbell Analytical	HOURS	HOURS	WEEK	Normal

Report To: James Medley **eMail:** jmedley@aewengineering.com

Company: AEW Engineering, Inc. **Project No.:** 2011-011

Project Name: T&R RYCG Pier 94 Backlands **Location:** T&R RYCG Pier 94 Backlands

Sampler: James Medley **Project No.:** 2011-011

Sampler: Signature: James Medley **Bill To:** Kenneth Leung

Reporting Requirement: Hard Copy : Yes ☐ No ☐

PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	Other	Comments
E-1-2.0		12/9/2011	0744	1	AL		X				X				X	X	X	X	X	X							
E-2-2.0		12/9/2011	0807	1	AL		X				X				X	X	X	X	X	X	X	X	X	X			
E-3-2.5		12/9/2011	0838	1	AL		X				X					X	X	X	X	X							E-3 COMPOSITE
E-3-5.0		12/9/2011	0840	1	AL		X				X				X												
E-4-2.5		12/9/2011	0900	1	AL		X				X				X	X	X	X	X	X	X	X	X	X			E-4 COMPOSITE
E-4-5.0		12/9/2011	0903	1	AL		X				X																
E-4-10		12/9/2011	0905	1	AL		X				X																
E-4-15		12/9/2011	0908	1	AL		X				X																
E-5-2.5		12/9/2011	0940	1	AL		X				X				X	X	X	X	X	X	X	X	X	X			E-5 COMPOSITE
E-5-5.0		12/9/2011	0941	1	AL		X				X																
E-6-2.5		12/9/2011	1000	1	AL		X				X					X	X	X	X	X							E-6 COMPOSITE
E-6-5.0		12/9/2011	1005	1	AL		X				X				X												
E-6-10		12/9/2011	1008	1	AL		X				X																

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:
AL = Acetate liner

ICE/T° 5.0 ☐
GOOD CONDITION ✓ ☐
HEAD SPACE ABSENT ✓ ☐
DECHLORINATED IN LAB ☐
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ☐

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓			

Please hold samples in laboratory for 6 months before disposal

Call James with questions

AEW ENGINEERING, INC.

55 New Montgomery Street, Suite 722, San Francisco, CA 94105

Telephone: (415) 495-8400 Fax: (415) 358-5598

Date: December 9, 2011

CHAIN OF CUSTODY RECORD Page 2 of 2

TURN AROUND TIME	☐	☐	☐	☒	Others:
LABORATORY:	24	48	1		
McCampbell Analytical	HOURS	HOURS	WEEK	Normal	

Report To: James Medley eMail: jmedley@aewengineering.com

Company: AEW Engineering, Inc. Project No.: 2011-011

Project Name: T&R RYCG Pier 94 Backlands Location: T&R RYCG Pier 94 Backlands

Sampler: James Medley Project No.: 2011-011

Sampler: Signature: James Medley Bill To: Kenneth Leung

Reporting Requirement: Hard Copy : Yes ☐ No ☐

PDF File: Yes ☑ No ☐ Electronic : Yes ☐ No ☑

SAMPLE ID	Location	Sampling Date	Sampling Time	# of Containers	Type of Container	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: Ice	HCl	HNO_3	Other	Analysis Request: VOCs (EPA 8260)	CAM 17 Title 22 Metals (EPA 6000/7000 Series)	TPH-gas,(EPA 8015)	TPH-diesel, motor oil w/ Silical Gel Cleanup (EPA Method 8015)	SVOCs (EPA 8270)	PCBs (EPA 8082)	Cyanide	Sulfides	Asbestos	pH	Dissolved Title 22 metals	Other	Comments
E-7-2.5		12/9/2011	1036	1	AL		X				X				X												E-7 COMPOSITE
E-7-5.0		12/9/2011	1042	1	AL		X				X																
E-7-10		12/9/2011	1046	1	AL		X				X																
E-8-2.5		12/9/2011	1148	1	AL		X				X																E-8 COMPOSITE
E-8-5.0		12/9/2011	1150	1	AL		X				X				X												
E-8-10		12/9/2011	1152	1	AL		X				X																
E-8-14		12/9/2011	1155	1	AL		X				X																
E-9-2.5		12/9/2011	1103	1	AL		X				X				X												E-9 COMPOSITE
E-9-5.0		12/9/2011	1105	1	AL		X				X																
E-9-10		12/9/2011	1108	1	AL		X				X																
E-9-14		12/9/2011	1113	1	AL		X				X																
#5 E-9-GW		12/9/2011	1118	7	--	X					X	X	X		X		X	X	X						X		

Relinquished By:	Date:	Time:	Received By:
James Medley	12/9/11	1400	
	12/9/11	1620	

Remarks:

AL = Acetate liner

Voas for VOCs, TPH-gas are unpreserved

Dissolved metals on the water sample

Please hold samples in laboratory for 6 months before disposal

Call James with questions

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: **5 days**

Date Received: **12/09/2011**
Date Printed: **12/16/2011**

					Requested Tests (See legend below)											
Lab ID	**Client ID**	**Matrix**	**Collection Date**	**Hold**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1112307-001	E-1-2.0	Soil	12/9/2011 7:44	☐	A	A		A				A				
1112307-002	E-2-2.0	Soil	12/9/2011 8:07	☐	A	A		A		A		A	A		A	
1112307-003	E-3 Composite	Soil	12/9/2011	☐	A			A				A				
1112307-003	E-3-5.0	Soil	12/9/2011 8:40	☐		B										
1112307-004	E-4 Composite	Soil	12/9/2011	☐	A			A		A		A	A		A	
1112307-004	E-4-2.5	Soil	12/9/2011 9:00	☐		B										
1112307-005	E-5 Composite	Soil	12/9/2011	☐	A			A		A		A	A		A	
1112307-005	E-5-2.5	Soil	12/9/2011 9:40	☐		B										
1112307-006	E-6 Composite	Soil	12/9/2011	☐	A			A				A				
1112307-006	E-6-5.0	Soil	12/9/2011 10:05	☐		B										
1112307-007	E-7 Composite	Soil	12/9/2011	☐	A			A		A		A	A		A	
1112307-007	E-7-2.5	Soil	12/9/2011 10:36	☐		B										
1112307-008	E-8 Composite	Soil	12/9/2011	☐	A			A				A				
1112307-008	E-8-5.0	Soil	12/9/2011 11:50	☐		B										

Test Legend:

1	8082A_PCB_S	2	8260B_S	3	8260B_W	4	8270D_S	5	8270D_W
6	SBESTOSPLM_FORENSIC_	7	CAM17MS_DISS	8	CAM17MS_S	9	CN_TOTAL_S	10	G-MBTEX_W
11	PH_S	12	PRDISSOLVED						

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Maria Venegas

Comments:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: **5 days**

Date Received: **12/09/2011**
Date Printed: **12/16/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1112307-009	E-9 Composite	Soil	12/9/2011	☐	A			A		A		A	A		A	
1112307-009	E-9-2.5	Soil	12/9/2011 11:03	☐		B										
1112307-010	E-9-GW	Water	12/9/2011 11:18	☐			B		D		C			A		C

Test Legend:

1	8082A_PCB_S	2	8260B_S	3	8260B_W	4	8270D_S	5	8270D_W
6	ASBESTOSPLM_FORENSIC_	7	CAM17MS_DISS	8	CAM17MS_S	9	CN_TOTAL_S	10	G-MBTEX_W
11	PH_S	12	PRDISSOLVED						

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
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1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
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Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: 5 days

Date Received: **12/09/2011**
Date Printed: **12/16/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					13	14	15	16	17	18	19	20	21	22	23	24
1112307-001	E-1-2.0	Soil	12/9/2011 7:44	☐		A										
1112307-002	E-2-2.0	Soil	12/9/2011 8:07	☐	A	A										
1112307-003	E-3 Composite	Soil	12/9/2011	☐		A										
1112307-003	E-3-5.0	Soil	12/9/2011 8:40	☐												
1112307-004	E-4 Composite	Soil	12/9/2011	☐	A	A										
1112307-004	E-4-2.5	Soil	12/9/2011 9:00	☐												
1112307-005	E-5 Composite	Soil	12/9/2011	☐	A	A										
1112307-005	E-5-2.5	Soil	12/9/2011 9:40	☐												
1112307-006	E-6 Composite	Soil	12/9/2011	☐		A										
1112307-006	E-6-5.0	Soil	12/9/2011 10:05	☐												
1112307-007	E-7 Composite	Soil	12/9/2011	☐	A	A										
1112307-007	E-7-2.5	Soil	12/9/2011 10:36	☐												
1112307-008	E-8 Composite	Soil	12/9/2011	☐		A										
1112307-008	E-8-5.0	Soil	12/9/2011 11:50	☐												

Test Legend:

13	SULFIDE_S	14	TPH(DMO)WSG_S	15		16		17	
18		19		20		21		22	
23		24							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Maria Venegas

Comments:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112307 **ClientCode: AEW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☑ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
James Medley
AEW Engineering, Inc.
55 New Montgomery St, Ste 722
San Francisco, CA 94105
(415) 495-8401 FAX: (415) 358-5598

Email: jmedley@aewengineering.com
cc:
PO:
ProjectNo: #2011-011; T&R RYCG Pier 94 Backlands

Bill to:
Kenneth Leung
AEW Engineering, Inc.
55 New Montgomery St, Ste 507
San Francisco, CA 94105
kleung@aewengineering.com; byeun

Requested TAT: 5 days

Date Received: **12/09/2011**
Date Printed: **12/16/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					13	14	15	16	17	18	19	20	21	22	23	24
1112307-009	E-9 Composite	Soil	12/9/2011	☐	A	A										
1112307-009	E-9-2.5	Soil	12/9/2011 11:03	☐												
1112307-010	E-9-GW	Water	12/9/2011 11:18	☐												

Test Legend:

13	SULFIDE_S	14	TPH(DMO)WSG_S	15		16		17	
18		19		20		21		22	
23		24							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A contain testgroup.

Prepared by: Maria Venegas

Comments:

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

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **AEW Engineering, Inc.** Date and Time Received: **12/9/2011 4:21:59 PM**

Project Name: **#2011-011; T&R RYCG Pier 94 Backlands** Checklist completed and reviewed by: Maria Venegas

WorkOrder N°: **1112307** Matrix: Soil/Water Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

Custody seals intact on 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: 5.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/12/11-12/16/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B | Analytical Method: SW8082 | Work Order: 1112307

Lab ID	1112307-001A	1112307-002A	1112307-003A	1112307-004A	Reporting Limit for DF =1	
Client ID	E-1-2.0	E-2-2.0	E-3 Composite	E-4 Composite		
Matrix	S	S	S	S		
DF	5	5	5	10	S	W
Compound	**Concentration**				mg/kg	ug/L
Aroclor1016	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1221	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1232	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1242	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1248	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1254	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Aroclor1260	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
PCBs, total	ND<0.25	ND<0.25	ND<0.25	ND<0.50	0.05	NA
Surrogate Recoveries (%)						
%SS:	122	127	124	119		
Comments	a3,h4	a3,h4	a3,h4	a3,h4		

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a1) sample diluted due to matrix interference
a3) sample diluted due to high organic content.
h4) sulfuric acid permanganate (EPA 3665) cleanup

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/12/11-12/16/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B | Analytical Method: SW8082 | Work Order: 1112307

Lab ID	1112307-005A	1112307-006A	1112307-007A	1112307-008A	Reporting Limit for DF =1	
Client ID	E-5 Composite	E-6 Composite	E-7 Composite	E-8 Composite		
Matrix	S	S	S	S		
DF	10	100	100	20	S	W
Compound	**Concentration**				mg/kg	ug/L
Aroclor1016	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1221	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1232	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1242	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1248	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
Aroclor1254	ND<0.50	16	ND<5.0	ND<1.0	0.05	NA
Aroclor1260	ND<0.50	ND<5.0	ND<5.0	ND<1.0	0.05	NA
PCBs, total	ND<0.50	16	ND<5.0	ND<1.0	0.05	NA
Surrogate Recoveries (%)						
%SS:	118	---#	115	---#		
Comments	a3,h4		a1,h4	a3,h4		

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a1) sample diluted due to matrix interference
a3) sample diluted due to high organic content.
h4) sulfuric acid permanganate (EPA 3665) cleanup

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/12/11-12/16/11

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550B | Analytical Method: SW8082 | Work Order: 1112307

					Reporting Limit for DF =1	
Lab ID	1112307-009A					
Client ID	E-9 Composite					
Matrix	S					
DF	100				S	W
Compound	**Concentration**				mg/kg	ug/L
Aroclor1016	ND<5.0				0.05	NA
Aroclor1221	ND<5.0				0.05	NA
Aroclor1232	ND<5.0				0.05	NA
Aroclor1242	ND<5.0				0.05	NA
Aroclor1248	ND<5.0				0.05	NA
Aroclor1254	ND<5.0				0.05	NA
Aroclor1260	ND<5.0				0.05	NA
PCBs, total	ND<5.0				0.05	NA
Surrogate Recoveries (%)						
%SS:	---#					
Comments	a1,h4					

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a1) sample diluted due to matrix interference
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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-001A
Client ID	E-1-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	94	%SS2:	114
%SS3:	112		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-002A
Client ID	E-2-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	97	%SS2:	108
%SS3:	108		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-003B
Client ID	E-3-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	117	%SS2:	117
%SS3:	100		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-004B
Client ID	E-4-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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	0.0095	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	95	%SS2:	117
%SS3:	110		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-005B
Client ID	E-5-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	97	%SS2:	117
%SS3:	113		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-006B
Client ID	E-6-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	0.11	1.0	0.05	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	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	0.0051	1.0	0.005	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, Total	0.025	1.0	0.005

Surrogate Recoveries (%)

%SS1:	115	%SS2:	125
%SS3:	109		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-007B
Client ID	E-7-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	114	%SS2:	126
%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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-008B
Client ID	E-8-5.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	115	%SS2:	119
%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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/14/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-009B
Client ID	E-9-2.5
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	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	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	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, Total	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	99	%SS2:	113
%SS3:	108		

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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/15/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/15/11

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1112307

Lab ID	1112307-010B
Client ID	E-9-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	10	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 Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	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	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	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	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, Total	ND	1.0	0.5

Surrogate Recoveries (%)

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

Comments: b1

* 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/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

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

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-001A
Client ID	E-1-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	72	%SS2:	50
%SS3:	71	%SS4:	61
%SS5:	67	%SS6:	62

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-002A
Client ID	E-2-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	73	%SS2:	---#
%SS3:	76	%SS4:	67
%SS5:	59	%SS6:	68

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/16/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-003A
Client ID	E-3 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	66	%SS2:	---#
%SS3:	74	%SS4:	65
%SS5:	---#	%SS6:	64

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-004A
Client ID	E-4 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<6.6	20	0.33	Acenaphthylene	ND<6.6	20	0.33
Acetochlor	ND<6.6	20	0.33	Anthracene	ND<6.6	20	0.33
Benzidine	ND<32	20	1.6	Benzoic Acid	ND<32	20	1.6
Benzo (a) anthracene	ND<6.6	20	0.33	Benzo (b) fluoranthene	ND<6.6	20	0.33
Benzo (k) fluoranthene	ND<6.6	20	0.33	Benzo (g,h,i) perylene	ND<6.6	20	0.33
Benzo (a) pyrene	ND<6.6	20	0.33	Benzyl Alcohol	ND<32	20	1.6
1,1-Biphenyl	ND<6.6	20	0.33	Bis (2-chloroethoxy) Methane	ND<6.6	20	0.33
Bis (2-chloroethyl) Ether	ND<6.6	20	0.33	Bis (2-chloroisopropyl) Ether	ND<6.6	20	0.33
Bis (2-ethylhexyl) Phthalate	ND<6.6	20	0.33	4-Bromophenyl Phenyl Ether	ND<6.6	20	0.33
Butylbenzyl Phthalate	ND<6.6	20	0.33	4-Chloroaniline	ND<13	20	0.66
4-Chloro-3-methylphenol	ND<6.6	20	0.33	2-Chloronaphthalene	ND<6.6	20	0.33
2-Chlorophenol	ND<6.6	20	0.33	4-Chlorophenyl Phenyl Ether	ND<6.6	20	0.33
Chrysene	ND<6.6	20	0.33	Dibenzo (a,h) anthracene	ND<6.6	20	0.33
Dibenzofuran	ND<6.6	20	0.33	Di-n-butyl Phthalate	ND<6.6	20	0.33
1,2-Dichlorobenzene	ND<6.6	20	0.33	1,3-Dichlorobenzene	ND<6.6	20	0.33
1,4-Dichlorobenzene	ND<6.6	20	0.33	3,3-Dichlorobenzidine	ND<13	20	0.66
2,4-Dichlorophenol	ND<6.6	20	0.33	Diethyl Phthalate	ND<6.6	20	0.33
2,4-Dimethylphenol	ND<6.6	20	0.33	Dimethyl Phthalate	ND<6.6	20	0.33
4,6-Dinitro-2-methylphenol	ND<32	20	1.6	2,4-Dinitrophenol	ND<32	20	1.6
2,4-Dinitrotoluene	ND<6.6	20	0.33	2,6-Dinitrotoluene	ND<6.6	20	0.33
Di-n-octyl Phthalate	ND<6.6	20	0.33	1,2-Diphenylhydrazine	ND<6.6	20	0.33
Fluoranthene	ND<6.6	20	0.33	Fluorene	ND<6.6	20	0.33
Hexachlorobenzene	ND<6.6	20	0.33	Hexachlorobutadiene	ND<6.6	20	0.33
Hexachlorocyclopentadiene	ND<32	20	1.6	Hexachloroethane	ND<6.6	20	0.33
Indeno (1,2,3-cd) pyrene	ND<6.6	20	0.33	Isophorone	ND<6.6	20	0.33
2-Methylnaphthalene	ND<6.6	20	0.33	2-Methylphenol (o-Cresol)	ND<6.6	20	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<6.6	20	0.33	Naphthalene	ND<6.6	20	0.33
2-Nitroaniline	ND<32	20	1.6	3-Nitroaniline	ND<32	20	1.6
4-Nitroaniline	ND<32	20	1.6	Nitrobenzene	ND<6.6	20	0.33
2-Nitrophenol	ND<32	20	1.6	4-Nitrophenol	ND<32	20	1.6
N-Nitrosodiphenylamine	ND<6.6	20	0.33	N-Nitrosodi-n-propylamine	ND<6.6	20	0.33
Pentachlorophenol	ND<32	20	1.6	Phenanthrene	ND<6.6	20	0.33
Phenol	ND<6.6	20	0.33	Pyrene	ND<6.6	20	0.33
1,2,4-Trichlorobenzene	ND<6.6	20	0.33	2,4,5-Trichlorophenol	ND<6.6	20	0.33
2,4,6-Trichlorophenol	ND<6.6	20	0.33				

Surrogate Recoveries (%)

%SS1:	53	%SS2:	---#
%SS3:	66	%SS4:	63
%SS5:	---#	%SS6:	68

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/17/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-005A
Client ID	E-5 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	---#	%SS2:	---#
%SS3:	74	%SS4:	64
%SS5:	---#	%SS6:	66

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-006A
Client ID	E-6 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<3.3	10	0.33	Acenaphthylene	ND<3.3	10	0.33
Acetochlor	ND<3.3	10	0.33	Anthracene	ND<3.3	10	0.33
Benzidine	ND<16	10	1.6	Benzoic Acid	ND<16	10	1.6
Benzo (a) anthracene	ND<3.3	10	0.33	Benzo (b) fluoranthene	ND<3.3	10	0.33
Benzo (k) fluoranthene	ND<3.3	10	0.33	Benzo (g,h,i) perylene	ND<3.3	10	0.33
Benzo (a) pyrene	ND<3.3	10	0.33	Benzyl Alcohol	ND<16	10	1.6
1,1-Biphenyl	ND<3.3	10	0.33	Bis (2-chloroethoxy) Methane	ND<3.3	10	0.33
Bis (2-chloroethyl) Ether	ND<3.3	10	0.33	Bis (2-chloroisopropyl) Ether	ND<3.3	10	0.33
Bis (2-ethylhexyl) Phthalate	ND<3.3	10	0.33	4-Bromophenyl Phenyl Ether	ND<3.3	10	0.33
Butylbenzyl Phthalate	ND<3.3	10	0.33	4-Chloroaniline	ND<6.6	10	0.66
4-Chloro-3-methylphenol	ND<3.3	10	0.33	2-Chloronaphthalene	ND<3.3	10	0.33
2-Chlorophenol	ND<3.3	10	0.33	4-Chlorophenyl Phenyl Ether	ND<3.3	10	0.33
Chrysene	ND<3.3	10	0.33	Dibenzo (a,h) anthracene	ND<3.3	10	0.33
Dibenzofuran	ND<3.3	10	0.33	Di-n-butyl Phthalate	ND<3.3	10	0.33
1,2-Dichlorobenzene	ND<3.3	10	0.33	1,3-Dichlorobenzene	ND<3.3	10	0.33
1,4-Dichlorobenzene	ND<3.3	10	0.33	3,3-Dichlorobenzidine	ND<6.6	10	0.66
2,4-Dichlorophenol	ND<3.3	10	0.33	Diethyl Phthalate	ND<3.3	10	0.33
2,4-Dimethylphenol	ND<3.3	10	0.33	Dimethyl Phthalate	ND<3.3	10	0.33
4,6-Dinitro-2-methylphenol	ND<16	10	1.6	2,4-Dinitrophenol	ND<16	10	1.6
2,4-Dinitrotoluene	ND<3.3	10	0.33	2,6-Dinitrotoluene	ND<3.3	10	0.33
Di-n-octyl Phthalate	ND<3.3	10	0.33	1,2-Diphenylhydrazine	ND<3.3	10	0.33
Fluoranthene	ND<3.3	10	0.33	Fluorene	ND<3.3	10	0.33
Hexachlorobenzene	ND<3.3	10	0.33	Hexachlorobutadiene	ND<3.3	10	0.33
Hexachlorocyclopentadiene	ND<16	10	1.6	Hexachloroethane	ND<3.3	10	0.33
Indeno (1,2,3-cd) pyrene	ND<3.3	10	0.33	Isophorone	ND<3.3	10	0.33
2-Methylnaphthalene	ND<3.3	10	0.33	2-Methylphenol (o-Cresol)	ND<3.3	10	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<3.3	10	0.33	Naphthalene	ND<3.3	10	0.33
2-Nitroaniline	ND<16	10	1.6	3-Nitroaniline	ND<16	10	1.6
4-Nitroaniline	ND<16	10	1.6	Nitrobenzene	ND<3.3	10	0.33
2-Nitrophenol	ND<16	10	1.6	4-Nitrophenol	ND<16	10	1.6
N-Nitrosodiphenylamine	ND<3.3	10	0.33	N-Nitrosodi-n-propylamine	ND<3.3	10	0.33
Pentachlorophenol	ND<16	10	1.6	Phenanthrene	ND<3.3	10	0.33
Phenol	ND<3.3	10	0.33	Pyrene	ND<3.3	10	0.33
1,2,4-Trichlorobenzene	ND<3.3	10	0.33	2,4,5-Trichlorophenol	ND<3.3	10	0.33
2,4,6-Trichlorophenol	ND<3.3	10	0.33				

Surrogate Recoveries (%)

%SS1:	64	%SS2:	---#
%SS3:	68	%SS4:	59
%SS5:	55	%SS6:	63

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/21/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-007A
Client ID	E-7 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<1.6	5.0	0.33	Acenaphthylene	ND<1.6	5.0	0.33
Acetochlor	ND<1.6	5.0	0.33	Anthracene	ND<1.6	5.0	0.33
Benzidine	ND<8.0	5.0	1.6	Benzoic Acid	ND<8.0	5.0	1.6
Benzo (a) anthracene	ND<1.6	5.0	0.33	Benzo (b) fluoranthene	ND<1.6	5.0	0.33
Benzo (k) fluoranthene	ND<1.6	5.0	0.33	Benzo (g,h,i) perylene	ND<1.6	5.0	0.33
Benzo (a) pyrene	ND<1.6	5.0	0.33	Benzyl Alcohol	ND<8.0	5.0	1.6
1,1-Biphenyl	ND<1.6	5.0	0.33	Bis (2-chloroethoxy) Methane	ND<1.6	5.0	0.33
Bis (2-chloroethyl) Ether	ND<1.6	5.0	0.33	Bis (2-chloroisopropyl) Ether	ND<1.6	5.0	0.33
Bis (2-ethylhexyl) Phthalate	ND<1.6	5.0	0.33	4-Bromophenyl Phenyl Ether	ND<1.6	5.0	0.33
Butylbenzyl Phthalate	ND<1.6	5.0	0.33	4-Chloroaniline	ND<3.3	5.0	0.66
4-Chloro-3-methylphenol	ND<1.6	5.0	0.33	2-Chloronaphthalene	ND<1.6	5.0	0.33
2-Chlorophenol	ND<1.6	5.0	0.33	4-Chlorophenyl Phenyl Ether	ND<1.6	5.0	0.33
Chrysene	ND<1.6	5.0	0.33	Dibenzo (a,h) anthracene	ND<1.6	5.0	0.33
Dibenzofuran	ND<1.6	5.0	0.33	Di-n-butyl Phthalate	ND<1.6	5.0	0.33
1,2-Dichlorobenzene	ND<1.6	5.0	0.33	1,3-Dichlorobenzene	ND<1.6	5.0	0.33
1,4-Dichlorobenzene	ND<1.6	5.0	0.33	3,3-Dichlorobenzidine	ND<3.3	5.0	0.66
2,4-Dichlorophenol	ND<1.6	5.0	0.33	Diethyl Phthalate	ND<1.6	5.0	0.33
2,4-Dimethylphenol	ND<1.6	5.0	0.33	Dimethyl Phthalate	ND<1.6	5.0	0.33
4,6-Dinitro-2-methylphenol	ND<8.0	5.0	1.6	2,4-Dinitrophenol	ND<8.0	5.0	1.6
2,4-Dinitrotoluene	ND<1.6	5.0	0.33	2,6-Dinitrotoluene	ND<1.6	5.0	0.33
Di-n-octyl Phthalate	ND<1.6	5.0	0.33	1,2-Diphenylhydrazine	ND<1.6	5.0	0.33
Fluoranthene	ND<1.6	5.0	0.33	Fluorene	ND<1.6	5.0	0.33
Hexachlorobenzene	ND<1.6	5.0	0.33	Hexachlorobutadiene	ND<1.6	5.0	0.33
Hexachlorocyclopentadiene	ND<8.0	5.0	1.6	Hexachloroethane	ND<1.6	5.0	0.33
Indeno (1,2,3-cd) pyrene	ND<1.6	5.0	0.33	Isophorone	ND<1.6	5.0	0.33
2-Methylnaphthalene	ND<1.6	5.0	0.33	2-Methylphenol (o-Cresol)	ND<1.6	5.0	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<1.6	5.0	0.33	Naphthalene	ND<1.6	5.0	0.33
2-Nitroaniline	ND<8.0	5.0	1.6	3-Nitroaniline	ND<8.0	5.0	1.6
4-Nitroaniline	ND<8.0	5.0	1.6	Nitrobenzene	ND<1.6	5.0	0.33
2-Nitrophenol	ND<8.0	5.0	1.6	4-Nitrophenol	ND<8.0	5.0	1.6
N-Nitrosodiphenylamine	ND<1.6	5.0	0.33	N-Nitrosodi-n-propylamine	ND<1.6	5.0	0.33
Pentachlorophenol	ND<8.0	5.0	1.6	Phenanthrene	ND<1.6	5.0	0.33
Phenol	ND<1.6	5.0	0.33	Pyrene	ND<1.6	5.0	0.33
1,2,4-Trichlorobenzene	ND<1.6	5.0	0.33	2,4,5-Trichlorophenol	ND<1.6	5.0	0.33
2,4,6-Trichlorophenol	ND<1.6	5.0	0.33				

Surrogate Recoveries (%)

%SS1:	48	%SS2:	95
%SS3:	98	%SS4:	113
%SS5:	---#	%SS6:	97

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/19/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-008A
Client ID	E-8 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<3.3	10	0.33	Acenaphthylene	ND<3.3	10	0.33
Acetochlor	ND<3.3	10	0.33	Anthracene	ND<3.3	10	0.33
Benzidine	ND<16	10	1.6	Benzoic Acid	ND<16	10	1.6
Benzo (a) anthracene	3.9	10	0.33	Benzo (b) fluoranthene	4.7	10	0.33
Benzo (k) fluoranthene	4.4	10	0.33	Benzo (g,h,i) perylene	7.4	10	0.33
Benzo (a) pyrene	7.4	10	0.33	Benzyl Alcohol	ND<16	10	1.6
1,1-Biphenyl	ND<3.3	10	0.33	Bis (2-chloroethoxy) Methane	ND<3.3	10	0.33
Bis (2-chloroethyl) Ether	ND<3.3	10	0.33	Bis (2-chloroisopropyl) Ether	ND<3.3	10	0.33
Bis (2-ethylhexyl) Phthalate	ND<3.3	10	0.33	4-Bromophenyl Phenyl Ether	ND<3.3	10	0.33
Butylbenzyl Phthalate	ND<3.3	10	0.33	4-Chloroaniline	ND<6.6	10	0.66
4-Chloro-3-methylphenol	ND<3.3	10	0.33	2-Chloronaphthalene	ND<3.3	10	0.33
2-Chlorophenol	ND<3.3	10	0.33	4-Chlorophenyl Phenyl Ether	ND<3.3	10	0.33
Chrysene	5.5	10	0.33	Dibenzo (a,h) anthracene	ND<3.3	10	0.33
Dibenzofuran	ND<3.3	10	0.33	Di-n-butyl Phthalate	ND<3.3	10	0.33
1,2-Dichlorobenzene	ND<3.3	10	0.33	1,3-Dichlorobenzene	ND<3.3	10	0.33
1,4-Dichlorobenzene	ND<3.3	10	0.33	3,3-Dichlorobenzidine	ND<6.6	10	0.66
2,4-Dichlorophenol	ND<3.3	10	0.33	Diethyl Phthalate	ND<3.3	10	0.33
2,4-Dimethylphenol	ND<3.3	10	0.33	Dimethyl Phthalate	ND<3.3	10	0.33
4,6-Dinitro-2-methylphenol	ND<16	10	1.6	2,4-Dinitrophenol	ND<16	10	1.6
2,4-Dinitrotoluene	ND<3.3	10	0.33	2,6-Dinitrotoluene	ND<3.3	10	0.33
Di-n-octyl Phthalate	ND<3.3	10	0.33	1,2-Diphenylhydrazine	ND<3.3	10	0.33
Fluoranthene	16	10	0.33	Fluorene	ND<3.3	10	0.33
Hexachlorobenzene	ND<3.3	10	0.33	Hexachlorobutadiene	ND<3.3	10	0.33
Hexachlorocyclopentadiene	ND<16	10	1.6	Hexachloroethane	ND<3.3	10	0.33
Indeno (1,2,3-cd) pyrene	5.2	10	0.33	Isophorone	ND<3.3	10	0.33
2-Methylnaphthalene	ND<3.3	10	0.33	2-Methylphenol (o-Cresol)	ND<3.3	10	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<3.3	10	0.33	Naphthalene	ND<3.3	10	0.33
2-Nitroaniline	ND<16	10	1.6	3-Nitroaniline	ND<16	10	1.6
4-Nitroaniline	ND<16	10	1.6	Nitrobenzene	ND<3.3	10	0.33
2-Nitrophenol	ND<16	10	1.6	4-Nitrophenol	ND<16	10	1.6
N-Nitrosodiphenylamine	ND<3.3	10	0.33	N-Nitrosodi-n-propylamine	ND<3.3	10	0.33
Pentachlorophenol	ND<16	10	1.6	Phenanthrene	8.6	10	0.33
Phenol	ND<3.3	10	0.33	Pyrene	20	10	0.33
1,2,4-Trichlorobenzene	ND<3.3	10	0.33	2,4,5-Trichlorophenol	ND<3.3	10	0.33
2,4,6-Trichlorophenol	ND<3.3	10	0.33				

Surrogate Recoveries (%)

%SS1:	75	%SS2:	78
%SS3:	76	%SS4:	66
%SS5:	59	%SS6:	61

Comments:

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/17/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550B | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-009A
Client ID	E-9 Composite
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<6.6	20	0.33	Acenaphthylene	ND<6.6	20	0.33
Acetochlor	ND<6.6	20	0.33	Anthracene	ND<6.6	20	0.33
Benzidine	ND<32	20	1.6	Benzoic Acid	ND<32	20	1.6
Benzo (a) anthracene	ND<6.6	20	0.33	Benzo (b) fluoranthene	ND<6.6	20	0.33
Benzo (k) fluoranthene	ND<6.6	20	0.33	Benzo (g,h,i) perylene	ND<6.6	20	0.33
Benzo (a) pyrene	ND<6.6	20	0.33	Benzyl Alcohol	ND<32	20	1.6
1,1-Biphenyl	ND<6.6	20	0.33	Bis (2-chloroethoxy) Methane	ND<6.6	20	0.33
Bis (2-chloroethyl) Ether	ND<6.6	20	0.33	Bis (2-chloroisopropyl) Ether	ND<6.6	20	0.33
Bis (2-ethylhexyl) Phthalate	ND<6.6	20	0.33	4-Bromophenyl Phenyl Ether	ND<6.6	20	0.33
Butylbenzyl Phthalate	ND<6.6	20	0.33	4-Chloroaniline	ND<13	20	0.66
4-Chloro-3-methylphenol	ND<6.6	20	0.33	2-Chloronaphthalene	ND<6.6	20	0.33
2-Chlorophenol	ND<6.6	20	0.33	4-Chlorophenyl Phenyl Ether	ND<6.6	20	0.33
Chrysene	ND<6.6	20	0.33	Dibenzo (a,h) anthracene	ND<6.6	20	0.33
Dibenzofuran	ND<6.6	20	0.33	Di-n-butyl Phthalate	ND<6.6	20	0.33
1,2-Dichlorobenzene	ND<6.6	20	0.33	1,3-Dichlorobenzene	ND<6.6	20	0.33
1,4-Dichlorobenzene	ND<6.6	20	0.33	3,3-Dichlorobenzidine	ND<13	20	0.66
2,4-Dichlorophenol	ND<6.6	20	0.33	Diethyl Phthalate	ND<6.6	20	0.33
2,4-Dimethylphenol	ND<6.6	20	0.33	Dimethyl Phthalate	ND<6.6	20	0.33
4,6-Dinitro-2-methylphenol	ND<32	20	1.6	2,4-Dinitrophenol	ND<32	20	1.6
2,4-Dinitrotoluene	ND<6.6	20	0.33	2,6-Dinitrotoluene	ND<6.6	20	0.33
Di-n-octyl Phthalate	ND<6.6	20	0.33	1,2-Diphenylhydrazine	ND<6.6	20	0.33
Fluoranthene	ND<6.6	20	0.33	Fluorene	ND<6.6	20	0.33
Hexachlorobenzene	ND<6.6	20	0.33	Hexachlorobutadiene	ND<6.6	20	0.33
Hexachlorocyclopentadiene	ND<32	20	1.6	Hexachloroethane	ND<6.6	20	0.33
Indeno (1,2,3-cd) pyrene	ND<6.6	20	0.33	Isophorone	ND<6.6	20	0.33
2-Methylnaphthalene	ND<6.6	20	0.33	2-Methylphenol (o-Cresol)	ND<6.6	20	0.33
3 &/or 4-Methylphenol (m,p-Cresol)	ND<6.6	20	0.33	Naphthalene	ND<6.6	20	0.33
2-Nitroaniline	ND<32	20	1.6	3-Nitroaniline	ND<32	20	1.6
4-Nitroaniline	ND<32	20	1.6	Nitrobenzene	ND<6.6	20	0.33
2-Nitrophenol	ND<32	20	1.6	4-Nitrophenol	ND<32	20	1.6
N-Nitrosodiphenylamine	ND<6.6	20	0.33	N-Nitrosodi-n-propylamine	ND<6.6	20	0.33
Pentachlorophenol	ND<32	20	1.6	Phenanthrene	ND<6.6	20	0.33
Phenol	ND<6.6	20	0.33	Pyrene	ND<6.6	20	0.33
1,2,4-Trichlorobenzene	ND<6.6	20	0.33	2,4,5-Trichlorophenol	ND<6.6	20	0.33
2,4,6-Trichlorophenol	ND<6.6	20	0.33				

Surrogate Recoveries (%)

%SS1:	60	%SS2:	---#
%SS3:	69	%SS4:	63
%SS5:	---#	%SS6:	69

Comments: a3

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

a3) sample diluted due to high organic content.

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/18/11

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3510C | Analytical Method: SW8270C | Work Order: 1112307

Lab ID	1112307-010D
Client ID	E-9-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<200	20	10	Acenaphthylene	ND<200	20	10
Acetochlor	ND<200	20	10	Anthracene	ND<200	20	10
Benzidine	ND<1000	20	50	Benzoic Acid	ND<1000	20	50
Benzo (a) anthracene	ND<200	20	10	Benzo (b) fluoranthene	ND<200	20	10
Benzo (k) fluoranthene	ND<200	20	10	Benzo (g,h,i) perylene	ND<200	20	10
Benzo (a) pyrene	ND<200	20	10	Benzyl Alcohol	ND<1000	20	50
1,1-Biphenyl	ND<200	20	10	Bis (2-chloroethoxy) Methane	ND<200	20	10
Bis (2-chloroethyl) Ether	ND<200	20	10	Bis (2-chloroisopropyl) Ether	ND<200	20	10
Bis (2-ethylhexyl) Phthalate	ND<400	20	20	4-Bromophenyl Phenyl Ether	ND<200	20	10
Butylbenzyl Phthalate	ND<200	20	10	4-Chloroaniline	ND<400	20	20
4-Chloro-3-methylphenol	ND<200	20	10	2-Chloronaphthalene	ND<200	20	10
2-Chlorophenol	ND<200	20	10	4-Chlorophenyl Phenyl Ether	ND<200	20	10
Chrysene	ND<200	20	10	Dibenzo (a,h) anthracene	ND<200	20	10
Dibenzofuran	ND<200	20	10	Di-n-butyl Phthalate	ND<200	20	10
1,2-Dichlorobenzene	ND<200	20	10	1,3-Dichlorobenzene	ND<200	20	10
1,4-Dichlorobenzene	ND<200	20	10	3,3-Dichlorobenzidine	ND<400	20	20
2,4-Dichlorophenol	ND<200	20	10	Diethyl Phthalate	ND<200	20	10
2,4-Dimethylphenol	ND<200	20	10	Dimethyl Phthalate	ND<200	20	10
4,6-Dinitro-2-methylphenol	ND<1000	20	50	2,4-Dinitrophenol	ND<1000	20	50
2,4-Dinitrotoluene	ND<200	20	10	2,6-Dinitrotoluene	ND<200	20	10
Di-n-octyl Phthalate	ND<200	20	10	1,2-Diphenylhydrazine	ND<200	20	10
Fluoranthene	ND<200	20	10	Fluorene	ND<200	20	10
Hexachlorobenzene	ND<200	20	10	Hexachlorobutadiene	ND<200	20	10
Hexachlorocyclopentadiene	ND<1000	20	50	Hexachloroethane	ND<200	20	10
Indeno (1,2,3-cd) pyrene	ND<200	20	10	Isophorone	ND<200	20	10
2-Methylnaphthalene	ND<200	20	10	2-Methylphenol (o-Cresol)	ND<200	20	10
3 &/or 4-Methylphenol (m,p-Cresol)	ND<200	20	10	Naphthalene	ND<200	20	10
2-Nitroaniline	ND<1000	20	50	3-Nitroaniline	ND<1000	20	50
4-Nitroaniline	ND<1000	20	50	Nitrobenzene	ND<200	20	10
2-Nitrophenol	ND<1000	20	50	4-Nitrophenol	ND<1000	20	50
N-Nitrosodiphenylamine	ND<200	20	10	N-Nitrosodi-n-propylamine	ND<200	20	10
Pentachlorophenol	ND<1000	20	50	Phenanthrene	ND<200	20	10
Phenol	ND<200	20	10	Pyrene	ND<200	20	10
1,2,4-Trichlorobenzene	ND<200	20	10	2,4,5-Trichlorophenol	ND<200	20	10
2,4,6-Trichlorophenol	ND<200	20	10				

Surrogate Recoveries (%)

%SS1:	---#	%SS2:	---#
%SS3:	54	%SS4:	59
%SS5:	---#	%SS6:	86

Comments: a3,b1

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

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor; #) surrogate diluted out of range or surrogate coelutes with another peak.

a3) sample diluted due to high organic content.
b1) aqueous sample that contains greater than ~1 vol. % sediment

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/10/11-12/14/11

CAM / CCR 17 Metals*

					Reporting Limit for DF =1; ND means not detected above the reporting limit	
Lab ID	1112307-010C					
Client ID	E-9-GW					
Matrix	W				S	W
Extraction Type	DISS.				mg/kg	µg/L

ICP-MS Metals, Concentration*

Analytical Method: E200.8 Extraction Method: E200.8 Work Order: 1112307

Dilution Factor	1				1	1
Antimony	2.9				NA	0.5
Arsenic	2.3				NA	0.5
Barium	1100				NA	5.0
Beryllium	ND				NA	0.5
Cadmium	ND				NA	0.25
Chromium	1.4				NA	0.5
Cobalt	3.3				NA	0.5
Copper	ND				NA	0.5
Lead	ND				NA	0.5
Mercury	0.074				NA	0.025
Molybdenum	9.9				NA	0.5
Nickel	14				NA	0.5
Selenium	2.8				NA	0.5
Silver	ND				NA	0.19
Thallium	ND				NA	0.5
Vanadium	1.4				NA	0.5
Zinc	ND				NA	5.0
%SS:	N/A					
Comments	b1					

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

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

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/12/11-12/13/11

CAM / CCR 17 Metals*

Lab ID	1112307-001A	1112307-002A	1112307-003A	1112307-004A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	E-1-2.0	E-2-2.0	E-3 Composite	E-4 Composite		
Matrix	S	S	S	S	S	W
Extraction Type	TOTAL	TOTAL	TOTAL	TOTAL	mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1112307

Dilution Factor	1	1	1	1	1	1
Antimony	0.90	ND	ND	ND	0.5	NA
Arsenic	3.6	1.7	1.6	4.8	0.5	NA
Barium	580	100	89	260	5.0	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	ND	ND	ND	ND	0.25	NA
Chromium	49	800	620	150	0.5	NA
Cobalt	10	57	53	40	0.5	NA
Copper	38	31	30	39	0.5	NA
Lead	13	6.4	6.0	76	0.5	NA
Mercury	ND	0.051	ND	1.2	0.05	NA
Molybdenum	ND	ND	ND	0.94	0.5	NA
Nickel	25	830	970	520	0.5	NA
Selenium	ND	ND	ND	ND	0.5	NA
Silver	ND	ND	ND	ND	0.5	NA
Thallium	ND	ND	ND	ND	0.5	NA
Vanadium	34	55	42	48	0.5	NA
Zinc	270	44	40	56	5.0	NA
%SS:	108	124	126	123		

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/12/11-12/13/11

CAM / CCR 17 Metals*

Lab ID	1112307-005A	1112307-006A	1112307-007A	1112307-008A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	E-5 Composite	E-6 Composite	E-7 Composite	E-8 Composite		
Matrix	S	S	S	S	S	W
Extraction Type	TOTAL	TOTAL	TOTAL	TOTAL	mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1112307

Dilution Factor	1	1	1	1	1	1
Antimony	0.78	1.7	1.5	0.57	0.5	NA
Arsenic	4.6	18	5.5	9.2	0.5	NA
Barium	200	100	140	62	5.0	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	ND	0.40	0.29	ND	0.25	NA
Chromium	62	130	54	100	0.5	NA
Cobalt	7.7	21	7.9	15	0.5	NA
Copper	31	47	41	38	0.5	NA
Lead	39	160	67	39	0.5	NA
Mercury	0.098	0.31	0.25	0.13	0.05	NA
Molybdenum	0.89	1.1	1.6	3.4	0.5	NA
Nickel	58	310	61	160	0.5	NA
Selenium	ND	ND	ND	ND	0.5	NA
Silver	ND	ND	ND	ND	0.5	NA
Thallium	ND	ND	ND	ND	0.5	NA
Vanadium	45	58	41	46	0.5	NA
Zinc	140	120	100	68	5.0	NA
%SS:	114	119	103	124		

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed 12/12/11-12/13/11

CAM / CCR 17 Metals*

					Reporting Limit for DF =1; ND means not detected above the reporting limit	
Lab ID	1112307-009A					
Client ID	E-9 Composite					
Matrix	S				S	W
Extraction Type	TOTAL				mg/Kg	mg/L

ICP Metals, Concentration*

Analytical Method: SW6020 Extraction Method: SW3050B Work Order: 1112307

Dilution Factor	1				1	1
Antimony	0.84				0.5	NA
Arsenic	7.4				0.5	NA
Barium	74				5.0	NA
Beryllium	ND				0.5	NA
Cadmium	ND				0.25	NA
Chromium	110				0.5	NA
Cobalt	19				0.5	NA
Copper	22				0.5	NA
Lead	64				0.5	NA
Mercury	0.30				0.05	NA
Molybdenum	0.69				0.5	NA
Nickel	240				0.5	NA
Selenium	ND				0.5	NA
Silver	ND				0.5	NA
Thallium	ND				0.5	NA
Vanadium	44				0.5	NA
Zinc	99				5.0	NA
%SS:	123					

Comments

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

means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/09/11
	Client P.O.:	Date Analyzed: 12/15/11

Cyanide, Total*^

Analytical Method: SM4500-CN⁻ ABCE | Work Order: 1112307

Lab ID	Client ID	Matrix	Total Cyanide	DF	Comments
1112307-002A	E-2-2.0	S	ND	1	
1112307-004A	E-4 Composite	S	ND	1	
1112307-005A	E-5 Composite	S	0.14	1	
1112307-007A	E-7 Composite	S	0.15	1	
1112307-009A	E-9 Composite	S	ND	1	

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	0.1 mg/Kg	

* water samples are reported in µg/L; soil/sludge/solid samples in mg/kg; wipe samples in µg/wipe.

^All soil samples are treated to remove sulfide, nitrate and nitrite interference prior to analysis.

DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted 12/09/11-12/14/11
	Client P.O.:	Date Analyzed 12/11/11-12/14/11

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Bm/SW8021B/8015Bm Work Order: 1112307

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	0.005
1112307-001A	E-1-2.0	S	ND	1	96	
1112307-002A	E-2-2.0	S	ND	1	92	
1112307-003A	E-3 Composite	S	ND	1	92	
1112307-004A	E-4 Composite	S	1.3	1	101	d7
1112307-005A	E-5 Composite	S	1.4	1	110	d7
1112307-006A	E-6 Composite	S	3.9	1	89	d7
1112307-007A	E-7 Composite	S	2.7	1	90	d7
1112307-008A	E-8 Composite	S	ND	1	104	
1112307-009A	E-9 Composite	S	7.7	1	93	d7
1112307-010A	E-9-GW	W	ND	1	100	b1

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

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

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/13/11
	Client P.O.:	Date Analyzed: 12/13/11

pH*

Analytical Method: SW9045D — Work Order: 1112307

Lab ID	Client ID	Matrix	pH	DF	Comments
1112307-002A	E-2-2.0	S	9.36 @ 20.7°C	1	
1112307-004A	E-4 Composite	S	9.83 @ 20.9°C	1	
1112307-005A	E-5 Composite	S	12.24 @ 21.0°C	1	
1112307-007A	E-7 Composite	S	11.97 @ 21.1°C	1	
1112307-009A	E-9 Composite	S	8.99 @ 21.5°C	1	

Method Accuracy and Reporting Units	W	NA	
	S	±0.05, pH units @ °C	

* EPA method 9045; pH = -log(aH+) @ _°C; ± 0.1 units

DF = Dilution Factor

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AEW Engineering, Inc. 55 New Montgomery St, Ste 722 San Francisco, CA 94105	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
	Client Contact: James Medley	Date Extracted: 12/15/11
	Client P.O.:	Date Analyzed: 12/15/11

Acid Soluble Sulfide*

Analytical Method: SW9030A/E376.2 Work Order: 1112307

Lab ID	Client ID	Matrix	Sulfide	DF	Comments
1112307-002A	E-2-2.0	S	ND	1	
1112307-004A	E-4 Composite	S	ND	1	
1112307-005A	E-5 Composite	S	ND	1	
1112307-007A	E-7 Composite	S	110	5	
1112307-009A	E-9 Composite	S	35	1	

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	10 mg/Kg	

*water samples are reported in mg/L, soil samples are reported in mg/kg.

DF = Dilution Factor

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AEW Engineering, Inc.	Client Project ID: #2011-011; T&R RYCG Pier 94 Backlands	Date Sampled: 12/09/11
		Date Received: 12/09/11
55 New Montgomery St, Ste 722	Client Contact: James Medley	Date Extracted: 12/09/11
San Francisco, CA 94105	Client P.O.:	Date Analyzed: 12/11/11-12/15/11

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C/3630C/SW3550B/3630C Analytical methods: SW8015B Work Order: 1112307

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1112307-001A	E-1-2.0	S	35	350	10	95	e7,e2
1112307-002A	E-2-2.0	S	8.1	100	2	96	e7,e2
1112307-003A	E-3 Composite	S	7.0	130	2	102	e7,e2
1112307-004A	E-4 Composite	S	59	540	20	104	e7,e2
1112307-005A	E-5 Composite	S	30	120	10	82	e7,e2
1112307-006A	E-6 Composite	S	58	320	20	93	e7,e2
1112307-007A	E-7 Composite	S	32	170	5	101	e7,e2
1112307-008A	E-8 Composite	S	130	300	10	87	e7,e2,e6
1112307-009A	E-9 Composite	S	37	310	20	93	e7,e2
1112307-010A	E-9-GW	W	2400	2800	1	103	e7,e2,e4,b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	1.0	5.0	mg/Kg

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

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

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
e2) diesel range compounds are significant; no recognizable pattern
e4) gasoline range compounds are significant.
e6) one to a few isolated peaks present in the THP(d/mo) chromatogram
e7) oil range compounds are significant

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QC SUMMARY REPORT FOR SW8082

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63298 | WorkOrder: 1112307

EPA Method: SW8082 | **Extraction: SW3550B** | **Spiked Sample ID: 1112219-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/kg	mg/kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Aroclor1260	ND	0.15	95.8	96	0.225	101	70 - 130	20	70 - 130
%SS:	102	0.050	102	104	1.79	92	70 - 130	20	70 - 130

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

BATCH 63298 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/12/11 9:36 PM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/12/11 10:30 PM
1112307-003A	12/09/11	12/09/11	12/12/11 11:25 PM	1112307-004A	12/09/11	12/09/11	12/13/11 12:19 AM
1112307-005A	12/09/11	12/09/11	12/13/11 5:15 AM	1112307-006A	12/09/11	12/09/11	12/16/11 5:24 AM
1112307-007A	12/09/11	12/09/11	12/14/11 7:52 PM	1112307-008A	12/09/11	12/09/11	12/13/11 8:00 AM
1112307-009A	12/09/11	12/09/11	12/15/11 2:16 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.

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

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63365 | WorkOrder: 1112307

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1112307-009B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	0.050	92.9	90.1	3.05	128	70 - 130	30	70 - 130
Benzene	ND	0.050	99.9	97.3	2.65	100	70 - 130	30	70 - 130
t-Butyl alcohol (TBA)	ND	0.20	97.6	101	3.41	83.1	70 - 130	30	70 - 130
Chlorobenzene	ND	0.050	103	100	3.23	99	70 - 130	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	98.1	96.9	1.23	98.3	70 - 130	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	99.2	97.5	1.73	94.9	70 - 130	30	70 - 130
1,1-Dichloroethene	ND	0.050	111	105	4.89	117	70 - 130	30	70 - 130
Diisopropyl ether (DIPE)	ND	0.050	124	121	2.48	89.2	70 - 130	30	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	0.050	98	93.9	4.34	92	70 - 130	30	70 - 130
Methyl-t-butyl ether (MTBE)	ND	0.050	99.3	95.8	3.56	97.3	70 - 130	30	70 - 130
Toluene	ND	0.050	108	103	4.24	106	70 - 130	30	70 - 130
Trichloroethene	ND	0.050	110	106	2.93	111	70 - 130	30	70 - 130
%SS1:	99	0.12	115	114	0.454	104	70 - 130	30	70 - 130
%SS2:	113	0.12	128	127	0.321	108	70 - 130	30	70 - 130
%SS3:	108	0.012	111	113	2.22	107	70 - 130	30	70 - 130

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

BATCH 63365 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/14/11 7:19 AM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/14/11 7:59 AM
1112307-003B	12/09/11 8:40 AM	12/09/11	12/14/11 6:55 AM	1112307-004B	12/09/11 9:00 AM	12/09/11	12/14/11 12:43 PM
1112307-005B	12/09/11 9:40 AM	12/09/11	12/14/11 1:24 PM	1112307-006B	12/09/11 10:05 AM	12/09/11	12/14/11 1:35 PM
1112307-007B	12/09/11 10:36 AM	12/09/11	12/14/11 2:14 PM	1112307-008B	12/09/11 11:50 AM	12/09/11	12/14/11 12:50 PM
1112307-009B	12/09/11 11:03 AM	12/09/11	12/14/11 2:08 PM				

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

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

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

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

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

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

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63335 | WorkOrder: 1112307

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1112262-002C**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	114	112	1.44	101	70 - 130	30	70 - 130
Benzene	ND	10	99.2	97.6	1.66	111	70 - 130	30	70 - 130
t-Butyl alcohol (TBA)	ND	40	94.5	100	5.96	77.6	70 - 130	30	70 - 130
Chlorobenzene	ND	10	96.6	94.9	1.73	108	70 - 130	30	70 - 130
1,2-Dibromoethane (EDB)	ND	10	105	101	3.48	103	70 - 130	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	95.7	94.9	0.843	104	70 - 130	30	70 - 130
1,1-Dichloroethene	ND	10	97.2	97.2	0	128	70 - 130	30	70 - 130
Diisopropyl ether (DIPE)	ND	10	101	99.1	1.72	106	70 - 130	30	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	101	101	0	107	70 - 130	30	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	101	100	0.994	107	70 - 130	30	70 - 130
Toluene	ND	10	96.1	94.4	1.77	107	70 - 130	30	70 - 130
Trichloroethene	0.58	10	102	97.8	4.01	115	70 - 130	30	70 - 130
%SS1:	102	25	112	114	1.29	109	70 - 130	30	70 - 130
%SS2:	102	25	108	108	0	99	70 - 130	30	70 - 130
%SS3:	99	2.5	104	104	0	95	70 - 130	30	70 - 130

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

BATCH 63335 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010B	12/09/11 11:18 AM	12/15/11	12/15/11 9:36 PM				

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

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

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

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

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

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

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

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QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63258 | WorkOrder: 1112307

EPA Method: SW8270C **Extraction: SW3550B** **Spiked Sample ID: 1112222-008A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acenaphthene	ND<0.66	2	52.5	59.1	11.7	84.5	30 - 130	30	30 - 130
4-Chloro-3-methylphenol	ND<0.66	4	59.2	64.6	8.87	78.5	30 - 130	30	30 - 130
2-Chlorophenol	ND<0.66	4	61.4	68.5	10.9	94	30 - 130	30	30 - 130
1,4-Dichlorobenzene	ND<0.66	2	66.5	73.1	9.48	86.8	30 - 130	30	30 - 130
2,4-Dinitrotoluene	ND<0.66	2	42.7	48	11.8	96.7	30 - 130	30	30 - 130
4-Nitrophenol	ND<3.2	4	43.2	52.5	19.5	76.2	30 - 130	30	30 - 130
N-Nitrosodi-n-propylamine	ND<0.66	2	60.4	71.2	16.5	95.8	30 - 130	30	30 - 130
Pentachlorophenol	ND<3.2	4	34.8	37.2	6.59	59.8	30 - 130	30	30 - 130
Phenol	ND<0.66	4	83.3	85.4	2.52	102	30 - 130	30	30 - 130
Pyrene	ND<0.66	2	49.1	54.5	10.5	83.4	30 - 130	30	30 - 130
1,2,4-Trichlorobenzene	ND<0.66	2	64.3	70.7	9.51	88.6	30 - 130	30	30 - 130
%SS1:	84	200	68	78	13.4	88	30 - 130	30	30 - 130
%SS2:	75	200	71	69	4.00	89	30 - 130	30	30 - 130
%SS3:	81	200	71	79	10.5	90	30 - 130	30	30 - 130
%SS4:	75	200	85	93	8.26	82	30 - 130	30	30 - 130
%SS5:	52	200	76	82	7.98	78	30 - 130	30	30 - 130
%SS6:	72	200	75	82	8.83	79	30 - 130	30	30 - 130

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

BATCH 63258 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/18/11 5:10 PM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/16/11 9:44 PM
1112307-003A	12/09/11	12/09/11	12/16/11 10:58 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 = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.

#) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.

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

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QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63364 | WorkOrder: 1112307

EPA Method: SW8270C **Extraction: SW3550B** **Spiked Sample ID: 1112307-009A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acenaphthene	ND<6.6	2	NR	NR	NR	84.7	30 - 130	30	30 - 130
4-Chloro-3-methylphenol	ND<6.6	4	NR	NR	NR	76.3	30 - 130	30	30 - 130
2-Chlorophenol	ND<6.6	4	NR	NR	NR	90.2	30 - 130	30	30 - 130
1,4-Dichlorobenzene	ND<6.6	2	NR	NR	NR	87.3	30 - 130	30	30 - 130
2,4-Dinitrotoluene	ND<6.6	2	NR	NR	NR	96.1	30 - 130	30	30 - 130
4-Nitrophenol	ND<32	4	NR	NR	NR	61.3	30 - 130	30	30 - 130
N-Nitrosodi-n-propylamine	ND<6.6	2	NR	NR	NR	91.2	30 - 130	30	30 - 130
Pentachlorophenol	ND<32	4	NR	NR	NR	37.7	30 - 130	30	30 - 130
Phenol	ND<6.6	4	NR	NR	NR	96.5	30 - 130	30	30 - 130
Pyrene	ND<6.6	2	NR	NR	NR	85.6	30 - 130	30	30 - 130
1,2,4-Trichlorobenzene	ND<6.6	2	NR	NR	NR	89.6	30 - 130	30	30 - 130
%SS1:	60	200	57	52	10.7	87	30 - 130	30	30 - 130
%SS2:	---#	200	---#	---#	---#	88	30 - 130	30	30 - 130
%SS3:	69	200	69	66	3.69	90	30 - 130	30	30 - 130
%SS4:	63	200	66	64	3.80	83	30 - 130	30	30 - 130
%SS5:	---#	200	---#	---#	---#	74	30 - 130	30	30 - 130
%SS6:	69	200	69	65	6.75	82	30 - 130	30	30 - 130

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

BATCH 63364 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-004A	12/09/11	12/09/11	12/18/11 10:30 PM	1112307-005A	12/09/11	12/09/11	12/17/11 12:10 AM
1112307-006A	12/09/11	12/09/11	12/18/11 6:33 PM	1112307-007A	12/09/11	12/09/11	12/21/11 12:56 AM
1112307-008A	12/09/11	12/09/11	12/19/11 7:52 PM	1112307-009A	12/09/11	12/09/11	12/17/11 1:23 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 = matrix interference and / or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix, sample diluted due to high matrix or analyte content, or MS/MSD samples diluted due to high organic content.

#) surrogate diluted out of range; & = low or no recovery of surrogate or target analytes due to matrix interference.

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

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QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63297 | WorkOrder: 1112307

EPA Method: SW8270C **Extraction: SW3510C** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acenaphthene	N/A	50	N/A	N/A	N/A	76.9	N/A	N/A	30 - 130
4-Chloro-3-methylphenol	N/A	100	N/A	N/A	N/A	65.6	N/A	N/A	30 - 130
2-Chlorophenol	N/A	100	N/A	N/A	N/A	82.4	N/A	N/A	30 - 130
1,4-Dichlorobenzene	N/A	50	N/A	N/A	N/A	69	N/A	N/A	30 - 130
2,4-Dinitrotoluene	N/A	50	N/A	N/A	N/A	89.1	N/A	N/A	30 - 130
4-Nitrophenol	N/A	100	N/A	N/A	N/A	59.5	N/A	N/A	30 - 130
N-Nitrosodi-n-propylamine	N/A	50	N/A	N/A	N/A	116	N/A	N/A	30 - 130
Pentachlorophenol	N/A	100	N/A	N/A	N/A	69.3	N/A	N/A	30 - 130
Phenol	N/A	100	N/A	N/A	N/A	86.9	N/A	N/A	30 - 130
Pyrene	N/A	50	N/A	N/A	N/A	73.9	N/A	N/A	30 - 130
1,2,4-Trichlorobenzene	N/A	50	N/A	N/A	N/A	69.6	N/A	N/A	30 - 130
%SS1:	N/A	5000	N/A	N/A	N/A	100	N/A	N/A	30 - 130
%SS2:	N/A	5000	N/A	N/A	N/A	100	N/A	N/A	30 - 130
%SS3:	N/A	5000	N/A	N/A	N/A	107	N/A	N/A	30 - 130
%SS4:	N/A	5000	N/A	N/A	N/A	95	N/A	N/A	30 - 130
%SS5:	N/A	5000	N/A	N/A	N/A	111	N/A	N/A	30 - 130
%SS6:	N/A	5000	N/A	N/A	N/A	100	N/A	N/A	30 - 130

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

BATCH 63297 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010D	12/09/11 11:18 AM	12/09/11	12/18/11 11:43 PM				

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

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

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

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

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

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

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QC SUMMARY REPORT FOR E200.8

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63343 | WorkOrder: 1112307

EPA Method: E200.8 **Extraction: E200.8** **Spiked Sample ID: 1112092-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Antimony	ND	50	92.1	92.2	0.0651	105	70 - 130	20	85 - 115
Arsenic	2.1	50	101	100	0.861	110	70 - 130	20	85 - 115
Barium	34	500	99.6	99.4	0.150	94.1	70 - 130	20	85 - 115
Beryllium	ND	50	92.1	92.3	0.260	111	70 - 130	20	85 - 115
Cadmium	ND	50	96.2	95.6	0.542	108	70 - 130	20	85 - 115
Chromium	ND	50	95.6	96.2	0.620	107	70 - 130	20	85 - 115
Cobalt	ND	50	95.1	95	0.0210	102	70 - 130	20	85 - 115
Copper	28	50	101	100	0.742	111	70 - 130	20	85 - 115
Lead	ND	50	95.1	95.2	0.0841	107	70 - 130	20	85 - 115
Mercury	ND	1.25	90.6	93	2.53	101	70 - 130	20	85 - 115
Molybdenum	3.5	50	99	98.1	0.853	104	70 - 130	20	85 - 115
Nickel	0.59	50	94.6	94	0.670	109	70 - 130	20	85 - 115
Selenium	0.60	50	96.6	97.8	1.30	112	70 - 130	20	85 - 115
Silver	ND	50	89.7	89.1	0.626	106	70 - 130	20	85 - 115
Thallium	ND	50	97.2	93.9	3.45	107	70 - 130	20	85 - 115
Vanadium	2.5	50	98.6	99	0.462	107	70 - 130	20	85 - 115
Zinc	5.8	500	94.8	95.3	0.582	111	70 - 130	20	85 - 115
%SS:	99	750	99	98	0.473	107	70 - 130	20	70 - 130

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

BATCH 63343 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010C	12/09/11 11:18 AM	12/09/11	12/10/11 10:37 AM	1112307-010C	12/09/11 11:18 AM	12/09/11	12/13/11 3:05 AM
1112307-010C	12/09/11 11:18 AM	12/09/11	12/14/11 8:32 PM				

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

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

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

N/A = not applicable to this method.

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

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QC SUMMARY REPORT FOR SW6020

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63355 | WorkOrder: 1112307

EPA Method: SW6020 **Extraction: SW3050B** **Spiked Sample ID: 1112274-010A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Antimony	ND	50	93.9	91.8	2.33	91.3	75 - 125	20	75 - 125
Arsenic	6.3	50	98.1	97.6	0.435	98.1	75 - 125	20	75 - 125
Barium	200	500	105	101	2.92	100	75 - 125	20	75 - 125
Beryllium	0.52	50	89.7	88.8	1.06	98.3	75 - 125	20	75 - 125
Cadmium	ND	50	99	96.9	2.12	98	75 - 125	20	75 - 125
Chromium	85	50	NR	NR	NR	94.3	75 - 125	20	75 - 125
Cobalt	14	50	98.9	96.3	2.10	102	75 - 125	20	75 - 125
Copper	29	50	96.6	94.4	1.42	98.4	75 - 125	20	75 - 125
Lead	7.9	50	102	98.8	2.36	96.2	75 - 125	20	75 - 125
Mercury	ND	1.25	102	101	1.29	96	75 - 125	20	75 - 125
Molybdenum	0.71	50	97.2	95	2.26	95.3	75 - 125	20	75 - 125
Nickel	110	50	NR	NR	NR	95.4	75 - 125	20	75 - 125
Selenium	ND	50	98.1	96.4	1.70	98	75 - 125	20	75 - 125
Silver	ND	50	92.7	91.1	1.74	100	75 - 125	20	75 - 125
Thallium	ND	50	103	101	2.04	99.5	75 - 125	20	75 - 125
Vanadium	56	50	NR	NR	NR	95.4	75 - 125	20	75 - 125
Zinc	60	500	96.7	95	1.56	97	75 - 125	20	75 - 125
%SS:	107	500	106	102	3.04	106	70 - 130	20	70 - 130

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

BATCH 63355 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/12/11 9:05 PM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/12/11 9:11 PM
1112307-002A	12/09/11 8:07 AM	12/09/11	12/13/11 3:38 PM	1112307-003A	12/09/11	12/09/11	12/12/11 9:17 PM
1112307-003A	12/09/11	12/09/11	12/13/11 4:03 PM	1112307-004A	12/09/11	12/09/11	12/12/11 9:42 PM
1112307-004A	12/09/11	12/09/11	12/13/11 4:09 PM	1112307-005A	12/09/11	12/09/11	12/12/11 9:48 PM
1112307-006A	12/09/11	12/09/11	12/12/11 9:55 PM	1112307-006A	12/09/11	12/09/11	12/13/11 4:16 PM
1112307-007A	12/09/11	12/09/11	12/12/11 10:01 PM	1112307-008A	12/09/11	12/09/11	12/12/11 10:07 PM
1112307-008A	12/09/11	12/09/11	12/13/11 4:22 PM	1112307-009A	12/09/11	12/09/11	12/12/11 10:13 PM
1112307-009A	12/09/11	12/09/11	12/13/11 4:28 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 applicable to this method.

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 SM4500-CN⁻ ABCE

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63341 | WorkOrder: 1112307

EPA Method: SM4500-CN⁻ ABCE **Extraction: SM4500-CN⁻ E** **Spiked Sample ID: 1112267-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Total Cyanide	0.23	0.80	92.6	90.6	1.70	90.1	80 - 120	20	90 - 110

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

BATCH 63341 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	12/09/11	12/15/11 10:42 AM	1112307-004A	12/09/11	12/09/11	12/15/11 10:46 AM
1112307-005A	12/09/11	12/09/11	12/15/11 10:49 AM	1112307-007A	12/09/11	12/09/11	12/15/11 10:53 AM
1112307-009A	12/09/11	12/09/11	12/15/11 10:57 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/8015Bm

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63347 | WorkOrder: 1112307

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1112279-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	0.60	76.9	78.5	2.07	76.7	70 - 130	20	70 - 130
MTBE	ND	0.10	98.2	104	5.48	102	70 - 130	20	70 - 130
Benzene	ND	0.10	87.2	93.7	7.19	94.1	70 - 130	20	70 - 130
Toluene	ND	0.10	89.3	96	7.22	96.2	70 - 130	20	70 - 130
Ethylbenzene	ND	0.10	93.2	101	7.59	100	70 - 130	20	70 - 130
Xylenes	ND	0.30	94	101	6.78	100	70 - 130	20	70 - 130
%SS:	93	0.10	86	87	1.16	93	70 - 130	20	70 - 130

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

BATCH 63347 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/11/11 7:42 PM	1112307-002A	12/09/11 8:07 AM	12/09/11	12/11/11 7:12 PM
1112307-003A	12/09/11	12/09/11	12/11/11 6:42 PM	1112307-004A	12/09/11	12/09/11	12/13/11 11:22 PM
1112307-005A	12/09/11	12/09/11	12/14/11 12:21 AM	1112307-006A	12/09/11	12/09/11	12/11/11 10:04 PM
1112307-007A	12/09/11	12/09/11	12/12/11 12:29 AM	1112307-008A	12/09/11	12/09/11	12/14/11 1:20 AM
1112307-009A	12/09/11	12/09/11	12/11/11 11:02 PM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63326 | WorkOrder: 1112307

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1112247-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	121	117	2.79	125	70 - 130	20	70 - 130
MTBE	ND	10	102	92.5	9.52	91.8	70 - 130	20	70 - 130
Benzene	ND	10	103	96.7	6.42	93.1	70 - 130	20	70 - 130
Toluene	ND	10	100	93.7	6.73	97.2	70 - 130	20	70 - 130
Ethylbenzene	ND	10	102	94.3	7.52	91.7	70 - 130	20	70 - 130
Xylenes	ND	30	102	95.5	7.10	93.8	70 - 130	20	70 - 130
%SS:	114	10	100	100	0	101	70 - 130	20	70 - 130

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

BATCH 63326 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010A	12/09/11 11:18 AM	12/14/11	12/14/11 7:43 PM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

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QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: **SW9045D (pH)** **Matrix:** **S** **WorkOrder:** **1112307**

Method Name: SW9045D | Units: ±, pH units @ °C | BatchID: 63284

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	Precision	Acceptance Criteria
1112307-002A	9.36 @ 20.7°C	1	9.38 @ 20.8°C	1	0.02	0.1
1112307-004A	9.83 @ 20.9°C	1	9.84 @ 21.0°C	1	0.01	0.1
1112307-005A	12.24 @ 21.0°C	1	12.25 @ 21.2°C	1	0.01	0.1
1112307-007A	11.97 @ 21.1°C	1	11.97 @ 21.2°C	1	0	0.1
1112307-009A	8.99 @ 21.5°C	1	9.00 @ 21.5°C	1	0.01	0.1

BATCH 63284 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	12/13/11	12/13/11 2:07 PM	1112307-004A	12/09/11	12/13/11	12/13/11 2:13 PM
1112307-005A	12/09/11	12/13/11	12/13/11 2:19 PM	1112307-007A	12/09/11	12/13/11	12/13/11 2:25 PM
1112307-009A	12/09/11	12/13/11	12/13/11 2:31 PM				

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.

Precision = Absolute Value (Sample - Duplicate)

RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]

%RPD is calculated using results of up to 10 significant figures, however the reported results are rounded to 2 or 3 significant figures. Therefore there may be a slight discrepancy between the %RPD displayed above and %RPD calculated using the reported results. MAI considers %RPD based upon more significant figures to be more accurate.

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QC SUMMARY REPORT FOR SW9030A/EPA376.2

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63342 | WorkOrder: 1112307

EPA Method: SW9030A/E376.2 **Extraction: SM4500-S^{-2} D** **Spiked Sample ID: 1112267-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Sulfide	ND	50	75.7	84.9	11.5	90.3	75 - 125	20	80 - 120

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

BATCH 63342 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	12/15/11	12/15/11 4:50 PM	1112307-004A	12/09/11	12/15/11	12/15/11 4:56 PM
1112307-005A	12/09/11	12/15/11	12/15/11 5:02 PM	1112307-007A	12/09/11	12/15/11	12/15/11 5:08 PM
1112307-009A	12/09/11	12/15/11	12/15/11 5:14 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 applicable to this method.

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 SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63330 | WorkOrder: 1112307

EPA Method: SW8015B | **Extraction: SW3550B/3630C** | **Spiked Sample ID: 1112248-010B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	30	40	102	106	2.58	103	70 - 130	30	70 - 130
%SS:	99	25	98	100	2.56	90	70 - 130	30	70 - 130

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

BATCH 63330 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-001A	12/09/11 7:44 AM	12/09/11	12/13/11 7:34 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 SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 63363 | WorkOrder: 1112307

EPA Method: SW8015B | **Extraction: SW3550B/3630C** | **Spiked Sample ID: 1112307-009A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	37	40	101	91.9	4.89	96.5	70 - 130	30	70 - 130
%SS:	93	25	87	102	15.8	102	70 - 130	30	70 - 130

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

BATCH 63363 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-002A	12/09/11 8:07 AM	12/09/11	12/15/11 7:45 PM	1112307-003A	12/09/11	12/09/11	12/14/11 11:54 PM
1112307-003A	12/09/11	12/09/11	12/15/11 3:50 PM	1112307-004A	12/09/11	12/09/11	12/13/11 8:47 AM
1112307-004A	12/09/11	12/09/11	12/15/11 1:29 PM	1112307-005A	12/09/11	12/09/11	12/11/11 12:31 AM
1112307-006A	12/09/11	12/09/11	12/11/11 4:59 AM	1112307-007A	12/09/11	12/09/11	12/12/11 11:24 PM
1112307-007A	12/09/11	12/09/11	12/15/11 4:03 PM	1112307-008A	12/09/11	12/09/11	12/11/11 8:24 AM
1112307-009A	12/09/11	12/09/11	12/15/11 1:00 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 SW8015B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63332 | WorkOrder: 1112307

EPA Method: SW8015B **Extraction: SW3510C/3630C** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	95	N/A	N/A	70 - 130
%SS:	N/A	625	N/A	N/A	N/A	101	N/A	N/A	70 - 130

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

BATCH 63332 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112307-010A	12/09/11 11:18 AM	12/09/11	12/13/11 3:50 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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