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Ms. Dilan Roe, P.E., Program Manager
Ms. Karel Detterman, P. G., Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: **Soil and Groundwater Investigation Work Plan**, Properties at 760 22nd Street and 2201 Brush Street, Oakland, California 94612.
Fuel Leak Case No. RO0003153
Geotracker Global ID T10000006348

Dear Alameda County Environmental Health:

Please find attached for your review the following document:

- Soil and Groundwater Investigation Report, Properties at 760 22nd Street and 2201 Brush Street, Oakland, California 94612. (ACEH Document No. RO3153_Investigation_R_2016-07-18)

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

Please call me at (510) 287-5353 ext. 339 if you have any questions.

Sincerely,

Everett Cleveland Jr.
Senior Project Manager

SOIL AND GROUND-WATER INVESTIGATION REPORT

PROPERTIES AT
760 22ND STREET AND 2201 BRUSH STREET
OAKLAND, CALIFORNIA 94612

Prepared for:

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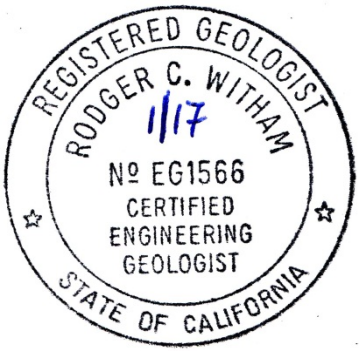
July 15, 2016

SOIL AND GROUND-WATER INVESTIGATION REPORT
PROPERTIES
AT
760 22ND STREET AND 2201 BRUSH STREET
OAKLAND, CALIFORNIA 94612



Rodger C. Witham, P.G., C.E.G.
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OAKLAND, CALIFORNIA 94612

1.0 INTRODUCTION

East Bay Asian Local Development Corporation (EBALDC) has requested that Essel Environmental Consulting (Essel) perform a third phase of subsurface environmental investigation at two adjacent properties located at 760 22nd Street and 2201 Brush Street in Oakland, California. This work was performed according to a Work Plan prepared by Essel (2016a) and conditionally approved by Alameda County Environmental Health (ACEH) via electronic mail to EBALDC on June 3, 2016.

Diesel and gasoline underground storage tanks (USTs) were formerly located on and adjacent to the 760 22nd Street property and releases of petroleum product to the underlying soil were discovered at the time the two USTs were removed in 1986. The ACEH granted closure of this leaking underground storage tank case on December 8, 1997 contingent on a continued commercial use of the property. In October 2014, EBALDC submitted to the ACEH additional supporting documentation and a request to close the leaking UST case with regard to redeveloping and using the two properties for residential purposes. The ACEH responded in March 2015 indicating that additional investigation of the extent of petroleum hydrocarbons in soil, soil vapor, and ground water beneath the properties was necessary to enable ACEH to evaluate EBALDC's request for closure under the State Water Resources Control Board's 2011 Low-Threat Underground Storage Tank Case Closure Policy (low-threat UST closure policy).

On behalf of EBALDC, Essel conducted two subsurface investigations at the site in September and October 2015 (Essel, 2015a) and February and March 2016 (Essel, 2016b) to evaluate impact related to the former USTs, former fueling facilities, former vehicle maintenance operations, and a geophysical anomaly area suspected to have been the location of a previously unidentified UST. A focused human health risk assessment was also performed in the area of the former USTs to evaluate vapor intrusion risk. These investigations have substantially defined the nature and extent of petroleum hydrocarbon impact at the site. The results; however, showed that soil and ground water at the western edge of the site were impacted with petroleum hydrocarbons and that contaminants might also have impacted adjacent properties to the west. The ACEH indicated that investigation of the extent of the off-site impact was necessary and this report presents the results of the off-site investigation.

1.1 Site Location, Description, and Planned Development

The two properties are located at the addresses of 760 22nd Street and 2201 Brush Street in Oakland, California and are a short distance to the southwest of the intersection of West Grand Avenue, San Pablo Avenue, and Interstate Highway 980. The adjacent and abutting properties are on the west side of Brush Street between West Grand Avenue on the north and 22nd Street on the south. Plate 1 shows the locations of the properties and the features of the regional and local vicinities and Plate 2 shows the configuration of the two properties and adjacent commercial and residential properties to the west.

At present, the northernmost property at 760 22nd Street is occupied by a metal frame/metal siding shop building, contains two mobile trailers and several parked buses, and is paved with concrete. A below grade pit, historically used for servicing large vehicles (trucks and buses) and referred to as the oil-changing pit, is located in the northern portion of the shop building. This pit is integral with the surrounding concrete floor of the building. The south-adjacent and abutting property at 2201 Brush Street is unpaved and also used to park buses. A 7,000-gallon diesel UST and a 2,000-gallon gasoline UST formerly were located at and next to (off-site, beneath the city sidewalk) the northeastern corner of the site, respectively. A small, raised concrete pedestal located at the east-central edge of the property is the location of a former fuel dispenser. During geophysical utility locating work in September 2015, an area of unusually low-density soil and a nearby standpipe indicative of a UST vent pipe were identified at the west-central edge of the site. This area is referred to as the geophysical anomaly area.

Adjacent to the northwestern side of the site is a commercial building presently occupied by City Print & Mail at 777 West Grand Avenue. Adjacent property to the southwest is occupied by a multi-family residential building at 764 22nd Street. Additional residential buildings and a church are located further to the west. Plate 2 shows the current locations of the shop building, oil-changing pit, and fuel dispenser pedestal; the approximate locations of the former USTs; the location of the geophysical anomaly area at the west-central edge of the property; and adjacent off-site properties.

East Bay Asian Local Development Corporation plans to redevelop the 760 22nd Street/2201 Brush Street properties with a multi-story residential structure containing 59 residential living units. Descriptions of the aboveground and belowground features of the planned building have been described in the two previous subsurface investigation reports. In addition to the former and current site features, Plate 2 shows the planned ground floor and below ground development.

1.2 Previous Work

Previous environmental work has included underground storage tank (UST) removal, Phase I Environmental Site Assessments (ESAs), and subsurface investigations related to the former USTs and former fuel dispenser. These activities took place between 1986 and 2012 and are described in more detail in previous work plans and reports (Essel, 2015b, 2016b).

Essel (2015a, 2016b) performed subsurface investigations in September/October 2015 and February/March 2016 to characterize the nature and extent of petroleum hydrocarbons in soil, soil vapor, and ground water at the site and off-site in relation to the criteria of the low-threat UST closure policy. Twenty soil borings (ECB-1 through ECB-20) were advanced to depths of 17 to 20 feet below grade to assess contaminants in soil and ground water in the areas of the two former USTs and dispenser island, near the oil changing pit, along the western edge of the property, and

to the northwest and west of the site along West Grand Avenue and 22nd Street, respectively. Seven soil-vapor wells were also installed at and in the vicinity of the former locations of the USTs and fuel dispenser to evaluate contaminant levels in soil vapor.

The investigations found relatively elevated petroleum hydrocarbon concentrations in local areas at the former UST and fuel dispenser locations and the geophysical anomaly located at the west-central edge of the site. In soil, the higher concentrations (95 to 16,000 mg/kg) of total petroleum hydrocarbons in the gasoline (TPHg), diesel (TPHd), and motor-oil (TPHmo) ranges were found within a relatively narrow zone (12 to 16 feet below grade) at and below the ground-water surface at the former gasoline UST pit; at depths of 8 to 15 feet below grade beneath the former fuel dispenser; and within a similar depth zone (12 to 15 feet below grade) at and below the ground-water surface at the west-central edge of the site (geophysical anomaly). Outside these local areas/depth zones, TPHg, TPHd, and TPHmo were primarily not detected and, except for the area of the geophysical anomaly, the indicator petroleum constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), naphthalene, and the polynuclear aromatic hydrocarbons (PAHs) were also largely not detected (see Table 1).

In ground water, high concentrations of TPHg, TPHd, and TPHmo were found in the areas of high soil impact, namely the former UST area, the former fuel dispenser area, and the geophysical anomaly area. Trace to low concentrations of xylenes and tert-butyl alcohol were detected in two water samples and BTEX, MTBE, and naphthalene were not detected in the water samples collected from the 14 borings advanced in September 2015. Relatively low levels of BTEX and naphthalene were found in ground water in the geophysical anomaly area in February 2016. A number of other petroleum-related volatile organic compounds (VOCs), non-chlorinated VOCs, and the chlorinated VOCs *cis*-1,2-dichloroethene and vinyl chloride were sporadically detected at low concentrations. The PAHs acenaphthene, phenanthrene, and 1- and 2-methylnaphthalene were detected in some water samples collected during the two investigations, with the relatively higher concentrations found in the vicinity of the geophysical anomaly (see Table 2).

In soil vapor, a number of petroleum-related and a few non-petroleum-related VOCs were detected in the areas of the former USTs and fuel dispenser. Benzene, vinyl chloride, and chloroform were detected at concentrations greater than default environmental screening levels for vapor intrusion health risk. A focused human health risk assessment that included all detected VOCs and site specific soil data; however, did not find significant cancer or non-cancer risk from vapor intrusion in the former UST and fuel dispenser areas.

The data showed that the site appears to satisfy most of the general (except the presence of secondary source material) and all the media-specific criteria of the low-threat UST closure policy. The depth of the significant contamination, the absence of health-risk indicator petroleum constituents in either soil or ground water, and the absence of nearby sensitive receptor wells indicated little potential for risks to human health or the environment. The focused health risk assessment in the area of the former USTs did not find significant risk for vapor intrusion of volatile organic compounds into a future residential building and investigation at and around the geophysical anomaly did not indicate that a UST was present in the west-central area of the property. The results; however, showed that soil and ground water at the western edge of the site in the geophysical anomaly area were impacted with petroleum hydrocarbons and that this impact likely extended a short distance off-site to the west. Based on these findings, the ACEH indicated that investigation of the extent of the off-site impact was necessary.

2.0 FIELD AND LABORATORY WORK

In the Work Plan, Essel (2016a) proposed to advance up to four borings at the two adjacent off-site properties and on West Grand Avenue and sample and analyze soil and ground water for total petroleum hydrocarbons, VOCs, and PAHs. Two borings were proposed at locations inside the City Print & Mail building at 777 West Grand Avenue, one boring was proposed at a location in the backyard of the multi-family residence at 764 22nd Street, and one boring was proposed at a location along West Grand Avenue. The following sections briefly describe the field and laboratory work performed. Detailed field procedures are included in Appendix A.

2.1 Pre-Drilling Activities

Pre-drilling activities included obtaining drilling and encroachment permits, surveying proposed boring locations for the presence of subsurface utilities, and updating the existing health and safety plan (see Appendix A). Copies of a Water Resources Well Permit, an encroachment permit, and an obstruction permit are included in Appendix B. Representatives of EBALDC and Essel contacted and met with the owners of City Print & Mail and the multi-family residence at 764 22nd Street to obtain permission to advance borings on these west-adjacent properties. The owner of City Print & Mail denied EBALDC access to his property and Essel notified ACEH of this denial in an electronic mail dated May 20, 2016. The owner of the multi-family residence agreed to allow EBALDC access to that property.

Essel subcontracted with a utility locator to clear the remaining two proposed boring locations with respect to underground utilities. The utility locator used electromagnetic and ground-penetrating radar (GPR) equipment to survey the boring locations on June 16, 2016.

Essel updated the site-specific Health and Safety Plan (Plan) prepared for the project. A site safety meeting was conducted at the start of work to review the contents of the plan and apprise Essel and subcontractor personnel of potential on-site hazards.

2.2 Locations of Borings

Boring ECB-21 was advanced at a location adjacent to the sidewalk along West Grand Avenue. This boring was placed at a distance of approximately 155 feet northwest of boring ECB-15 in the geophysical anomaly. Boring ECB-22 was advanced at a location approximately 30 feet to the west-northwest of boring ECB-15 and the geophysical anomaly. Plates 2 and 3 show the locations of borings ECB-21 and ECB-22.

2.3 Drilling Borings and Sampling Soil and Ground Water

Field work to advance borings and collect soil and ground-water samples took place on June 16, 2016. PeneCore Drilling of Woodland, California (C-57 license number 906899) used a Geoprobe 7822DT, track-mounted, direct-push drill rig to advance boring ECB-21 and a Geoprobe 420M limited access direct-push drill rig to advance boring ECB-22. Boring ECB-21 was advanced to a depth of 20 feet below the ground surface and boring ECB-22 was advanced to a depth of 16 feet below grade, which was the maximum-depth capability of the limited access rig. Boring ECB-22 was hand-augered to a depth of 5 feet to check for possible irrigation or other small-diameter and non-metallic piping before using the limited-access rig.

Continuous soil cores were collected from the borings for description of sediments, screening for evidence of contaminants (photoionization detector readings, discoloration, odors), and selection of samples for laboratory analysis. Based on field evidence and depth of ground water, three discrete-depth soil samples were collected from each boring for laboratory analyses.

Temporary wells, consisting of ¾-inch-diameter polyvinyl chloride pipe, were placed in the two boreholes to sample the ground water. Before sampling, the wells were checked for the presence of free-phase petroleum product and the depth to ground water was measured through the casings using an electronic oil-water interface probe. No measurable water was present in boring ECB-22 at the time this boring was completed. Subsequent recharge was very slow and little water was available to sample from this boring.

2.4 Laboratory Analyses

Six soil samples and two water samples were delivered to McCampbell Analytical, Inc. (McCampbell [Laboratory Certificate No. 1644]) in Pittsburg, California for analysis. McCampbell analyzed the six soil samples for TPHg using United States Environmental Protection Agency (USEPA) Method 8015Bm; TPHd and TPHmo using USEPA Method 8015B; and VOCs using USEPA Method 8260B. One soil sample from boring ECB-21 and two soil samples from boring ECB-22 were also analyzed for PAHs using USEPA Method 8270C-Selective Ion Monitoring (SIM). The water sample collected from boring ECB-21 was analyzed for the above-described compounds. Because little water was available in boring ECB-22, the amount collected was analyzed for VOCs and PAHs only.

3.0 RESULTS OF INVESTIGATION

3.1 Geology and Ground Water

Unconsolidated sediments encountered in the two borings included units of clay, silt, and sand, generally with fine-grained silt and clay between the ground surface and 10 feet below grade and coarser-grained sand between 10 and 20 feet below the ground surface. At boring ECB-21, advanced along West Grand Avenue, fill, consisting of layers of gravelly sand, silt, sand, and a bottom silty clay were encountered beneath the street to a depth of 3¼ feet. A relatively thick unit of silty clay containing an interbed of silty fine-grained sand was encountered between 3¼ and 9 feet below grade and silt was encountered at 9 to 10 feet below grade. Interbedded units of silty sand, clayey sand, and sand were encountered between 10 and 19½ feet and silt was encountered between 19½ feet and the 20-foot total depth of boring ECB-21. The sand in this deeper interval was observed to be primarily fine grained and gravel was absent or a minor component, except in the clayey sand observed between 17 and 19½ feet below grade. The sediments were observed to be various shades of yellowish-brown. Medium bluish-gray mottling was observed in the sand units between 12½ and 15 feet below the grade; however, no petroleum odor was noted and no organic vapors were detected in these sediments.

At boring ECB-22, advanced in the back yard of the southwest-adjacent multi-family residence, silt was encountered between the ground surface and approximately 2½ below grade and silty clay with a silt interbed was found between 2½ and 10½ feet below the ground surface. The color of these fine-grained units lightened downward from dusky yellowish-brown of the surface silt unit to a dusky and dark yellowish-brown mottled upper portion of the silty clay that graded

downward to pale yellowish-brown and light olive gray at depths below 4 feet. Interbedded units of primarily silty sand and sand were encountered between 10½ and the 16-foot total depth of this boring. These units consist primarily of fine-grained sand and were observed to be pale yellowish-brown and light olive gray in color.

Depth to ground water was measured in the temporary well installed in boring ECB-21 at 13.05 feet below the ground surface. No ground water was present in boring ECB-22 when this boring was completed and was measured at a depth of 14.55 feet below grade 2½ hours after the boring was completed. Saturated sediments were observed in the boring at approximately 12.8 feet below grade, which is considered to be near the static water level. No free-phase petroleum product was measured on the ground water in either boring (see Table 3).

Plate 4 is geologic cross section C-C', which has been expanded to present the geologic and ground-water information between on-site boring ECB-16 at the west-central edge of the site and off-site boring ECB-22 in the backyard of the southwest-adjacent multi-family residence. The plate shows the sediments encountered at the location of boring ECB-16 extend to the location of boring ECB-22. The off-site extent of discolored soil observed in ECB-16 is inferred to be minimal based on no discoloration observed at ECB-22. Appendix C (Figures C-1 through C-5) contains a Unified Soil Classification System key and logs of borings for ECB-21 and ECB-22. The boring logs include descriptions of sediments encountered, photoionization detector readings, depths at which soil samples were collected, and approximate depths to ground water in the borings.

3.2 Field Evidence of Contaminants

As indicated above, medium bluish-gray mottling was observed in the sand units encountered in boring ECB-21 between 12½ and 15 feet below the grade. No petroleum odor was noted and no organic vapors were detected in these sediments. Photoionization detector readings of the organic vapor content of the soil in boring ECB-21 were taken at a 1-foot depth interval between 1 and 20 feet below grade. No organic vapors were detected in the soil core from the boring. No evidence of discolored soil was observed in the core from boring ECB-22 and no organic vapors were detected in the depth interval between 5 and 16 feet below grade.

3.3 Laboratory Analytical Results

3.3.1 Soil

Three soil samples were collected from each of the two borings at depths above, at, and below the ground-water surface, which was the anticipated zone of potential contaminant impact. In boring ECB-21, samples of silty and clayey sand were collected at depths of 11½, 13½, and 16½ feet, which were above, within, and below the observed zone of medium bluish-gray mottling, respectively. The three soil samples were analyzed for TPHg, TPHd, TPHmo, and VOCs. The sample from the 13½-foot depth, containing the medium bluish-gray mottling, was also analyzed for the PAHs. None of the above-referenced compounds were detected in the three samples at a concentration greater than the applicable laboratory-reporting limit.

In boring ECB-22, soil samples were collected at 10½, 12½, and 15 feet below the ground surface, which corresponds to the top, middle, and bottom of the zone of elevated concentrations detected in the geophysical anomaly area. The three samples were analyzed for TPHg, TPHd, TPHmo, and VOCs and the two deeper samples were also analyzed for PAHs. Soil samples from

the 10½- and 15-foot depths did not contain detectable concentrations of the above-referenced compounds. No TPHg, TPHd, TPHmo, or VOCs were detected in the 12½-foot-depth sample (sample S-12½-ECB22); however, eleven PAHs were detected at low concentrations, ranging from 0.014 milligram per kilogram (mg/Kg) to 0.061 mg/Kg. Three of the PAHs; fluoranthene, phenanthrene, and pyrene were detected in soil samples from borings ECB-15 and ECB-16 located in the geophysical anomaly area. The anthracene, five benzo-related PAHs, chrysene, and indeno (1,2,3-cd) pyrene detected in soil sample S-12½-ECB22 were not detected in on-site borings ECB-15 and ECB-16, likely because of higher laboratory-reporting limits. Of the eleven compounds detected in sample S-12½-ECB22, only benzo (a) pyrene was at a concentration greater than the applicable Tier 1 environmental screening level (ESL) published by the San Francisco Bay Regional Water Quality Control Board (2016). The concentration of benzo (a) pyrene and the other carcinogenic PAHs detected in this sample; however, are less than the media-specific criteria concentration (7.5 mg/Kg) for direct contact and outdoor air health risk contained in the low-threat UST closure policy.

Table 1 presents the cumulative results of laboratory analyses of soil samples collected from borings ECB-21 and ECB-22 and samples collected elsewhere during the current and previous investigations. Appendix D contains copies of the Chain-of-Custody form and laboratory analytical report for the soil samples analyzed during the current investigation.

3.3.2 Ground Water

The ground-water sample collected from boring ECB-21 was analyzed for TPHg, TPHd, TPHmo, VOCs, and PAHs. No TPHg, TPHmo, VOCs, or PAHs were detected in the water sample from boring ECB-21; however, a low concentration of 44 micrograms per liter (µg/L) TPHd was detected in this sample. The concentration detected is less than the Tier 1 ESL for TPHd, which is 100 µg/L.

The ground-water sample collected from boring ECB-22 was analyzed only for VOCs and PAHs because of the low volume of water available from the boring. None of the compounds included in the VOC and PAH analyses were detected at a concentration greater than the laboratory-reporting limit. These results suggest that concentrations of TPHg, TPHd, or TPHmo, if present at the location of ECB-22, are either low or not detectable. Nearly all water samples collected during Essel's two previous subsurface investigations that contained detectable concentrations of TPHg, TPHd, or TPHmo also contained a detectable concentration of one or more VOCs or PAHs.

Naphthalene was not detected in ground-water samples at the site, except in borings ECB-15, ECB-16, and ECB-17, which were advanced in the geophysical anomaly area. The highest concentration detected, 89 µg/L, was in boring ECB-16 at the west-central edge of the site. Naphthalene was not detected in the water samples from either boring ECB-21 or ECB-22 and the absence of naphthalene at ECB-22 indicates minimal off-site migration of contaminants to the west of the geophysical anomaly area.

Table 2 presents the cumulative results of analyses of ground-water samples collected from borings ECB-21 and ECB-22 and samples collected from borings during previous investigations at the site. Appendix D contains copies of the Chain-of-Custody form and laboratory analytical report for the two recently analyzed water samples.

3.4 Distribution of Petroleum Hydrocarbons in the Geophysical Anomaly Area

Laboratory analytical data from February 2016 showed that high concentrations of total petroleum hydrocarbons, principally in the motor-oil range, are present in soil directly beneath the geophysical anomaly. Essel (2016b) estimated that the elevated concentrations extend approximately 25 feet north of the anomaly to a point between borings ECB-19 and ECB-9; approximately 20 feet south of the anomaly to a point between borings ECB-17 and ECB-20; and an estimated 20 feet west of the anomaly beyond boring ECB-16 and a short distance beneath the adjacent residential and commercial properties. The soil analytical data from boring ECB-22, located less than 20 feet west of the site, shows that elevated concentrations of petroleum hydrocarbons are likely to have migrated only a few feet beneath the southwest-adjacent residential property. The absence of detectable petroleum hydrocarbons in soil from boring ECB-18 indicates the impact to soil does not extend more than a few feet to the east of the anomaly. The vertical extent of the elevated levels appears to be restricted to an interval between 12 and 16 feet below the ground surface. Plate 4 (Cross Section C-C') presents the laboratory analytical data for boring ECB-22. Plate 5 presents the distribution of contaminants of concern in soil beneath the western portion of the site and off-site to the west. Plate 5 includes the data from borings ECB-21 and ECB-22 and both Plates 4 and 5 illustrate the restricted extent of off-site migration of petroleum contaminants to the west of the geophysical anomaly.

In ground water, high total petroleum hydrocarbon levels were found in an area equivalent to the area of elevated soil impact during Essel's February/March 2016 investigation. As in soil, the highest total petroleum hydrocarbon concentrations were detected at boring ECB-15. Total petroleum hydrocarbons were not detected in ground water at the locations of borings ECB-9 (north), ECB-18 (east), ECB-20 (south) or ECB-11 (southwest) and these borings defined the extent of impact to ground water in these directions. Essel (2016b) inferred that detectable concentrations of the three ranges of total petroleum hydrocarbons likely extend a short distance to the west (beyond boring ECB-16) and northwest of the anomaly area beneath the adjacent residential and commercial properties. Laboratory analytical data from boring ECB-22 support this inference. Plate 6 shows the distribution of naphthalene in ground water in the west-central portion of the site and a similar limited distribution is expected for TPHg, TPHd, and TPHmo.

4.0 FINDINGS AND CONCLUSION

4.1 Findings

Essel advanced two borings in June 2016 to evaluate the off-site extent of petroleum hydrocarbon compounds present in soil and ground water at the west-central edge of the properties at 760 22nd Street and 2201 Brush Street in Oakland, California. This portion of the site is referred to as the geophysical anomaly area. Following are the findings of the off-site investigation.

- Boring ECB-21 was advanced along West Grand Avenue at a location approximately 155 feet northwest of the geophysical anomaly and boring ECB-22 was advanced at a location on the adjacent multi-family residential property approximately 30 feet to the west-northwest of the geophysical anomaly. Unconsolidated sediments encountered in the two borings were, in general, finer-grained silt and clay from the ground surface to a depth of 10 feet and clayey sand, silty sand, and sand from 10 to 20 feet below the ground surface. Ground water was encountered at a depth of 13 feet below grade.

- Bluish-gray mottling was observed in soil from boring ECB-21 between 12½ and 15 feet below the ground surface, but no petroleum odor or detectable organic vapors were associated with the mottled soil. No discoloration, petroleum odor, or organic vapors were noted in the soil from boring ECB-22. No free phase petroleum product was encountered on the ground water in the two borings.

- Three soil samples were collected from boring ECB-21 above, at, and below the anticipated zone of contaminant impact, including one sample of the bluish-gray mottled soil. The three samples were analyzed for TPHg, TPHd, TPHmo, and VOCs and none of these compounds were detected. The bluish-gray mottled soil sample was also analyzed for PAHs and none were detected. None of these compounds were detected in the ground-water sample collected from this boring, except for a low concentration of 44 µg/L TPHd. This concentration is less than the applicable environmental screening level.

- Three soil samples collected from boring ECB-22 at depths above, at, and below the anticipated zone of contaminant impact were analyzed for TPHg, TPHd, TPHmo, and VOCs and none were detected. Two of the three samples were also analyzed for PAHs. None of the PAH compounds were detected in the deepest sample collected from 15 feet below the ground surface. Low concentrations of eleven PAH compounds were detected in the sample (S-12½-ECB22) collected at the approximate depth of the ground water. The concentration of benzo (a) pyrene in this sample is greater than the applicable environmental screening level, but is notably lower than the corresponding media-specific criteria concentration of the low-threat UST closure policy. No VOC or PAH compound was detected in the water sample collected from boring ECB-22 and by inference, TPHg, TPHd, and TPHmo are also likely not detectable or at low concentrations. Insufficient water was available from this boring to test for all target compounds.

4.2 Conclusion

Based on the findings of this subsurface investigation, Essel concludes the following.

- The extent of the detectable concentrations of total petroleum hydrocarbons and petroleum hydrocarbon constituents in soil and ground water was previously delineated on the site to the north, east, and south of the geophysical anomaly. The absence of detectable concentrations of total petroleum hydrocarbons and VOCs in soil; the presence low concentrations of PAHs in soil that are, except one, less than environmental screening levels; and the absence of VOCs and PAHs in ground water at the location of boring ECB-22 indicate that the extent of contaminants have been delineated off-site to the west of the geophysical anomaly.

Limitations to this investigation are included in Appendix E.

5.0 REFERENCES CITED

California Regional Water Quality Control Board, San Francisco Bay Region, 2016, *Environmental screening levels, Tier 1 ESLs.* February.

Essel Environmental Consulting, 2015a, *Soil and ground-water investigation report, properties at 760 22nd Street and 2201 Brush Street, Oakland, California 94612*. November 6.

_____, 2015b, *Work plan, additional subsurface investigation, properties at 760 22nd Street and 2201 Brush Street, Oakland, California 94612*. April 8.

_____, 2016a, *Work Plan, Off-Site Delineation of Petroleum Hydrocarbon Impact to Soil and Ground Water, Properties at 760 22nd Street and 2201 Brush Street, Oakland, California 94612*. May 12.

_____, 2016b, *Soil and ground-water investigation report, properties at 760 22nd Street and 2201 Brush Street, Oakland, California 94612*. March 31.

TABLE 1
Concentrations of Organic Compounds in Soil Samples
Properties at 760 22nd Street and 2201 Brush Street, Oakland, California

Location	Date Sampled	Sample Designation	Sample Depth (feet)	Total Petroleum Hydrocarbons			Volatile Organic Compounds											Polynuclear Aromatic Hydrocarbons							PCBs	Metals				
				Gasoline	Diesel	Motor Oil	B	T	E	X	MTBE	Naphth	n-Butyl	s-Butyl	n-Propyl	1,2,4-TMB	1,3,5-TMB	Fluoran	Fluorene	1-Methyl	2-Methyl	Naphth	Phenan	Pyrene	Total	Cd	Cr	Lead	Nickel	Zinc
Underground Storage Tank Removal - 760 22nd Street and Adjacent Sidewalk																														
K Gasoline UST-north en	Oct-86	S-1	12	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
K Gasoline UST-south en	Oct-86	S-3	12	1.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7K Diesel UST-north end	Oct-86	S-5	12	--	250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7K Diesel UST-north end	Oct-86	S-8	13	--	220	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7K Diesel UST-south end	Oct-86	S-2	12	--	80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2005 Subsurface Investigation (PES Environmental, Inc.)																														
B-2	9/8/05	B-2-7.5	7½	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/8/05	B-2-12	12	<1.0	1.5	<10	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3	9/8/05	B-3-5.0	5	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/8/05	B-3-11.5	11½	1.6	23	<10	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-4	9/8/05	B-4-8.0	8	190	230	<10	<0.025	<0.025	<0.025	<0.025	<0.025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/8/05	B-4-12	12	6.6	23	<10	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-5	9/8/05	B-5-5.0	5	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/8/05	B-5-11.5	11½	<1.0	<1.0	<10	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2011 Subsurface Investigation (PES Environmental, Inc.)																														
SB1	10/20/11	SB1-4.0	4	<1.0	<1.0	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB1-10.0	10	<1.0	<1.0	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB2	10/20/11	SB2-2.0	2	<1.0	1.7	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB2-4.0	4	<1.0	4.3	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB2-8.0	8	<1.0	<1.0	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB3	10/20/11	SB3-2.0	2	<1.0	3.1	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB3-4.0	4	<1.0	<1.0	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB3-8.0	8	<1.0	<1.0	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB4	10/20/11	SB4-2.0	2	<1.0	2.1	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB4-4.0	4	<1.0	1.2	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB4-8.0	8	<1.0	5.0	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB5	10/20/11	SB5-2.0	2	<1.0	1.9	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB5-4.0	4	<1.0	<1.0	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB5-8.0	8	<1.0	<1.0	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	10/20/11	SB6-2.0	2	<1.0	12	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB6-4.0	4	<1.0	2.2	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/20/11	SB6-8.0	8	<1.0	9.3	--	<0.0050	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SFBRWQCB Environmental Screening Level (Residential)																														
Tier 1				**100**	**230**	**5,100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**0.023**	**NA**	**NA**	**NA**	**NA**	**NA**	**60**	**8.9**	**NA**	**0.25**	**0.023**	**11**	**85**	**0.25**	**39**	**NA**	**80**	**83**	**23,000**
Human Health (direct exposure)				**740**	**230**	**11,000**	**0.23**	**970**	**5.1**	**560**	**42**	**1.8**	**NA**	**NA**	**NA**	**NA**	**NA**	**2,400**	**2,400**	**NA**	**240**	**1.8**	**NA**	**1,800**	**0.25**	**39**	**NA**	**80**	**820**	**23,000**

TABLE 1
Concentrations of Organic Compounds in Soil Samples
Properties at 760 22nd Street and 2201 Brush Street, Oakland, California

Location	Date Sampled	Sample Designation	Sample Depth (feet)	Total Petroleum Hydrocarbons			Volatile Organic Compounds										Polynuclear Aromatic Hydrocarbons							PCBs	Metals				
				Gasoline	Diesel	Motor Oil	B	T	E	X	MTBE	Naphth	n-Butyl	s-Butyl	n-Propyl	1,2,4-TMB	1,3,5-TMB	Fluoran	Fluorene	1-Methyl	2-Methyl	Naphth	Phenan	Pyrene	Total	Cd	Cr	Lead	Nickel	Zinc
2015 Subsurface Investigation (Essel Environmental Consulting, Inc.)																													
ECB-1	9/24/15	S-12½-ECB1	12½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-15-ECB1	15	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-19½-ECB1	19½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-2	9/24/15	S-4½-ECB2	4½	<1.0	<1.0	5.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	9/24/15	S-9-ECB2	9	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	9/24/15	S-17-ECB2	17	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-19½-ECB2	19½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-3	9/24/15	S-4½-ECB3	4½	<1.0	1.1	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	9/24/15	S-9½-ECB3	9½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	9/24/15	S-15½-ECB3	15½	200	930	310	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-18½-ECB3	18½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-4	9/24/15	S-4½-ECB4	4½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-9-ECB4	9	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-13-ECB4	13	400	940	310	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-17½-ECB4	17½	<1.0	1.3	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-5	9/24/15	S-4-ECB5	4	2.1	1.7	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	9/24/15	S-8-ECB5	8	130	12	<5.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	9/24/15	S-14½-ECB5	14½	95	3.9	<5.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-18-ECB5	18	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-6	9/24/15	S-13-ECB6	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-7	9/25/15	S-4½-ECB7	4½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	9/25/15	S-9½-ECB7	9½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
ECB-8	9/25/15	S-13-ECB8	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-9	9/25/15	S-13-ECB9	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-10	9/25/15	S-13-ECB10	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/25/15	S-14½-ECB10	14½	360	210	1,600	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-11	9/24/15	S-13-ECB11	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-12	9/25/15	S-13-ECB12	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-13	9/24/15	S-13-ECB13	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-14	9/24/15	S-13-ECB14	13	<1.0	2.5	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/24/15	S-18½-ECB14	18½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
SFBRWQCB Environmental Screening Level (Residential)																													
Tier 1				**100**	**230**	**5,100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**0.023**	**NA**	**NA**	**NA**	**NA**	**NA**	**60**	**8.9**	**NA**	**0.25**	**0.023**	**11**	**85**	**0.25**	**39**	**NA**	**80**	**83**	**23,000**
Human Health (direct exposure)				**740**	**230**	**11,000**	**0.23**	**970**	**5.1**	**560**	**42**	**1.8**	**NA**	**NA**	**NA**	**NA**	**NA**	**2,400**	**2,400**	**NA**	**240**	**1.8**	**NA**	**1,800**	**0.25**	**39**	**NA**	**80**	**820**	**23,000**

TABLE 1
Concentrations of Organic Compounds in Soil Samples
Properties at 760 22nd Street and 2201 Brush Street, Oakland, California

Location	Date Sampled	Sample Designation	Sample Depth (feet)	Total Petroleum Hydrocarbons			Volatile Organic Compounds										Polynuclear Aromatic Hydrocarbons							PCBs	Metals				
				Gasoline	Diesel	Motor Oil	B	T	E	X	MTBE	Naphth	n-Butyl	s-Butyl	n-Propyl	1,2,4-TMB	1,3,5-TMB	Fluoran	Fluorene	1-Methyl	2-Methyl	Naphth	Phenan	Pyrene	Total	Cd	Cr	Lead	Nickel	Zinc
2016 Subsurface Investigation (Essel Environmental Consulting, Inc.)																													
Borings at Geophysical Anomaly																													
ECB-15	2/16/16	S-4-ECB15	4	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.25	60	5.1	49	29
	2/16/16	S-9½-ECB15	9½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.25	52	4.5	68	32
	2/16/16	S-12½-ECB15	12½	790	2,300	16,000	<1.0	<1.0	<1.0	2.5	<1.0	15	1.9	<1.0	1.6	18	4.5	<0.50	<0.50	2.8	1.3	5.2	0.52	<0.50	--	--	--	--	--	--
	2/16/16	S-18-ECB15	18	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-16	2/16/16	S-13-ECB16	13	700	730	5,200	<1.0	<1.0	<1.0	2.6	<1.0	7.6	<1.0	<1.0	<1.0	7.4	1.9	<0.20	<0.20	1.7	3.1	2.7	0.33	0.22	--	--	--	--	--	--
	2/16/16	S-16½-ECB16	16½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-17	2/16/16	S-13½-ECB17	13½	1,100	1,200	8,800	<1.0	<1.0	<1.0	1.5	<1.0	4.9	1.6	<0.0050	1.3	13	2.6	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/16	S-15-ECB17	15	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-18	2/16/16	S-3-ECB18	3	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/16	S-9½-ECB18	9½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/16	S-13-ECB18	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-19	2/16/16	S-14½-ECB19	14½	44	56	430	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.026	0.067	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	2/16/16	S-17-ECB19	17	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-20	2/16/16	S-13-ECB20	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
Soil Vapor Well Borings																													
B-SV1	2/15/16	S-4-BSV1	4	42	7.1	<5.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.22	<0.10	0.15	<0.10	<0.10	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/15/16	S-13-BSV1	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
B-SV2	2/15/16	S-12-BSV2	12	9.5	1.7	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
B-SV3	2/15/16	S-13-BSV3	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/15/16	S-16-BSV3	16	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
B-SV4	2/15/16	S-13-BSV4	13	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/15/16	S-16-BSV4	16	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
B-SV5	2/15/16	S-12-BSV5	12	21	73	31	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.011	0.013	0.0076	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/15/16	S-15-BSV5	15	150	190	48	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.059	<0.050	0.079	<0.050	<0.050	0.058	0.068	<0.050	<0.050	<0.050	0.23	0.079	--	--	--	--	--	--
B-SV6	2/15/16	S-8½-BSV6	8½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/15/16	S-11½-BSV6	11½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
B-SV7	2/15/16	S-5½-BSV7	5½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
		S-10½-BSV7	10½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
Oil Changing Pit - Hand Auger Borings																													
HA-1	2/23/16	S-1-HA1	1 (6)#	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.25	55	5.9	87	38
	2/23/16	S-3-HA1	3 (8#)	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
HA-2	2/23/16	S-1-HA2	1 (6)#	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.25	77	7.3	110	52
	2/23/16	S-3½-HA2	3½ (8½)#	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
HA-3	2/23/16	S-1-HA3	1 (6)#	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.25	65	6.6	92	58
	2/23/16	S-3-HA3	3 (8)#	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
Off-Site Borings																													
ECB-21	6/16/16	S-11½-ECB21	11½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/16	S-13½-ECB21	13½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
	6/16/16	S-16½-ECB21	16½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
ECB-22	6/16/16	S-10½-ECB22	10½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/16	S-12½-ECB22	12½	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.060	<0.010	<0.010	<0.010	<0.010	0.052	0.061	--	--	--	--	--	--
																		Anthracene	**Benzo(a)A**	**Benzo(a)P**	**Benzo(b)F**	**Benzo(g,h,i)P**	**Benzo(k)F**	**Chrysene**	**Indeno(cd)P**					
																		0.014	0.028	0.039	0.060	0.040	0.024	0.044	0.027					
																	Tier 1	**2.8**	**0.16**	**0.016**	**0.16**	**2.5**	**1.6**	**3.8**	**0.16**					
	6/16/16	S-15-ECB22	15	<1.0	<1.0	<5.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	--	--	--	--	--
SFBRWQCB Environmental Screening Level (Residential)																													
Tier 1				**100**	**230**	**5,100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**0.023**	**NA**	**NA**	**NA**	**NA**	**NA**	**60**	**8.9**	**NA**	**0.25**	**0.023**	**11**	**85**	**0.25**	**39**	**NA**	**80**	**83**	**23,000**
Human Health (direct exposure)				**740**	**230**	**11,000**	**0.23**	**970**	**5.1**	**560**	**42**	**1.8**	**NA**	**NA**	**NA**	**NA**	**NA**	**2,400**	**2,400**	**NA**	**240**	**1.8**	**NA**	**1,800**	**0.25**	**39**	**NA**	**80**	**820**	**23,000**

Analytical results and screening levels are in milligrams per kilogram = parts per million.
Detectable concentrations are shaded gray. Detectable concentrations that are greater than the applicable and most stringent soil screening levels are shaded yellow.

BTEX = benzene, toluene, ethylbenzene, total xylenes
MTBE = methyl tertiary butyl ether
Naphth = naphthalene
n-Butyl = n-Butyl benzene
s-Butyl = sec-Butyl benzene
n-Propyl = n-Propyl benzene
1,2,4-TMB = 1,2,4-Trimethylbenzene
1,3,5-TMB = 1,3,5-Trimethylbenzene
Fluoran = Fluoranthene
1-Methyl = 1-Methylnaphthalene
2-Methyl = 2-Methylnaphthalene
Phenan = Phenanthrene
Cd = Cadmium
Cr = Chromium
Benzo(a)A = Benzo (a) anthracene
Benzo(a)P = Benzo (a) pyrene
Benzo(b)F = Benzo (b) fluoranthene
Benzo(g,h,i)P = Benzo (g,h,i) perylene
Benzo(k)F = Benzo (k) fluoranthene
Indeno(cd)P = Indeno (1,2,3-cd) pyrene

< = less than
-- = not analyzed
NA = screening level not available.
# = first number is depth below the bottom of the concrete; the number in parentheses is the depth below the ground surface
SFBRWQCB = San Francisco Bay Regional Water Quality Control Board
Environmental screening levels for residential land use taken from SFBRWQCB Environmental Screening Levels, February 2016.

TABLE 2
Concentrations of Organic Compounds in Ground-Water Samples
Properties at 760 22nd Street and 2201 Brush Street, Oakland, California

	PES Environmental, Inc.				Essel Environmental Consulting									MCL	ESL	ESL VI
Boring	B-1	B-2	B-5	B-6	ECB-1	ECB-2	ECB-3	ECB-4	ECB-5	ECB-6	ECB-7	ECB-8	ECB-9			
Sample Number	B-1	B-2	B-5	B-6	W-ECB1	W-ECB2	W-ECB3	W-ECB4	W-ECB5	W-ECB6	W-ECB7	W-ECB8	W-ECB9			
Date Sampled	9/8/05	9/8/05	9/8/05	9/8/05	9/25/15	9/25/15	9/24/15	9/24/15	9/25/15	9/25/15	9/25/15	9/25/15	9/25/15			
Analyte																
Petroleum Hydrocarbons																
TPH-gas	<50	<50	<50	<50	<50	330	710	1,200	430	<50	<50	<50	<50	**NA**	**100**	**No Value**
TPH-diesel	360	3,200	530	170	<50	4,900	24,000	3,100	100	<50	<50	<50	<50	**NA**	**100**	**No Value**
TPH-motor oil	190	<100	490	230	<250	1,700	7,300	780	<250	<250	<250	<250	<250	**NA**	**100**	**No Value**
VOCs																
Benzene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**1.0**	**1.0**	**30**
Toluene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**150**	**40**	**10,000**
Ethylbenzene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**300**	**13**	**370**
Xylenes	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.56	<0.50	<0.50	<0.50	<0.50	**1,750**	**20**	**38,000**
Methyl tertiary butyl ether	0.61	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**13**	**5.0**	**15,000**
tert-Butyl alcohol	--	--	--	--	3.9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**NA**	**12**	**No Value**
Naphthalene	--	--	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**0.12**	**180**
Acetone	--	--	--	--	92	42	18	<10	12	<10	14	25	27	**NA**	**1,500**	**140,000,000**
Bromomethane	--	--	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.59	<0.50	<0.50	**NA**	**7.5**	**NA**
2-Butanone (MEK)	--	--	--	--	11	6.6	<2.0	<2.0	3.6	<2.0	3.8	4.7	4.9	**NA**	**5,600**	**22,000,000**
n-Butyl benzene	--	--	--	--	<0.50	<0.50	0.91	1.4	0.92	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
sec-Butyl benzene	--	--	--	--	<0.50	<0.50	1.4	2.0	1.4	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
tert-Butyl benzene	--	--	--	--	<0.50	<0.50	<0.50	0.71	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
2-Hexanone	--	--	--	--	2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
Isopropylbenzene	--	--	--	--	<0.50	<0.50	<0.50	2.0	1.1	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
4-Isopropyl toluene	--	--	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
4-Methyl-2-pentanone (MIBK)	--	--	--	--	<0.50	0.78	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**120**	**11,000,000**
n-Propyl benzene	--	--	--	--	<0.50	<0.50	0.67	1.8	1.3	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
1,2,4-Trimethylbenzene	--	--	--	--	<0.50	<0.50	<0.50	<0.50	0.62	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
1,3,5-Trimethylbenzene	--	--	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
cis -1,2-Dichloroethene	--	--	--	--	<0.50	<0.50	<0.50	1.0	<0.50	<0.50	<0.50	<0.50	<0.50	**6.0**	**6.0**	**15,000**
Vinyl chloride	--	--	--	--	<0.50	<0.50	<0.50	0.67	<0.50	<0.50	<0.50	<0.50	<0.50	**0.5**	**0.061**	**2.0**
PAHs																
Acenaphthene	--	--	--	--	--	<0.50	1.9	--	<0.50	--	<0.50	<0.50	--	**NA**	**20**	**No Value**
1-Methylnaphthalene	--	--	--	--	--	<0.50	<0.50	--	<0.50	--	<0.50	<0.50	--	**NA**	**NA**	**NA**
2-Methylnaphthalene	--	--	--	--	--	<0.50	<0.50	--	<0.50	--	<0.50	<0.50	--	**NA**	**2.1**	**NA**
Naphthalene	--	--	--	--	--	<0.50	<0.50	--	<0.50	--	<0.50	<0.50	--	**NA**	**0.12**	**180**
Phenanthrene	--	--	--	--	--	<0.50	3.3	--	<0.50	--	<0.50	<0.50	--	**NA**	**4.6**	**No Value**
Polychlorinated Biphenyls																
Aroclors (individual)	--	--	--	--	--	--	--	--	--	--	--	--	--	**NA**	**NA**	**NA**
Total PCBs	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.50**	**0.0019**	**No Value**

See Notes on Page 2 of 2.

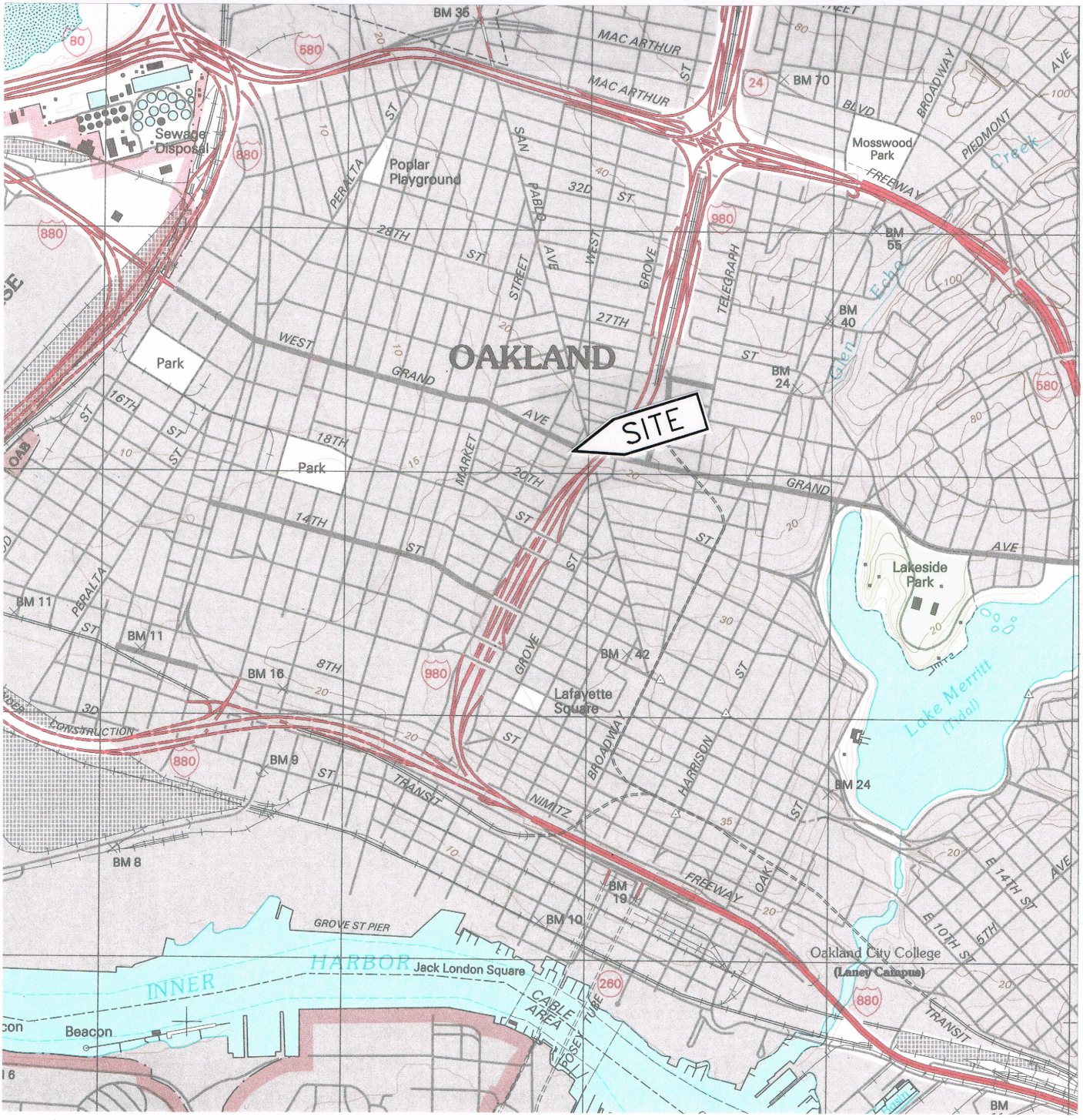
TABLE 2
Concentrations of Organic Compounds in Ground-Water Samples
Properties at 760 22nd Street and 2201 Brush Street, Oakland, California

	Essel Environmental Consulting													MCL	ESL	ESL VI
Boring	ECB-10	ECB-11	ECB-12	ECB-13	ECB-14	ECB-15	ECB-16	ECB-17	ECB-18	ECB-19	ECB-20	ECB-21	ECB-22			
Sample Number	W-ECB10	W-ECB11	W-ECB12	W-ECB13	W-ECB14	W-ECB15	W-ECB16	W-ECB17	W-ECB18	W-ECB19	W-ECB20	W-ECB21	W-ECB22			
Date Sampled	9/25/15	9/25/15	9/25/15	9/24/15	9/24/15	2/16/16	2/16/16	2/16/16	2/16/16	2/16/16	2/16/16	6/16/16	6/16/16			
Analyte																
Petroleum Hydrocarbons																
TPH-gas	98	<50	<50	<50	<50	120	850	550	<50	140	<50	<50	--	**NA**	**100**	**No Value**
TPH-diesel	3,100	<50	<50	<50	56	3,400	870	780	<50	310	<100	44	--	**NA**	**100**	**No Value**
TPH-motor oil	17,000	<250	<250	<250	<250	24,000	6,300	4,800	<250	2,000	<500	<75	--	**NA**	**100**	**No Value**
VOCs																
Benzene	<0.50	<0.50	<0.50	<0.50	<0.50	0.54	7.2	<1.2	<0.50	<0.50	<0.50	<0.50	<0.50	**1.0**	**1.0**	**30**
Toluene	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	<5.0	2.4	<0.50	0.58	<0.50	<0.50	<0.50	**150**	**40**	**10,000**
Ethylbenzene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	2.1	<0.50	<0.50	<0.50	<0.50	<0.50	**300**	**13**	**370**
Xylenes	<0.50	<0.50	<0.50	<0.50	<0.50	4.6	28	24	<0.50	<0.50	<0.50	<0.50	<0.50	**1,750**	**20**	**38,000**
Methyl tertiary butyl ether	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.2	<0.50	<0.50	<0.50	<0.50	<0.50	**13**	**5.0**	**15,000**
tert-Butyl alcohol	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<20	<5.0	<2.0	<2.0	3.0	<2.0	<2.0	**NA**	**12**	**No Value**
Naphthalene	<0.50	<0.50	<0.50	<0.50	<0.50	6.1	25	31	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**0.12**	**180**
Acetone	19	<10	<10	11	<10	<10	<100	<25	<10	<10	<10	<10	<10	**NA**	**1,500**	**140,000,000**
Bromomethane	<0.50	0.67	<0.50	<0.50	<0.50	<0.50	<5.0	<1.2	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**7.5**	**NA**
2-Butanone (MEK)	4.8	2.6	2.2	2.8	<2.0	<2.0	<20	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	**NA**	**5,600**	**22,000,000**
n-Butyl benzene	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	<5.0	6.0	<0.50	0.67	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
sec-Butyl benzene	0.67	<0.50	<0.50	<0.50	<0.50	0.63	<5.0	3.1	<0.50	1.3	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
tert-Butyl benzene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.2	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
2-Hexanone	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.2	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
Isopropylbenzene	<0.50	<0.50	<0.50	<0.50	<0.50	0.95	<5.0	4.4	<0.50	0.83	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
4-Isopropyl toluene	<0.50	<0.50	0.99	<0.50	<0.50	1.9	7.1	9.2	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
4-Methyl-2-pentanone (MIBK)	0.99	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.2	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**120**	**11,000,000**
n-Propyl benzene	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	6.0	7.3	<0.50	0.56	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
1,2,4-Trimethylbenzene	<0.50	<0.50	<0.50	<0.50	<0.50	19	78	96	<0.50	0.69	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
1,3,5-Trimethylbenzene	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	9.9	16	<0.50	<0.50	<0.50	<0.50	<0.50	**NA**	**NA**	**NA**
cis -1,2-Dichloroethene	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.2	<0.50	<0.50	<0.50	<0.50	<0.50	**6.0**	**6.0**	**15,000**
Vinyl chloride	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<1.2	<0.50	<0.50	<0.50	<0.50	<0.50	**0.5**	**0.061**	**2.0**
PAHs																
Acenaphthene	<0.50	--	<0.50	--	--	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.50	<0.50	**NA**	**20**	**No Value**
1-Methylnaphthalene	0.57	--	<0.50	--	--	15	52	15	<5.0	<5.0	<5.0	<0.50	<0.50	**NA**	**NA**	**NA**
2-Methylnaphthalene	<0.50	--	<0.50	--	--	19	60	<5.0	<5.0	<5.0	<5.0	<0.50	<0.50	**NA**	**2.1**	**NA**
Naphthalene	<0.50	--	<0.50	--	--	36	89	38	<5.0	<5.0	<5.0	<0.50	<0.50	**NA**	**0.12**	**180**
Phenanthrene	<0.50	--	<0.50	--	--	<5.0	6.1	<5.0	<5.0	<5.0	<5.0	<0.50	<0.50	**NA**	**4.6**	**No Value**
Polychlorinated Biphenyls																
Aroclors (individual)	--	--	--	--	--	<25	<25	--	--	<25	--	--	--	**NA**	**NA**	**NA**
Total PCBs	--	--	--	--	--	<25	<25	--	--	<25	--	--	--	**0.50**	**0.0019**	**No Value**

Results and health-risk screening levels are in micrograms per liter = parts per billion.
Detectable concentrations are shaded gray.
Detectable concentrations that are greater than an applicable health-risk standard are shaded yellow.
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds
PAHs - polynuclear aromatic hydrocarbons
MCL = California Maximum Contaminant Level taken from California Department of Public Health website, updated September 23, 2015
ESL = Environmental Screening Level
ESL VI = Environmental Screening Level for evaluation of the potential for vapor intrusion at residential properties underlain by mixed fine- and coarse-grained sediment.
< = less than
-- = not analyzed
NA = not available
Environmental screening levels for drinking water and vapor intrusion risk are taken from San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, February 2016.

TABLE 3
Ground-Water Data
Properties at 760 22nd Street and 2201 Brush Street, Oakland, California

Boring	Date	Depth of Boring (feet below ground surface)	Depth to Water (feet below ground surface)	Free Phase Product (feet)
ECB-1	9/25/15	20	16.2	0.0
ECB-2	9/25/15	20	14.24	0.0
ECB-3	9/24/15	20	14.34	0.0
ECB-4	9/24/15	20	14.3	0.0
ECB-5	9/25/15	20	14.61	0.0
ECB-6	9/25/15	20	14.1	0.0
ECB-7	9/25/15	20.8	20.19	0.0
ECB-8	9/25/15	20	17.26	0.0
ECB-9	9/25/15	20	17.95	0.0
ECB-10	9/25/15	20	14.4	0.0
ECB-11	9/25/15	17	14.29	0.0
ECB-12	9/25/15	20	13.69	0.0
ECB-13	9/24/15	20	19.85	0.0
ECB-14	9/24/15	20	12.41	0.0
ECB-15	2/16/16	20	12.97	0.0
ECB-16	2/16/16	20	12.95	0.0
ECB-17	2/16/16	20	12.96	0.0
ECB-18	2/16/16	20	12.99	0.0
ECB-19	2/16/16	20	13.25	0.0
ECB-20	2/16/16	20	12.8	0.0
ECB-21	6/16/16	20	13.05	0.0
ECB-22	6/16/16	16	12.8	0.0



Scale: 0 2000 feet 4000 feet

Source: USGS 7 1/2–Minute Quadrangle, Oakland West, California 1993

PROJECT NO.	DRAWN BY	REPORT DATE
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Site Vicinity Map

760 22nd Street and
2201 Brush Street
Oakland, California

PLATE 1

EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- SOIL BORING LOCATION (PES ENVIRONNMENTAL, INC., 2005)
- SOIL BORING LOCATION (PES ENVIRONNMENTAL, INC., 2011)
- SOIL BORING LOCATION (ESSEL, 2015)
- SOIL BORING LOCATION (ESSEL, 2016)
- SOIL VAPOR WELL LOCATION (ESSEL, 2015, 2016)
- HAND AUGER LOCATION (ESSEL, 2016)
- FORMER UNDERGROUND STORAGE TANK
- D DIESEL
- G GASOLINE
- BUILDING FOOTPRINT
- LANDSCAPING

NOTES: UNDERGROUND STORAGE TANK LOCATIONS FROM HAGEMAN–SCHANK, INC. (1987)

ECB–7 ADVANCED 30 DEGREES FROM VERTICAL. DASHED LINE SHOWS TRACE OF BORING.

N

Approximate Scale

0 30 60

feet

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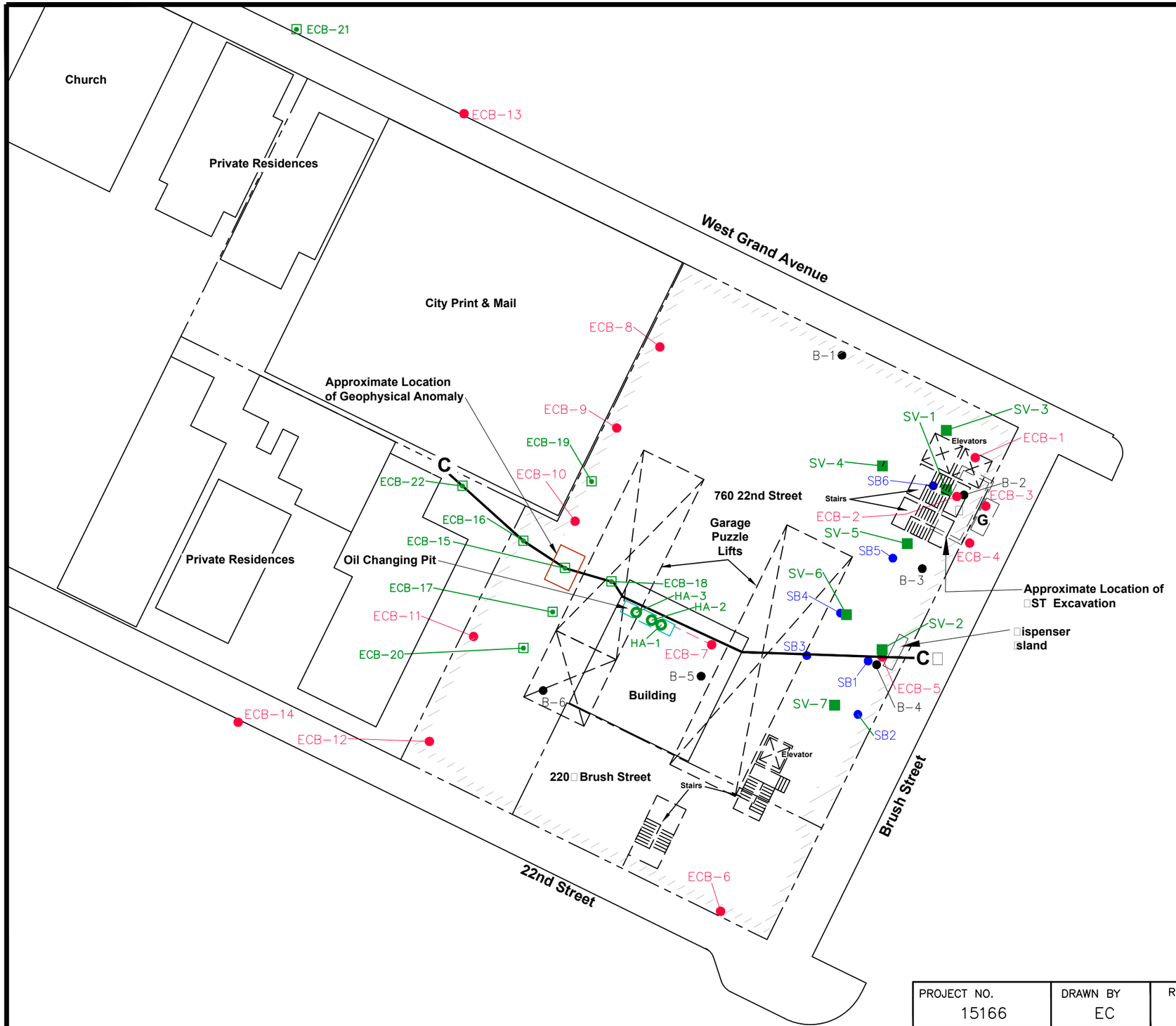
Site Plan and Future Ground Floor
760 22nd Street and
2201 Brush Street
Oakland, California

PLATE 2



EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- SOIL BORING LOCATION (PES ENVIRONNMENTAL, INC., 2005)
- SOIL BORING LOCATION (PES ENVIRONNMENTAL, INC., 2011)
- SOIL BORING LOCATION (ESSEL, 2015)
- SOIL BORING LOCATION (ESSEL, 2016)
- SOIL VAPOR WELL LOCATION (ESSEL, 2015, 2016)
- HAND AUGER LOCATION (ESSEL, 2016)
- FORMER UNDERGROUND STORAGE TANK
- D DIESEL
- G GASOLINE
- BUILDING FOOTPRINT
- C — C CROSS SECTION LOCATION

NOTES: UNDERGROUND STORAGE TANK LOCATIONS FROM HAGEMAN–SCHANK, INC. (1987)

ECB–7 ADVANCED 30 DEGREES FROM VERTICAL. DASHED LINE SHOWS TRACE OF BORING.

N

Approximate Scale

0 30 60

feet

PROJECT NO.	DRAWN BY	REPORT DATE
15166	EC	July 2016

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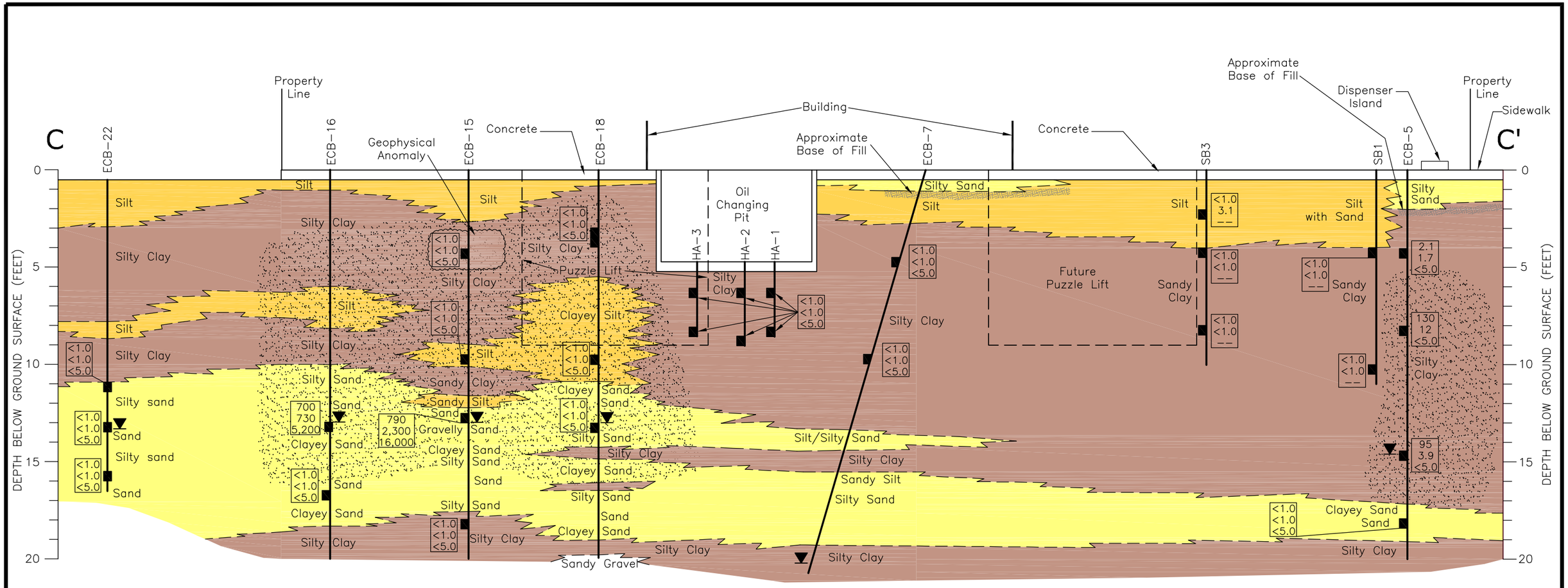
Location of Cross Section
760 22nd Street and
2201 Brush Street
Oakland, California

PLATE 3



EXPLANATION

- ■ SAMPLE LOCATION
- ▼ WATER LEVEL
- 790 / 2,300 / 16,000 — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE / DIESEL / MOTOR OIL
- TOTAL PETROLEUM HYDROCARBON CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM
- < LESS THAN
- –– NOT ANALYZED
- DISCOLORED SOIL

SEE PLATE 3 FOR LOCATION OF CROSS SECTION

Approximate Vertical Scale
0 5 10
feet

Approximate Horizontal Scale
0 5 10
feet

PROJECT NO.	DRAWN BY	REPORT DATE
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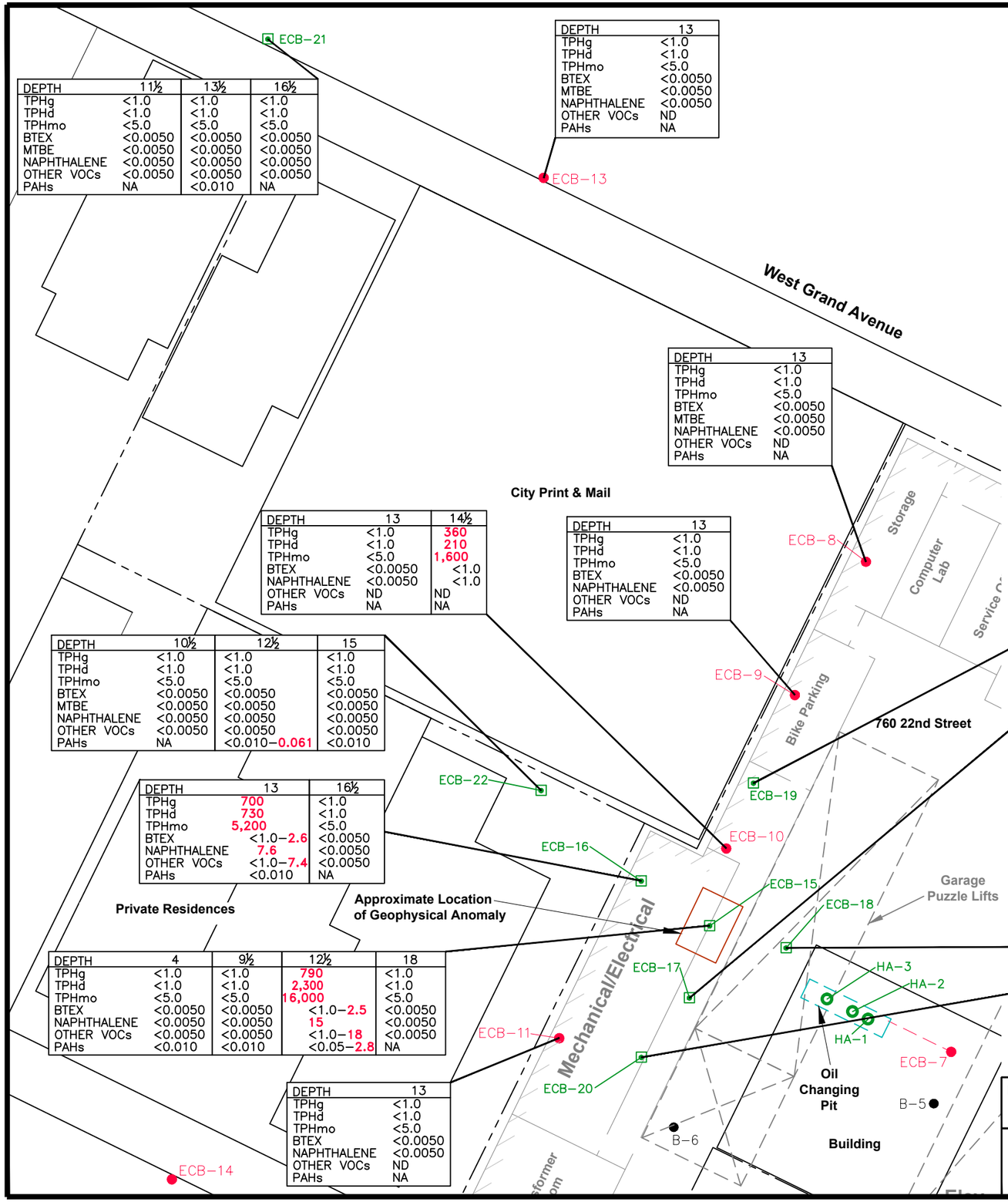
Cross Section C - C'

760 22nd Street and
2201 Brush Street
Oakland, California

PLATE 4



DEPTH	11½	13½	16½
TPHg	<1.0	<1.0	<1.0
TPHd	<1.0	<1.0	<1.0
TPHmo	<5.0	<5.0	<5.0
BTEX	<0.0050	<0.0050	<0.0050
MTBE	<0.0050	<0.0050	<0.0050
NAPHTHALENE	<0.0050	<0.0050	<0.0050
OTHER VOCs	<0.0050	<0.0050	<0.0050
PAHs	NA	<0.010	NA

DEPTH	13
TPHg	<1.0
TPHd	<1.0
TPHmo	<5.0
BTEX	<0.0050
MTBE	<0.0050
NAPHTHALENE	<0.0050
OTHER VOCs	ND
PAHs	NA

DEPTH	13
TPHg	<1.0
TPHd	<1.0
TPHmo	<5.0
BTEX	<0.0050
MTBE	<0.0050
NAPHTHALENE	<0.0050
OTHER VOCs	ND
PAHs	NA

DEPTH	13	14½
TPHg	<1.0	360
TPHd	<1.0	210
TPHmo	<5.0	1,600
BTEX	<0.0050	<1.0
NAPHTHALENE	<0.0050	<1.0
OTHER VOCs	ND	ND
PAHs	NA	NA

DEPTH	13
TPHg	<1.0
TPHd	<1.0
TPHmo	<5.0
BTEX	<0.0050
NAPHTHALENE	<0.0050
OTHER VOCs	ND
PAHs	NA

DEPTH	14½	17
TPHg	44	<1.0
TPHd	56	<1.0
TPHmo	430	<5.0
BTEX	<0.0050	<0.0050
NAPHTHALENE	<0.0050	<0.0050
OTHER VOCs	ND	ND–0.067
PAHs	<0.010	NA

DEPTH	10½	12½	15
TPHg	<1.0	<1.0	<1.0
TPHd	<1.0	<1.0	<1.0
TPHmo	<5.0	<5.0	<5.0
BTEX	<0.0050	<0.0050	<0.0050
MTBE	<0.0050	<0.0050	<0.0050
NAPHTHALENE	<0.0050	<0.0050	<0.0050
OTHER VOCs	<0.0050	<0.0050	<0.0050
PAHs	NA	<0.010–0.061	<0.010

DEPTH	13½	15
TPHg	1,100	<1.0
TPHd	1,200	<1.0
TPHmo	8,800	<5.0
BTEX	<1.0–1.5	<0.0050
NAPHTHALENE	4.9	<0.0050
OTHER VOCs	<1.0–13	ND
PAHs	NA	NA

DEPTH	13	16½
TPHg	700	<1.0
TPHd	730	<1.0
TPHmo	5,200	<5.0
BTEX	<1.0–2.6	<0.0050
NAPHTHALENE	7.6	<0.0050
OTHER VOCs	<1.0–7.4	<0.0050
PAHs	<0.010	NA

DEPTH	3	9½	13
TPHg	<1.0	<1.0	<1.0
TPHd	<1.0	<1.0	<1.0
TPHmo	<5.0	<5.0	<5.0
BTEX	<0.0050	<0.0050	<0.0050
NAPHTHALENE	<0.0050	<0.0050	<0.0050
OTHER VOCs	<0.0050	<0.0050	<0.0050
PAHs	NA	NA	NA

DEPTH	4	9½	12½	18
TPHg	<1.0	<1.0	790	<1.0
TPHd	<1.0	<1.0	2,300	<1.0
TPHmo	<5.0	<5.0	16,000	<5.0
BTEX	<0.0050	<0.0050	<1.0–2.5	<0.0050
NAPHTHALENE	<0.0050	<0.0050	15	<0.0050
OTHER VOCs	<0.0050	<0.0050	<1.0–18	<0.0050
PAHs	<0.010	<0.010	<0.05–2.8	NA

DEPTH	13
TPHg	<1.0
TPHd	<1.0
TPHmo	<5.0
BTEX	<0.0050
NAPHTHALENE	<0.0050
OTHER VOCs	ND
PAHs	NA

DEPTH	13
TPHg	<1.0
TPHd	<1.0
TPHmo	<5.0
BTEX	<0.0050
NAPHTHALENE	<0.0050
OTHER VOCs	ND
PAHs	NA

EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- SOIL BORING LOCATION (PES ENVIRONNMENTAL, INC., 2005)
- SOIL BORING LOCATION (ESSEL, 2015)
- SOIL BORING LOCATION (ESSEL, 2016)
- HAND AUGER LOCATION (ESSEL, 2016)
- BUILDING FOOTPRINT

CONCENTRATIONS ARE IN MILLIGRAMS PER KILOGRAM = PARTS PER MILLION

DEPTH	FEET BELOW GROUND SURFACE
TPHg	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
TPHd	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPHmo	TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES
VOCs	VOLATILE ORGANIC COMPOUNDS
PAHs	POLYNUCLEAR AROMATIC HYDROCARBONS
ND	NOT DETECTED
NA	NOT ANALYZED
<	LESS THAN

NOTE: ECB–7 ADVANCED 30 DEGREES FROM VERTICAL. DASHED LINE SHOWS TRACE OF BORING.

N

Approximate Scale

0 20 40

feet

PROJECT NO.	DRAWN BY	REPORT DATE
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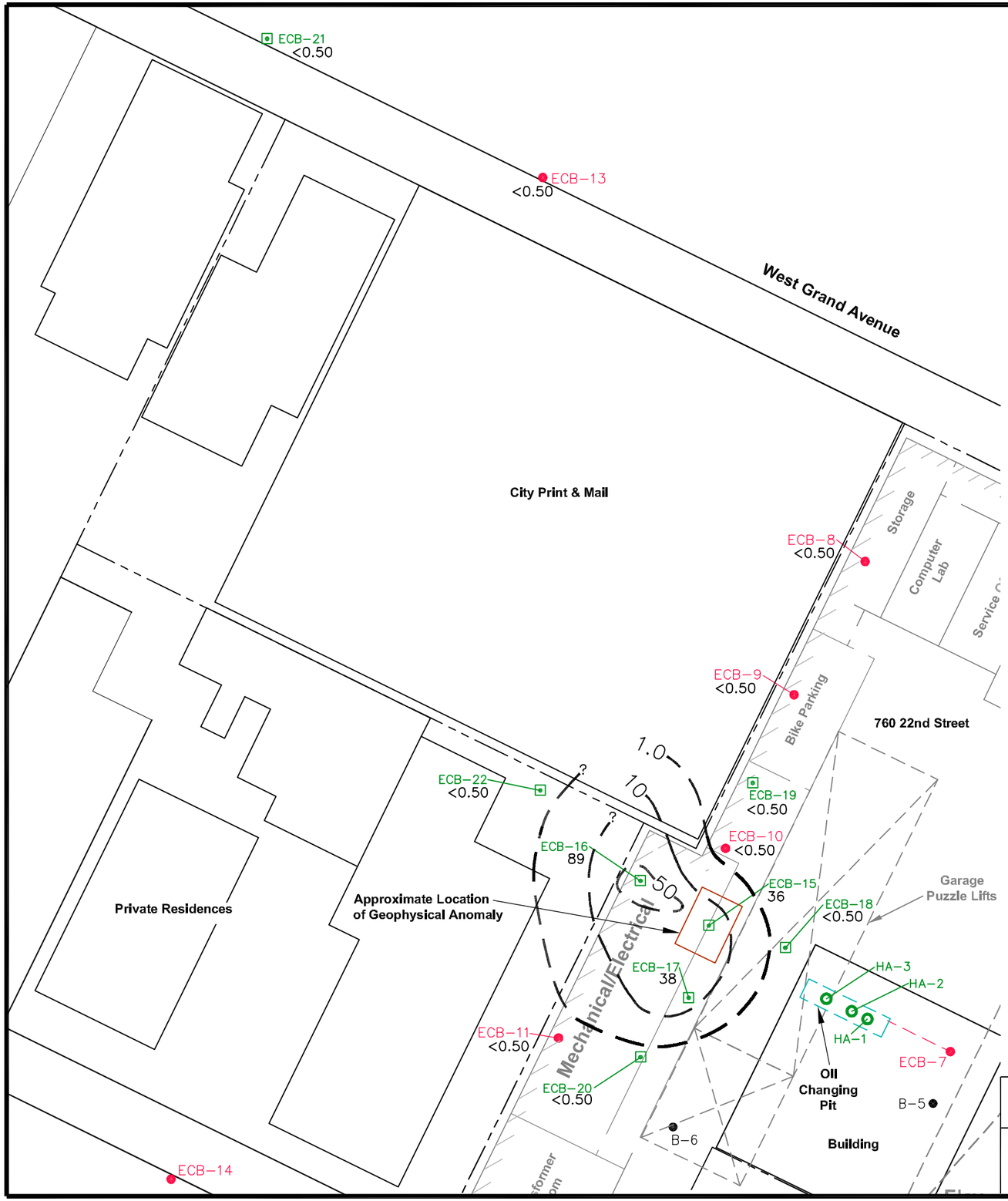
Organic Compounds in Soil

760 22nd Street and
2201 Brush Street
Oakland, California

PLATE 5



EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- SOIL BORING LOCATION (PES ENVIRONNMENTAL, INC., 2005)
- SOIL BORING LOCATION (ESSEL, 2015)
- SOIL BORING LOCATION (ESSEL, 2016)
- HAND AUGER LOCATION (ESSEL, 2016)
- BUILDING FOOTPRINT
- 50 — LINE OF EQUAL CONCENTRATION IN MICROGRAMS PER LITER = PARTS PER BILLION
- 89 CONCENTRATION IN MICROGRAMS PER LITER = PARTS PER BILLION
- < LESS THAN

NOTES: NAPHTHALENE CONCENTRATIONS OF SAMPLES COLLECTED ON FEBRUARY 16 AND JUNE 16, 2016

ECB-7 ADVANCED 30 DEGREES FROM VERTICAL. DASHED LINE SHOWS TRACE OF BORING.

N

Approximate Scale

0 20 40

feet

PROJECT NO.	DRAWN BY	REPORT DATE		PLATE
15166	EC	July 2016	Naphthalene in Ground Water	6

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760 22nd Street and
2201 Brush Street
Oakland, California

APPENDIX A

FIELD PROCEDURES

FIELD PROCEDURES

Permits and Utility Clearance

Essel submitted an application to advance the borings and install soil vapor wells to the Alameda County Public Works Agency (ACPWA) and the ACPWA issued Water Resources Well Permit Numbers W2016-0059 and W2016-0060 on June 15, 2016. Essel also submitted permit applications to the City of Oakland Planning and Building Department (Planning and Building Department) to advance boring ECB-21 on West Grand Avenue. The Planning and Building Department issued an obstruction permit and an excavation permit on June 13, 2016. Copies of the approved permits are included in Appendix B.

Essel marked the proposed boring locations and notified Underground Services Alert of Northern California and Nevada on June 13, 2016 of the planned drilling activities. This notification occurred more than 48 hours before drilling began. Essel also subcontracted with 1st Call Utility Locating (1st Call) of El Cerrito, California to clear boring locations with respect to subsurface utilities. On June 16, 2016, 1st Call used electromagnetic and ground-penetrating radar (GPR) equipment to identify potential subsurface utilities or other obstructions at the proposed boring locations.

Essel updated the existing site-specific Health and Safety Plan (Plan) before conducting fieldwork and this Plan was available at the site during field activities. Essel and subcontractor personnel were apprised of potential on-site hazards during a field orientation meeting that was conducted before field work began.

Drilling Borings and Sampling Soil

Field work to advance borings and collect soil and ground-water samples took place on June 16, 2016. PeneCore Drilling of Woodland, California (C-57 license number 906899) used a Geoprobe 7822DT, track-mounted, direct-push drill rig to advance boring ECB-21 and a Geoprobe 420M limited access direct-push drill rig to advance boring ECB-22. The two vertical borings were advanced to depths of 20 and 16 feet below the ground surface, respectively. Drilling equipment was decontaminated (i.e., steam cleaned) between boring locations to avoid potential cross-contamination of samples.

Continuous soil cores were collected from the borings using a 2½-inch-outside-diameter, hollow steel rod fitted with 1½-inch-outside-diameter by 3- to 5-foot-long, clear plastic sleeves. The plastic sleeve was removed from the core barrel after each sampling interval and replaced with a clean plastic sleeve for the next lower sampling interval. Soil cores contained in the plastic sleeves were cut into 1- to 2-foot lengths for field screening for contaminants, identifying and describing sediments, and selecting samples for laboratory analysis. Samples retrieved from the borings were screened for potential contaminants using a photoionization detector, through visual observation of the soil for discoloration, and noting any odors in the soil.

Essel retained three soil samples from each boring for laboratory analysis. A minimum 6-inch-long section of the plastic sleeve was cut at the selected sample depth and the ends of the sleeve were covered with Teflon sheets, sealed with plastic caps, and wrapped with duct tape. Each sample was then labeled and placed on ice in a cooler pending delivery to the laboratory. Essel prepared a Chain-of-Custody form for the soil samples and this form accompanied the samples to the laboratory. A copy of the Chain-of-Custody form is included in Appendix D.

Sampling Ground Water

Water samples were collected from borings ECB-21 and ECB-22 through ¾-inch-diameter polyvinyl chloride (PVC) casings that were placed in the boreholes. Before sampling, the depth to any free-phase petroleum product and the depth to ground water were measured through the temporary casings using an electronic oil-water interface probe. The water sample from boring ECB-21 was collected through ¼-inch-diameter polyethylene tubing, which was inserted into the PVC casing and attached to a peristaltic pump. Because of the limited volume of water available, a small-diameter clean bailer was used to collect the water sample from boring ECB-22. The water samples were placed into 40-milliliter clear glass vials containing hydrochloric acid as a preservative, 40-milliliter amber glass vials that contained no preserving solution, and 1-liter amber glass bottles that also contained no preserving solution. The sample containers were filled completely to eliminate air bubbles and were sealed with Teflon-lined caps, labeled, and placed on ice in a closed cooler. Essel completed a Chain-of-Custody form for the water samples and this form accompanied the samples to the laboratory. A copy of the Chain-of-Custody form is included in Appendix D.

After drilling and sampling, the boreholes for ECB-21 and ECB-22 were backfilled with neat cement slurry from the total depths to the ground surface. A 1-inch-diameter PVC pipe was used as a tremie during backfill operations. A representative of the ACPWA was present to observe backfilling of ECB-21 and confirm the procedure conformed to the requirements of the drilling permit.

APPENDIX B

DRILLING PERMITS

Alameda County Public Works Agency - Water Resources Well Permit

Public Works Agency
Alameda County

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

Application Approved on: 06/15/2016 By jamesy

Permit Numbers: W2016-0420
Permits Valid from 06/16/2016 to 06/16/2016

Application Id: 1465952354094 **City of Project Site:** Oakland
Site Location: 762 22nd Street, Oakland and W. Grand Avenue (Street) @ 783 W. Grand Ave
Exploratory Boring- Backyard
Subsurface Investigation: Fuel Leak Case# RO3153-Bekins 760 22nd Street
Start 06/16
Project Start Date: 06/16/2016 **Completion Date:** 06/16/2016
Assigned Inspector: Contact Lindsay Furuyama at (925) 956-2311 or Lfuruyama@groundzonees.com

Applicant: Essel Environmental Consulting - Hugo Mendoza
351 California Street, Suite 615, San Francisco, CA 94104 **Phone:** 415-960-9528

Property Owner: Smith Frederick
3924 Gardenia Place, Oakland, CA 94605 **Phone:** --

Client: EBALDC EBALDC
1825 San Pablo, Suite 200, Oakland, CA 94612 **Phone:** --

	Total Due:	$265.00
Receipt Number: WR2016-0292	**Total Amount Paid:**	$265.00
Payer Name : Sagnik Lahiri	Paid By: VISA	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 2 Boreholes
Driller: Penecore Drilling, Inc. - Lic #: 906899 - Method: DP **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2016-0420	06/15/2016	09/14/2016	2	2.50 in.	25.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

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

4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters

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

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

7. NOTE:
Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

Permits for which no major inspection has been approved within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

FIELD COPY

CITY OF OAKLAND

250 FRANK H. OGAWA PLAZA • 2ND FLOOR • OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

PH: 510-238-3891
FAX: 510-238-2263
TDD: 510-238-3254

Permit No: OB1600692 Obstruction **Filed Date:** 6/13/2016

Job Site: 2201 BRUSH ST **Schedule Inspection by calling:** 510-238-3444

Parcel No: 003 002501100

District:

Project Description: Reserve 1 NON-METERED parking space(s) in front of parcel at 783 West Grand Avenue - for drilling vehicle, equipment, or materials. Post No-parking signs 72 hours prior in residential areas. No impact on traffic lane or sidewalk allowed. No-parking signs picked up by applicant after payment, 4TH FLOOR. To Have Illegally Parked Vehicle Ticketed Call 510-777-3333. Applicant arranges towing. Comply with terms set forth in CVC Section 22651 (m). For Towed Vehicle: Call 510-238-3021.
RE: 1 Soil boring(s) on West Grand Ave. No impact on traffic lane or sidewalk allowed.

Related Permits: X1601235

	Name	Applicant	Address	Phone	License #
Owner:	WEST GRAND & BRUSH LLC		1825 SAN PABLO AVE OAKLAND, CA		
Contractor-Employee:	HUGO C MENDOZA	X	220 NORTH EAST ST WOODLAND, CA	(530) 661-3600	
Contractor:	T S A DRILLING INC		220 NORTH EAST ST WOODLAND, CA	(530) 661-3600	906899

PERMIT DETAILS: Building/Public Use/Activity/Obstructions

Work Information

Start Date: 06/16/2016
End Date: 06/16/2016

Obstruction Permit Type: Short Term (Max 14 Days)
Number of Meters (Metered Area):
Length Of Obstruction (Unmetered Area): 25

TOTAL FEES TO BE PAID AT FILING: $99.84

Application Fee	~~$70.00~~	Records Management Fee	$8.27	Short Term Permits	$17.00
Technology Enhancement Fee	$4.57				

Plans Checked By _____ Date _____ Permit Issued By BG Date 6/13/16

Finalized By _____ Date _____

Permits for which no major inspection has been approved within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.

CITY OF OAKLAND

FIELD COPY

250 FRANK H. OGAWA PLAZA ▪ 2ND FLOOR ▪ OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

PH: 510-238-3891
FAX: 510-238-2263
TDD: 510-238-3254

Permit No: X1601235 OPW - Excavation **Filed Date:** 6/13/2016

Job Site: 2201 BRUSH ST **Schedule Inspection by calling:** 510-238-3444

Parcel No: 003 002501100

District:

Project Description: 1 Soil boring(s) on West Grand Ave. No impact on traffic lane or sidewalk allowed. Ensure that environmental controls are in place to prevent dust/debris/waste water from contaminating environment. Do Not Cut Into Pavement Unless And Until Ready To Complete Project.
If working within 25' feet of a monument you must comply with State Law 8771, contact the Inspector prior to starting excavation: minimum $5,800.00 fine for non-compliance.
Comply with all terms of City of Oakland Public Works Standards, Street Excavation Rules, Revised March 2015 and City Council Ordinance No. 13300 C.M.S. Five day prior notice required for work lasting five days or less in business/commercial districts; 72 hour notice in residential districts. Ten day prior notice required for work lasting six days or more in all districts.
Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.
Contact: H. Mendoza 415 960-9528

Related Permits:

	Name	Applicant	Address	Phone	License #
Owner:	WEST GRAND & BRUSH LLC		1825 SAN PABLO AVE OAKLAND, CA		
Contractor-Employee:	HUGO C MENDOZA	X	220 NORTH EAST ST WOODLAND, CA	(530) 661-3600	
Contractor:	T S A DRILLING INC		220 NORTH EAST ST WOODLAND, CA	(530) 661-3600	906899

PERMIT DETAILS: Building/Public Infrastructure/Excavation/NA

General Information

Excavation Type: Private Party
Special Paving Detail Required:
Tree Removal Involved:
Date Street Last Resurfaced:
Holiday Restriction (Nov 1 - Jan 1):
Worker's Compensation Company Name:
Limited Operation Area (7AM-9AM) And (4PM-6PM):
Worker's Compensation Policy #:

Key Dates

Approximate Start Date:
Approximate End Date:

TOTAL FEES TO BE PAID AT FILING: $434.91

Application Fee	$70.00	Excavation - Private Party Type	$309.00	Records Management Fee	$36.01
Technology Enhancement Fee	$19.90				

Plans Checked By _____ Date _____ Permit Issued By BG Date 6/13/16

Finalized By _____ Date _____

City of Oakland

Planning and Building Department

250 Frank H. Ogawa Plaza
510-238-4774

844 Accela Permit	0.00	0.00
Permit Number: OB1600692		
Fee	70.00	70.00
Application Fee		
Fee	17.00	17.00
Short Term Permits		
Fee	4.57	4.57
Technology Enhancement Fee		
Fee	8.27	8.27
Records Management Fee		
844 Accela Permit	0.00	0.00
Permit Number: X1601235		
Fee	70.00	70.00
Application Fee		
Fee	309.00	309.00
Excavation - Private Party Type		
Fee	19.90	19.90
Technology Enhancement Fee		
Fee	36.01	36.01
Records Management Fee		

Payer Name: ESSEL TECHNOLOGY SERVICES, INC.

SubTotal:	534.75
Total:	534.75
Check Number : 2707	534.75

6/13/2016 15:56
#0629479 /77/24

Thank You

APPENDIX C

LOGS OF BORINGS

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		LTR	DESCRIPTION	MAJOR DIVISIONS		LTR	DESCRIPTION
Coarse-grained soils	Gravel and gravelly soils	GW	Well-graded gravels or gravel-sand mixtures, little or no fines	Fine-grained soils	Silts and clays LL<50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		GM	Silty gravels, gravel-sand-silt mixtures			OL	Organic silts and organic silt-clays of low plasticity
		GC	Clayey gravels, gravel-sand-clay mixtures		Silts and clays LL>50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils. Elastic silts
	Sand and sandy soils	SW	Well-graded sand or gravelly sands, little or no fines			CH	Inorganic clays of high plasticity, fat clays
		SP	Poorly-graded sands or gravelly sands, little or no fines			OH	Organic clays of medium to high plasticity, organic silts
		SM	Silty sands, sand-silt mixtures				
		SC	Clayey sands, sand-clay mixtures	Highly organic soils		PT	Peat and other highly organic soils

- Depth through which sampler is driven
- Relatively undisturbed sample retained for analysis
- No sample recovered
- Static water level observed in well
- Initial water level observed in boring
- PID — Photoionization Detector (readings in ppm)

- Sand pack
- Bentonite
- Neat cement
- Caved or backfilled native soil
- Blank PVC
- Machine-slotted PVC
- Concrete

BLOWS REPRESENT THE NUMBER OF BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH EACH 6 INCHES OF AN 18-INCH PENETRATION. THE INTERVAL LENGTH IS SHOWN WHERE LESS THAN 6 INCHES WAS PENETRATED WITH THE MAXIMUM 50 BLOWS.

DASHED LINES SEPARATING UNITS ON THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS AT THE BORING LOCATION AT THE TIME OF DRILLING ONLY.

NAMES AND NUMERICAL DESIGNATIONS OF COLORS ARE FROM THE ROCK-COLOR CHART (GEOLOGICAL SOCIETY OF AMERICA, 1984)

PERCENT BY WEIGHT DESIGNATION

TRACE	0-5 PERCENT
SOME	5-15 PERCENT
WITH	15-30 PERCENT
-Y (EX., SANDY)	30-45 PERCENT
AND	45-50 PERCENT

PROJECT NO.	DRAWN BY	REPORT DATE
15166	EC	July 2016

Essel Environmental Consulting
351 California Street, Suite 615
San Francisco, California 94104
1-800-595-7616

UNIFIED SOIL CLASSIFICATION SYSTEM AND SYMBOL KEY
760 22nd Street and
2201 Brush Street
Oakland, California

FIGURE
C-1

Total depth of boring:	20 feet	Casing diameter:	NA
Diameter of boring:	2 1/2 inches	Casing material:	NA
Date drilled:	06/16/16	Slot size:	NA
Drilling Company:	PeneCore Drilling	Sand size:	NA
Driller:	Sean	Blank casing from	NA to NA
Drilling method:	Direct push	Perforated casing from	NA to NA
Sample diameter:	1 1/4 inches	Annular seal from	NA to NA
Field Geologist:	Rodger Witham	Bentonite plug from	NA to NA
		Sand pack from	NA to NA

Depth	Sample No.	PID in PPM	USCS Code	Description	Well Const.
				Concrete.	
1		0.0	SW	Gravelly fine– to coarse–grained sand (FILL), trace silt, light olive gray (5Y 5/2) and dark yellowish–brown (10YR 4/2), damp	
			ML	Silt (FILL), some fine– to coarse–grained sand, dusky brown (5YR 2/2), damp.	
2		0.0	SP	Very fine– to fine–grained sand (FILL), dark yellowish–brown (10YR 4/2), damp.	
			CH	Silty clay (FILL), trace medium– to coarse–grained sand, trace gravel, brownish–black (5YR 2/1), medium bluish–gray (5B 5/1), and dark yellowish–brown (10YR 4/2) variegated, high plasticity, damp, trace red brick fragments.	
3		0.0			
			CH	Silty clay, trace fine– to medium–grained sand, dark yellowish–brown (10YR 4/2) with some dusky yellowish–brown (10YR 2/2) patches, damp, high plasticity, trace partly decayed plant material.	
4		0.0		Moderate yellowish–brown (10YR 5/4) at 4 feet, some dusky yellowish–brown (10YR 2/2) and dark yellowish–orange (10YR 6/6) staining along seams, with white (N9) decomposed coarse–grained sand and gravel clasts at 4 feet to 4 feet 7 inches.	
5		0.0	SM	Silty very fine– to fine–grained sand, trace medium– to coarse–grained sand, trace gravel, moderate yellowish–brown (10YR 5/4), trace dark yellowish–orange (10YR 6/6) staining around sand grains, as small patches, and along seams, trace dusky yellowish–brown (10YR 2/2) staining as small patches, moist.	
6		0.0			
			CH	Silty clay, trace fine–grained sand, pale yellowish–brown (10YR 6/2), moderately abundant dark yellowish–orange (10YR 6/6) staining, some dusky yellowish–brown (10YR 2/2) staining as small patches and irregular filaments, moist, high plasticity.	
7		0.0			
8		0.0		Light olive gray (5Y 6/1) mottling at 8 to 9 feet.	
9		0.0	ML	Silt, some very fine–grained sand, trace coarse–grained sand, trace clay, pale yellowish–brown (10YR 6/2), moderately abundant dark yellowish–orange (10YR 6/6) staining, some dusky yellowish–brown (10YR 2/2) staining as irregular patches, moist, low plasticity.	
				Silty very fine– to fine–grained sand, trace medium– to coarse–grained sand, trace gravel, light olive gray (5Y 6/1), moderately abundant dark yellowish–orange (10YR 6/6) staining, moist.	
10		0.0	SM	Fine–grained sand, some medium– to coarse–grained sand, trace silt, pale yellowish–brown (10YR 6/2), moderately abundant dark yellowish–orange (10YR 6/6) staining, very moist.	
			SP	Silty very fine– to fine–grained sand, trace medium– to coarse–grained sand, pale yellowish–brown (10YR 6/2) and medium light gray (N6) mottled, moderately abundant dark yellowish–orange (10YR 6/6) staining, very moist.	
		0.0	SM		

PROJECT NO.	DRAWN BY	REPORT DATE	LOG OF BORING ECB-21	FIGURE
15166	EC	July 2016	760 22nd Street and 2201 Brush Street Oakland, California	C-2

Essel Environmental Consulting
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San Francisco, California 94104
1–800–595–7616

Depth	Sample No.	PID in PPM	USCS Code	Description	Well Const.
12	S-11½	0.0	SM	Silty very fine- to fine-grained sand, trace medium- to coarse-grained sand, pale yellowish-brown (10YR 6/2) and medium light gray (N6) mottled, moderately abundant dark yellowish-orange (10YR 6/6) staining, very moist.	
13		0.0	SC	Clayey fine- to medium-grained sand, trace coarse-grained sand, trace gravel, pale yellowish-brown (10YR 6/2), moderately abundant dark yellowish-orange (10YR 6/6) staining, some irregular dusky yellowish-brown (10YR 2/2) patches, very moist. ▼ Medium bluish-gray (5B 5/1) mottling at 12 feet 7 inches to 12 feet 11 inches, no petroleum odor.	
14	S-13½	0.0	SC/SM	Very fine- to fine-grained sand, with clay and silt, trace medium- to coarse-grained sand, trace gravel, pale yellowish-brown (10YR 6/2), moderately abundant medium bluish-gray (5B 5/1) mottling, wet, no petroleum odor. Minor moderate reddish-brown (10R 4/6) staining at 14 feet. Abundant irregular moderate reddish-brown (10R 4/6) staining at 14 feet 6 inches to 14 feet 7 inches.	
15		0.0	SP	Very fine- to fine-grained sand, trace silt, pale yellowish-brown (10YR 6/2) with medium bluish-gray (5B 5/1) mottling to 14 feet 10 inches, wet. Pervasive dark yellowish-orange (10YR 6/6) staining at 14 feet 10 inches to 15 feet. Dark yellowish-brown (10YR 4/2) at 15 feet.	
16		0.0			
17	S-16½	0.0	SC	Clayey fine- to coarse-grained sand with gravel, dark yellowish-brown (10YR 4/2), moderately abundant moderate reddish-brown (10R 4/6) staining, wet.	
18		0.0			
19		0.0			
20		0.0	ML	Silt, some fine- to coarse-grained sand, some clay, trace gravel, dark yellowish-brown (10YR 4/2), moderately abundant dark yellowish-orange (10YR 6/6) staining, medium plasticity, wet.	
21				Total Depth = 20 feet. Ground water measured at 13.05 feet.	
22					
23					
24					

PROJECT NO.	DRAWN BY	REPORT DATE
15166	EC	July 2016

Essel Environmental Consulting
351 California Street, Suite 615
San Francisco, California 94104
1-800-595-7616

LOG OF BORING ECB-21

760 22nd Street and
2201 Brush Street
Oakland, California

FIGURE
C-3

Total depth of boring:	16 feet	Casing diameter:	NA
Diameter of boring:	2 1/2 inches	Casing material:	NA
Date drilled:	06/16/16	Slot size:	NA
Drilling Company:	PeneCore Drilling	Sand size:	NA
Driller:	Sean	Blank casing from	NA to NA
Drilling method:	Direct push	Perforated casing from	NA to NA
Sample diameter:	1 1/4 inches	Annular seal from	NA to NA
Field Geologist:	Rodger Witham	Bentonite plug from	NA to NA
		Sand pack from	NA to NA

Depth	Sample No.	PID in PPM	USCS Code	Description	Well Const.
				Hand auger and log cuttings from 0 to 5 feet.	
1			ML	Silt, trace fine– to coarse–grained sand, dusky yellowish–brown (10YR 2/2), moist, low plasticity.	
2					
3			CH	Silty clay, some fine– to coarse–grained sand, dusky yellowish–brown (10YR 2/2) and dark yellowish–brown (10YR 4/2) mottled, some irregular medium bluish–gray (5B 5/1) patches, moist, high plasticity, some partly decayed plant roots, no petroleum odor.	
4				Light olive gray (5Y 5/2) at 4 feet.	
5		0.0		Pale yellowish–brown (10YR 6/2) at 5 feet, trace fine– to coarse–grained sand, some minute patches of dusky yellowish–brown (10YR 2/2) decomposed plant material, trace dark yellowish–orange (10YR 6/6) and white (N9) weathered sand grains. White (N9) weathered gravel clasts at 5½ to 6 feet.	
6		0.0		Some small patches and specks of dusky yellowish–brown (10YR 2/2) and dark yellowish–orange (10YR 6/6) staining at 6 feet.	
7		0.0		Grades to:	
8		0.0	ML	Clayey silt, pale yellowish–brown (10YR 6/2), some irregular dark yellowish–orange (10YR 6/6) and dusky yellowish–brown (10YR 2/2) patches, streaks, and specks, moist, medium plasticity.	
9		0.0	CL	Silty clay, some fine– to medium–grained sand, light olive gray (5Y 5/2), moderately abundant dark yellowish–orange (10YR 6/6) staining, some small, dusky yellowish–brown (10YR 2/2) patches and streaks, moist, medium plasticity. Trace gravel clasts between 9 and 10 feet, pale yellowish–brown (10YR 6/2) and light olive gray (5Y 5/2) mottled, with dark yellowish–orange staining and dusky yellowish–brown patches and streaks as above.	
10		0.0			
	S–10½	0.0	SM	Silty very fine– to fine–grained sand, trace medium– to coarse–grained sand, trace clay, pale yellowish–brown (10YR 6/2) and light olive gray (5Y 5/2) mottled, some dark yellowish–orange (10YR 6/6) staining, very moist.	

PROJECT NO.	DRAWN BY	REPORT DATE	LOG OF BORING ECB-22	FIGURE
15166	EC	July 2016	760 22nd Street and 2201 Brush Street Oakland, California	C-4

Essel Environmental Consulting
351 California Street, Suite 615
San Francisco, California 94104
1–800–595–7616

Depth	Sample No.	PID in PPM	USCS Code	Description	Well Const.
12		0.0	SM	Silty very fine– to fine–grained sand, trace medium– to coarse–grained sand, trace clay, pale yellowish–brown (10YR 6/2) and light olive gray (5Y 5/2) mottled, very moist. With gravel at 11½ to 12 feet.	
13	S–12½	0.0	SP	Very fine– to fine–grained sand, trace silt, dusky yellowish–brown (10YR 2/2), wet.	
			SM	Silty very fine– to fine–grained sand, trace clay, light olive gray (5Y 5/2), some dark yellowish–orange (10YR 6/6) and dusky yellowish–brown (10YR 2/2) staining, wet.	
			SP	Fine– to medium–grained sand, trace gravel, dark yellowish–brown (10YR 4/2), wet.	
14		0.0	SM	Silty very fine– to fine–grained sand, light olive gray (5Y 5/2), some dusky yellowish–brown (10YR 2/2) and dark yellowish–orange (10YR 6/6) staining, wet. Pervasive dusky yellowish–brown (10YR 2/2) staining at 13 feet 7 inches to 13 feet 9 inches.	
15	S–15	0.0		Trace dusky yellowish–brown (10YR 2/2) and dark yellowish–orange (10YR 6/6) staining at 14 feet.	
16		0.0	SP	Very fine– to fine–grained sand, light olive gray (5Y 5/2), wet.	
				Total Depth = 16 feet. Ground water encountered at 12 feet 10 inches.	
17					
18					
19					
20					
21					
22					
23					
24					

PROJECT NO.	DRAWN BY	REPORT DATE
15166	EC	July 2016

Essel Environmental Consulting
351 California Street, Suite 615
San Francisco, California 94104
1–800–595–7616

LOG OF BORING ECB-22

760 22nd Street and
2201 Brush Street
Oakland, California

FIGURE C-5

APPENDIX D

CHAIN-OF-CUSTODY FORMS
AND
LABORATORY ANALYTICAL REPORTS

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1606747

Report Created for: Essel Environmental Consulting

351 California Street, Ste. 615
San Francisco, CA 94104

Project Contact: Nik Lahiri
Project P.O.:
Project Name: 15166; EBALDC

Project Received: 06/16/2016

Analytical Report reviewed & approved for release on 06/23/2016 by:

Angela Rydelius,
Laboratory Manager

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

Glossary of Terms & Qualifier Definitions

Client: Essel Environmental Consulting
Project: 15166; EBALDC
WorkOrder: 1606747

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-11½-ECB21	1606747-001A	Soil	06/16/2016 07:55	GC10	122408

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	06/19/2016 01:51
tert-Amyl methyl ether (TAME)	ND	0.0050	1	06/19/2016 01:51
Benzene	ND	0.0050	1	06/19/2016 01:51
Bromobenzene	ND	0.0050	1	06/19/2016 01:51
Bromochloromethane	ND	0.0050	1	06/19/2016 01:51
Bromodichloromethane	ND	0.0050	1	06/19/2016 01:51
Bromoform	ND	0.0050	1	06/19/2016 01:51
Bromomethane	ND	0.0050	1	06/19/2016 01:51
2-Butanone (MEK)	ND	0.020	1	06/19/2016 01:51
t-Butyl alcohol (TBA)	ND	0.050	1	06/19/2016 01:51
n-Butyl benzene	ND	0.0050	1	06/19/2016 01:51
sec-Butyl benzene	ND	0.0050	1	06/19/2016 01:51
tert-Butyl benzene	ND	0.0050	1	06/19/2016 01:51
Carbon Disulfide	ND	0.0050	1	06/19/2016 01:51
Carbon Tetrachloride	ND	0.0050	1	06/19/2016 01:51
Chlorobenzene	ND	0.0050	1	06/19/2016 01:51
Chloroethane	ND	0.0050	1	06/19/2016 01:51
Chloroform	ND	0.0050	1	06/19/2016 01:51
Chloromethane	ND	0.0050	1	06/19/2016 01:51
2-Chlorotoluene	ND	0.0050	1	06/19/2016 01:51
4-Chlorotoluene	ND	0.0050	1	06/19/2016 01:51
Dibromochloromethane	ND	0.0050	1	06/19/2016 01:51
1,2-Dibromo-3-chloropropane	ND	0.0040	1	06/19/2016 01:51
1,2-Dibromoethane (EDB)	ND	0.0040	1	06/19/2016 01:51
Dibromomethane	ND	0.0050	1	06/19/2016 01:51
1,2-Dichlorobenzene	ND	0.0050	1	06/19/2016 01:51
1,3-Dichlorobenzene	ND	0.0050	1	06/19/2016 01:51
1,4-Dichlorobenzene	ND	0.0050	1	06/19/2016 01:51
Dichlorodifluoromethane	ND	0.0050	1	06/19/2016 01:51
1,1-Dichloroethane	ND	0.0050	1	06/19/2016 01:51
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	06/19/2016 01:51
1,1-Dichloroethene	ND	0.0050	1	06/19/2016 01:51
cis-1,2-Dichloroethene	ND	0.0050	1	06/19/2016 01:51
trans-1,2-Dichloroethene	ND	0.0050	1	06/19/2016 01:51
1,2-Dichloropropane	ND	0.0050	1	06/19/2016 01:51
1,3-Dichloropropane	ND	0.0050	1	06/19/2016 01:51
2,2-Dichloropropane	ND	0.0050	1	06/19/2016 01:51

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-11½-ECB21	1606747-001A	Soil	06/16/2016 07:55	GC10	122408

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	06/19/2016 01:51
cis-1,3-Dichloropropene	ND	0.0050	1	06/19/2016 01:51
trans-1,3-Dichloropropene	ND	0.0050	1	06/19/2016 01:51
Diisopropyl ether (DIPE)	ND	0.0050	1	06/19/2016 01:51
Ethylbenzene	ND	0.0050	1	06/19/2016 01:51
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	06/19/2016 01:51
Freon 113	ND	0.0050	1	06/19/2016 01:51
Hexachlorobutadiene	ND	0.0050	1	06/19/2016 01:51
Hexachloroethane	ND	0.0050	1	06/19/2016 01:51
2-Hexanone	ND	0.0050	1	06/19/2016 01:51
Isopropylbenzene	ND	0.0050	1	06/19/2016 01:51
4-Isopropyl toluene	ND	0.0050	1	06/19/2016 01:51
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	06/19/2016 01:51
Methylene chloride	ND	0.0050	1	06/19/2016 01:51
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	06/19/2016 01:51
Naphthalene	ND	0.0050	1	06/19/2016 01:51
n-Propyl benzene	ND	0.0050	1	06/19/2016 01:51
Styrene	ND	0.0050	1	06/19/2016 01:51
1,1,1,2-Tetrachloroethane	ND	0.0050	1	06/19/2016 01:51
1,1,2,2-Tetrachloroethane	ND	0.0050	1	06/19/2016 01:51
Tetrachloroethene	ND	0.0050	1	06/19/2016 01:51
Toluene	ND	0.0050	1	06/19/2016 01:51
1,2,3-Trichlorobenzene	ND	0.0050	1	06/19/2016 01:51
1,2,4-Trichlorobenzene	ND	0.0050	1	06/19/2016 01:51
1,1,1-Trichloroethane	ND	0.0050	1	06/19/2016 01:51
1,1,2-Trichloroethane	ND	0.0050	1	06/19/2016 01:51
Trichloroethene	ND	0.0050	1	06/19/2016 01:51
Trichlorofluoromethane	ND	0.0050	1	06/19/2016 01:51
1,2,3-Trichloropropane	ND	0.0050	1	06/19/2016 01:51
1,2,4-Trimethylbenzene	ND	0.0050	1	06/19/2016 01:51
1,3,5-Trimethylbenzene	ND	0.0050	1	06/19/2016 01:51
Vinyl Chloride	ND	0.0050	1	06/19/2016 01:51
Xylenes, Total	ND	0.0050	1	06/19/2016 01:51

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-11½-ECB21	**1606747-001A**	**Soil**	**06/16/2016 07:55**	**GC10**	**122408**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	88	70-130		06/19/2016 01:51
Toluene-d8	106	70-130		06/19/2016 01:51
4-BFB	101	70-130		06/19/2016 01:51
Benzene-d6	88	60-140		06/19/2016 01:51
Ethylbenzene-d10	112	60-140		06/19/2016 01:51
1,2-DCB-d4	85	60-140		06/19/2016 01:51

Analyst(s): KF

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-13½-ECB21	1606747-002A	Soil	06/16/2016 08:02	GC10	122408

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	06/19/2016 02:36
tert-Amyl methyl ether (TAME)	ND	0.0050	1	06/19/2016 02:36
Benzene	ND	0.0050	1	06/19/2016 02:36
Bromobenzene	ND	0.0050	1	06/19/2016 02:36
Bromochloromethane	ND	0.0050	1	06/19/2016 02:36
Bromodichloromethane	ND	0.0050	1	06/19/2016 02:36
Bromoform	ND	0.0050	1	06/19/2016 02:36
Bromomethane	ND	0.0050	1	06/19/2016 02:36
2-Butanone (MEK)	ND	0.020	1	06/19/2016 02:36
t-Butyl alcohol (TBA)	ND	0.050	1	06/19/2016 02:36
n-Butyl benzene	ND	0.0050	1	06/19/2016 02:36
sec-Butyl benzene	ND	0.0050	1	06/19/2016 02:36
tert-Butyl benzene	ND	0.0050	1	06/19/2016 02:36
Carbon Disulfide	ND	0.0050	1	06/19/2016 02:36
Carbon Tetrachloride	ND	0.0050	1	06/19/2016 02:36
Chlorobenzene	ND	0.0050	1	06/19/2016 02:36
Chloroethane	ND	0.0050	1	06/19/2016 02:36
Chloroform	ND	0.0050	1	06/19/2016 02:36
Chloromethane	ND	0.0050	1	06/19/2016 02:36
2-Chlorotoluene	ND	0.0050	1	06/19/2016 02:36
4-Chlorotoluene	ND	0.0050	1	06/19/2016 02:36
Dibromochloromethane	ND	0.0050	1	06/19/2016 02:36
1,2-Dibromo-3-chloropropane	ND	0.0040	1	06/19/2016 02:36
1,2-Dibromoethane (EDB)	ND	0.0040	1	06/19/2016 02:36
Dibromomethane	ND	0.0050	1	06/19/2016 02:36
1,2-Dichlorobenzene	ND	0.0050	1	06/19/2016 02:36
1,3-Dichlorobenzene	ND	0.0050	1	06/19/2016 02:36
1,4-Dichlorobenzene	ND	0.0050	1	06/19/2016 02:36
Dichlorodifluoromethane	ND	0.0050	1	06/19/2016 02:36
1,1-Dichloroethane	ND	0.0050	1	06/19/2016 02:36
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	06/19/2016 02:36
1,1-Dichloroethene	ND	0.0050	1	06/19/2016 02:36
cis-1,2-Dichloroethene	ND	0.0050	1	06/19/2016 02:36
trans-1,2-Dichloroethene	ND	0.0050	1	06/19/2016 02:36
1,2-Dichloropropane	ND	0.0050	1	06/19/2016 02:36
1,3-Dichloropropane	ND	0.0050	1	06/19/2016 02:36
2,2-Dichloropropane	ND	0.0050	1	06/19/2016 02:36

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-13½-ECB21	**1606747-002A**	**Soil**	**06/16/2016 08:02**	**GC10**	**122408**

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	06/19/2016 02:36
cis-1,3-Dichloropropene	ND	0.0050	1	06/19/2016 02:36
trans-1,3-Dichloropropene	ND	0.0050	1	06/19/2016 02:36
Diisopropyl ether (DIPE)	ND	0.0050	1	06/19/2016 02:36
Ethylbenzene	ND	0.0050	1	06/19/2016 02:36
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	06/19/2016 02:36
Freon 113	ND	0.0050	1	06/19/2016 02:36
Hexachlorobutadiene	ND	0.0050	1	06/19/2016 02:36
Hexachloroethane	ND	0.0050	1	06/19/2016 02:36
2-Hexanone	ND	0.0050	1	06/19/2016 02:36
Isopropylbenzene	ND	0.0050	1	06/19/2016 02:36
4-Isopropyl toluene	ND	0.0050	1	06/19/2016 02:36
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	06/19/2016 02:36
Methylene chloride	ND	0.0050	1	06/19/2016 02:36
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	06/19/2016 02:36
Naphthalene	ND	0.0050	1	06/19/2016 02:36
n-Propyl benzene	ND	0.0050	1	06/19/2016 02:36
Styrene	ND	0.0050	1	06/19/2016 02:36
1,1,1,2-Tetrachloroethane	ND	0.0050	1	06/19/2016 02:36
1,1,2,2-Tetrachloroethane	ND	0.0050	1	06/19/2016 02:36
Tetrachloroethene	ND	0.0050	1	06/19/2016 02:36
Toluene	ND	0.0050	1	06/19/2016 02:36
1,2,3-Trichlorobenzene	ND	0.0050	1	06/19/2016 02:36
1,2,4-Trichlorobenzene	ND	0.0050	1	06/19/2016 02:36
1,1,1-Trichloroethane	ND	0.0050	1	06/19/2016 02:36
1,1,2-Trichloroethane	ND	0.0050	1	06/19/2016 02:36
Trichloroethene	ND	0.0050	1	06/19/2016 02:36
Trichlorofluoromethane	ND	0.0050	1	06/19/2016 02:36
1,2,3-Trichloropropane	ND	0.0050	1	06/19/2016 02:36
1,2,4-Trimethylbenzene	ND	0.0050	1	06/19/2016 02:36
1,3,5-Trimethylbenzene	ND	0.0050	1	06/19/2016 02:36
Vinyl Chloride	ND	0.0050	1	06/19/2016 02:36
Xylenes, Total	ND	0.0050	1	06/19/2016 02:36

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-13½-ECB21	**1606747-002A**	**Soil**	**06/16/2016 08:02**	**GC10**	**122408**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	88	70-130		06/19/2016 02:36
Toluene-d8	107	70-130		06/19/2016 02:36
4-BFB	99	70-130		06/19/2016 02:36
Benzene-d6	87	60-140		06/19/2016 02:36
Ethylbenzene-d10	110	60-140		06/19/2016 02:36
1,2-DCB-d4	85	60-140		06/19/2016 02:36

Analyst(s): KF

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-16½-ECB21	1606747-003A	Soil	06/16/2016 08:07	GC10	122408

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	06/19/2016 03:21
tert-Amyl methyl ether (TAME)	ND	0.0050	1	06/19/2016 03:21
Benzene	ND	0.0050	1	06/19/2016 03:21
Bromobenzene	ND	0.0050	1	06/19/2016 03:21
Bromochloromethane	ND	0.0050	1	06/19/2016 03:21
Bromodichloromethane	ND	0.0050	1	06/19/2016 03:21
Bromoform	ND	0.0050	1	06/19/2016 03:21
Bromomethane	ND	0.0050	1	06/19/2016 03:21
2-Butanone (MEK)	ND	0.020	1	06/19/2016 03:21
t-Butyl alcohol (TBA)	ND	0.050	1	06/19/2016 03:21
n-Butyl benzene	ND	0.0050	1	06/19/2016 03:21
sec-Butyl benzene	ND	0.0050	1	06/19/2016 03:21
tert-Butyl benzene	ND	0.0050	1	06/19/2016 03:21
Carbon Disulfide	ND	0.0050	1	06/19/2016 03:21
Carbon Tetrachloride	ND	0.0050	1	06/19/2016 03:21
Chlorobenzene	ND	0.0050	1	06/19/2016 03:21
Chloroethane	ND	0.0050	1	06/19/2016 03:21
Chloroform	ND	0.0050	1	06/19/2016 03:21
Chloromethane	ND	0.0050	1	06/19/2016 03:21
2-Chlorotoluene	ND	0.0050	1	06/19/2016 03:21
4-Chlorotoluene	ND	0.0050	1	06/19/2016 03:21
Dibromochloromethane	ND	0.0050	1	06/19/2016 03:21
1,2-Dibromo-3-chloropropane	ND	0.0040	1	06/19/2016 03:21
1,2-Dibromoethane (EDB)	ND	0.0040	1	06/19/2016 03:21
Dibromomethane	ND	0.0050	1	06/19/2016 03:21
1,2-Dichlorobenzene	ND	0.0050	1	06/19/2016 03:21
1,3-Dichlorobenzene	ND	0.0050	1	06/19/2016 03:21
1,4-Dichlorobenzene	ND	0.0050	1	06/19/2016 03:21
Dichlorodifluoromethane	ND	0.0050	1	06/19/2016 03:21
1,1-Dichloroethane	ND	0.0050	1	06/19/2016 03:21
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	06/19/2016 03:21
1,1-Dichloroethene	ND	0.0050	1	06/19/2016 03:21
cis-1,2-Dichloroethene	ND	0.0050	1	06/19/2016 03:21
trans-1,2-Dichloroethene	ND	0.0050	1	06/19/2016 03:21
1,2-Dichloropropane	ND	0.0050	1	06/19/2016 03:21
1,3-Dichloropropane	ND	0.0050	1	06/19/2016 03:21
2,2-Dichloropropane	ND	0.0050	1	06/19/2016 03:21

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-16½-ECB21	1606747-003A	Soil	06/16/2016 08:07	GC10	122408

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	06/19/2016 03:21
cis-1,3-Dichloropropene	ND	0.0050	1	06/19/2016 03:21
trans-1,3-Dichloropropene	ND	0.0050	1	06/19/2016 03:21
Diisopropyl ether (DIPE)	ND	0.0050	1	06/19/2016 03:21
Ethylbenzene	ND	0.0050	1	06/19/2016 03:21
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	06/19/2016 03:21
Freon 113	ND	0.0050	1	06/19/2016 03:21
Hexachlorobutadiene	ND	0.0050	1	06/19/2016 03:21
Hexachloroethane	ND	0.0050	1	06/19/2016 03:21
2-Hexanone	ND	0.0050	1	06/19/2016 03:21
Isopropylbenzene	ND	0.0050	1	06/19/2016 03:21
4-Isopropyl toluene	ND	0.0050	1	06/19/2016 03:21
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	06/19/2016 03:21
Methylene chloride	ND	0.0050	1	06/19/2016 03:21
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	06/19/2016 03:21
Naphthalene	ND	0.0050	1	06/19/2016 03:21
n-Propyl benzene	ND	0.0050	1	06/19/2016 03:21
Styrene	ND	0.0050	1	06/19/2016 03:21
1,1,1,2-Tetrachloroethane	ND	0.0050	1	06/19/2016 03:21
1,1,2,2-Tetrachloroethane	ND	0.0050	1	06/19/2016 03:21
Tetrachloroethene	ND	0.0050	1	06/19/2016 03:21
Toluene	ND	0.0050	1	06/19/2016 03:21
1,2,3-Trichlorobenzene	ND	0.0050	1	06/19/2016 03:21
1,2,4-Trichlorobenzene	ND	0.0050	1	06/19/2016 03:21
1,1,1-Trichloroethane	ND	0.0050	1	06/19/2016 03:21
1,1,2-Trichloroethane	ND	0.0050	1	06/19/2016 03:21
Trichloroethene	ND	0.0050	1	06/19/2016 03:21
Trichlorofluoromethane	ND	0.0050	1	06/19/2016 03:21
1,2,3-Trichloropropane	ND	0.0050	1	06/19/2016 03:21
1,2,4-Trimethylbenzene	ND	0.0050	1	06/19/2016 03:21
1,3,5-Trimethylbenzene	ND	0.0050	1	06/19/2016 03:21
Vinyl Chloride	ND	0.0050	1	06/19/2016 03:21
Xylenes, Total	ND	0.0050	1	06/19/2016 03:21

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-16½-ECB21	**1606747-003A**	**Soil**	**06/16/2016 08:07**	**GC10**	**122408**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	88	70-130		06/19/2016 03:21
Toluene-d8	106	70-130		06/19/2016 03:21
4-BFB	101	70-130		06/19/2016 03:21
Benzene-d6	88	60-140		06/19/2016 03:21
Ethylbenzene-d10	112	60-140		06/19/2016 03:21
1,2-DCB-d4	86	60-140		06/19/2016 03:21

Analyst(s): KF

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-10½-ECB22	1606747-004A	Soil	06/16/2016 11:20	GC28	122408

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	06/20/2016 09:41
tert-Amyl methyl ether (TAME)	ND	0.0050	1	06/20/2016 09:41
Benzene	ND	0.0050	1	06/20/2016 09:41
Bromobenzene	ND	0.0050	1	06/20/2016 09:41
Bromochloromethane	ND	0.0050	1	06/20/2016 09:41
Bromodichloromethane	ND	0.0050	1	06/20/2016 09:41
Bromoform	ND	0.0050	1	06/20/2016 09:41
Bromomethane	ND	0.0050	1	06/20/2016 09:41
2-Butanone (MEK)	ND	0.020	1	06/20/2016 09:41
t-Butyl alcohol (TBA)	ND	0.050	1	06/20/2016 09:41
n-Butyl benzene	ND	0.0050	1	06/20/2016 09:41
sec-Butyl benzene	ND	0.0050	1	06/20/2016 09:41
tert-Butyl benzene	ND	0.0050	1	06/20/2016 09:41
Carbon Disulfide	ND	0.0050	1	06/20/2016 09:41
Carbon Tetrachloride	ND	0.0050	1	06/20/2016 09:41
Chlorobenzene	ND	0.0050	1	06/20/2016 09:41
Chloroethane	ND	0.0050	1	06/20/2016 09:41
Chloroform	ND	0.0050	1	06/20/2016 09:41
Chloromethane	ND	0.0050	1	06/20/2016 09:41
2-Chlorotoluene	ND	0.0050	1	06/20/2016 09:41
4-Chlorotoluene	ND	0.0050	1	06/20/2016 09:41
Dibromochloromethane	ND	0.0050	1	06/20/2016 09:41
1,2-Dibromo-3-chloropropane	ND	0.0040	1	06/20/2016 09:41
1,2-Dibromoethane (EDB)	ND	0.0040	1	06/20/2016 09:41
Dibromomethane	ND	0.0050	1	06/20/2016 09:41
1,2-Dichlorobenzene	ND	0.0050	1	06/20/2016 09:41
1,3-Dichlorobenzene	ND	0.0050	1	06/20/2016 09:41
1,4-Dichlorobenzene	ND	0.0050	1	06/20/2016 09:41
Dichlorodifluoromethane	ND	0.0050	1	06/20/2016 09:41
1,1-Dichloroethane	ND	0.0050	1	06/20/2016 09:41
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	06/20/2016 09:41
1,1-Dichloroethene	ND	0.0050	1	06/20/2016 09:41
cis-1,2-Dichloroethene	ND	0.0050	1	06/20/2016 09:41
trans-1,2-Dichloroethene	ND	0.0050	1	06/20/2016 09:41
1,2-Dichloropropane	ND	0.0050	1	06/20/2016 09:41
1,3-Dichloropropane	ND	0.0050	1	06/20/2016 09:41
2,2-Dichloropropane	ND	0.0050	1	06/20/2016 09:41

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-10½-ECB22	1606747-004A	Soil	06/16/2016 11:20	GC28	122408

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	06/20/2016 09:41
cis-1,3-Dichloropropene	ND	0.0050	1	06/20/2016 09:41
trans-1,3-Dichloropropene	ND	0.0050	1	06/20/2016 09:41
Diisopropyl ether (DIPE)	ND	0.0050	1	06/20/2016 09:41
Ethylbenzene	ND	0.0050	1	06/20/2016 09:41
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	06/20/2016 09:41
Freon 113	ND	0.0050	1	06/20/2016 09:41
Hexachlorobutadiene	ND	0.0050	1	06/20/2016 09:41
Hexachloroethane	ND	0.0050	1	06/20/2016 09:41
2-Hexanone	ND	0.0050	1	06/20/2016 09:41
Isopropylbenzene	ND	0.0050	1	06/20/2016 09:41
4-Isopropyl toluene	ND	0.0050	1	06/20/2016 09:41
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	06/20/2016 09:41
Methylene chloride	ND	0.0050	1	06/20/2016 09:41
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	06/20/2016 09:41
Naphthalene	ND	0.0050	1	06/20/2016 09:41
n-Propyl benzene	ND	0.0050	1	06/20/2016 09:41
Styrene	ND	0.0050	1	06/20/2016 09:41
1,1,1,2-Tetrachloroethane	ND	0.0050	1	06/20/2016 09:41
1,1,2,2-Tetrachloroethane	ND	0.0050	1	06/20/2016 09:41
Tetrachloroethene	ND	0.0050	1	06/20/2016 09:41
Toluene	ND	0.0050	1	06/20/2016 09:41
1,2,3-Trichlorobenzene	ND	0.0050	1	06/20/2016 09:41
1,2,4-Trichlorobenzene	ND	0.0050	1	06/20/2016 09:41
1,1,1-Trichloroethane	ND	0.0050	1	06/20/2016 09:41
1,1,2-Trichloroethane	ND	0.0050	1	06/20/2016 09:41
Trichloroethene	ND	0.0050	1	06/20/2016 09:41
Trichlorofluoromethane	ND	0.0050	1	06/20/2016 09:41
1,2,3-Trichloropropane	ND	0.0050	1	06/20/2016 09:41
1,2,4-Trimethylbenzene	ND	0.0050	1	06/20/2016 09:41
1,3,5-Trimethylbenzene	ND	0.0050	1	06/20/2016 09:41
Vinyl Chloride	ND	0.0050	1	06/20/2016 09:41
Xylenes, Total	ND	0.0050	1	06/20/2016 09:41

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-10½-ECB22	**1606747-004A**	**Soil**	**06/16/2016 11:20**	**GC28**	**122408**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	87	70-130		06/20/2016 09:41
Toluene-d8	105	70-130		06/20/2016 09:41
4-BFB	90	70-130		06/20/2016 09:41
Benzene-d6	98	60-140		06/20/2016 09:41
Ethylbenzene-d10	123	60-140		06/20/2016 09:41
1,2-DCB-d4	92	60-140		06/20/2016 09:41

Analyst(s): KF

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-12½-ECB22	1606747-005A	Soil	06/16/2016 11:30	GC28	122408

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	06/20/2016 10:19
tert-Amyl methyl ether (TAME)	ND	0.0050	1	06/20/2016 10:19
Benzene	ND	0.0050	1	06/20/2016 10:19
Bromobenzene	ND	0.0050	1	06/20/2016 10:19
Bromochloromethane	ND	0.0050	1	06/20/2016 10:19
Bromodichloromethane	ND	0.0050	1	06/20/2016 10:19
Bromoform	ND	0.0050	1	06/20/2016 10:19
Bromomethane	ND	0.0050	1	06/20/2016 10:19
2-Butanone (MEK)	ND	0.020	1	06/20/2016 10:19
t-Butyl alcohol (TBA)	ND	0.050	1	06/20/2016 10:19
n-Butyl benzene	ND	0.0050	1	06/20/2016 10:19
sec-Butyl benzene	ND	0.0050	1	06/20/2016 10:19
tert-Butyl benzene	ND	0.0050	1	06/20/2016 10:19
Carbon Disulfide	ND	0.0050	1	06/20/2016 10:19
Carbon Tetrachloride	ND	0.0050	1	06/20/2016 10:19
Chlorobenzene	ND	0.0050	1	06/20/2016 10:19
Chloroethane	ND	0.0050	1	06/20/2016 10:19
Chloroform	ND	0.0050	1	06/20/2016 10:19
Chloromethane	ND	0.0050	1	06/20/2016 10:19
2-Chlorotoluene	ND	0.0050	1	06/20/2016 10:19
4-Chlorotoluene	ND	0.0050	1	06/20/2016 10:19
Dibromochloromethane	ND	0.0050	1	06/20/2016 10:19
1,2-Dibromo-3-chloropropane	ND	0.0040	1	06/20/2016 10:19
1,2-Dibromoethane (EDB)	ND	0.0040	1	06/20/2016 10:19
Dibromomethane	ND	0.0050	1	06/20/2016 10:19
1,2-Dichlorobenzene	ND	0.0050	1	06/20/2016 10:19
1,3-Dichlorobenzene	ND	0.0050	1	06/20/2016 10:19
1,4-Dichlorobenzene	ND	0.0050	1	06/20/2016 10:19
Dichlorodifluoromethane	ND	0.0050	1	06/20/2016 10:19
1,1-Dichloroethane	ND	0.0050	1	06/20/2016 10:19
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	06/20/2016 10:19
1,1-Dichloroethene	ND	0.0050	1	06/20/2016 10:19
cis-1,2-Dichloroethene	ND	0.0050	1	06/20/2016 10:19
trans-1,2-Dichloroethene	ND	0.0050	1	06/20/2016 10:19
1,2-Dichloropropane	ND	0.0050	1	06/20/2016 10:19
1,3-Dichloropropane	ND	0.0050	1	06/20/2016 10:19
2,2-Dichloropropane	ND	0.0050	1	06/20/2016 10:19

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-12½-ECB22	1606747-005A	Soil	06/16/2016 11:30	GC28	122408

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	06/20/2016 10:19
cis-1,3-Dichloropropene	ND	0.0050	1	06/20/2016 10:19
trans-1,3-Dichloropropene	ND	0.0050	1	06/20/2016 10:19
Diisopropyl ether (DIPE)	ND	0.0050	1	06/20/2016 10:19
Ethylbenzene	ND	0.0050	1	06/20/2016 10:19
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	06/20/2016 10:19
Freon 113	ND	0.0050	1	06/20/2016 10:19
Hexachlorobutadiene	ND	0.0050	1	06/20/2016 10:19
Hexachloroethane	ND	0.0050	1	06/20/2016 10:19
2-Hexanone	ND	0.0050	1	06/20/2016 10:19
Isopropylbenzene	ND	0.0050	1	06/20/2016 10:19
4-Isopropyl toluene	ND	0.0050	1	06/20/2016 10:19
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	06/20/2016 10:19
Methylene chloride	ND	0.0050	1	06/20/2016 10:19
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	06/20/2016 10:19
Naphthalene	ND	0.0050	1	06/20/2016 10:19
n-Propyl benzene	ND	0.0050	1	06/20/2016 10:19
Styrene	ND	0.0050	1	06/20/2016 10:19
1,1,1,2-Tetrachloroethane	ND	0.0050	1	06/20/2016 10:19
1,1,2,2-Tetrachloroethane	ND	0.0050	1	06/20/2016 10:19
Tetrachloroethene	ND	0.0050	1	06/20/2016 10:19
Toluene	ND	0.0050	1	06/20/2016 10:19
1,2,3-Trichlorobenzene	ND	0.0050	1	06/20/2016 10:19
1,2,4-Trichlorobenzene	ND	0.0050	1	06/20/2016 10:19
1,1,1-Trichloroethane	ND	0.0050	1	06/20/2016 10:19
1,1,2-Trichloroethane	ND	0.0050	1	06/20/2016 10:19
Trichloroethene	ND	0.0050	1	06/20/2016 10:19
Trichlorofluoromethane	ND	0.0050	1	06/20/2016 10:19
1,2,3-Trichloropropane	ND	0.0050	1	06/20/2016 10:19
1,2,4-Trimethylbenzene	ND	0.0050	1	06/20/2016 10:19
1,3,5-Trimethylbenzene	ND	0.0050	1	06/20/2016 10:19
Vinyl Chloride	ND	0.0050	1	06/20/2016 10:19
Xylenes, Total	ND	0.0050	1	06/20/2016 10:19

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-12½-ECB22	**1606747-005A**	**Soil**	**06/16/2016 11:30**	**GC28**	**122408**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	86	70-130		06/20/2016 10:19
Toluene-d8	106	70-130		06/20/2016 10:19
4-BFB	89	70-130		06/20/2016 10:19
Benzene-d6	93	60-140		06/20/2016 10:19
Ethylbenzene-d10	118	60-140		06/20/2016 10:19
1,2-DCB-d4	88	60-140		06/20/2016 10:19

Analyst(s): KF

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-15-ECB22	1606747-006A	Soil	06/16/2016 11:40	GC28	122408

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	06/20/2016 10:58
tert-Amyl methyl ether (TAME)	ND	0.0050	1	06/20/2016 10:58
Benzene	ND	0.0050	1	06/20/2016 10:58
Bromobenzene	ND	0.0050	1	06/20/2016 10:58
Bromochloromethane	ND	0.0050	1	06/20/2016 10:58
Bromodichloromethane	ND	0.0050	1	06/20/2016 10:58
Bromoform	ND	0.0050	1	06/20/2016 10:58
Bromomethane	ND	0.0050	1	06/20/2016 10:58
2-Butanone (MEK)	ND	0.020	1	06/20/2016 10:58
t-Butyl alcohol (TBA)	ND	0.050	1	06/20/2016 10:58
n-Butyl benzene	ND	0.0050	1	06/20/2016 10:58
sec-Butyl benzene	ND	0.0050	1	06/20/2016 10:58
tert-Butyl benzene	ND	0.0050	1	06/20/2016 10:58
Carbon Disulfide	ND	0.0050	1	06/20/2016 10:58
Carbon Tetrachloride	ND	0.0050	1	06/20/2016 10:58
Chlorobenzene	ND	0.0050	1	06/20/2016 10:58
Chloroethane	ND	0.0050	1	06/20/2016 10:58
Chloroform	ND	0.0050	1	06/20/2016 10:58
Chloromethane	ND	0.0050	1	06/20/2016 10:58
2-Chlorotoluene	ND	0.0050	1	06/20/2016 10:58
4-Chlorotoluene	ND	0.0050	1	06/20/2016 10:58
Dibromochloromethane	ND	0.0050	1	06/20/2016 10:58
1,2-Dibromo-3-chloropropane	ND	0.0040	1	06/20/2016 10:58
1,2-Dibromoethane (EDB)	ND	0.0040	1	06/20/2016 10:58
Dibromomethane	ND	0.0050	1	06/20/2016 10:58
1,2-Dichlorobenzene	ND	0.0050	1	06/20/2016 10:58
1,3-Dichlorobenzene	ND	0.0050	1	06/20/2016 10:58
1,4-Dichlorobenzene	ND	0.0050	1	06/20/2016 10:58
Dichlorodifluoromethane	ND	0.0050	1	06/20/2016 10:58
1,1-Dichloroethane	ND	0.0050	1	06/20/2016 10:58
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	06/20/2016 10:58
1,1-Dichloroethene	ND	0.0050	1	06/20/2016 10:58
cis-1,2-Dichloroethene	ND	0.0050	1	06/20/2016 10:58
trans-1,2-Dichloroethene	ND	0.0050	1	06/20/2016 10:58
1,2-Dichloropropane	ND	0.0050	1	06/20/2016 10:58
1,3-Dichloropropane	ND	0.0050	1	06/20/2016 10:58
2,2-Dichloropropane	ND	0.0050	1	06/20/2016 10:58

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-15-ECB22	1606747-006A	Soil	06/16/2016 11:40	GC28	122408

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	06/20/2016 10:58
cis-1,3-Dichloropropene	ND	0.0050	1	06/20/2016 10:58
trans-1,3-Dichloropropene	ND	0.0050	1	06/20/2016 10:58
Diisopropyl ether (DIPE)	ND	0.0050	1	06/20/2016 10:58
Ethylbenzene	ND	0.0050	1	06/20/2016 10:58
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	06/20/2016 10:58
Freon 113	ND	0.0050	1	06/20/2016 10:58
Hexachlorobutadiene	ND	0.0050	1	06/20/2016 10:58
Hexachloroethane	ND	0.0050	1	06/20/2016 10:58
2-Hexanone	ND	0.0050	1	06/20/2016 10:58
Isopropylbenzene	ND	0.0050	1	06/20/2016 10:58
4-Isopropyl toluene	ND	0.0050	1	06/20/2016 10:58
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	06/20/2016 10:58
Methylene chloride	ND	0.0050	1	06/20/2016 10:58
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	06/20/2016 10:58
Naphthalene	ND	0.0050	1	06/20/2016 10:58
n-Propyl benzene	ND	0.0050	1	06/20/2016 10:58
Styrene	ND	0.0050	1	06/20/2016 10:58
1,1,1,2-Tetrachloroethane	ND	0.0050	1	06/20/2016 10:58
1,1,2,2-Tetrachloroethane	ND	0.0050	1	06/20/2016 10:58
Tetrachloroethene	ND	0.0050	1	06/20/2016 10:58
Toluene	ND	0.0050	1	06/20/2016 10:58
1,2,3-Trichlorobenzene	ND	0.0050	1	06/20/2016 10:58
1,2,4-Trichlorobenzene	ND	0.0050	1	06/20/2016 10:58
1,1,1-Trichloroethane	ND	0.0050	1	06/20/2016 10:58
1,1,2-Trichloroethane	ND	0.0050	1	06/20/2016 10:58
Trichloroethene	ND	0.0050	1	06/20/2016 10:58
Trichlorofluoromethane	ND	0.0050	1	06/20/2016 10:58
1,2,3-Trichloropropane	ND	0.0050	1	06/20/2016 10:58
1,2,4-Trimethylbenzene	ND	0.0050	1	06/20/2016 10:58
1,3,5-Trimethylbenzene	ND	0.0050	1	06/20/2016 10:58
Vinyl Chloride	ND	0.0050	1	06/20/2016 10:58
Xylenes, Total	ND	0.0050	1	06/20/2016 10:58

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-15-ECB22	**1606747-006A**	**Soil**	**06/16/2016 11:40**	**GC28**	**122408**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	88	70-130		06/20/2016 10:58
Toluene-d8	104	70-130		06/20/2016 10:58
4-BFB	90	70-130		06/20/2016 10:58
Benzene-d6	83	60-140		06/20/2016 10:58
Ethylbenzene-d10	103	60-140		06/20/2016 10:58
1,2-DCB-d4	80	60-140		06/20/2016 10:58

Analyst(s): KF

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW3550B
Date Prepared:	6/20/16	**Analytical Method:**	SW8270C-SIM
Project:	15166; EBALDC	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-13½-ECB21	**1606747-002A**	**Soil**	**06/16/2016 08:02**	**GC35**	**122547**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	06/20/2016 20:52
Acenaphthylene	ND	0.010	1	06/20/2016 20:52
Anthracene	ND	0.010	1	06/20/2016 20:52
Benzo (a) anthracene	ND	0.010	1	06/20/2016 20:52
Benzo (a) pyrene	ND	0.010	1	06/20/2016 20:52
Benzo (b) fluoranthene	ND	0.010	1	06/20/2016 20:52
Benzo (g,h,i) perylene	ND	0.010	1	06/20/2016 20:52
Benzo (k) fluoranthene	ND	0.010	1	06/20/2016 20:52
Chrysene	ND	0.010	1	06/20/2016 20:52
Dibenzo (a,h) anthracene	ND	0.010	1	06/20/2016 20:52
Fluoranthene	ND	0.010	1	06/20/2016 20:52
Fluorene	ND	0.010	1	06/20/2016 20:52
Indeno (1,2,3-cd) pyrene	ND	0.010	1	06/20/2016 20:52
1-Methylnaphthalene	ND	0.010	1	06/20/2016 20:52
2-Methylnaphthalene	ND	0.010	1	06/20/2016 20:52
Naphthalene	ND	0.010	1	06/20/2016 20:52
Phenanthrene	ND	0.010	1	06/20/2016 20:52
Pyrene	ND	0.010	1	06/20/2016 20:52

Surrogates	REC (%)	Limits	
1-Fluoronaphthalene	88	30-130	06/20/2016 20:52
2-Fluorobiphenyl	96	30-130	06/20/2016 20:52

Analyst(s): REB

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW3550B
Date Prepared:	6/20/16	**Analytical Method:**	SW8270C-SIM
Project:	15166; EBALDC	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-12½-ECB22	**1606747-005A**	**Soil**	**06/16/2016 11:30**	**GC35**	**122547**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	06/20/2016 21:17
Acenaphthylene	ND	0.010	1	06/20/2016 21:17
Anthracene	**0.014**	0.010	1	06/20/2016 21:17
Benzo (a) anthracene	**0.028**	0.010	1	06/20/2016 21:17
Benzo (a) pyrene	**0.039**	0.010	1	06/20/2016 21:17
Benzo (b) fluoranthene	**0.060**	0.010	1	06/20/2016 21:17
Benzo (g,h,i) perylene	**0.040**	0.010	1	06/20/2016 21:17
Benzo (k) fluoranthene	**0.024**	0.010	1	06/20/2016 21:17
Chrysene	**0.044**	0.010	1	06/20/2016 21:17
Dibenzo (a,h) anthracene	ND	0.010	1	06/20/2016 21:17
Fluoranthene	**0.060**	0.010	1	06/20/2016 21:17
Fluorene	ND	0.010	1	06/20/2016 21:17
Indeno (1,2,3-cd) pyrene	**0.027**	0.010	1	06/20/2016 21:17
1-Methylnaphthalene	ND	0.010	1	06/20/2016 21:17
2-Methylnaphthalene	ND	0.010	1	06/20/2016 21:17
Naphthalene	ND	0.010	1	06/20/2016 21:17
Phenanthrene	**0.052**	0.010	1	06/20/2016 21:17
Pyrene	**0.061**	0.010	1	06/20/2016 21:17

Surrogates	REC (%)	Limits	
1-Fluoronaphthalene	85	30-130	06/20/2016 21:17
2-Fluorobiphenyl	88	30-130	06/20/2016 21:17

Analyst(s): REB

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW3550B
Date Prepared:	6/20/16	**Analytical Method:**	SW8270C-SIM
Project:	15166; EBALDC	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-15-ECB22	1606747-006A	Soil	06/16/2016 11:40	GC35	122547

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	06/20/2016 21:42
Acenaphthylene	ND	0.010	1	06/20/2016 21:42
Anthracene	ND	0.010	1	06/20/2016 21:42
Benzo (a) anthracene	ND	0.010	1	06/20/2016 21:42
Benzo (a) pyrene	ND	0.010	1	06/20/2016 21:42
Benzo (b) fluoranthene	ND	0.010	1	06/20/2016 21:42
Benzo (g,h,i) perylene	ND	0.010	1	06/20/2016 21:42
Benzo (k) fluoranthene	ND	0.010	1	06/20/2016 21:42
Chrysene	ND	0.010	1	06/20/2016 21:42
Dibenzo (a,h) anthracene	ND	0.010	1	06/20/2016 21:42
Fluoranthene	ND	0.010	1	06/20/2016 21:42
Fluorene	ND	0.010	1	06/20/2016 21:42
Indeno (1,2,3-cd) pyrene	ND	0.010	1	06/20/2016 21:42
1-Methylnaphthalene	ND	0.010	1	06/20/2016 21:42
2-Methylnaphthalene	ND	0.010	1	06/20/2016 21:42
Naphthalene	ND	0.010	1	06/20/2016 21:42
Phenanthrene	ND	0.010	1	06/20/2016 21:42
Pyrene	ND	0.010	1	06/20/2016 21:42

Surrogates	REC (%)	Limits	
1-Fluoronaphthalene	88	30-130	06/20/2016 21:42
2-Fluorobiphenyl	95	30-130	06/20/2016 21:42

Analyst(s): REB

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8021B/8015Bm
Project:	15166; EBALDC	**Unit:**	mg/Kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-11½-ECB21	**1606747-001A**	**Soil**	**06/16/2016 07:55**	**GC7**	**122405**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/17/2016 22:58
MTBE	---	0.050	1	06/17/2016 22:58
Benzene	---	0.0050	1	06/17/2016 22:58
Toluene	---	0.0050	1	06/17/2016 22:58
Ethylbenzene	---	0.0050	1	06/17/2016 22:58
Xylenes	---	0.015	1	06/17/2016 22:58

Surrogates	REC (%)	Limits	
2-Fluorotoluene	96	70-130	06/17/2016 22:58

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-13½-ECB21	**1606747-002A**	**Soil**	**06/16/2016 08:02**	**GC19**	**122405**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/18/2016 01:27
MTBE	---	0.050	1	06/18/2016 01:27
Benzene	---	0.0050	1	06/18/2016 01:27
Toluene	---	0.0050	1	06/18/2016 01:27
Ethylbenzene	---	0.0050	1	06/18/2016 01:27
Xylenes	---	0.015	1	06/18/2016 01:27

Surrogates	REC (%)	Limits	
2-Fluorotoluene	94	70-130	06/18/2016 01:27

Analyst(s): IA

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8021B/8015Bm
Project:	15166; EBALDC	**Unit:**	mg/Kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-16½-ECB21	1606747-003A	Soil	06/16/2016 08:07	GC7	122405

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/17/2016 23:58
MTBE	---	0.050	1	06/17/2016 23:58
Benzene	---	0.0050	1	06/17/2016 23:58
Toluene	---	0.0050	1	06/17/2016 23:58
Ethylbenzene	---	0.0050	1	06/17/2016 23:58
Xylenes	---	0.015	1	06/17/2016 23:58

Surrogates	REC (%)	Limits	
2-Fluorotoluene	91	70-130	06/17/2016 23:58

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-10½-ECB22	1606747-004A	Soil	06/16/2016 11:20	GC19	122405

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/18/2016 02:28
MTBE	---	0.050	1	06/18/2016 02:28
Benzene	---	0.0050	1	06/18/2016 02:28
Toluene	---	0.0050	1	06/18/2016 02:28
Ethylbenzene	---	0.0050	1	06/18/2016 02:28
Xylenes	---	0.015	1	06/18/2016 02:28

Surrogates	REC (%)	Limits	
2-Fluorotoluene	99	70-130	06/18/2016 02:28

Analyst(s): IA

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/16/16	**Analytical Method:**	SW8021B/8015Bm
Project:	15166; EBALDC	**Unit:**	mg/Kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-12½-ECB22	**1606747-005A**	**Soil**	**06/16/2016 11:30**	**GC7**	**122405**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/18/2016 00:28
MTBE	---	0.050	1	06/18/2016 00:28
Benzene	---	0.0050	1	06/18/2016 00:28
Toluene	---	0.0050	1	06/18/2016 00:28
Ethylbenzene	---	0.0050	1	06/18/2016 00:28
Xylenes	---	0.015	1	06/18/2016 00:28

Surrogates	REC (%)	Limits	
2-Fluorotoluene	92	70-130	06/18/2016 00:28

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-15-ECB22	**1606747-006A**	**Soil**	**06/16/2016 11:40**	**GC19**	**122405**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	06/18/2016 04:29
MTBE	---	0.050	1	06/18/2016 04:29
Benzene	---	0.0050	1	06/18/2016 04:29
Toluene	---	0.0050	1	06/18/2016 04:29
Ethylbenzene	---	0.0050	1	06/18/2016 04:29
Xylenes	---	0.015	1	06/18/2016 04:29

Surrogates	REC (%)	Limits	
2-Fluorotoluene	95	70-130	06/18/2016 04:29

Analyst(s): IA

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW3550B/3630C
Date Prepared:	6/16/16	**Analytical Method:**	SW8015B
Project:	15166; EBALDC	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-11½-ECB21	**1606747-001A**	**Soil**	**06/16/2016 07:55**	**GC9b**	**122355**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/17/2016 08:11
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/17/2016 08:11

Surrogates	REC (%)	Limits	
C9	90	70-130	06/17/2016 08:11

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-13½-ECB21	**1606747-002A**	**Soil**	**06/16/2016 08:02**	**GC9b**	**122355**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/17/2016 06:54
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/17/2016 06:54

Surrogates	REC (%)	Limits	
C9	89	70-130	06/17/2016 06:54

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-16½-ECB21	**1606747-003A**	**Soil**	**06/16/2016 08:07**	**GC9b**	**122355**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/17/2016 03:01
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/17/2016 03:01

Surrogates	REC (%)	Limits	
C9	90	70-130	06/17/2016 03:01

Analyst(s): TK

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Received:	6/16/16 14:27	**Extraction Method:**	SW3550B/3630C
Date Prepared:	6/16/16	**Analytical Method:**	SW8015B
Project:	15166; EBALDC	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-10½-ECB22	**1606747-004A**	**Soil**	**06/16/2016 11:20**	**GC9b**	**122355**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/16/2016 22:29
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/16/2016 22:29

Surrogates	REC (%)	Limits	
C9	88	70-130	06/16/2016 22:29

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-12½-ECB22	**1606747-005A**	**Soil**	**06/16/2016 11:30**	**GC9b**	**122355**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/16/2016 23:47
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/16/2016 23:47

Surrogates	REC (%)	Limits	
C9	89	70-130	06/16/2016 23:47

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S-15-ECB22	**1606747-006A**	**Soil**	**06/16/2016 11:40**	**GC9b**	**122355**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	06/17/2016 11:55
TPH-Motor Oil (C18-C36)	ND	5.0	1	06/17/2016 11:55

Surrogates	REC (%)	Limits	
C9	90	70-130	06/17/2016 11:55

Analyst(s): TK

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Prepared:	6/15/16	**BatchID:**	122355
Date Analyzed:	6/16/16	**Extraction Method:**	SW3550B/3630C
Instrument:	GC9a	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122355 1606676-018AMS/MSD

QC Report for SW8015B with Silica Gel Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	39.6	1.0	40	-	99	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	24.2	24.5		25	97	98	62-139

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR		2200	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR			NR	NR	-	NR	

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QA/QC Officer

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

Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Prepared:	6/16/16	**BatchID:**	122408
Date Analyzed:	6/16/16	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122408 1606759-010AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0396	0.0050	0.050	-	79	53-116
Benzene	ND	0.0501	0.0050	0.050	-	100	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.180	0.050	0.20	-	90	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0545	0.0050	0.050	-	109	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0475	0.0040	0.050	-	95	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0506	0.0040	0.050	-	101	58-135
1,1-Dichloroethene	ND	0.0500	0.0050	0.050	-	100	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

(Cont.)

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QA/QC Officer

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Prepared:	6/16/16	**BatchID:**	122408
Date Analyzed:	6/16/16	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122408 1606759-010AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0458	0.0050	0.050	-	92	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0445	0.0050	0.050	-	89	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0460	0.0050	0.050	-	92	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0578	0.0050	0.050	-	115	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0521	0.0050	0.050	-	104	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Prepared:	6/16/16	**BatchID:**	122408
Date Analyzed:	6/16/16	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/kg
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122408 1606759-010AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.112	0.115		0.12	89	92	70-130
Toluene-d8	0.132	0.132		0.12	105	106	70-130
4-BFB	0.0112	0.0121		0.012	90	97	70-130
Benzene-d6	0.0993	0.104		0.10	99	104	60-140
Ethylbenzene-d10	0.123	0.133		0.10	123	133	60-140
1,2-DCB-d4	0.0916	0.101		0.10	92	101	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0356	0.0342	0.050	ND	71	68	53-116	4.13	20
Benzene	0.0457	0.0421	0.050	ND	91	84	63-137	8.34	20
t-Butyl alcohol (TBA)	0.143	0.143	0.20	ND	71	72	41-135	0.265	20
Chlorobenzene	0.0492	0.0453	0.050	ND	98	91	77-121	8.42	20
1,2-Dibromoethane (EDB)	0.0405	0.0379	0.050	ND	81	76	67-119	6.67	20
1,2-Dichloroethane (1,2-DCA)	0.0412	0.0390	0.050	ND	82	78	58-135	5.29	20
1,1-Dichloroethene	0.0446	0.0411	0.050	ND	89	82	42-145	8.20	20
Diisopropyl ether (DIPE)	0.0418	0.0246	0.050	ND	84	49,F1	52-129	51.8,F1	20
Ethyl tert-butyl ether (ETBE)	0.0398	0.0378	0.050	ND	80	76	53-125	5.13	20
Methyl-t-butyl ether (MTBE)	0.0394	0.0374	0.050	ND	79	75	58-122	5.26	20
Toluene	0.0515	0.0466	0.050	ND	103	93	76-130	10.0	20
Trichloroethene	0.0458	0.0420	0.050	ND	92	84	72-132	8.54	20
Surrogate Recovery									
Dibromofluoromethane	0.110	0.113	0.12		88	90	70-130	2.01	20
Toluene-d8	0.129	0.128	0.12		103	102	70-130	0.668	20
4-BFB	0.0117	0.0116	0.012		94	93	70-130	0.910	20
Benzene-d6	0.0924	0.0872	0.10		92	87	60-140	5.78	20
Ethylbenzene-d10	0.115	0.107	0.10		115	107	60-140	7.07	20
1,2-DCB-d4	0.0907	0.0860	0.10		91	86	60-140	5.25	20

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Prepared:	6/20/16	**BatchID:**	122547
Date Analyzed:	6/20/16	**Extraction Method:**	SW3550B
Instrument:	GC35	**Analytical Method:**	SW8270C-SIM
Matrix:	Soil	**Unit:**	mg/kg
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122547 1606396-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.010	-	-	-	-
Acenaphthylene	ND	-	0.010	-	-	-	-
Anthracene	ND	-	0.010	-	-	-	-
Benzo (a) anthracene	ND	-	0.010	-	-	-	-
Benzo (a) pyrene	ND	0.157	0.010	0.20	-	78	23-129
Benzo (b) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.010	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.010	-	-	-	-
Chrysene	ND	0.148	0.010	0.20	-	74	38-104
Dibenzo (a,h) anthracene	ND	-	0.010	-	-	-	-
Fluoranthene	ND	-	0.010	-	-	-	-
Fluorene	ND	-	0.010	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.010	-	-	-	-
1-Methylnaphthalene	ND	0.166	0.010	0.20	-	83	59-106
2-Methylnaphthalene	ND	0.153	0.010	0.20	-	77	54-108
Naphthalene	ND	-	0.010	-	-	-	-
Phenanthrene	ND	0.164	0.010	0.20	-	82	48-107
Pyrene	ND	0.169	0.010	0.20	-	84	40-104
Surrogate Recovery							
1-Fluoronaphthalene	0.388	0.365		0.50	78	73	63-123
2-Fluorobiphenyl	0.420	0.378		0.50	84	76	55-127

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Benzo (a) pyrene	NR	NR		ND<0.05	NR	NR	-	NR	
Chrysene	NR	NR		ND<0.05	NR	NR	-	NR	
1-Methylnaphthalene	NR	NR		ND<0.05	NR	NR	-	NR	
2-Methylnaphthalene	NR	NR		ND<0.05	NR	NR	-	NR	
Phenanthrene	NR	NR		ND<0.05	NR	NR	-	NR	
Pyrene	NR	NR		ND<0.05	NR	NR	-	NR	
Surrogate Recovery									
1-Fluoronaphthalene	NR	NR			NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR			NR	NR	-	NR	

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606747
Date Prepared:	6/16/16	**BatchID:**	122405
Date Analyzed:	6/17/16	**Extraction Method:**	SW5030B
Instrument:	GC19	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Soil	**Unit:**	mg/Kg
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122405

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.613	0.40	0.60	-	102	70-130
MTBE	ND	0.0710	0.050	0.10	-	71	70-130
Benzene	ND	0.0961	0.0050	0.10	-	96	70-130
Toluene	ND	0.109	0.0050	0.10	-	109	70-130
Ethylbenzene	ND	0.120	0.0050	0.10	-	120	70-130
Xylenes	ND	0.370	0.015	0.30	-	123	70-130
Surrogate Recovery							
2-Fluorotoluene	0.114	0.113		0.10	114	113	70-130

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QA/QC Officer

McCampbell Analytical, Inc.
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Pittsburg, CA 94565-1701
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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1606747 **ClientCode: ESL**

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

Report to:
Nik Lahiri
Essel Environmental Consulting
351 California Street, Ste. 615
San Francisco, CA 94104
(707) 494-4883 FAX: 510-380-6610

Email: nlahiri@esseltek.com
cc/3rd Party:
PO:
ProjectNo: 15166; EBALDC

Bill to:
Nik Lahiri
Essel Environmental Consulting
351 California Street, Ste. 615
San Francisco, CA 94104
tjohnson@esseltek.com; nlahiri@esselt

Requested TAT: 5 days;

Date Received: **06/16/2016**
Date Logged: **06/16/2016**

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
1606747-001	S-11½-ECB21	Soil	6/16/2016 7:55	☐	A		A	A								
1606747-002	S-13½-ECB21	Soil	6/16/2016 8:02	☐	A	A	A	A								
1606747-003	S-16½-ECB21	Soil	6/16/2016 8:07	☐	A		A	A								
1606747-004	S-10½-ECB22	Soil	6/16/2016 11:20	☐	A		A	A								
1606747-005	S-12½-ECB22	Soil	6/16/2016 11:30	☐	A	A	A	A								
1606747-006	S-15-ECB22	Soil	6/16/2016 11:40	☐	A	A	A	A								

Test Legend:

1	8260B_S	2	8270_PNA_S	3	G-MBTEX_S	4	TPH(DMO)WSG_S
5		6		7		8	
9		10		11		12	

Prepared by: Maria Venegas

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A contain testgroup.

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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WORK ORDER SUMMARY

Client Name: ESSEL ENVIRONMENTAL CONSULTING
QC Level: LEVEL 2
Work Order: 1606747
Project: 15166; EBALDC
Client Contact: Nik Lahiri
Date Logged: 6/16/2016
Comments:
Contact's Email: nlahiri@esseltek.com

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1606747-001A	S-11½-ECB21	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Acetate Liner	☐	6/16/2016 7:55	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1606747-002A	S-13½-ECB21	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Acetate Liner	☐	6/16/2016 8:02	5 days		☐	
			SW8270C (PAHs/PNAs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1606747-003A	S-16½-ECB21	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Acetate Liner	☐	6/16/2016 8:07	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1606747-004A	S-10½-ECB22	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Acetate Liner	☐	6/16/2016 11:20	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1606747-005A	S-12½-ECB22	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Acetate Liner	☐	6/16/2016 11:30	5 days		☐	
			SW8270C (PAHs/PNAs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1606747-006A	S-15-ECB22	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	1	Acetate Liner	☐	6/16/2016 11:40	5 days		☐	
			SW8270C (PAHs/PNAs)			☐		5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

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WORK ORDER SUMMARY

Client Name: ESSEL ENVIRONMENTAL CONSULTING
Project: 15166; EBALDC
Comments:

QC Level: LEVEL 2
Client Contact: Nik Lahiri
Contact's Email: nlahiri@esseltek.com

Work Order: 1606747
Date Logged: 6/16/2016

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1606747-006A	S-15-ECB22	Soil	SW8260B (VOCs)	1	Acetate Liner	☐	6/16/2016 11:40	5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

McCAMPBELL ANALYTICAL, INC.

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1606747

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: Nik Lahiri	Bill To: Samhita Lahiri
Company: Essel Technology Services, Inc	
351 California Street, Suite 615	
San Francisco, California 94104	E-Mail: nlahiri@esseltek.com
Tele: (925) 413-5511	Fax: (510) 380-6610
Project #: 15166	Project Name: EBALDC
Project Location: West Grand Avenue and Brush Street, Oakland, California 94612	
Sampler Signature: Rodger C. Wilhams	

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
S-11½-ECB21	ECB-21	6/16/16	7:55a.m.	1	P		X				X			
S-13½-ECB21	ECB-21	6/16/16	8:02a.m.	1	P		X				X			
S-16½-ECB21	ECB-21	6/16/16	8:07a.m.	1	P		X				X			
S-10½-ECB22	ECB-22	6/16/16	11:20a.m.	1	P		X				X			
S-12½-ECB22	ECB-22	6/16/16	11:30a.m.	1	P		X				X			
S-15-ECB22	ECB-22	6/16/16	11:40a.m.	1	P		X				X			

Analysis Request	Other	Comments
BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	Filter sample for DISSOLVED metals analysis	**Indicate here if these samples are potentially dangerous to handle:
TPH as Gasoline, Diesel, Motor Oil (8015)		Silica gel cleanup before diesel motor oil analyses
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) 8260B		
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)		

**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:
Rodger C. Wilhams	6/16/16	2:27p.m.	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 1.3 COMMENTS:
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

VOAS O&G METALS OTHER
PRESERVATION_____ pH<2_____

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Sample Receipt Checklist

Client Name:	**Essel Environmental Consulting**	Date and Time Received:	**6/16/2016 14:27**
Project Name:	**15166; EBALDC**	Date Logged:	**6/16/2016**
WorkOrder №:	**1606747** Matrix: Soil	Received by:	Maria Venegas
Carrier:	Client Drop-In	Logged by:	Maria Venegas

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 ☐	
Sample/Temp Blank temperature	Temp: 1.3°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

Comments:

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Analytical Report

WorkOrder: 1606748

Report Created for: Essel Environmental Consulting

351 California Street, Ste. 615
San Francisco, CA 94104

Project Contact: Nik Lahiri
Project P.O.:
Project Name: 15166; EBALDC

Project Received: 06/16/2016

Analytical Report reviewed & approved for release on 06/22/2016 by:

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: Essel Environmental Consulting
Project: 15166; EBALDC
WorkOrder: 1606748

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

b1	aqueous sample that contains greater than ~1 vol. % sediment
e2	diesel range compounds are significant; no recognizable pattern

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/18/16-6/19/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB21	1606748-001B	Water	06/16/2016 08:34	GC18	122529

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	06/18/2016 23:25
tert-Amyl methyl ether (TAME)	ND	0.50	1	06/18/2016 23:25
Benzene	ND	0.50	1	06/18/2016 23:25
Bromobenzene	ND	0.50	1	06/18/2016 23:25
Bromochloromethane	ND	0.50	1	06/18/2016 23:25
Bromodichloromethane	ND	0.50	1	06/18/2016 23:25
Bromoform	ND	0.50	1	06/18/2016 23:25
Bromomethane	ND	0.50	1	06/18/2016 23:25
2-Butanone (MEK)	ND	2.0	1	06/18/2016 23:25
t-Butyl alcohol (TBA)	ND	2.0	1	06/18/2016 23:25
n-Butyl benzene	ND	0.50	1	06/18/2016 23:25
sec-Butyl benzene	ND	0.50	1	06/18/2016 23:25
tert-Butyl benzene	ND	0.50	1	06/18/2016 23:25
Carbon Disulfide	ND	0.50	1	06/18/2016 23:25
Carbon Tetrachloride	ND	0.50	1	06/18/2016 23:25
Chlorobenzene	ND	0.50	1	06/18/2016 23:25
Chloroethane	ND	0.50	1	06/18/2016 23:25
Chloroform	ND	0.50	1	06/18/2016 23:25
Chloromethane	ND	0.50	1	06/18/2016 23:25
2-Chlorotoluene	ND	0.50	1	06/18/2016 23:25
4-Chlorotoluene	ND	0.50	1	06/18/2016 23:25
Dibromochloromethane	ND	0.50	1	06/18/2016 23:25
1,2-Dibromo-3-chloropropane	ND	0.20	1	06/18/2016 23:25
1,2-Dibromoethane (EDB)	ND	0.50	1	06/18/2016 23:25
Dibromomethane	ND	0.50	1	06/18/2016 23:25
1,2-Dichlorobenzene	ND	0.50	1	06/18/2016 23:25
1,3-Dichlorobenzene	ND	0.50	1	06/18/2016 23:25
1,4-Dichlorobenzene	ND	0.50	1	06/18/2016 23:25
Dichlorodifluoromethane	ND	0.50	1	06/18/2016 23:25
1,1-Dichloroethane	ND	0.50	1	06/18/2016 23:25
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	06/18/2016 23:25
1,1-Dichloroethene	ND	0.50	1	06/18/2016 23:25
cis-1,2-Dichloroethene	ND	0.50	1	06/18/2016 23:25
trans-1,2-Dichloroethene	ND	0.50	1	06/18/2016 23:25
1,2-Dichloropropane	ND	0.50	1	06/18/2016 23:25
1,3-Dichloropropane	ND	0.50	1	06/18/2016 23:25
2,2-Dichloropropane	ND	0.50	1	06/18/2016 23:25

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Angela Rydelius, Lab Manager

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/18/16-6/19/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB21	1606748-001B	Water	06/16/2016 08:34	GC18	122529

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	06/18/2016 23:25
cis-1,3-Dichloropropene	ND	0.50	1	06/18/2016 23:25
trans-1,3-Dichloropropene	ND	0.50	1	06/18/2016 23:25
Diisopropyl ether (DIPE)	ND	0.50	1	06/18/2016 23:25
Ethylbenzene	ND	0.50	1	06/18/2016 23:25
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	06/18/2016 23:25
Freon 113	ND	0.50	1	06/18/2016 23:25
Hexachlorobutadiene	ND	0.50	1	06/18/2016 23:25
Hexachloroethane	ND	0.50	1	06/18/2016 23:25
2-Hexanone	ND	0.50	1	06/18/2016 23:25
Isopropylbenzene	ND	0.50	1	06/18/2016 23:25
4-Isopropyl toluene	ND	0.50	1	06/18/2016 23:25
Methyl-t-butyl ether (MTBE)	ND	0.50	1	06/18/2016 23:25
Methylene chloride	ND	0.50	1	06/18/2016 23:25
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	06/18/2016 23:25
Naphthalene	ND	0.50	1	06/18/2016 23:25
n-Propyl benzene	ND	0.50	1	06/18/2016 23:25
Styrene	ND	0.50	1	06/18/2016 23:25
1,1,1,2-Tetrachloroethane	ND	0.50	1	06/18/2016 23:25
1,1,2,2-Tetrachloroethane	ND	0.50	1	06/18/2016 23:25
Tetrachloroethene	ND	0.50	1	06/18/2016 23:25
Toluene	ND	0.50	1	06/18/2016 23:25
1,2,3-Trichlorobenzene	ND	0.50	1	06/18/2016 23:25
1,2,4-Trichlorobenzene	ND	0.50	1	06/18/2016 23:25
1,1,1-Trichloroethane	ND	0.50	1	06/18/2016 23:25
1,1,2-Trichloroethane	ND	0.50	1	06/18/2016 23:25
Trichloroethene	ND	0.50	1	06/18/2016 23:25
Trichlorofluoromethane	ND	0.50	1	06/18/2016 23:25
1,2,3-Trichloropropane	ND	0.50	1	06/18/2016 23:25
1,2,4-Trimethylbenzene	ND	0.50	1	06/18/2016 23:25
1,3,5-Trimethylbenzene	ND	0.50	1	06/18/2016 23:25
Vinyl Chloride	ND	0.50	1	06/18/2016 23:25
Xylenes, Total	ND	0.50	1	06/18/2016 23:25

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/18/16-6/19/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB21	1606748-001B	Water	06/16/2016 08:34	GC18	122529

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		06/18/2016 23:25
Toluene-d8	86	70-130		06/18/2016 23:25
4-BFB	81	70-130		06/18/2016 23:25

Analyst(s): MW Analytical Comments: b1

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/18/16-6/19/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB22	1606748-002A	Water	06/16/2016 13:27	GC18	122529

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	06/19/2016 00:03
tert-Amyl methyl ether (TAME)	ND	0.50	1	06/19/2016 00:03
Benzene	ND	0.50	1	06/19/2016 00:03
Bromobenzene	ND	0.50	1	06/19/2016 00:03
Bromochloromethane	ND	0.50	1	06/19/2016 00:03
Bromodichloromethane	ND	0.50	1	06/19/2016 00:03
Bromoform	ND	0.50	1	06/19/2016 00:03
Bromomethane	ND	0.50	1	06/19/2016 00:03
2-Butanone (MEK)	ND	2.0	1	06/19/2016 00:03
t-Butyl alcohol (TBA)	ND	2.0	1	06/19/2016 00:03
n-Butyl benzene	ND	0.50	1	06/19/2016 00:03
sec-Butyl benzene	ND	0.50	1	06/19/2016 00:03
tert-Butyl benzene	ND	0.50	1	06/19/2016 00:03
Carbon Disulfide	ND	0.50	1	06/19/2016 00:03
Carbon Tetrachloride	ND	0.50	1	06/19/2016 00:03
Chlorobenzene	ND	0.50	1	06/19/2016 00:03
Chloroethane	ND	0.50	1	06/19/2016 00:03
Chloroform	ND	0.50	1	06/19/2016 00:03
Chloromethane	ND	0.50	1	06/19/2016 00:03
2-Chlorotoluene	ND	0.50	1	06/19/2016 00:03
4-Chlorotoluene	ND	0.50	1	06/19/2016 00:03
Dibromochloromethane	ND	0.50	1	06/19/2016 00:03
1,2-Dibromo-3-chloropropane	ND	0.20	1	06/19/2016 00:03
1,2-Dibromoethane (EDB)	ND	0.50	1	06/19/2016 00:03
Dibromomethane	ND	0.50	1	06/19/2016 00:03
1,2-Dichlorobenzene	ND	0.50	1	06/19/2016 00:03
1,3-Dichlorobenzene	ND	0.50	1	06/19/2016 00:03
1,4-Dichlorobenzene	ND	0.50	1	06/19/2016 00:03
Dichlorodifluoromethane	ND	0.50	1	06/19/2016 00:03
1,1-Dichloroethane	ND	0.50	1	06/19/2016 00:03
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	06/19/2016 00:03
1,1-Dichloroethene	ND	0.50	1	06/19/2016 00:03
cis-1,2-Dichloroethene	ND	0.50	1	06/19/2016 00:03
trans-1,2-Dichloroethene	ND	0.50	1	06/19/2016 00:03
1,2-Dichloropropane	ND	0.50	1	06/19/2016 00:03
1,3-Dichloropropane	ND	0.50	1	06/19/2016 00:03
2,2-Dichloropropane	ND	0.50	1	06/19/2016 00:03

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/18/16-6/19/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB22	1606748-002A	Water	06/16/2016 13:27	GC18	122529

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	06/19/2016 00:03
cis-1,3-Dichloropropene	ND	0.50	1	06/19/2016 00:03
trans-1,3-Dichloropropene	ND	0.50	1	06/19/2016 00:03
Diisopropyl ether (DIPE)	ND	0.50	1	06/19/2016 00:03
Ethylbenzene	ND	0.50	1	06/19/2016 00:03
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	06/19/2016 00:03
Freon 113	ND	0.50	1	06/19/2016 00:03
Hexachlorobutadiene	ND	0.50	1	06/19/2016 00:03
Hexachloroethane	ND	0.50	1	06/19/2016 00:03
2-Hexanone	ND	0.50	1	06/19/2016 00:03
Isopropylbenzene	ND	0.50	1	06/19/2016 00:03
4-Isopropyl toluene	ND	0.50	1	06/19/2016 00:03
Methyl-t-butyl ether (MTBE)	ND	0.50	1	06/19/2016 00:03
Methylene chloride	ND	0.50	1	06/19/2016 00:03
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	06/19/2016 00:03
Naphthalene	ND	0.50	1	06/19/2016 00:03
n-Propyl benzene	ND	0.50	1	06/19/2016 00:03
Styrene	ND	0.50	1	06/19/2016 00:03
1,1,1,2-Tetrachloroethane	ND	0.50	1	06/19/2016 00:03
1,1,2,2-Tetrachloroethane	ND	0.50	1	06/19/2016 00:03
Tetrachloroethene	ND	0.50	1	06/19/2016 00:03
Toluene	ND	0.50	1	06/19/2016 00:03
1,2,3-Trichlorobenzene	ND	0.50	1	06/19/2016 00:03
1,2,4-Trichlorobenzene	ND	0.50	1	06/19/2016 00:03
1,1,1-Trichloroethane	ND	0.50	1	06/19/2016 00:03
1,1,2-Trichloroethane	ND	0.50	1	06/19/2016 00:03
Trichloroethene	ND	0.50	1	06/19/2016 00:03
Trichlorofluoromethane	ND	0.50	1	06/19/2016 00:03
1,2,3-Trichloropropane	ND	0.50	1	06/19/2016 00:03
1,2,4-Trimethylbenzene	ND	0.50	1	06/19/2016 00:03
1,3,5-Trimethylbenzene	ND	0.50	1	06/19/2016 00:03
Vinyl Chloride	ND	0.50	1	06/19/2016 00:03
Xylenes, Total	ND	0.50	1	06/19/2016 00:03

(Cont.)

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/18/16-6/19/16	**Analytical Method:**	SW8260B
Project:	15166; EBALDC	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB22	1606748-002A	Water	06/16/2016 13:27	GC18	122529

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		06/19/2016 00:03
Toluene-d8	86	70-130		06/19/2016 00:03
4-BFB	82	70-130		06/19/2016 00:03

Analyst(s): MW Analytical Comments: b1

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW3510C
Date Prepared:	6/21/16	**Analytical Method:**	SW8270C-SIM
Project:	15166; EBALDC	**Unit:**	µg/L

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB21	1606748-001C	Water	06/16/2016 08:34	GC35	122613

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.50	1	06/22/2016 12:04
Acenaphthylene	ND	0.50	1	06/22/2016 12:04
Anthracene	ND	0.50	1	06/22/2016 12:04
Benzo (a) anthracene	ND	0.50	1	06/22/2016 12:04
Benzo (a) pyrene	ND	0.50	1	06/22/2016 12:04
Benzo (b) fluoranthene	ND	0.50	1	06/22/2016 12:04
Benzo (g,h,i) perylene	ND	0.50	1	06/22/2016 12:04
Benzo (k) fluoranthene	ND	0.50	1	06/22/2016 12:04
Chrysene	ND	0.50	1	06/22/2016 12:04
Dibenzo (a,h) anthracene	ND	0.50	1	06/22/2016 12:04
Fluoranthene	ND	0.50	1	06/22/2016 12:04
Fluorene	ND	0.50	1	06/22/2016 12:04
Indeno (1,2,3-cd) pyrene	ND	0.50	1	06/22/2016 12:04
1-Methylnaphthalene	ND	0.50	1	06/22/2016 12:04
2-Methylnaphthalene	ND	0.50	1	06/22/2016 12:04
Naphthalene	ND	0.50	1	06/22/2016 12:04
Phenanthrene	ND	0.50	1	06/22/2016 12:04
Pyrene	ND	0.50	1	06/22/2016 12:04

Surrogates	REC (%)	Limits	
1-Fluoronaphthalene	83	30-130	06/22/2016 12:04
2-Fluorobiphenyl	87	30-130	06/22/2016 12:04

Analyst(s): REB Analytical Comments: b1

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW3510C
Date Prepared:	6/21/16	**Analytical Method:**	SW8270C-SIM
Project:	15166; EBALDC	**Unit:**	µg/L

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB22	1606748-002B	Water	06/16/2016 13:27	GC35	122613

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.50	1	06/22/2016 12:30
Acenaphthylene	ND	0.50	1	06/22/2016 12:30
Anthracene	ND	0.50	1	06/22/2016 12:30
Benzo (a) anthracene	ND	0.50	1	06/22/2016 12:30
Benzo (a) pyrene	ND	0.50	1	06/22/2016 12:30
Benzo (b) fluoranthene	ND	0.50	1	06/22/2016 12:30
Benzo (g,h,i) perylene	ND	0.50	1	06/22/2016 12:30
Benzo (k) fluoranthene	ND	0.50	1	06/22/2016 12:30
Chrysene	ND	0.50	1	06/22/2016 12:30
Dibenzo (a,h) anthracene	ND	0.50	1	06/22/2016 12:30
Fluoranthene	ND	0.50	1	06/22/2016 12:30
Fluorene	ND	0.50	1	06/22/2016 12:30
Indeno (1,2,3-cd) pyrene	ND	0.50	1	06/22/2016 12:30
1-Methylnaphthalene	ND	0.50	1	06/22/2016 12:30
2-Methylnaphthalene	ND	0.50	1	06/22/2016 12:30
Naphthalene	ND	0.50	1	06/22/2016 12:30
Phenanthrene	ND	0.50	1	06/22/2016 12:30
Pyrene	ND	0.50	1	06/22/2016 12:30

Surrogates	REC (%)	Limits	
1-Fluoronaphthalene	94	30-130	06/22/2016 12:30
2-Fluorobiphenyl	88	30-130	06/22/2016 12:30

Analyst(s): REB Analytical Comments: b1

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW5030B
Date Prepared:	6/19/16	**Analytical Method:**	SW8021B/8015Bm
Project:	15166; EBALDC	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB21	1606748-001A	Water	06/16/2016 08:34	GC3	122521

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	06/19/2016 17:36
MTBE	---	5.0	1	06/19/2016 17:36
Benzene	---	0.50	1	06/19/2016 17:36
Toluene	---	0.50	1	06/19/2016 17:36
Ethylbenzene	---	0.50	1	06/19/2016 17:36
Xylenes	---	1.5	1	06/19/2016 17:36

Surrogates	REC (%)	Limits	
aaa-TFT	98	70-130	06/19/2016 17:36

Analyst(s): IA Analytical Comments: b1

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Analytical Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Received:	6/16/16 14:27	**Extraction Method:**	SW3510C/3630C
Date Prepared:	6/16/16	**Analytical Method:**	SW8015B
Project:	15166; EBALDC	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
W-ECB21	**1606748-001A**	**Water**	**06/16/2016 08:34**	**GC9b**	**122418**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**44**	35	1	06/17/2016 16:31
TPH-Motor Oil (C18-C36)	ND	75	1	06/17/2016 16:31

Surrogates	REC (%)	Limits	
C26	92	71-134	06/17/2016 16:31

Analyst(s): TK Analytical Comments: e2,b1

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Prepared:	6/18/16	**BatchID:**	122529
Date Analyzed:	6/18/16	**Extraction Method:**	SW5030B
Instrument:	GC18	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122529 1606764-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.37	0.50	10	-	84	54-140
Benzene	ND	8.99	0.50	10	-	90	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	30.3	2.0	40	-	76	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	9.71	0.50	10	-	97	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	9.46	0.50	10	-	95	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	8.87	0.50	10	-	89	66-125
1,1-Dichloroethene	ND	9.05	0.50	10	-	91	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Prepared:	6/18/16	**BatchID:**	122529
Date Analyzed:	6/18/16	**Extraction Method:**	SW5030B
Instrument:	GC18	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122529 1606764-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	8.37	0.50	10	-	84	57-136
Ethanol	ND	-	50	-	-	-	-
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.53	0.50	10	-	85	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.42	0.50	10	-	84	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	9.41	0.50	10	-	94	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	9.56	0.50	10	-	96	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Prepared:	6/18/16	**BatchID:**	122529
Date Analyzed:	6/18/16	**Extraction Method:**	SW5030B
Instrument:	GC18	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122529 1606764-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	22.5	22.0		25	90	88	70-130
Toluene-d8	21.2	21.6		25	85	86	70-130
4-BFB	2.01	2.12		2.5	80	85	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	9.40	9.72	10	ND	94	97	69-139	3.30	20
Benzene	8.56	8.96	10	ND	86	90	69-141	4.55	20
t-Butyl alcohol (TBA)	38.3	39.0	40	ND	96	98	41-152	1.93	20
Chlorobenzene	9.27	9.68	10	ND	93	97	77-120	4.31	20
1,2-Dibromoethane (EDB)	10.3	10.5	10	ND	103	105	76-135	1.74	20
1,2-Dichloroethane (1,2-DCA)	9.04	9.35	10	ND	90	93	73-139	3.40	20
1,1-Dichloroethene	8.55	9.04	10	ND	86	90	59-140	5.58	20
Diisopropyl ether (DIPE)	8.39	8.74	10	ND	84	87	72-140	4.08	20
Ethyl tert-butyl ether (ETBE)	8.94	9.24	10	ND	89	92	71-140	3.32	20
Methyl-t-butyl ether (MTBE)	9.37	9.69	10	ND	94	97	73-139	3.40	20
Toluene	8.81	9.22	10	ND	88	92	71-128	4.53	20
Trichloroethene	8.99	9.47	10	ND	90	95	64-132	5.21	20
Surrogate Recovery									
Dibromofluoromethane	22.1	22.1	25		88	89	73-131	0.283	20
Toluene-d8	21.6	21.4	25		86	86	72-117	0	20
4-BFB	2.09	2.10	2.5		83	84	74-116	0.387	20

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Prepared:	6/21/16	**BatchID:**	122613
Date Analyzed:	6/22/16	**Extraction Method:**	SW3510C
Instrument:	GC35	**Analytical Method:**	SW8270C-SIM
Matrix:	Water	**Unit:**	µg/L
Project:	15166; EBALDC	**Sample ID:**	MB/LCS/LCSD-122613

QC Summary Report for SW8270C

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Acenaphthene	ND	0.50	-	-	-
Acenaphthylene	ND	0.50	-	-	-
Anthracene	ND	0.50	-	-	-
Benzo (a) anthracene	ND	0.50	-	-	-
Benzo (a) pyrene	ND	0.50	-	-	-
Benzo (b) fluoranthene	ND	0.50	-	-	-
Benzo (g,h,i) perylene	ND	0.50	-	-	-
Benzo (k) fluoranthene	ND	0.50	-	-	-
Chrysene	ND	0.50	-	-	-
Dibenzo (a,h) anthracene	ND	0.50	-	-	-
Fluoranthene	ND	0.50	-	-	-
Fluorene	ND	0.50	-	-	-
Indeno (1,2,3-cd) pyrene	ND	0.50	-	-	-
1-Methylnaphthalene	ND	0.50	-	-	-
2-Methylnaphthalene	ND	0.50	-	-	-
Naphthalene	ND	0.50	-	-	-
Phenanthrene	ND	0.50	-	-	-
Pyrene	ND	0.50	-	-	-
Surrogate Recovery					
1-Fluoronaphthalene	19.6		25	79	45-129
2-Fluorobiphenyl	21.3		25	85	47-125

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Benzo (a) pyrene	9.83	9.83	10	98	98	12-152	0	25
Chrysene	8.66	8.59	10	87	86	28-116	0.787	25
1-Methylnaphthalene	11.0	10.4	10	110	104	48-125	5.23	25
2-Methylnaphthalene	10.1	9.72	10	101	97	41-124	4.28	25
Phenanthrene	9.70	9.63	10	97	96	36-123	0.762	25
Pyrene	10.0	11.0	10	100	110	29-118	9.12	25
Surrogate Recovery								
1-Fluoronaphthalene	21.2	20.9	25	85	83	45-129	1.51	25
2-Fluorobiphenyl	22.2	22.0	25	89	88	47-125	0.838	25

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Prepared:	6/19/16	**BatchID:**	122521
Date Analyzed:	6/19/16	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	15166; EBALDC	**Sample ID:**	MB/LCS-122521 1606748-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	58.5	40	60	-	98	70-130
MTBE	ND	10.6	5.0	10	-	106	70-130
Benzene	ND	10.4	0.50	10	-	104	70-130
Toluene	ND	10.6	0.50	10	-	106	70-130
Ethylbenzene	ND	10.7	0.50	10	-	107	70-130
Xylenes	ND	32.5	1.5	30	-	108	70-130
Surrogate Recovery							
aaa-TFT	9.77	9.61		10	98	96	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	59.4	58.6	60	ND	99	98	70-130	1.26	20
MTBE	10.8	10.7	10	ND	108	107	70-130	0.725	20
Benzene	10.4	10.2	10	ND	104	102	70-130	2.04	20
Toluene	10.6	10.3	10	ND	106	103	70-130	2.96	20
Ethylbenzene	10.8	10.6	10	ND	108	106	70-130	2.29	20
Xylenes	32.5	32.2	30	ND	108	107	70-130	0.940	20
Surrogate Recovery									
aaa-TFT	9.29	9.16	10		93	92	70-130	1.43	20

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Quality Control Report

Client:	Essel Environmental Consulting	**WorkOrder:**	1606748
Date Prepared:	6/16/16	**BatchID:**	122418
Date Analyzed:	6/16/16 - 6/17/16	**Extraction Method:**	SW3510C/3630C
Instrument:	GC11A, GC11B	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	15166; EBALDC	**Sample ID:**	MB/LCS/LCSD-122418

QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	35	-	-	-
TPH-Motor Oil (C18-C36)	ND	75	-	-	-
Surrogate Recovery					
C26	110		125	88	71-134

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	206	202	200	103	101	70-130	2.02	30
Surrogate Recovery								
C26	121	119	125	97	95	71-134	1.78	30

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1606748 **ClientCode: ESL**

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

Report to:
Nik Lahiri
Essel Environmental Consulting
351 California Street, Ste. 615
San Francisco, CA 94104
(707) 494-4883 FAX: 510-380-6610

Email: nlahiri@esseltek.com
cc/3rd Party:
PO:
ProjectNo: 15166; EBALDC

Bill to:
Nik Lahiri
Essel Environmental Consulting
351 California Street, Ste. 615
San Francisco, CA 94104
tjohnson@esseltek.com; nlahiri@esselt

Requested TAT: 5 days;

Date Received: **06/16/2016**
Date Logged: **06/16/2016**

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
1606748-001	W-ECB21	Water	6/16/2016 8:34	☐	B	C	A	A								
1606748-002	W-ECB22	Water	6/16/2016 13:27	☐	A	B										

Test Legend:

1	8260B_W	2	8270_PNA_W	3	G-MBTEX_W	4	TPH(DMO)LVWSG_W
5		6		7		8	
9		10		11		12	

Prepared by: Maria Venegas

The following SampID: 001A contains testgroup.

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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WORK ORDER SUMMARY

Client Name: ESSEL ENVIRONMENTAL CONSULTING
QC Level: LEVEL 2
Work Order: 1606748
Project: 15166; EBALDC
Client Contact: Nik Lahiri
Date Logged: 6/16/2016
Comments:
Contact's Email: nlahiri@esseltek.com

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

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1606748-001A	W-ECB21	Water	Multi-Range LV TPH(g,d,mo) w/ S.G. Clean-Up	5	VOA w/ HCl + 2-1 Amber Liter	☐	6/16/2016 8:34	5 days	5%+	☐	
1606748-001B	W-ECB21	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	6/16/2016 8:34	5 days	5%+	☐	
1606748-001C	W-ECB21	Water	SW8270C (PAHs/PNAs)	1	1LA	☐	6/16/2016 8:34	5 days	5%+	☐	
1606748-002A	W-ECB22	Water	SW8260B (VOCs)	3	VOA w/ HCl	☐	6/16/2016 13:27	5 days	25%+	☐	
1606748-002B	W-ECB22	Water	SW8270C (PAHs/PNAs)	3	aVOA	☐	6/16/2016 13:27	5 days	25%+	☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD 160648
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME RUSH 24 HR 48 HR 72 HR (5 DAY)

GeoTracker EDF **PDF** **Excel** **Write On (DW)**

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

Report To: Nik Lahiri Bill To: Samhita Lahiri

Company: Essel Technology Services, Inc
351 California Street, Suite 615
San Francisco, California 94104 E-Mail: nlahiri@esseltek.com

Tele: (925) 413-5511 Fax: (510) 380-6610

Project #: 15166 Project Name: EBALDC

Project Location: West Grand Avenue and Brush Street, Oakland, California 94612

Sampler Signature: Rodger C. Williams

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
W-ECB21	ECB-21	6/16/16	8:34 a.m.	8	G	X					X	X		
W-ECB22	ECB-22	6/16/16	1:27 p.m.	6	G	X					X	X		

Analysis Request	Other	Comments
BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE		
TPH as Gasoline, Diesel, Motor Oil (8015) LV		
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) B		
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)		
	Filter sample for DISSOLVED metals analysis	
		**Indicate here if these samples are potentially dangerous to handle: Silica gel cleanup and diesel and motor oil.

**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:
Rodger C. Williams	6/16/16	2:27 p.m.	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 1.3 COMMENTS:
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

VOAS O&G METALS OTHER
PRESERVATION_____ pH<2_____

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:	**Essel Environmental Consulting**	Date and Time Received:	**6/16/2016 14:27**
Project Name:	**15166; EBALDC**	Date Logged:	**6/16/2016**
WorkOrder №:	**1606748** Matrix: Water	Received by:	Maria Venegas
Carrier:	Client Drop-In	Logged by:	Maria Venegas

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	☐	
Sample/Temp Blank temperature	Temp:				NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes	☑	No	☐	NA ☐
Sample labels checked for correct preservation?	Yes	☑	No	☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes	☐	No	☐	NA ☑
Samples Received on Ice?	Yes	☑	No	☐	
	(Ice Type: WET ICE)				

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes	☐	No	☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes	☐	No	☐	NA ☑

Comments:

APPENDIX E

LIMITATIONS

LIMITATIONS

The environmental investigation described in this report has been conducted in accordance with current regulatory guidance and the standards of environmental and geological practice performed in the general project area. No warranty, expressed or implied, is made regarding the professional opinions presented in the report.

Essel Environmental Consulting's descriptions, conclusions, and recommendations in the report, with respect to environmental conditions, are based on a limited number of sampling points and chemical analyses. Field observations made during the investigation and the samples collected and submitted for testing are considered to be representative of the area evaluated. Subsurface soil and ground-water conditions; however, may vary between and beyond sampling or observation points. Additional work, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation.

The interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. Chemical testing was conducted by an analytical laboratory that is certified by the state of California to perform the analyses requested for this investigation. Essel Environmental Consulting is not associated with the laboratory that performed the analyses and claims no responsibility for any inaccuracy in laboratory results.

This document is intended to be used in its entirety. No portion of the document, by itself, is designed to completely represent every aspect of the project. Essel Environmental Consulting should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

This report, furthermore, is intended for the exclusive use by the client. Any use of the contents of this report by parties other than the client is undertaken at those parties' sole risk.