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By Alameda County Environmental Health 9:32 am, Aug 02, 2017

July 21, 2017

Mr. Mark Detterman, P.G., C.H.G.
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: *Site Investigation Report*, 5th and Magnolia Streets, Oakland, California (Case No.: RO0003194).

Dear Mr. Detterman:

Please find attached the *Site Investigation Report* prepared by West Environmental Services & Technology, Inc. (WEST) for the 5th and Magnolia Streets property in Oakland, California (the "Site"). 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 510-588-5152 if you have any questions or wish to discuss this further.

Sincerely,

Kevin Brown
Partner

SITE INVESTIGATION REPORT
5TH Street and Magnolia Street
West Oakland, California

July 2017

Prepared for

Holliday Development
1201 Pine Street, Suite 151
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Prepared by

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SIGNATURE PAGE

All information, conclusions and recommendations contained in this report have been prepared under the supervision of the undersigned professional(s).

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1.0 INTRODUCTION

This *Site Investigation Report* ("*Report"*) has been prepared by West Environmental Services & Technology, Inc. (WEST), on behalf of Holliday Development, to present the findings of a soil and soil vapor investigation conducted 5th Street and Magnolia Street property located in West Oakland, California ("the Site;" Figure 1-1). The investigation was conducted in May 2017 pursuant to: WEST's September 2016 *Site Investigation Work Plan* (*Work Plan*; WEST, 2016); and the Alameda County Department of Environmental Health (ACDEH) March 10, 2017 conditional approval of the *Work Plan* (ACDEH, 2017).

This *Report* presents: a summary of previous and recent investigations; evaluation of Site conditions; and a data gap analysis. Regulatory and technical guidance documents used in preparing this *Report* included: State Water Resources Control Board (SWRCB) *Resolution 92-49, Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code 13304* (SWRCB, 1996); the California Environmental Protection Agency (CalEPA) *Advisory Active Soil Gas Investigations*, July 2015 (CalEPA, 2015).

1.1 BACKGROUND

The approximately 0.5-acre Site is an undeveloped asphalt paved lot bounded by: 5th Street to the south; Union Street to the west; commercial businesses to the north; and Magnolia Street to the east; and is located within a commercial zone. The Site was formerly part of the California Department of Transportation's (Caltrans) Interstate 880 (Cypress Freeway) right-of-way that was demolished following the 1989 Loma Prieta earthquake. As part of the demolition, the freeway support columns were demolished to approximately three-feet below ground surface. In August 2015, Caltrans auctioned the Site for redevelopment.

The Site will be developed with a single story commercial/retail building and a multi-story mixed multi-family residential building along with a landscaping and hardscape. The multi-family residential units will be constructed above an open-air at-grade parking garage.

Neighboring commercial businesses include automobile repair and service operations. Releases to soil and groundwater occurred on the adjacent commercial properties (1225 7th Street and 1211 7th Street) from underground storage tanks (USTs) containing petroleum products. In June 1997, the releases from the USTs at 1225 7th Street were closed by the Alameda County Health Care Services Agency (ACHCSA, 1997). Investigations of the UST releases at 1211 7th Street are currently ongoing.

In September 2015, an investigation was conducted to characterize the Site environmental conditions and potential impacts from off-Site UST releases. Eight borings (W-1 to W-8) were advanced to 6-feet below ground surface for the collection of soil, soil gas and groundwater samples. Laboratory analysis of the soil samples revealed the presence of polycyclic aromatic hydrocarbons (PAHs) including benzo(a)pyrene up to 119 micrograms per kilogram (µg/kg) ands metals including lead up to 2,180 milligrams per kilogram (mg/kg).

Volatile organic compounds (VOCs) were detected in the soil gas samples collected from borings W-1, W-2, W-4 and W-7 including: tetrachloroethene (PCE) up to 352 micrograms per cubic meter (µg/m^3) and benzene up to 9.14 µg/m^3. Laboratory analysis of the groundwater samples did not reveal total petroleum hydrocarbons (TPH) as gasoline (TPHg) or VOCs above the laboratory-reporting limits, except for PCE up to 0.850 micrograms per liter (µg/l).

Based on the findings of the September 2015 investigations, Holliday Development entered into a voluntary cleanup agreement (VCA) with ACDEH. Pursuant to the VCA, ACDEH requested additional sampling to further characterize the Site conditions prior to development. In March 2016, WEST submitted a *Work Plan* to ACDEH further characterize the presence of chemicals in soil that will be excavated as part of the development foundation work. The *Work Plan* was approved by the ACDEH on March 10, 2017 with the following conditions: advancement additional borings for soil sampling; additional laboratory analyses of the soil samples; relocation of proposed borings; and collection of additional soil gas samples near previous soil gas sample locations. This *Report* presents a summary of the investigations conducted at the Site pursuant to the *Work Plan* and in accordance with the ACDEH additional requirements (ACDEH, 2017).

2.0 SITE DESCRIPTION

The approximately 0.5-acre Site is an undeveloped asphalt paved lot located within a commercial zone and bounded by: 5th Street to the south; Union Street to the west; commercial businesses to the north; and Magnolia Street to the east (Figure 2-1). As part of the demolition, the freeway support columns were demolished to approximately three-feet below ground surface. In August 2015, Caltrans auctioned the Site for redevelopment.

2.1 REGIONAL GEOLOGIC AND HYDROGEOLOGIC SETTING

The geology encountered in borings at the Site is comprised of fill and unconsolidated sands, silty sands and clay sands of the Merritt Formation. The fill material is approximately three-feet thick and comprised of sands and gravels with brick and concrete debris. Unconsolidated sands, silty sands and clayey sands of the Merritt Formation were encountered beneath the fill material to approximately 16-feet below ground surface (WEST, 2015).

Groundwater was encountered in the borings advanced at the Site between approximately 10-feet and 12-feet below ground surface. The groundwater flow direction measured at nearby sites is to the west-southwest (AEC, 1995).

2.2 SURFACE WATER

The San Francisco Bay is located approximately 500-feet west of the Site.

2.3 HISTORICAL SITE USE

The Site was formerly part of the Caltrans Interstate 880 (Cypress Freeway) right-of-way that was demolished following the 1989 Loma Prieta earthquake. Following freeway demolition, the Site was paved and fenced for use as a parking and equipment storage lot.

2.4 CURRENT USES OF ADJOINING PROPERTIES

Two adjoining properties to the north (1211 and 1225 7th Street) have been used for automobile repair and service operations. Releases of petroleum products from USTs have occurred at 1211 and 1225 7th Street. The UST release at 1225 7th Street (Zentrum Motors) impacted soil and occurred from a 10,000-gallon gasoline UST that was removed in 1992. In 1997, the ACHCSA closed the UST release at 1225 7th Street (ACHCSA, 1997).

The release at 1211 7th Street (Former Everidge Service Co.) impacted soil and groundwater and occurred from three 4,000-gallon gasoline USTs and one 250-gallon waste oil UST. The four USTs were installed in the 1960s (AEC, 1995). In 1992, the four USTs were removed. Between 1992 and 1995, investigations were conducted at 1211 7th Street to characterize the UST releases. In September 2015, the California Regional Water Quality Control Board – San Francisco Bay Region (Regional Water Board) approved a work plan to address data gaps at 1211 7th Street including: membrane interface probe (MIP); soil and groundwater sampling; preferential pathway study; monitoring well installation; and soil gas sampling (Regional Water Board, 2015).

2.5 PROPOSED DEVELOPMENT

The Site will be developed with a single story commercial/retail building and a multi-story mixed multi-family residential building along with a landscaping and hardscape. The multi-family residential units will be constructed above an open-air at-grade parking garage. Residential studio, one bedroom and two bedroom apartments will be constructed above the parking garage (WEST, 2016). As part of the construction, foundation footings will be excavated between approximately two-feet and four-feet below ground surface. Soil generated during construction will be managed using a Site Management Plan (SMP). The SMP will be submitted to the ACDEH for review and approval. Copies of the plans for the proposed development are included in Appendix A.

3.0 SUMMARY OF INVESTIGATIONS

Investigations conducted at and near the Site since 2015 have revealed the presence of: total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), pesticides, metals in soil; and VOCs in soil gas and groundwater. A summary of the previous and recent investigations is presented below. Soil, soil gas and groundwater analytical data are summarized in Tables 3-1 to 3-6 and depicted on Figures 3-1 to 3-3.

3.1 PREVIOUS INVESTIGATIONS

In September 2015, WEST conducted Site investigations to characterize the environmental conditions at the Site and potential impacts from the UST releases on the adjacent properties. The field activities included drilling of eight borings (W-1 to W-8) to 16-feet below ground surface for collection of soil, soil gas and groundwater samples.

3.1.1 Soil Sampling

Soil samples were collected from the Site between one- and six-feet below ground surface. Laboratory analysis of the soil samples revealed the presence of: PAHs including benzo(a)pyrene up to 119 µg/kg; pesticides including chlordane up to 18.4 µg/kg and 4,4-DDE up to 7.54 µg/kg; and metals including arsenic up to 7.21 mg/kg and lead up to 2,180 mg/kg (Tables 3-2 to 3-4).

3.1.2 Soil Gas Sampling

Soil gas samples have been collected from four temporary vapor wells (W-1, W-2, W-4 and W-7) installed to five-feet below ground surface at the Site on September 17, 2015. Laboratory analysis of the soil gas samples revealed the presence of VOCs including: PCE up to 352 µg/m^3 (W-4); benzene up to 9.14 µg/m^3 (W-1); toluene up to 15.8 µg/m^3 (W-1); ethyl benzene up to 4.60 µg/m^3 (W-1); xylenes up to 19.11 µg/m^3 (W-1); 1,3,5-trimethylbenzene (1,3,5-TMB) up to 10.4 µg/m^3 (W-1); 1,2,4-trimethylbenzene (1,2,4-TMB) up to 17 µg/m^3; and

trichlorofluoromethane (TCFM) up to 16.7 µg/m^3 (W-1)(Table 3-5 and Figure 3-2). The helium leak tracer gas was not detected in the soil gas samples above the laboratory-reporting limit of 0.100-percent.

3.1.3 Groundwater Sampling

Three groundwater samples were collected from borings W-1, W-2 and W-4 on September 17, 2015. Laboratory analysis of the groundwater samples did not reveal the presence of TPHg above its laboratory-reporting limit of 0.050 milligrams per liter (mg/l)(Table 3-6). VOCs were not detected in the groundwater samples above their laboratory-reporting limits, except for PCE at 0.850 µg/l (W-2)(Table 3-6).

3.2 RECENT INVESTIGATIONS

In May 2017, WEST conducted a soil and soil gas investigation at the Site. Nine soil borings (B-1 to B-5) were advanced for collection of soil samples between one- and 2.5-feet; and five borings (SG-1 to SG-5) were advanced for installation of temporary vapor probes at five-feet below ground surface. In addition, pursuant to a request by the ACDEH, two soil gas samples were collected from temporary vapor probes installed in the vicinity of previous sample locations W-2 and W-4. Summaries of the analytical data are presented in Tables 3-1 to 3-5 and depicted on Figures 3-1 and 3-2. Copies of the laboratory data certificates and chain-of-custody forms are included in Appendix B.

3.2.1 Permitting, Health and Safety, Utility Clearance

A boring permit (permit number W2017-0375) was obtained from the Alameda County Public Works Agency (ACPWA) for the advancement of the borings at the Site. Pursuant to California Assembly Bill AB 73, Underground Services Alert (USA) was contacted to locate and clear work areas for underground utilities at the Site. A private underground utility locating contractor,

Coast Wide Utility Locators of Felton, California, also cleared subsurface utilities/conduits in the boring areas.

A Site-specific *Health and Safety Plan* ("*HASP*") was prepared to address worker health and safety during investigation activities. The *HASP* was prepared in accordance with the California Occupational Health and Safety Administration (CalOSHA) Title 8 §5192 Hazardous Waste Operations and Emergency Response and United States OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Responses. The *HASP* was read and signed by all on-Site workers and Site visitors prior to entering the work area.

3.2.2 Temporary Vapor Monitoring Well Installation

Seven temporary vapor monitoring wells (SG-1 to SG-5, W-2 and W-4) were installed to 5.5-feet below ground surface at the Site on May 8, 2017, using truck-mounted hydraulic direct-push drilling equipment operated by Environmental Control Associates (ECA), of Aptos, California, a C-57 licensed well drilling contractor. Details of the vapor well installations are presented below.

3.2.2.1 Soil Borings

The soil borings were continuously advanced from the surface using a 2.25-inch diameter, four-foot long stainless steel Macrocore barrel outfitted with acetate liner inserts. The soil cores were described on boring logs using the Unified Soil Classification System (USCS) and Munsell Color Index (Appendix A). The soil cores were also field screened using a hand-held photoionization detector (PID) equipped with a 10.6 electron Volt (eV) lamp and calibrated to 100 parts per million by volume (ppm_v) using isobutylene calibration gas.

3.2.2.2 TEMPORARY VAPOR MONITORING WELL CONSTRUCTION

Temporary vapor monitoring wells were constructed within the soil borings at approximately five-feet below ground surface. Once the boring target depth of approximately 5.5-feet had been reached, the drill rods were withdrawn and approximately six-inches of #3 sand placed at the base of the borehole. An approximately six-inch long, 0.375-inch diameter stainless steel screen outfitted with a length of Teflon® tubing was then lowered into the borehole and covered with six-inches of sand and one-foot of dry granulated bentonite. Hydrated bentonite granules were then placed above the dry bentonite granules within the borehole to the surface. A gas-tight valve was installed on the sample tubing.

3.2.3 Soil Investigation

Soil samples for laboratory analysis were collected from the continuously cored borings by cutting six-inch sections of the acetate liners at target depths. After collection, the soil samples were labeled and placed in a chilled cooler for transported to K Prime, Inc., of Santa Rosa, California, a California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory for chemical analysis. The soil samples were transported following ASTM D 4840 chain-of-custody protocols and analyzed for: total petroleum hydrocarbons (TPH) as gasoline (TPHg) by United States Environmental Protection Agency (USEPA) Method 8015; TPH as diesel (TPHd) and TPH as motor oil (TPHmo) with silica gel clean up by USEPA Method 8015; benzene, toluene, ethyl benzene, xylenes and methyl tert-butyl ether by USEPA Method 5035/8260B; PAHs by USEPA Method 8270-SIM; and Title 22 metals by USEPA Method 6000/7000 series.

3.2.3.1 SOIL ANALYTICAL RESULTS

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Soil samples collected from the borings advanced at the Site on May 8, 2017 were reported to contain TPHd up to 423 mg/kg (B-6; collected from one-foot below ground surface) and TPHmo

up to 2,000 mg/kg (B-6; collected from one-foot below ground surface)(Table 3-1). Laboratory analysis of the soil samples did not reveal TPHg, benzene, toluene, ethyl benzene, xylenes and MTBE above their respective laboratory-reporting limits (Table 3-1).

[illegible]

Laboratory analysis of the soil samples collected between 1.5-feet and 2.5-feet below ground surface from borings B-1, B-2, B-4, B-6, B-7, B-8 and B-9 revealed PAHs above the laboratory-reporting-limits, including: benzo(a)anthracene up to 311 µg/kg (B-9); benzo(b)fluoranthene up to 404 µg/kg (B-9); benzo(a)pyrene up to 399 µg/kg (B-9); dibenzo(a,h)anthracene up to 216 µg/kg (B-9); and indeno(1,2,3-c,d)pyrene up to 453 µg/kg (B-9)(Table 3-2).

[illegible]

Metals were reported present in the soil samples collected from the nine borings advanced at the Site with: arsenic up to 4.57 mg/kg (B-9); barium up to 214 mg/kg (B-2); chromium up to 43.2 mg/kg (B-9); cobalt up to 11.5 mg/kg (B-9); copper up to 30.8 mg/kg (B-2); lead up to 1,080 mg/kg (B-4); mercury up to 0.306 mg/kg (B-2); nickel up to 38.8 mg/kg (B-9); vanadium up to 36.6 mg/kg (B-9); and zinc up to 265 mg/kg (B-2)(Table 3-4). Other metals were not reported present in the soil samples above the laboratory-reporting limit of 2.50 mg/kg (Table 3-4).

3.2.4 Soil Vapor Investigation

Soil gas samples were collected at five-feet below ground surface from the temporary vapor monitoring wells, SG-1 to SG-5, W-2 and W-4, on May 8 and 9, 2017. Pursuant to the *DTSC Advisory - Active Soil Gas Investigation* (CalEPA, 2015), the soil gas samples were collected at least two-hours following vapor well installation using direct push technology and there had not been a significant rain event, defined as 0.5-inches or greater of rainfall, in the previous five-days.

3.2.4.1 "SHUT-IN" TEST

Prior to purging or sampling soil gas, a test was conducted to check for leaks in the aboveground fittings, i.e., "shut-in" test. The shut-in test consisted of assembling the above ground apparatus (e.g., valves, lines and fittings downstream from the top of the sampling probe), and evacuating the lines to a measured vacuum of approximately 30-inches of mercury, then shutting the vacuum with closed valves on opposite ends of the sampling equipment. The vacuum gauge connected to the line via "T"-fitting was then observed for at least one minute and if there was observable loss of vacuum, the fittings were adjusted, as needed, until the vacuum in the aboveground portion of the sampling equipment did not dissipate.

3.2.4.2 PURGING

Prior to soil gas sample collection, stagnant air from: tubing; the internal volume of the probe; void space of sand pack around the probe tip; and void space of the dry bentonite was purged using a peristaltic pump at a rate of 125 milliliters per minute (ml/minute). Pursuant to the *DTSC Advisory - Active Soil Gas Investigation* (CalEPA, 2015), three purge volumes were removed. The field forms are provided in Appendix A.

3.2.4.3 QUANTITATIVE LEAK TESTING

During purging and sampling, helium was applied at the well and connections of the sampling equipment including valves, gauges, tubing, manifold and sample container. Helium was used for leak tracer testing by placing a shroud over the probe and sampling equipment. Helium was released into the shroud and a handheld helium detector used to monitor and maintain a reasonably steady concentration of approximately 20 to 30 percent helium, which was recorded on field data forms.

Helium measurements of the purged gas were used to evaluate real time leakage into the well and sampling train. Real time leak testing did not reveal helium within the well and sampling train in

excess of five-percent of the helium concentration within the shroud, i.e., within acceptable range as indicated in the *DTSC Advisory - Active Soil Gas Investigation* (CalEPA, 2015). In addition, laboratory analysis of the soil gas samples included testing for helium gas using ASTM Method 1946.

3.2.4.4 SAMPLE COLLECTION

Following purging through a laboratory-prepared sampling manifold with 125-ml per minute flow control valve, vapor flow was directed to a laboratory-prepared one-liter Summa® canister. The Summa® canister contained a vacuum of approximately 30-inches of mercury and was connected to the Teflon® tubing and manifold using airtight stainless-steel fittings. Following sample collection, the Summa® canister atmosphere was measured with a vacuum gauge and recorded on field data forms.

The Summa® canisters were labeled and transported to K Prime, Inc., of Santa Rosa, a CDPH ELAP certified laboratory pursuant to ASTM D 4840 chain-of-custody protocols. The samples were analyzed for VOCs using USEPA Method TO-15 and helium gas using ASTM Method 1946.

3.2.4.5 SOIL GAS ANALYTICAL RESULTS

Laboratory analysis of the soil gas samples revealed VOCs including: PCE up to 182 µg/m^3 (W-4); benzene up to 18.6 µg/m^3 (SG-2); toluene up to 38.4 µg/m^3 (SG-2); methylene chloride up to 24.2 µg/m^3 (SG-3); and trichlorofluoromethane up to 14.2 µg/m^3 (SG-4) (Table 3-5).

4.0 DATA EVALUATION

Consistent with Regional Water Board guidance, a screening level assessment was performed to assist in assessing the adequacy of the existing data (Regional Water Board, 2016). The screening level assessment consisted of three components: (1) identification of potential exposure pathways; (2) identification of appropriate screening levels for each media; and (3) a comparative analysis. The screening level assessment has been used to evaluate conditions of potential concern and identify areas for additional investigations, i.e., data gaps.

4.1 SCREENING LEVEL ASSESSMENT

4.1.1 Exposure Pathways Evaluation

Exposure pathways for PAHs, pesticides and metals in soil, VOCs in soil gas and VOCs in groundwater at the Site have been evaluated to assess the potential impacts to human health and the environment. Direct contact and ingestion of soil is identified as complete exposure pathway for future construction and maintenance workers. Direct contact and ingestion of soil is not identified as complete exposure pathway for future occupants due to the proposed hardscapes and buildings to be constructed on the Site. Inhalation of VOCs is identified as a potentially complete exposure pathway for future Site occupants. Direct exposure to VOCs in groundwater is not identified as a potentially complete exposure pathway as the Site is served by municipal water supply (Figure 4-1).

4.1.1.1 EXPOSURE CONCENTRATIONS

Where sample data were limited, the maximum-detected concentration of the chemicals was compared with the screening levels. Where an adequate number of data points were available, the 95 percent upper confidence level (UCL) of the mean concentration, i.e., the Reasonable Maximum Exposure (RME) was compared with the screening levels, pursuant to CalEPA and USEPA guidance (CalEPA, 1996). The 95-percent UCL was calculated using ProUCL Version

5.0 (USEPA, 2013) and was performed on the soil laboratory analytical results for lead in soil (WEST, 2015).

The USEPA recommends that maximum beneficial uses of a property be the basis for evaluation. Based on the development plans for ground floor commercial offices, above grade residential, parking garage, landscaping and hardscape, the Site soil conditions have been screened using the methods described below based on a commercial/construction worker exposure scenario. The Site soil gas conditions wee screened based on a residential and commercial exposure scenario.

4.1.1.2 COMMERCIAL/INDUSTRIAL WORKER

The commercial/industrial scenario uses the conservative assumption that on-Site workers spend all or most their workday outdoors. The exposure for commercial/industrial workers is presumed to include: (1) a full time employee of a company operating on-site who spends most of the work day conducting maintenance or manual labor activities outdoors or (2) a worker who is assumed to regularly perform grounds-keeping activities as part of his/her daily responsibilities (Regional Water Board, 2013). Exposure to surface and shallow subsurface soils (i.e., at depths of zero- to two-feet below ground surface) is expected to occur during excavation of foundations and subsurface utilities during Site construction and moderate digging associated with routine maintenance and grounds-keeping. The commercial/industrial worker scenario is based on a worker that is exposed to chemicals at the Site for 24-hours per day during 250-days per year for 25-years.

4.1.2 Identification of Screening Levels

Based on the identified exposure pathways, screening levels were identified for chemicals in soil, soil gas and groundwater as non-drinking water source. Chemical-specific screening levels were developed from concentrations based on published environmental screening criteria. The screening levels that were considered include the Regional Water Board Environmental Screening Levels (ESLs). Exceeding a screening level “does not necessarily indicate that adverse

impact to human health or the environment are occurring, [it] simply indicates that potential for adverse impacts may exist and that additional evaluation is warranted" (Regional Water Board, 2016).

4.1.2.1 REGIONAL WATER BOARD ESLS

The Regional Water Board has identified ESLs for PAHs, pesticides and metals in soil, VOCs in soil gas and VOCs in groundwater (Regional Water Board, 2016). The Regional Water Board ESLs "are intended to be conservative" and "the presence of a chemical at […] concentrations below the corresponding ESL can be assumed to not pose a significant threat to human health and the environment." While a chemical may be measured at concentrations above the Regional Water Board ESL, it "does not necessarily indicate adverse effects on human health or the environment are occurring, rather that additional evaluation is warranted." In developing the ESLs, the Regional Water Board has considered exposure pathways to humans, including inhalation of VOCs in indoor air from migration of contaminated soil gas.

4.1.2.2 CALIFORNIA DEPARTMENT OF PUBLIC HEALTH – MAXIMUM CONTAMINANT LEVELS

The MCL is the maximum concentration of a chemical that is allowed in public drinking water systems. The MCL is established by either the USEPA or the CDPH. Currently, there are fewer than 100 chemicals for which MCLs have been established; however, these represent chemicals that are thought to pose the most serious risk.

The USEPA guidance for establishing an MCL states that "MCLs are enforceable standards and are to be set as close to the maximum contaminant level goals (MCLGs) as is feasible and are based upon treatment technologies, costs (affordability) and other feasibility factors, such as availability of analytical methods, treatment technology and costs for achieving various levels of removal." The process of determining an MCL starts with an evaluation of the adverse effects caused by the chemical in question and the doses needed to cause such effects.

The result of this process is a safe dose (the dose thought to provide protection against adverse effects including a margin of safety), now called a Reference Dose (RfD) by the EPA. This evaluation is based on the results of animal experiments, and the research results are extrapolated to humans using standard EPA methods.

4.2 COMPARATIVE ANALYSIS

An evaluation between the identified screening levels and the soil laboratory analytical results was performed to characterize the Site conditions.

4.2.1 Soil Conditions

4.2.1.1 TPH AND VOCS

TPHg was not detected in soil above its laboratory-reporting limit of 1.00 mg/kg. TPHd was detected up to 423 mg/kg (boring B-6 at 1-foot below ground surface), above its unrestricted Regional Water Board ESL of 230 mg/kg but below its commercial Regional Water Board ESL of 880 mg/kg. TPHd was not detected in the soil sample collected from boring B-6 at 2.5-feet below ground surface above its laboratory-reporting limit of 10 mg/kg.

TPHmo was detected up to 2,000 mg/kg (boring B-6 at 1-foot below ground surface) and co-present with TPHd at 423 mg/kg, below its unrestricted use Regional Water Board ESL of 5,100 mg/kg. TPHmo was detected in the soil sample collected from boring B-6 at 2.5-feet below ground surface at a lower concentration of 10.8 mg/kg, below its unrestricted use Regional Water Board ESL of 5,100 mg/kg (Table 3-1).

VOCs including benzene, toluene, ethyl benzene, xylenes and MTBE were not detected in the soil samples collected at the Site above their respective laboratory-reporting limits (Table 3-1).

4.2.1.2 PAHs

Benzo(a)anthracene was detected in soil up to 311 µg/kg (boring B-9 at 1-foot below ground surface), above its unrestricted use Regional Water Board ESL of 160 µg/kg but below its commercial Regional Water Board ESL of 2,900 µg/kg. Benzo(b)fluoranthene was detected in soil up to 404 µg/kg (boring B-9 at 1-foot below ground surface), above its unrestricted use Regional Water Board ESL of 160 µg/kg but below its commercial Regional Water Board ESL of 2,900 µg/kg.. Benzo(a)pyrene was detected in the soil samples collected at the Site up to 399 µg/kg (boring B-9 at 1-foot below ground surface), above its unrestricted use and commercial Regional Water Board ESLs of 16 µg/kg and 290 µg/kg (Table 3-2 and Figure 3-1).

Dibenzo(a,h)anthracene was detected up to 430 µg/kg (boring W-6 at 1-foot below ground surface), above its unrestricted use and commercial Regional Water Board ESLs of 16 µg/kg and 290 µg/kg. Indeno(1,2,3-c,d)pyrene was detected up to 453 µg/kg (boring B-9 at 1-foot below ground surface), which is above its unrestricted use Regional Water ESL of 160 µg/kg but below its commercial Regional Water Board ESL of 2,900 µg/kg. Other PAHs were detected in the soil samples collected at the Site but at concentrations below their respective unrestricted use Regional Water Board ESLs (Table 3-2).

4.2.1.3 ORGANOCHLORINE PESTICIDES

The organochlorine pesticides chlordane and 4,4-DDE were detected in the soil samples above the laboratory-reporting limits. Chlordane was detected up to 18.4 µg/kg (boring W-8 at 1-foot below ground surface), which is below its unrestricted use Regional Water Board ESL of 480 µg/kg. 4,4-DDE was detected up to 7.54 µg/kg (boring W-5 at 1-foot below ground surface), which is below its unrestricted use Regional Water Board ESL of 1,900 µg/kg (Table 3-3).

4.2.1.4 METALS

Metals were detected in the soil samples including arsenic and lead. Arsenic was detected up to 7.21 mg/kg (boring W-2 at 1-foot below ground surface), which is consistent with the range of background arsenic concentrates up to 11 mg/kg for the San Francisco Bay Area (Duverge, 2011). Lead was detected in soil up to 2,180 mg/kg (boring W-4 at 3-feet below ground surface), which is above its unrestricted use and commercial Regional Water Board ESLs of 80 mg/kg and 320 mg/kg (Table 3-4 and Figure 3-1). Other metals were detected in the soil samples but at concentrations below their respective unrestricted use Regional Water Board ESLs.

4.2.2 Soil Gas Conditions

VOCs were detected in the soil gas samples collected at the Site. PCE was detected up to 352 $\mu g/m^3$ (boring W-2; September 2015), which is above its unrestricted use Regional Water Board ESL of 240 $\mu g/m^3$ but below its commercial Regional Water board ESL of 2,100 $\mu g/m^3$. However, during the May 2017 investigation, PCE was detected in the soil gas sample collected from the boring W-2 location at a lower concentration of 182 $\mu g/m^3$, which is below its unrestricted use Regional Water Board ESL of 240 $\mu g/m^3$ (Table 3-5 and Figure 3-2).

Benzene was detected up to 18.6 $\mu g/m^3$ (boring SG-2), which is below its unrestricted use Regional Water Board ESL of 48 $\mu g/m^3$ (Table 3-5; Figure 3-2). Toluene was detected up to 38.4 $\mu g/m^3$ (boring SG-2), which is below its unrestricted use Regional Water Board ESL of 160,000 $\mu g/m^3$. Methylene chloride was detected up to 24.2 $\mu g/m^3$ (boring SG-3), below its unrestricted use Regional Water Board ESL of 510 $\mu g/m^3$. Other VOCs were either not detected in soil gas above their respective laboratory-reporting limits or unrestricted use Regional Water Board ESLs (Table 3-5).

4.2.3 Groundwater Conditions

Groundwater samples were collected from borings W-1, W-2 and W-4. Laboratory analysis of the groundwater samples did not reveal the presence of TPHg above its laboratory-reporting limit of 0.050 mg/l. The VOC PCE was detected up to 0.850 µg/l, which is below its maximum contaminant level (MCL) of 5 µg/l. Other VOCs were not detected in the groundwater samples above their respective laboratory-reporting limits (Table 3-6).

5.0 SUMMARY

Based on the findings, lead and PAHs were detected in soil, above their respective unrestricted use Regional Water Board ESLs. However, the proposed Site development is comprised of: at grade commercial; at-grade parking garage; hardscapes; and landscaping. The landscape areas will be over-excavated and backfilled with clean imported soil. During construction, soil will be excavated during grading, foundation excavations, utility trenching and over-excavation of landscape areas. The soil generated during the construction activities will be managed on-Site as engineered fill or for off-Site disposal.

In addition, PCE was previously detected in soil gas in one sample (W-4 at 352 $\mu g/m^3$) above its unrestricted use Regional Water Board ESL of 240 $\mu g/m^3$ near the proposed elevator and open air parking garage. However, subsequent sampling conducted near boring W-4 in May 2017 revealed PCE at a lower concentration of 182 $\mu g/m^3$, below its unrestricted use Regional Water Board ESL of 240 $\mu g/m^3$ and commercial use Regional Water Board ESL of 2,100 $\mu g/m^3$.

Following construction, there will be no complete soil exposure pathway for future Site occupants and maintenance workers as the Site will be covered with buildings and hardscape and the landscape areas will be over-excavated and backfilled with clean imported soil. In addition, due to the soil gas results and the proposed of the open-air parking garage, there does not appear to be a complete exposure pathway for VOCs in soil gas for future residents.

5.1 RECOMMENDATIONS

Based on the proposed development plan and the incomplete exposure pathway for future Site occupants to soil, a Site Management Plan (SMP) should be developed which details the procedures and protocols for managing soil during construction. Following completion of Site construction, a land use covenant (LUC) will be prepared and recorded with the Alameda County Recorders Office. The LUC will identify restrictions that are reasonably necessary to protect

human health and safety or the environment due to the presence of hazardous materials beneath the Site

6.0 REFERENCES

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7.0 DISTRIBUTION LIST

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TABLE 3-1
SUMMARY OF SOIL ANALYTICAL RESULTS - TPHS & PVOCS
5th Street and Magnolia Street
West Oakland, California

Sample ID	Date	Depth (feet)	Petroleum Hydrocarbons			Petroleum Related VOCs				
			TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE
			(mg/kg)	(mg/kg)	(mg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
B-1	5/8/17	1.5	<1.00	58.3	334	<1.65	<1.65	<1.65	<1.65	<1.65
B-2	5/8/17	1	<1.00	10.8	43.8	<1.71	<1.71	<1.71	<1.71	<1.71
		2.5	<1.00	<10.0	<10.0	<1.68	<1.68	<1.68	<1.68	<1.68
B-3	5/8/17	1.5	<1.00	59.6	498	<1.72	<1.72	<1.72	<1.72	<1.72
		3	<1.00	<10.0	<10.0	<1.77	<1.77	<1.77	<1.77	<1.77
B-4	5/8/17	1.5	<1.00	36.3	45.9	<1.57	<1.57	<1.57	<1.57	<1.57
B-5	5/8/17	1.5	<1.00	22.6	77.6	<1.68	<1.68	<1.68	<1.68	<1.68
B-6	5/8/17	1	<1.00	**423**	2,000	<1.85	<1.85	<1.85	<1.85	<1.85
		2.5	<1.00	<10.0	10.8	<1.72	<1.72	<1.72	<1.72	<1.72
B-7	5/8/17	1.5	<1.00	<10.0	29.3	<1.80	<1.80	<1.80	<1.80	<1.80
		2.5	<1.00	<10.0	21.0	<1.81	<1.81	<1.81	<1.81	<1.81
B-8	5/8/17	1.5	<1.00	12.1	64.4	<1.70	<1.70	<1.70	<1.70	<1.70
B-9	5/8/17	1	<1.00	63.1	455	<1.79	<1.79	<1.79	<1.79	<1.79
		2	<1.00	<10.0	<10.0	<1.65	<1.65	<1.65	<1.65	<1.65
ESLs-Commercial			3,900	1,100	140,000	24,000	4,600,000	22,000	2,400,000	180,000
ESLs-Construction Worker			2,800	880	32,000	1,000	4,100,000	480,000	2,400,000	3,700,000
ESLs-Unrestricted Use			740	230	5,100	230	970,000	5,100	560,000	42,000

Notes:

VOCs: Volatile organic compounds
TPHg: Total petroleum hydrocarbons as gasoline
TPHd: Total petroleum hydrocarbons as diesel
TPHmo: Total petroleum hydrocarbons as motor oil
MTBE: Methyl tert-butyl ether
mg/kg: milligrams per kilogram
µg/kg: micrograms per kilogram
ESLs: California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Levels, Rev. 3

TABLE 3-2
SUMMARY OF SOIL ANALYTICAL RESULTS - PAHS
5th Street and Magnolia Street
West Oakland, California

Sample ID	Date	Depth (feet)	Acenaphthene (µg/kg)	Acenaphthylene (µg/kg)	Anthracene (µg/kg)	Benzo(a) anthracene (µg/kg)	Benzo(b) fluoranthene (µg/kg)	Benzo(k) fluoranthene (µg/kg)	Benzo(a)pyrene (µg/kg)	Benzo(g,h,i) perylene (µg/kg)	Chrysene (µg/kg)	Dibenz(a,h) anthracene (µg/kg)	Fluoranthene (µg/kg)	Fluorene (µg/kg)	Indeno (1,2,3-c,d) pyrene (µg/kg)	Naphthalene (µg/kg)	Phenanthrene (µg/kg)	Pyrene (µg/kg)
W-1	9/17/15	1	<2.50	9.42	5.46	14.8	80	15.6	**47.1**	209	53.4	36.5	8.07	<2.50	41.8	14	19.3	29.5
W-2	9/17/15	1	<2.50	14.8	10.1	55.1	132	35.8	**99.8**	255	79.6	59.3	31.5	<2.50	103	26.2	36	97.1
W-3	9/17/15	1	<2.50	11.3	6.73	26	**176**	27	**87.4**	240	130	98.1	14.4	23	87.3	12.3	49.2	101
W-4	9/17/15	1	<2.50	32	25.9	105	**178**	60.7	**119**	287	91.9	70.6	87	28.2	107	13.9	129	184
W-5	9/17/15	1	<2.50	20.3	18.3	67.5	130	47.2	**81.5**	159	75.9	26	74	<2.50	99.6	11.4	49.7	127
W-6	9/17/15	1	<2.50	17.7	9.44	36.9	74.5	28.3	**44.4**	226	40.5	**430**	28.2	19.5	59.2	11.7	38.3	72.6
W-7	9/17/15	1	<2.50	18.8	15.7	61.2	187	45.2	**111**	264	97.2	77.3	50.7	9.02	120	13.5	84.2	144
W-8	9/17/15	1	<2.50	13.9	6.45	41.7	134	38.5	**78.2**	234	80.1	73.1	17.1	13	99.7	23.6	30.9	48.4
B-1	5/8/17	1.5	<2.50	14.2	16.5	42.1	70.5	39.8	**24.7**	114	46.4	28.4	55.5	<2.50	59.4	5.44	36.1	134
B-2	5/8/17	2.5	<2.50	43.8	98.9	70.9	**185**	115	**74.2**	231	165	48.0	321	<2.50	**169**	103	125	309
B-4	5/8/17	1.5	<2.50	15.4	26.4	41.1	70.1	42.7	**33.9**	86.3	64.6	28.7	112	<2.50	61.0	7.32	36.2	94.9
B-6	5/8/17	2.5	<2.50	19.6	40.4	22.2	65.8	43.6	**21.0**	66.5	51.1	14.3	98.2	<2.50	45.1	40.2	33.7	71.1
B-7	5/8/17	2.5	<2.50	14.6	40.3	27.1	36.0	24.9	15.7	47.9	50.2	<10.0	77.4	<2.50	31.4	184	53.5	70.2
B-8	5/8/17	1.5	<2.50	6.46	17.1	21.7	36.2	25.9	**17.0**	47.5	34.9	22.6	35.0	<2.50	27.7	6.60	19.6	56.6
B-9	5/8/17	1	4.77	97.3	122	**311**	**404**	151	**399**	662	241	216	559	9.07	**453**	13.0	249	1,720
ESLs-Commercial			5.E+04	--	2.3E+08	2,900	2,900	29,000	290	--	3.E+05	290	3.0E+07	3.0E+07	2,900	14,000	--	2.3E+07
ESLs-Residential			4.E+06	--	1.8E+07	160	160	1,600	16	--	2.E+04	16	2.4E+06	2.4E+06	160	3,300	--	1.8E+06

Notes:

PAHs: Polycyclic aromatic hydrocarbons

µg/kg: micrograms per kilogram

--: Not promulgated

ESLs: California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Levels, Rev. 3

<2.50: Less than the laboratory-reporting limit of 2.50 µg/kg

TABLE 3-3
SUMMARY OF SOIL ANALYTICAL RESULTS - PESTICIDES
5th Street and Magnolia Street
West Oakland, California

Sample ID	Date	Depth (feet)	Pesticides																		
			Alpha-BHC	Beta-BHC	Gamma-BHC (Lindane)	Heptachlor	Delta-BHC	Aldrin	Heptachlor epoxide	Endosulfan I	4,4-DDE	Dieldrin	Endrin	4,4-DDD	Endosulfan II	4,4-DDT	Endrin aldehyde	Endosulfan Sulfate	Methoxychlor	Chlordane	Toxaphene
			(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
W-1	9/17/15	1	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<12.5	<12.5	<62.5
W-2	9/17/15	1	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<12.5	17.6	<62.5
W-3	9/17/15	1	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<12.5	<12.5	<62.5
W-4	9/17/15	1	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<12.5	15.2	<62.5
W-5	9/17/15	1	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	7.54	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<12.5	<12.5	<62.5
W-6	9/17/15	1	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<12.5	15.8	<62.5
W-7	9/17/15	1	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<12.5	15.3	<62.5
W-8	9/17/15	1	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<12.5	18.4	<62.5
ESLs-Commercial			--	--	2,500	--	--	160	300	5.8E+06	8,500	170	290,000	12,000	5.8E+06	8,500	--	5.8E+06	4.8E+06	2,200	2,200
ESLs-Construction worker			--	--	16,000	--	--	1,000	1,900	1.5E+06	57,000	1,100	74,000	81,000	1.5E+06	57,000	--	1.5E+06	1.2E+06	14,000	14,000
ESLs-Residential			--	--	550	--	--	36	67	4.2E+05	1,900	38	21,000	2,700	4.2E+05	1,900	--	4.2E+05	3.5E+05	480	510

Notes:
PAHs: Polycyclic aromatic hydrocarbons
µg/kg: micrograms per kilogram
--: Not analyzed/not available
ESLs: California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Levels
<2.50: Less than the laboratory-reporting limit of 2.50 µg/kg

TABLE 3-4
SUMMARY OF SOIL ANALYTICAL RESULTS - METALS
5th Street and Magnolia Street
West Oakland, California

Sample ID	Date	Depth (feet)	Metals																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
W-1	9/17/15	1	--	3.58	--	--	--	--	--	--	25.9	--	--	--	--	--	--	--	--
		3	--	<2.50	--	--	--	--	--	--	119	--	--	--	--	--	--	--	--
		6	--	<2.50	--	--	--	--	--	--	3.45	--	--	--	--	--	--	--	--
W-2	9/17/15	1	--	7.21	--	--	--	--	--	--	36.4	--	--	--	--	--	--	--	--
		3	<2.50	6.91	1,790	<2.50	<2.50	25.6	3.92	37.7	**661**	0.38	<2.50	20	<2.50	<2.50	<2.50	28.5	688
		6	--	<2.50	--	--	--	--	--	--	<2.50	--	--	--	--	--	--	--	--
W-3	9/17/15	1	<2.50	2.61	99.1	<2.50	<2.50	23.1	8.18	40.1	19.6	0.127	<2.50	27.8	<2.50	<2.50	<2.50	43.2	87.1
		3	--	<2.50	--	--	--	--	--	--	169	--	--	--	--	--	--	--	--
		6	--	<2.50	--	--	--	--	--	--	**1,360**	--	--	--	--	--	--	--	--
W-4	9/17/15	1	--	3.54	--	--	--	--	--	--	24.7	--	--	--	--	--	--	--	--
		3	<2.50	7.17	990	<2.50	<2.50	29.9	6.35	43.4	**2,180**	0.344	<2.50	34.5	<2.50	<2.50	<2.50	26.7	701
		6	--	<2.50	--	--	--	--	--	--	<2.50	--	--	--	--	--	--	--	--
W-5	9/17/15	1	--	5.60	--	--	--	--	--	--	**510**	--	--	--	--	--	--	--	--
		3	--	<2.50	--	--	--	--	--	--	50.2	--	--	--	--	--	--	--	--
		6	--	<2.50	--	--	--	--	--	--	<2.50	--	--	--	--	--	--	--	--
W-6	9/17/15	1	--	4.34	--	--	--	--	--	--	25.5	--	--	--	--	--	--	--	--
		3	--	4.36	--	--	--	--	--	--	316	--	--	--	--	--	--	--	--
		6	<2.50	<2.50	36.1	<2.50	<2.50	22.3	<2.50	4.04	7.87	<0.100	<2.50	11.9	<2.50	<2.50	<2.50	15.6	12.8
W-7	9/17/15	1	--	4.90	--	--	--	--	--	--	18.9	--	--	--	--	--	--	--	--
		3	--	2.50	--	--	--	--	--	--	**199**	--	--	--	--	--	--	--	--
		6	--	2.64	--	--	--	--	--	--	2.87	--	--	--	--	--	--	--	--
W-8	9/17/15	1	--	3.28	--	--	--	--	--	--	20.1	--	--	--	--	--	--	--	--
		3	--	2.76	--	--	--	--	--	--	**174**	--	--	--	--	--	--	--	--
		6	--	2.93	--	--	--	--	--	--	3.58	--	--	--	--	--	--	--	--
B-1	5/8/17	1.5	--	--	--	--	--	--	--	--	**102**	--	--	--	--	--	--	--	--
B-2	5/8/17	1	--	--	--	--	--	--	--	--	**107**	--	--	--	--	--	--	--	--
		2.5	<2.50	4.5	214	<2.50	<2.50	31.4	4.05	30.8	**314**	0.306	<2.50	18.1	<2.50	<2.50	<2.50	20.8	265
B-3	5/8/17	1.5	--	--	--	--	--	--	--	--	36.5	--	--	--	--	--	--	--	--
		3	<2.50	4.02	141	<2.50	<2.50	17.2	7.07	20.2	**98.0**	0.110	<2.50	15.4	<2.50	<2.50	<2.50	36.1	72.8
B-4	5/8/17	1.5	--	--	--	--	--	--	--	--	**1,080**	--	--	--	--	--	--	--	--
B-5	5/8/17	1.5	--	--	--	--	--	--	--	--	**191**	--	--	--	--	--	--	--	--

TABLE 3-4
SUMMARY OF SOIL ANALYTICAL RESULTS - METALS
5th Street and Magnolia Street
West Oakland, California

Sample ID	Date	Depth (feet)	Metals																
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
B-6	5/8/17	1	--	--	--	--	--	--	--	--	43.9	--	--	--	--	--	--	--	--
		2.5	<2.50	3.40	104	<2.50	<2.50	30.0	4.39	15.4	**206**	0.200	<2.50	20.5	<2.50	<2.50	<2.50	22.2	110
B-7	5/8/17	1.5	--	--	--	--	--	--	--	--	76.9	--	--	--	--	--	--	--	--
		2.5	--	--	--	--	--	--	--	--	**228**	--	--	--	--	--	--	--	--
B-8	5/8/17	1.5	<2.50	3.34	106	<2.50	<2.50	32.8	6.22	18.7	**113**	0.186	<2.50	20.8	<2.50	<2.50	<2.50	30.2	119
B-9	5/8/17	1	--	--	--	--	--	--	--	--	**96.0**	--	--	--	--	--	--	--	--
		2	<2.50	4.57	122	<2.50	<2.50	43.2	11.5	26.1	13.6	<0.100	<2.50	38.8	<2.50	<2.50	<2.50	36.6	43.9
ESLs-Commercial			470	bg	220,000	2,200	580	1,800,000	350	47,000	320	190	5,800	11,000	5,800	5,800	12	5,800	350,000
ESLs-Residential			31	bg	15,000	150	39	120,000	23	3,100	80	13	390	820	390	390	0.78	390	23,000

Notes:
mg/kg: milligrams per kilogram
--: Not analyzed
<2.50: Less than the laboratory-reporting limit of 2.50 µg/kg
ESLs: California Regional Water Quality Control Board - San Franicsco Bay Region Environmental Screening Levels, Rev. 3

TABLE 3-5
SUMMARY OF SOIL GAS ANALYTICAL RESULTS
5th Street and Magnolia Street
West Oakland, California

Sample ID	Depth (feet)	Date	Dichlorodifluoromethmane	Chloromethane	Dichlorotetrafluoroethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	1,1-Dchloroethene	Trichlorotrifluoroethane	Methylene chloride	1,1-Dichloroethane	cis-1,2-Dichloroethene	Chloroform	1,1,1-Trichloroethane	1,2-Dichloroethane	Benzene	Carbon Tetrachloride	1,2-Dichloropropane	Trichloroethene	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Toluene	1,1,2-Trichloroethane	1,2-Dibromomethane	Tetrachloroethene
			($\mu g/m^3$)																								
W-1	5	9/17/15	<4.95	<2.07	<6.99	<2.56	<3.88	<2.64	16.7	<3.97	<7.66	<3.47	<4.05	<3.97	<4.88	<5.46	<4.05	9.14	<6.29	<4.62	<5.37	<4.54	<4.54	15.8	<5.46	<7.68	29.4
W-2	5	9/17/15	<24.7	<10.3	<35	<12.8	<19.4	<13.2	<28.1	<19.8	<38.3	<17.4	<20.2	<19.8	<24.4	<27.3	<20.2	<16.0	<31.5	<23.1	<26.9	<22.7	<22.7	<18.8	<27.3	<38.4	224
		5/8/17	<4.95	<2.07	<6.99	<2.56	<3.88	<2.64	6.52	<3.97	<7.66	5.07	<4.05	<3.97	<4.88	<5.46	<4.05	<3.19	<6.29	<4.62	<5.37	<4.54	<4.54	<3.77	<5.46	<7.68	45
W-4	5	9/17/15	<24.7	<10.3	<35	<12.8	<19.4	<13.2	<28.1	<19.8	<38.3	<17.4	<20.2	<19.8	<24.4	<27.3	<20.2	<16.0	<31.5	<23.1	<26.9	<22.7	<22.7	<18.8	<27.3	<38.4	**352**
		5/9/17	<9.89	<4.13	<14.0	<5.11	<7.77	<5.28	<11.2	<7.93	<15.3	<6.95	<8.10	<7.93	<9.77	<10.9	<8.09	<6.39	<12.6	<9.24	<10.7	<9.08	<9.08	<7.54	<10.9	<15.4	182
W-7	5	9/17/15	<24.7	<10.3	<35	<12.8	<19.4	<13.2	<28.1	<19.8	<38.3	<17.4	<20.2	<19.8	<24.4	<27.3	<20.2	<16.0	<31.5	<23.1	<26.9	<22.7	<22.7	<18.8	<27.3	<38.4	64
SG-1	5	5/8/17	<4.95	<2.07	<6.99	<2.56	<3.88	<2.64	6.24	<3.97	<7.66	<3.47	<4.05	<3.97	<4.88	<5.46	<4.05	<3.19	<6.29	<4.62	<5.37	<9.08	<9.08	4.86	<5.46	<7.68	109
SG-2	5	5/8/17	<9.89	<4.13	<14.0	<5.11	<7.77	<5.28	<11.2	<7.93	<15.3	<6.95	<8.10	<7.93	<9.77	<10.9	<8.09	18.6	<12.6	<9.24	<10.7	<9.08	<9.08	38.4	<10.9	<15.4	14
SG-3	5	5/9/17	<9.89	<4.13	<14.0	<5.11	<7.77	<5.28	<11.2	<7.93	<15.3	24.2	<8.10	<7.93	<9.77	<10.9	<8.09	<6.39	<12.6	<9.24	<10.7	<9.08	<9.08	<7.54	<10.9	<15.4	<13.6
SG-4	5	5/9/17	<4.95	<2.07	<6.99	<2.56	<3.88	<2.64	14.2	<3.97	<7.66	<3.47	<4.05	<3.97	<4.88	<5.46	<4.05	<3.19	<6.29	<4.62	<5.37	<9.08	<9.08	<3.77	<5.46	<7.68	13.5
SG-5	5	5/9/17	<9.89	<4.13	<14.0	<5.11	<7.77	<5.28	<11.2	<7.93	<15.3	<6.95	<8.10	<7.93	<9.77	<10.9	<8.09	<6.39	<12.6	<9.24	<10.7	<9.08	<9.08	<7.54	<10.9	<15.4	21.3
ESLs-Commercial			--	3.9E+05	--	160	22,000	4.4E+07	--	3.1E+05	--	12,000	7,700	35,000	530	4.4E+06	470	420	290	1,200	3,000	770	3.5E+05	1.3E+06		20	2,100
ESLs-Residential			--	47,000	--	4.7	2,600	5.2E+06	--	37,000	--	510	880	4,200	61	5.2E+05	54	48	33	140	240	88	420	1.6E+05		2.3	240

Notes:

$\mu g/m^3$: micrograms per meter cubed

<21.8: Less than the laboratory-reporting limit of 21.8 $\mu g/m^3$

--: not available

ESLs: California Regional Water Quality Control Board - San Franicsco Bay Region Environmental Screening Levels (Rev. 3)

TABLE 3-5
SUMMARY OF SOIL GAS ANALYTICAL RESULTS
5th Street and Magnolia Street
West Oakland, California

Sample ID	Depth (feet)	Date	Chlorobenzene	Ethyl Benzene	Xylenes	Styrene	1,1,2,2-Tetrachloroethane	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	1,2,4-Trichlorobenzene	Hexachlorobutadiene	Helium
			(µg/m3)												(%)
W-1	5	9/17/15	<4.60	4.60	19.11	<4.26	<6.87	<4.92	<4.92	<6.01	<6.01	<6.01	<14.8	<10.7	<0.100
W-2	5	9/17/15	<23	<21.7	<21.7	<21.3	<34.3	<24.6	<24.6	<30.1	<30.1	<30.1	<74.2	<53.3	<0.100
		5/8/17	<4.60	<4.34	<4.34	<4.26	<6.87	<4.92	<4.92	<6.01	<6.01	<6.01	<7.42	<10.7	<0.100
W-4	5	9/17/15	<23	<21.7	<21.7	<21.3	<34.3	<24.6	<24.6	<30.1	<30.1	<30.1	<74.2	<53.3	<0.100
		5/9/17	<9.21	<8.68	<8.68	<8.52	<13.7	<9.83	<9.83	<12.0	<12.0	<12.0	<14.8	<21.3	<0.100
W-7	5	9/17/15	<23	<21.7	<21.7	<21.3	<34.3	<24.6	<24.6	<30.1	<30.1	<30.1	<74.2	<53.3	<0.100
SG-1	5	5/8/17	<4.60	<4.34	<4.34	<4.26	<6.87	<4.92	<4.92	<6.01	<6.01	<6.01	<7.42	<10.7	<0.100
SG-2	5	5/8/17	<9.21	<8.68	<8.68	<8.52	<13.7	<9.83	<9.83	<12.0	<12.0	<12.0	<14.8	<21.3	<0.100
SG-3	5	5/9/17	<9.21	<8.68	<8.68	<8.52	<13.7	<9.83	<9.83	<12.0	<12.0	<12.0	<14.8	<21.3	<0.100
SG-4	5	5/9/17	<9.21	<8.68	<8.68	<8.52	<13.7	<9.83	<9.83	<12.0	<12.0	<12.0	<14.8	<21.3	<0.100
SG-5	5	5/9/17	<9.21	<8.68	<8.68	<8.52	<13.7	<9.83	<9.83	<12.0	<12.0	<12.0	<14.8	<21.3	<0.100
ESLs-Commercial			2.2E+05	4,900	4.4E+05	3.9E+06	210	--	--	--	1,100	8.8E+05	8,800	--	--
ESLs-Residential			26,000	560	5.2E+04	4.7E+05	24	--	--	--	130	1.0E+05	1,000	--	--

Notes:
µg/m^3: micrograms per m
<21.8: Less than the labor
--: not available
ESLs: California Regiona

TABLE 3-6
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
5th Street and Magnolia Street
West Oakland, California

Sample ID	Date	TPHg	Dichlorodifluoromethmane	Chloromethane	Chloroethene	Bromomethane	Chloroethane	Trichlorofluoromethane	1,1-Dchloroethene	Trichlorotrifluoroethane	Methylene chloride	trans-1,2-Dichloroethene	1,1-Dichloroethane	cis-1,2-Dichloroethene	2-2Dichloropropane	Bromochloromnethane	Chloroform	1,1,1-Trichloroethane	Carbon Tetrachloride	1,1-Dichlorpropene	Benzene	1,2-Dichloroethane	Trichloroethene	1,2-Dichloropropane	Dibromomethane	Bromodichloromethane	trans-1,3-Dichloroprrpene	Toluene	cis-1,3-Dichloroprrpene	1,1,2-Tetrachloroethane	Tetrachloroethene	1,3-Dichloropropene	Dibromochloromethane	1,2-Dibromomethane
		(mg/l)	(µg/l)																															
W-1	9/17/15	<0.050	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
W-2	9/17/15	<0.050	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.850	<0.500	<0.500	<0.500
W-4	9/17/15	<0.050	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
MCLs			220	190	0.5	7.5	21,000	--	6	--	5	10	5	6	--	--	80	200	--	--	1	0.5	5	5	--	80	--	40	--	5	5	0.5	80	0.05

Notes:
µg/l: micrograms per liter
mg/l: milligrams per liter
<0.500: Less than the laboratory-reporting limit of 0.500
MCLs: Maximum Contaminant Levels

TABLE 3-6
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
5th Street and Magnolia Street
West Oakland, California

Sample ID	Date	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethyl Benzene	Xylenes	Styrene	Bromoform	Isoprpylbenzene	1,1,2,2-Tetrachloroethane	Bromomethane	1,2,3-Trichloropropane	n-Propylbenzene	2-Chlorotoluene	1,3,5-Trimethylbenzene	4-Chlorotoluene	Tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorbenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	Hexachlorobutadiene	Naphthalene	1,2,3-Trichlorobenzene
		(µg/l)																										
W-1	9/17/15	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
W-2	9/17/15	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
W-4	9/17/15	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
MCLs		--	0.57	30	20	--	80	--	1	--	--	--	--	--	--	--	--	--	60	--	5	--	100	--	5	0.14	0.17	--

Notes:
µg/l: microgra
mg/l: milligran
<0.500: Less than
MCLs: Maximur

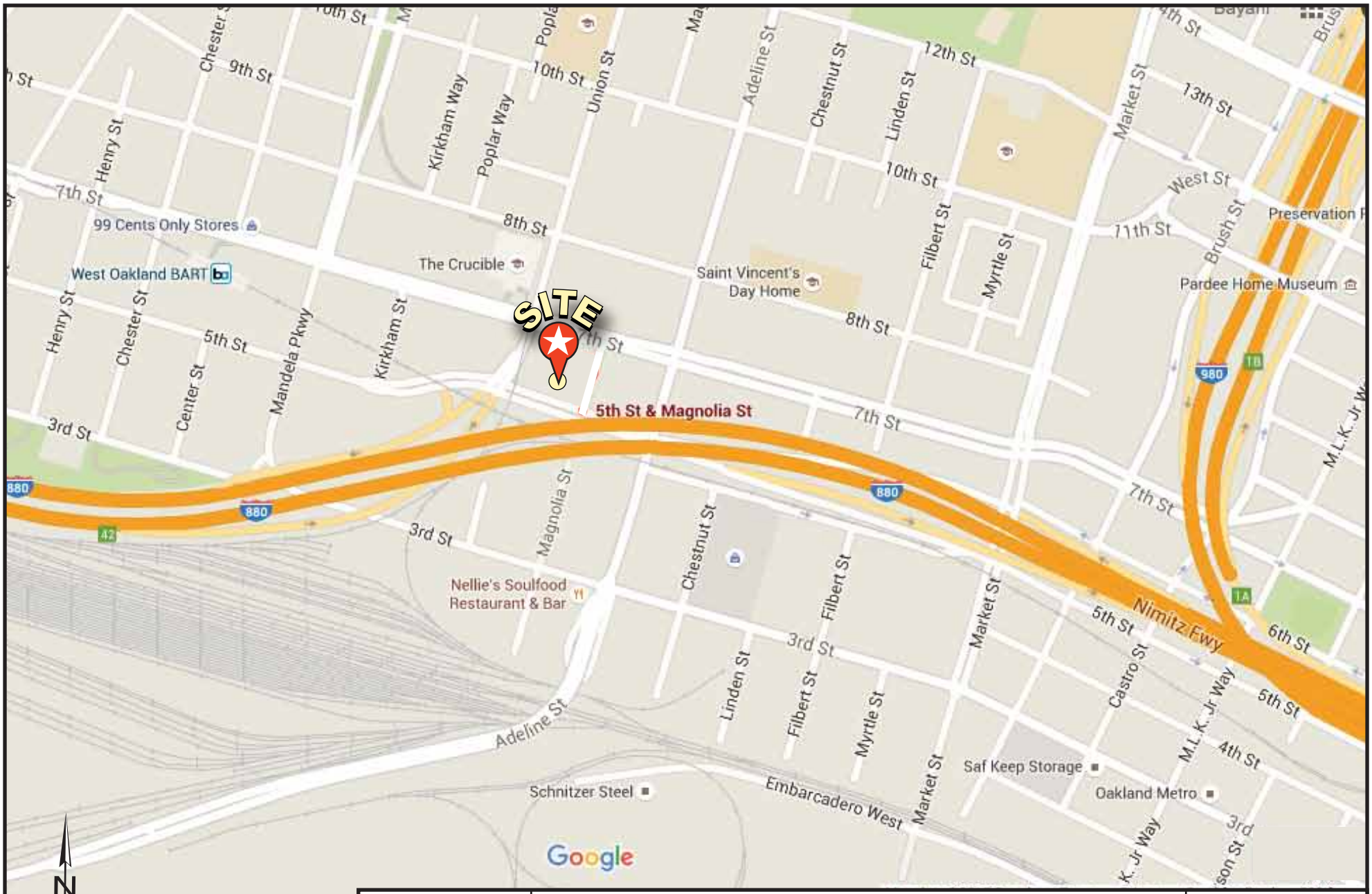
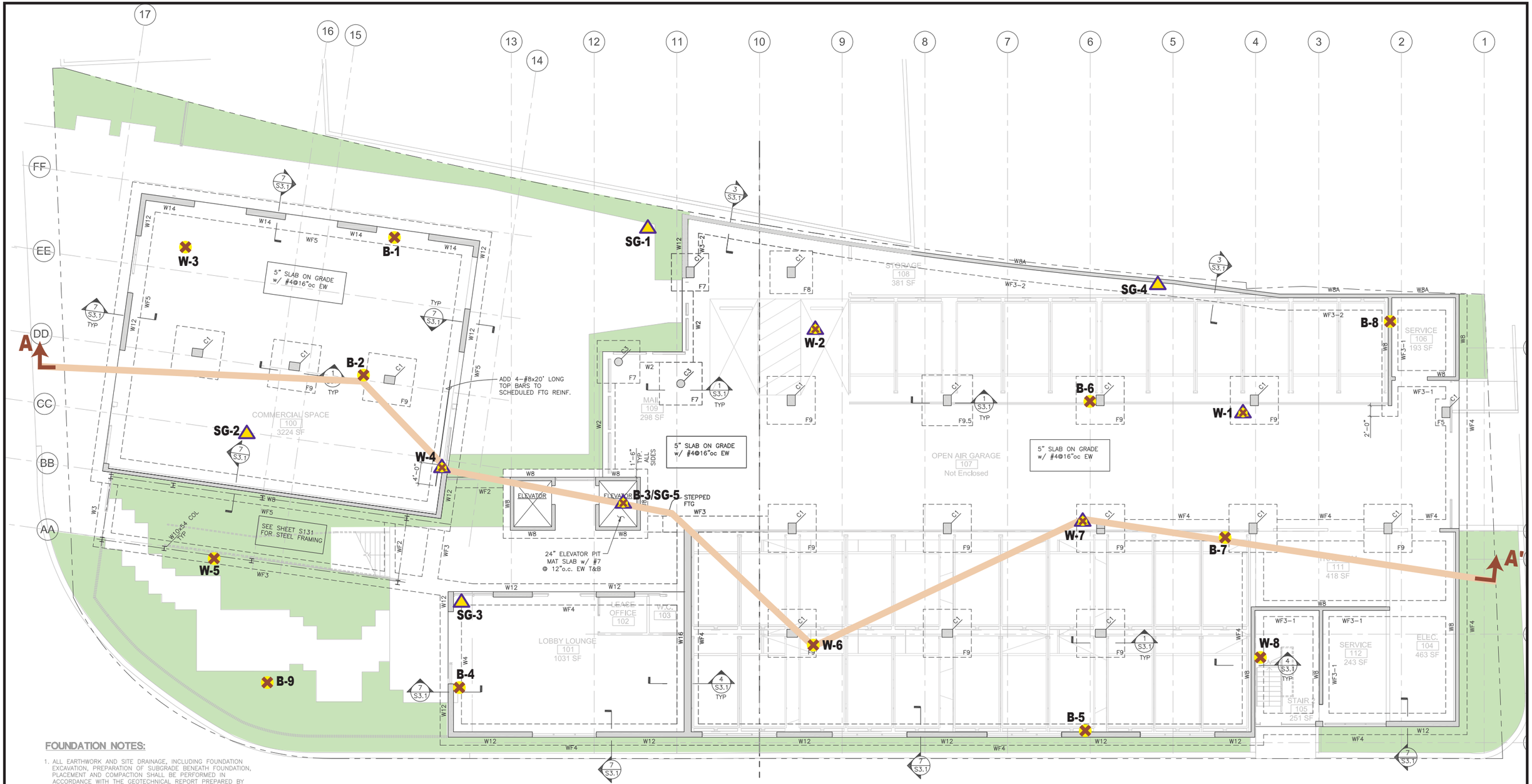


Figure 1-1	**SITE LOCATION MAP**	WEST Environmental Services & Technology
July 17	5th Street and Magnolia Street, West Oakland, California	



FOUNDATION NOTES:

1. ALL EARTHWORK AND SITE DRAINAGE, INCLUDING FOUNDATION EXCAVATION, PREPARATION OF SUBGRADE BENEATH FOUNDATION, PLACEMENT AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY EARTH SYSTEMS PACIFIC.
2. NOTIFY THE GEOTECHNICAL ENGINEER AT LEAST 48 HOURS PRIOR TO START OF ALL GRADING EARTHWORK AND FOUNDATION EXCAVATION.
3. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE ON-SITE OBSERVATION AND TESTING DURING SITE PREPARATION, GRADING, PLACEMENT, AND COMPACTION OF FILL, AND FOUNDATION INSTALLATION.
4. ALL FOOTINGS TO BEAR ON IMPROVED SUBGRADE. REFER TO SOILS REPORT FOR ACCEPTED PROCEDURES.
5. SPREAD FOOTINGS TO BE SUNK TO ELEVATION AT B.O. PIT WHERE CONFLICTS WITH ELEVATOR PITS OCCUR.
6. FOUNDATION DESIGN IS BASED ON THE SOILS REPORT :
   A. ALLOWABLE SOIL PRESSURE FOR:
      DEAD PLUS LIVE LOADS: 6,000 PSF
      DEAD PLUS LIVE PLUS SEISMIC: 8,000 PSF

LEGEND

- C1 — INDICATES TYPE OF CONCRETE COLUMN, SEE S3.1
- W12 — INDICATES TYPE OF CONCRETE WALL, SEE S3.1
- INDICATES DEPRESSED SLAB AREA OR SLAB ELEVATION CHANGED
- F1 — INDICATES TYPE OF CONCRETE COLUMN FOOTING, SEE S3.1
- WF1 — INDICATES TYPE OF WALL FOOTING OR GRADE BEAM, SEE S3.1

EXPLANATION

- SOIL SAMPLE LOCATION
- SOIL/SOIL GAS SAMPLE LOCATION
- SOIL GAS SAMPLE LOCATION
- LANDSCAPING/PLANTER AREAS

A — A' CROSS-SECTION LOCATION

1/S111 LEVEL 1 - FOUNDATION PLAN SOUTH 1/8" = 1'-0"

0 FEET 16

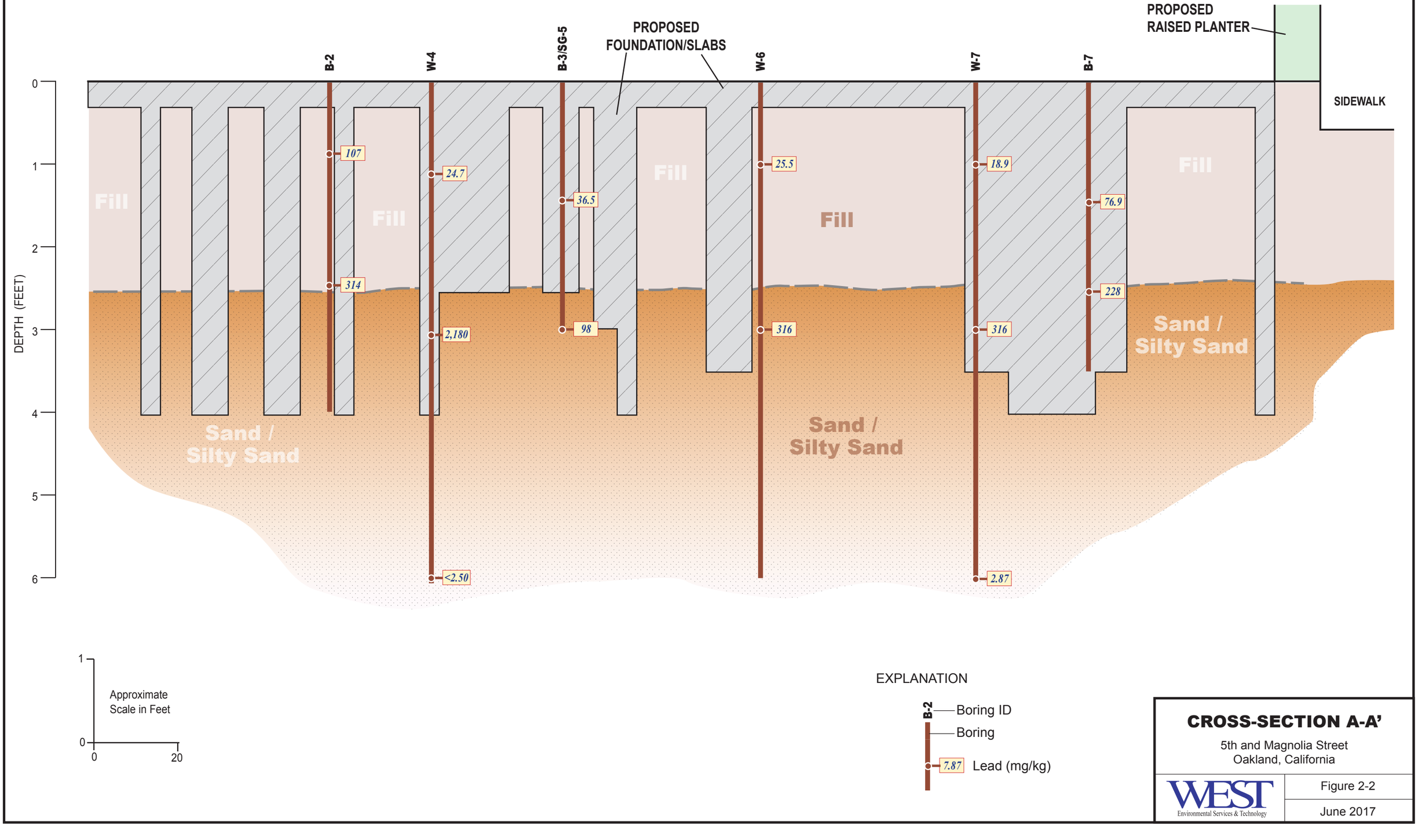
SITE PLAN

5th and Magnolia Street
Oakland, California

WEST Environmental Services & Technology

Figure 2-1

June 2017



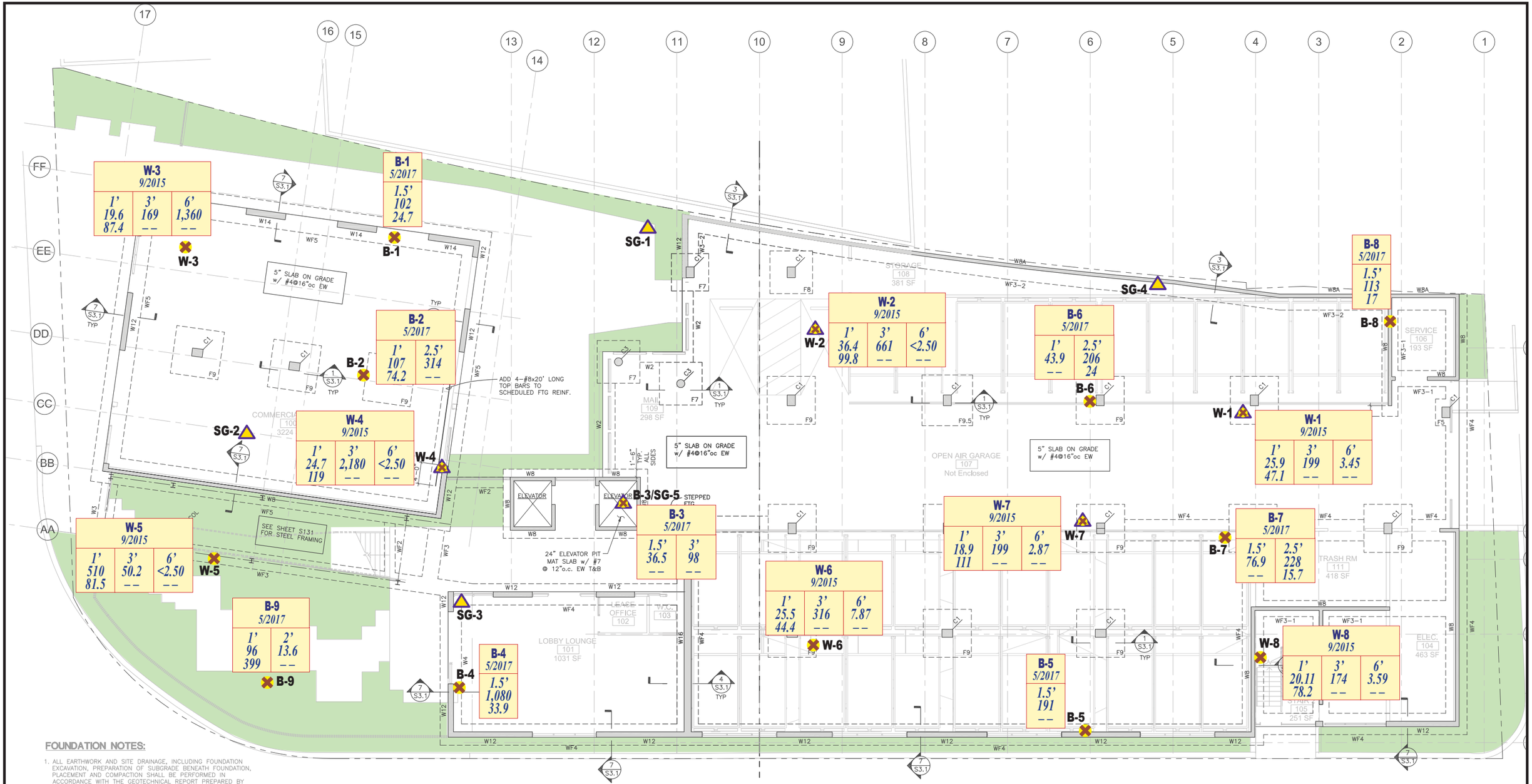
CROSS-SECTION A-A'

5th and Magnolia Street
Oakland, California

WEST Environmental Services & Technology

Figure 2-2

June 2017



FOUNDATION NOTES:

1. ALL EARTHWORK AND SITE DRAINAGE, INCLUDING FOUNDATION EXCAVATION, PREPARATION OF SUBGRADE BENEATH FOUNDATION, PLACEMENT AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY EARTH SYSTEMS PACIFIC.
2. NOTIFY THE GEOTECHNICAL ENGINEER AT LEAST 48 HOURS PRIOR TO START OF ALL GRADING EARTHWORK AND FOUNDATION EXCAVATION.
3. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE ON-SITE OBSERVATION AND TESTING DURING SITE PREPARATION, GRADING, PLACEMENT, AND COMPACTION OF FILL, AND FOUNDATION INSTALLATION.
4. ALL FOOTINGS TO BEAR ON IMPROVED SUBGRADE. REFER TO SOILS REPORT FOR ACCEPTED PROCEDURES.
5. SPREAD FOOTINGS TO BE SUNK TO ELEVATION AT B.O. PIT WHERE CONFLICTS WITH ELEVATOR PITS OCCUR.
6. FOUNDATION DESIGN IS BASED ON THE SOILS REPORT :
   A. ALLOWABLE SOIL PRESSURE FOR:
      DEAD PLUS LIVE LOADS: 6,000 PSF
      DEAD PLUS LIVE PLUS SEISMIC: 8,000 PSF

LEGEND

- C1 — INDICATES TYPE OF CONCRETE COLUMN, SEE S3.1
- W12 — INDICATES TYPE OF CONCRETE WALL, SEE S3.1
- INDICATES DEPRESSED SLAB AREA OR SLAB ELEVATION CHANGED
- F1 — INDICATES TYPE OF CONCRETE COLUMN FOOTING, SEE S3.1
- WF1 — INDICATES TYPE OF WALL FOOTING OR GRADE BEAM, SEE S3.1

EXPLANATION

- SOIL SAMPLE LOCATION
- SOIL/SOIL GAS SAMPLE LOCATION
- SOIL GAS SAMPLE LOCATION
- LANDSCAPING/PLANTER AREAS

B-5 / 5/2017 / 1.5' / 191 / --
SAMPLE ID
DATE
DEPTH (FT)
LEAD (mg/kg)
BAP (µg/kg)

1 S111 LEVEL 1 - FOUNDATION PLAN SOUTH
1/8" = 1'-0"

N

0 FEET 16

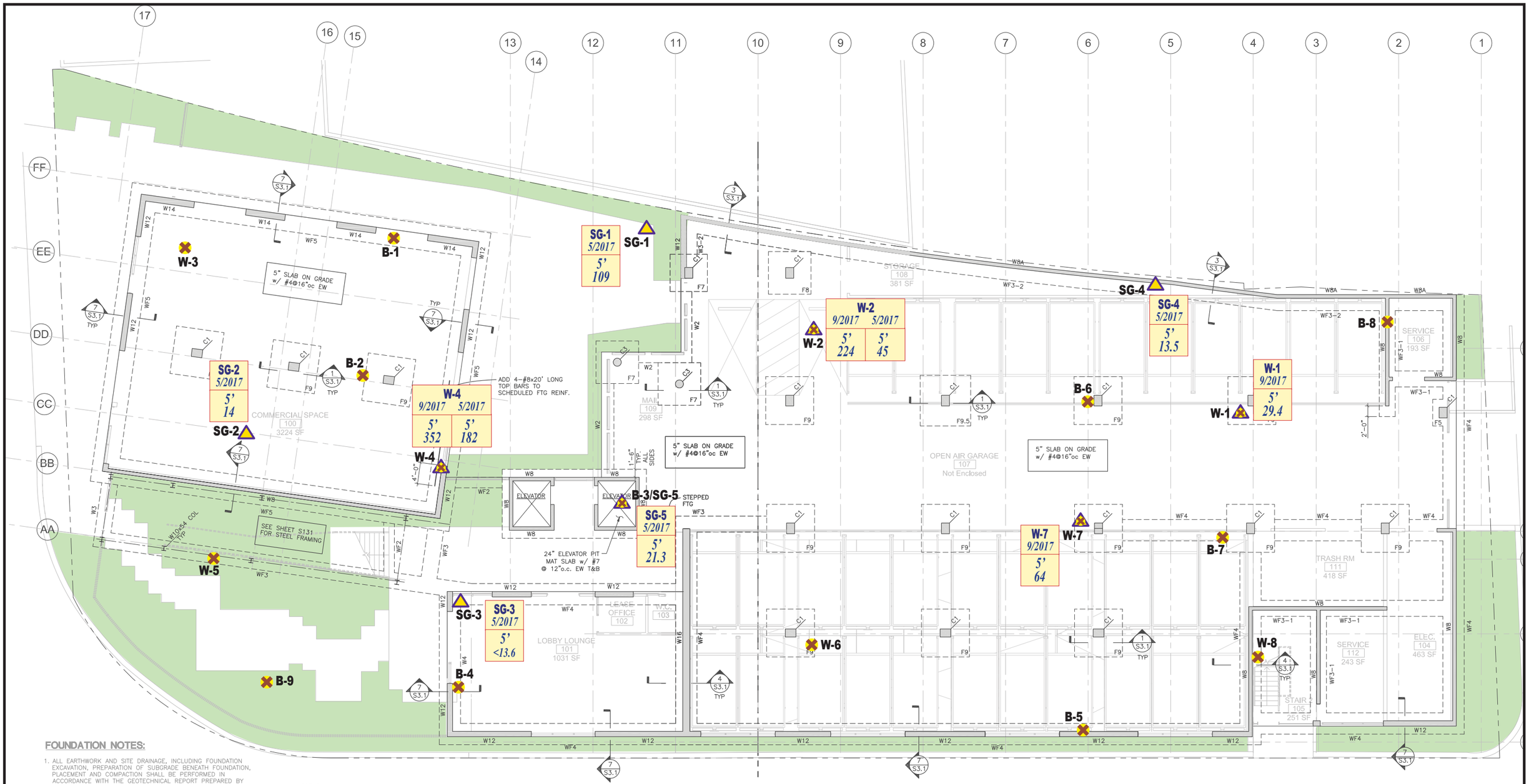
PAHs & LEAD IN SOIL

5th and Magnolia Street
Oakland, California

WEST Environmental Services & Technology

Figure 3-1

June 2017



FOUNDATION NOTES:

1. ALL EARTHWORK AND SITE DRAINAGE, INCLUDING FOUNDATION EXCAVATION, PREPARATION OF SUBGRADE BENEATH FOUNDATION, PLACEMENT AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY EARTH SYSTEMS PACIFIC.
2. NOTIFY THE GEOTECHNICAL ENGINEER AT LEAST 48 HOURS PRIOR TO START OF ALL GRADING EARTHWORK AND FOUNDATION EXCAVATION.
3. THE GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE ON-SITE OBSERVATION AND TESTING DURING SITE PREPARATION, GRADING, PLACEMENT, AND COMPACTION OF FILL, AND FOUNDATION INSTALLATION.
4. ALL FOOTINGS TO BEAR ON IMPROVED SUBGRADE. REFER TO SOILS REPORT FOR ACCEPTED PROCEDURES.
5. SPREAD FOOTINGS TO BE SUNK TO ELEVATION AT B.O. PIT WHERE CONFLICTS WITH ELEVATOR PITS OCCUR.
6. FOUNDATION DESIGN IS BASED ON THE SOILS REPORT :
   A. ALLOWABLE SOIL PRESSURE FOR:
      DEAD PLUS LIVE LOADS: 6,000 PSF
      DEAD PLUS LIVE PLUS SEISMIC: 8,000 PSF

LEGEND

- C1 — INDICATES TYPE OF CONCRETE COLUMN, SEE S3.1
- W12 — INDICATES TYPE OF CONCRETE WALL, SEE S3.1
- INDICATES DEPRESSED SLAB AREA OR SLAB ELEVATION CHANGED
- F1 — INDICATES TYPE OF CONCRETE COLUMN FOOTING, SEE S3.1
- WF1 — INDICATES TYPE OF WALL FOOTING OR GRADE BEAM, SEE S3.1

EXPLANATION

- SOIL SAMPLE LOCATION
- SOIL/SOIL GAS SAMPLE LOCATION
- SOIL GAS SAMPLE LOCATION
- LANDSCAPING/PLANTER AREAS

SG-3 5/2017 5' <13.6 — SAMPLE ID; DATE; DEPTH (FT); PCE (µg/kg)

1 S111 LEVEL 1 - FOUNDATION PLAN SOUTH 1/8" = 1'-0"

0 FEET 16

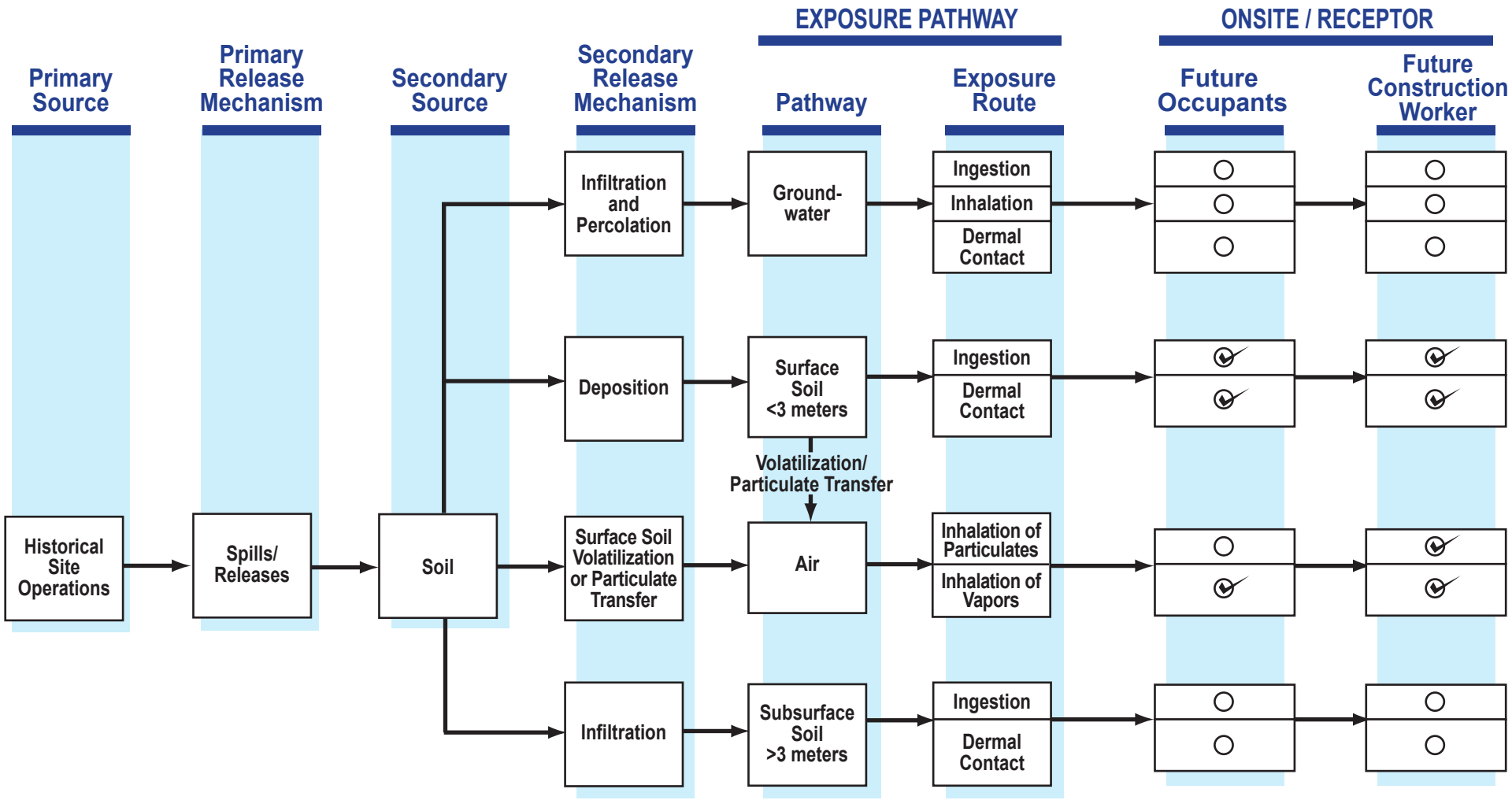
PCE IN SOIL GAS

5th and Magnolia Street
Oakland, California

WEST Environmental Services & Technology

Figure 3-2

June 2017



○ Incomplete exposure pathway

✓ Complete exposure pathway

Figure 4-1	**EXPOSURE PATHWAY CHART**	WEST Environmental Services & Technology
July 2017	5th Street and Magnolia Street, West Oakland, California	

APPENDIX A

BORING LOGS AND

FIELD DATA FORMS

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SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-1-5

PROJECT NAME:	Holliday, WO, 5th Magnolia				
PROJECT LOCATION:	5th & Magnolia, Oakland				
WEATHER:	clear skies, high 60's to low 70's, NW breeze				
DATE:	May 8, 2017				
SAMPLED BY:	RLM				
WELL TYPE, e.g., PERMANENT; TEMPORARY:	Temporary				
SAMPLE DATA	SAMPLE ID:	SG-1-5			
	VAPOR PROBE SAMPLE DEPTH (FT):	5			
	SUMMA CANISTER ID:	S-612			
	FLOW CONTROLLER SERIAL NO.:	—			
PURGE VOLUME CALCULATION	BORING/WELL DIAMETER (INCH):	2.25			
	DRY BENTONITE INTERVAL (FT)	3.3 to 4.3			
	SAND PACK INTERVAL (FT):	4.3 to 5.5			
	TUBING TYPE:	Nylaflow			
	TUBING LENGTH (FT):	8			
	TUBING ID (INCH):	0.17			
	PURGE VOLUME (CC):	373			
	PURGE RATE (CC/MIN):	125			
	PURGE TIME 1 WELL VOLUME (MIN):	3.0			
	PURGE WELL VOLUMES (CIRCLE)	1	3	7	10
	PURGE TIME (MIN):	3.0	9.0	—	—
SHUT IN/ 10-MINUTE VACUUM TEST	VACUUM HOLD TEST START TIME (24 HR):	1244			
	INITIAL CANISTER VACUUM (IN. Hg)	7			
	VACUUM HOLD TEST END TIME (24 HR):	1254			
	VACUUM HOLD TEST DURATION (MIN):	10			
	FINAL CANISTER VACUUM (IN. Hg):	7			
PURGE AND SAMPLE TRAIN LEAK TEST	MEASUREMENTS WITHIN SHROUD	TIME (24 HR)	HELIUM (%)		
	PRIOR TO PURGE	1255	24.0		
	DURING PURGE	1304	21.4		
	POST PURGE	1310	22.2		
	MEASUREMENTS FROM SAMPLING TRAIN	TIME (24 HR)	HELIUM (%)	PID (PPMV)	
	PURGE START	1300	0	0.2	
	1 WELL VOLUME	1303	0	0.0	
	3 WELL VOLUMES	1309	0	0.0	
	7 WELL VOLUMES	—	—	—	
	10 WELL VOLUMES	—	—	—	

WEST
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SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-1-5

PROJECT NAME:	Holliday, WO, 5th Magnolia
PROJECT LOCATION:	5th & Magnolia, Oakland, CA
DATE:	May 8, 2017

SAMPLE COLLECTION AND TRACER GAS MONITORING

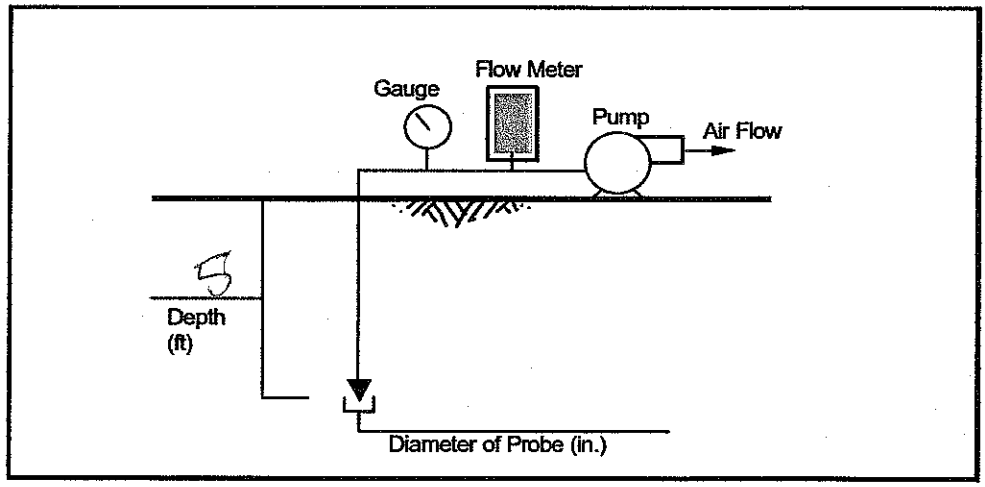
INITIAL CANISTER VACUUM (IN. Hg)	29
TIME CANISTER OPENED (24 HR) 5-6L2	1311

APPLY TRACER GAS WITHIN THE SHROUD

TIME (MINS)	HELIUM (%)	VACUUM (IN. Hg)
2	20.90	25
4	21.3	21
6	20.3	18
8	21.2	164
10	20.6	10
15	—	—
20	—	—
30	—	—
40	—	—
50	—	—
60	—	—

TIME CANISTER CLOSED (24 HR)	1326
FINAL CANISTER PRESSURE (IN. Hg):	3
TOTAL SAMPLE TIME (MINS):	15

INTRINSIC PERMEABILITY TESTING



TEST THRU WELL TUBING/NO MANIFOLD	TEST 1	TEST 2	TEST 3	TEST 4
VACUUM (IN. WATER)	—			
FLOW METER READING	—			
FLOW RATE (CC/MIN)	—			
LENGTH OF TEST (SEC)	—			

WEST
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SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-2-5

PROJECT NAME:	Holliday, NO. 5th Magnolia				
PROJECT LOCATION:	5th & Magnolia, Oakland, CA				
WEATHER:	Clear skies, 65°F, WSW breeze				
DATE:	May 8, 2017				
SAMPLED BY:	RLM				
WELL TYPE, e.g., PERMANENT; TEMPORARY:	Temporary				
SAMPLE DATA	SAMPLE ID:	SG-2-5			
	VAPOR PROBE SAMPLE DEPTH (FT):	5			
	SUMMA CANISTER ID:	5-360			
	FLOW CONTROLLER SERIAL NO.:	—			
PURGE VOLUME CALCULATION	BORING/WELL DIAMETER (INCH):	2.25			
	DRY BENTONITE INTERVAL (FT)	3.3 to 4.3			
	SAND PACK INTERVAL (FT):	4.3 to 5.5			
	TUBING TYPE:	Nylaflow			
	TUBING LENGTH (FT):	8			
	TUBING ID (INCH):	0.17			
	PURGE VOLUME (CC):	373			
	PURGE RATE (CC/MIN):	125			
	PURGE TIME 1 WELL VOLUME (MIN):	3.0			
	PURGE WELL VOLUMES (CIRCLE)	1	3	7	10
	PURGE TIME (MIN):	3.0	9.0	—	—
SHUT IN/ 10-MINUTE VACUUM TEST	VACUUM HOLD TEST START TIME (24 HR):	1204			
	INITIAL CANISTER VACUUM (IN. Hg)	6			
	VACUUM HOLD TEST END TIME (24 HR):	1214			
	VACUUM HOLD TEST DURATION (MIN):	10			
	FINAL CANISTER VACUUM (IN. Hg):	6			
PURGE AND SAMPLE TRAIN LEAK TEST	MEASUREMENTS WITHIN SHROUD	TIME (24 HR)	HELIUM (%)		
	PRIOR TO PURGE	1214	23.0		
	DURING PURGE	1219	20.1		
	POST PURGE	1225	21.9		
	MEASUREMENTS FROM SAMPLING TRAIN	TIME (24 HR)	HELIUM (%)	PID (PPMV)	
	PURGE START	1215	0	0.1	
	1 WELL VOLUME	1218	0	0.1	
	3 WELL VOLUMES	1224	0	0.1	
	7 WELL VOLUMES	—	—	—	
	10 WELL VOLUMES	—	—	—	

WEST
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SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-2-5

PROJECT NAME:	Holiday. WO. 5th Magnolia
PROJECT LOCATION:	5th and Magnolia, Oakland
DATE:	May 8, 2017

SAMPLE COLLECTION AND TRACER GAS MONITORING

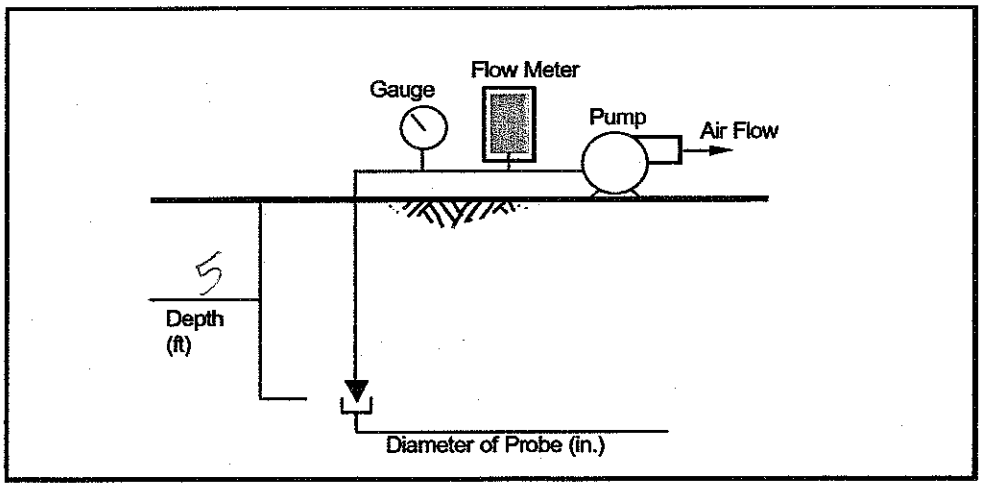
INITIAL CANISTER VACUUM (IN. Hg)	30
TIME CANISTER OPENED (24 HR) 5-360	1225

APPLY TRACER GAS WITHIN THE SHROUD

TIME (MINS)	HELIUM (%)	VACUUM (IN. Hg)
2	21.4	26
4	20.7	22
6	20.6	19
8	22.0	15
10	20.0	11
15	—	—
20	—	—
30	—	—
40	—	—
50	—	—
60	—	—

TIME CANISTER CLOSED (24 HR)	1239
FINAL CANISTER PRESSURE (IN. Hg):	3
TOTAL SAMPLE TIME (MINS):	14

INTRINSIC PERMEABILITY TESTING



TEST THRU WELL TUBING/NO MANIFOLD	TEST 1	TEST 2	TEST 3	TEST 4
VACUUM (IN. WATER)	1	2	3	
FLOW METER READING	20	25	30	
FLOW RATE (CC/MIN)	235	365	537	
LENGTH OF TEST (SEC)	45	45	45	

WEST
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SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-3-5

PROJECT NAME:	Holliday, WO, 5th Magnolia				
PROJECT LOCATION:	5th & Magnolia Oakland, CA				
WEATHER:	clear skies, mid 60's, north breeze				
DATE:	May 9, 2017				
SAMPLED BY:	RLM				
WELL TYPE, e.g., PERMANENT; TEMPORARY:	Temporary				
SAMPLE DATA	SAMPLE ID:	SG-3-5			
	VAPOR PROBE SAMPLE DEPTH (FT):	5			
	SUMMA CANISTER ID:	5-716			
	FLOW CONTROLLER SERIAL NO.:	—			
PURGE VOLUME CALCULATION	BORING/WELL DIAMETER (INCH):	2.25			
	DRY BENTONITE INTERVAL (FT)	3.3 to 4.3			
	SAND PACK INTERVAL (FT):	4.3 to 5.5			
	TUBING TYPE:	Nylaflow			
	TUBING LENGTH (FT):	60			
	TUBING ID (INCH):	0.17			
	PURGE VOLUME (CC):	373			
	PURGE RATE (CC/MIN):	125			
	PURGE TIME 1 WELL VOLUME (MIN):	3.0			
	PURGE WELL VOLUMES (CIRCLE)	1	3	7	10
	PURGE TIME (MIN):	3.0	9.0	—	—
SHUT IN/ 10-MINUTE VACUUM TEST	VACUUM HOLD TEST START TIME (24 HR):	1040			
	INITIAL CANISTER VACUUM (IN. Hg)	7			
	VACUUM HOLD TEST END TIME (24 HR):	1050			
	VACUUM HOLD TEST DURATION (MIN):	10			
	FINAL CANISTER VACUUM (IN. Hg):	7			

PURGE AND SAMPLE TRAIN LEAK TEST	MEASUREMENTS WITHIN SHROUD	TIME (24 HR)	HELIUM (%)		
	PRIOR TO PURGE	1050	23.6		
	DURING PURGE	1055	22.2		
	POST PURGE	1101	21.2		
	MEASUREMENTS FROM SAMPLING TRAIN	TIME (24 HR)	HELIUM (%)	PID (PPMV)	
	PURGE START	1051	0	0.0	
	1 WELL VOLUME	1054	0	0.0	
	3 WELL VOLUMES	1100	0	0.0	
	7 WELL VOLUMES	—	—	—	
	10 WELL VOLUMES	—	—	—	

WEST
Environmental Services & Technology

SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-3-5

PROJECT NAME:	Holliday, WO. 54th Magnolia
PROJECT LOCATION:	54th & Magnolia Oakland, CA
DATE:	May 9, 2017

SAMPLE COLLECTION AND TRACER GAS MONITORING

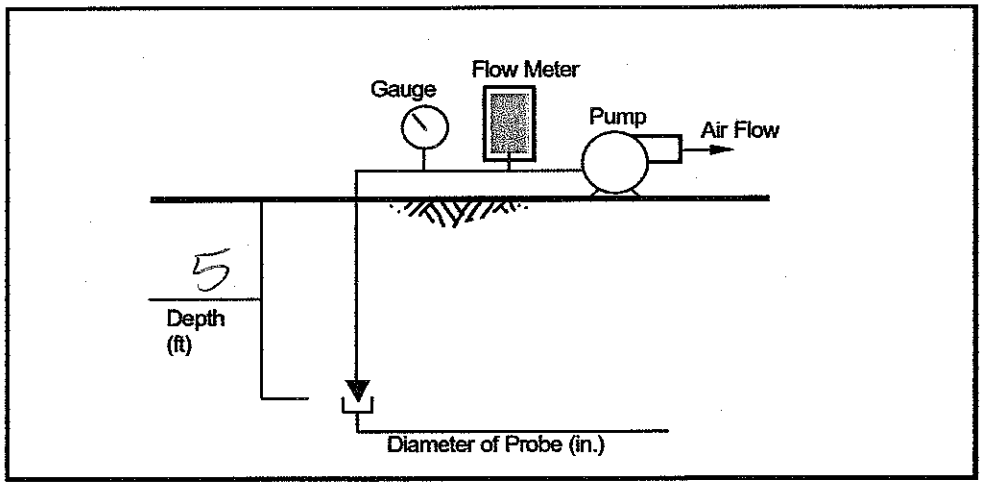
INITIAL CANISTER VACUUM (IN. Hg)	28
TIME CANISTER OPENED (24 HR) S-716	1101

APPLY TRACER GAS WITHIN THE SHROUD

TIME (MINS)	HELIUM (%)	VACUUM (IN. Hg)
2	20.6	24
4	21.2	20
6	20.7	17
8	21.1	14
10	20.8	10
15	—	—
20	—	—
30	—	—
40	—	—
50	—	—
60	—	—

TIME CANISTER CLOSED (24 HR)	1115
FINAL CANISTER PRESSURE (IN. Hg):	4
TOTAL SAMPLE TIME (MINS):	14

INTRINSIC PERMEABILITY TESTING



TEST THRU WELL TUBING/NO MANIFOLD	TEST 1	TEST 2	TEST 3	TEST 4
VACUUM (IN. WATER)	—			
FLOW METER READING	—			
FLOW RATE (CC/MIN)	—			
LENGTH OF TEST (SEC)	—			

WEST
Environmental Services & Technology

SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-4-5

PROJECT NAME:	Holliday, WO. 5th Magnolia				
PROJECT LOCATION:	5th & Magnolia, Oakland				
WEATHER:	clear skies, high 50's, calm to E breeze				
DATE:	May 9, 2017				
SAMPLED BY:	RLM				
WELL TYPE, e.g., PERMANENT; TEMPORARY:	Temporary				
SAMPLE DATA	SAMPLE ID:	SG-4-5			
	VAPOR PROBE SAMPLE DEPTH (FT):	5			
	SUMMA CANISTER ID:	5-230			
	FLOW CONTROLLER SERIAL NO.:	—			
PURGE VOLUME CALCULATION	BORING/WELL DIAMETER (INCH):	2.25			
	DRY BENTONITE INTERVAL (FT)	3.3 to 4.3			
	SAND PACK INTERVAL (FT):	4.3 to 5.5			
	TUBING TYPE:	Nylaflow			
	TUBING LENGTH (FT):	8			
	TUBING ID (INCH):	0.17			
	PURGE VOLUME (CC):	373			
	PURGE RATE (CC/MIN):	125			
	PURGE TIME 1 WELL VOLUME (MIN):	3.0			
	PURGE WELL VOLUMES (CIRCLE)	1	3	7	10
	PURGE TIME (MIN):	3.0	9.0	—	—
SHUT IN/ 10-MINUTE VACUUM TEST	VACUUM HOLD TEST START TIME (24 HR):	0845			
	INITIAL CANISTER VACUUM (IN. Hg)	10			
	VACUUM HOLD TEST END TIME (24 HR):	0855			
	VACUUM HOLD TEST DURATION (MIN):	10			
	FINAL CANISTER VACUUM (IN. Hg):	10			
PURGE AND SAMPLE TRAIN LEAK TEST	MEASUREMENTS WITHIN SHROUD	TIME (24 HR)	HELIUM (%)		
	PRIOR TO PURGE	0857	25.1		
	DURING PURGE	0903	22.8		
	POST PURGE	0909			
	MEASUREMENTS FROM SAMPLING TRAIN	TIME (24 HR)	HELIUM (%)	PID (PPMV)	
	PURGE START	0859	0	0.0	vac
	1 WELL VOLUME	0902	0	0.0	~10
	3 WELL VOLUMES	0908	0	0.0	
	7 WELL VOLUMES	—	—	—	
	10 WELL VOLUMES	—	—	—	

WEST
Environmental Services & Technology

SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-4-5

PROJECT NAME:	Holliday, WO. 5th Magnolia
PROJECT LOCATION:	5th & Magnolia, Oakland
DATE:	May 9, 2017

SAMPLE COLLECTION AND TRACER GAS MONITORING

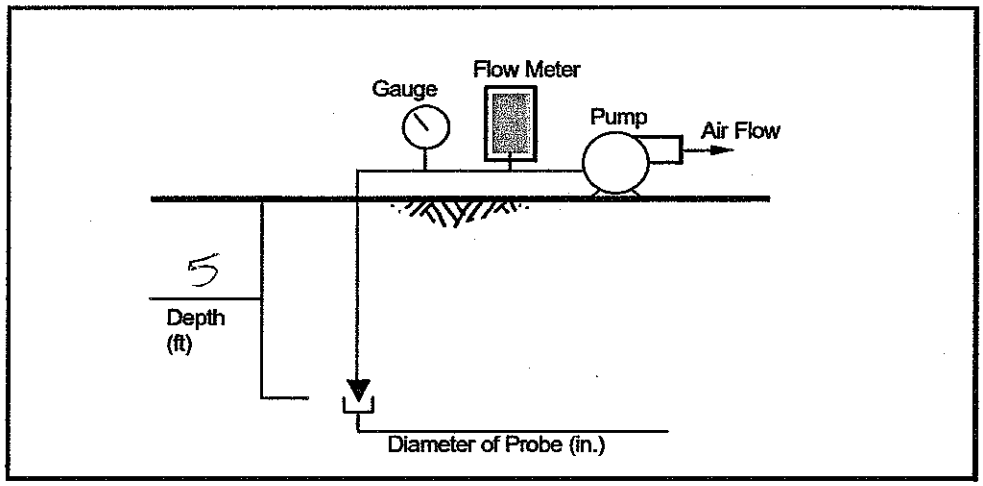
INITIAL CANISTER VACUUM (IN. Hg)	30
TIME CANISTER OPENED (24 HR) S-230	0910

APPLY TRACER GAS WITHIN THE SHROUD

TIME (MINS)	HELIUM (%)	VACUUM (IN. Hg)
2	20.2	22
4	21.4	14
6	20.7	6
8	—	—
10	—	—
15	—	—
20	—	—
30	—	—
40	—	—
50	—	—
60	—	—

TIME CANISTER CLOSED (24 HR)	0917
FINAL CANISTER PRESSURE (IN. Hg):	3
TOTAL SAMPLE TIME (MINS):	7

INTRINSIC PERMEABILITY TESTING



TEST THRU WELL TUBING/NO MANIFOLD	TEST 1	TEST 2	TEST 3	TEST 4
VACUUM (IN. WATER)	0.15	0.25	0.35	
FLOW METER READING	20	25	30	
FLOW RATE (CC/MIN)	239	365	537	
LENGTH OF TEST (SEC)	45	45	45	

WEST
Environmental Services & Technology

SOIL VAPOR SAMPLING LOG, SAMPLE ID: SG-5-5

PROJECT NAME:	Holliday, WO-5th Magnolia				
PROJECT LOCATION:	5th & Magnolia, Oakland, CA				
WEATHER:	clear skies, low 60's, North breeze to 4mph				
DATE:	May 9, 2017				
SAMPLED BY:	RLM				
WELL TYPE, e.g., PERMANENT; TEMPORARY:	Temporary				
SAMPLE DATA	SAMPLE ID:	SG-5-5			
	VAPOR PROBE SAMPLE DEPTH (FT):	5			
	SUMMA CANISTER ID:	S-728			
	FLOW CONTROLLER SERIAL NO.:	—			
PURGE VOLUME CALCULATION	BORING/WELL DIAMETER (INCH):	2.25			
	DRY BENTONITE INTERVAL (FT)	3.3 to 4.3			
	SAND PACK INTERVAL (FT):	4.3 to 5.5			
	TUBING TYPE:	Nylaflow			
	TUBING LENGTH (FT):	8			
	TUBING ID (INCH):	0.17			
	PURGE VOLUME (CC):	373			
	PURGE RATE (CC/MIN):	125			
	PURGE TIME 1 WELL VOLUME (MIN):	3.0			
	PURGE WELL VOLUMES (CIRCLE)	1	3	7	10
	PURGE TIME (MIN):	3.0	9.0	—	—
SHUT IN/ 10-MINUTE VACUUM TEST	VACUUM HOLD TEST START TIME (24 HR):	0924			
	INITIAL CANISTER VACUUM (IN. Hg)	12			
	VACUUM HOLD TEST END TIME (24 HR):	0934			
	VACUUM HOLD TEST DURATION (MIN):	10			
	FINAL CANISTER VACUUM (IN. Hg):	12			

PURGE AND SAMPLE TRAIN LEAK TEST	MEASUREMENTS WITHIN SHROUD	TIME (24 HR)	HELIUM (%)		
	PRIOR TO PURGE	0934	23.6		
	DURING PURGE	0939	22.1		
	POST PURGE	0945	21.1		
	MEASUREMENTS FROM SAMPLING TRAIN	TIME (24 HR)	HELIUM (%)	PID (PPMV)	
	PURGE START	0935	0	0.0	vac
	1 WELL VOLUME	0938	0	0.0	30
	3 WELL VOLUMES	0944	0	0.0	
	7 WELL VOLUMES	—	—	—	
	10 WELL VOLUMES	—	—	—	

WEST
Environmental Services & Technology

SOIL VAPOR SAMPLING LOG, SAMPLE ID: S6-5-5

PROJECT NAME:	Holliday. WO. 5th Magnolia
PROJECT LOCATION:	5th & Magnolia, Oakland, CA
DATE:	May 9, 2017

SAMPLE COLLECTION AND TRACER GAS MONITORING

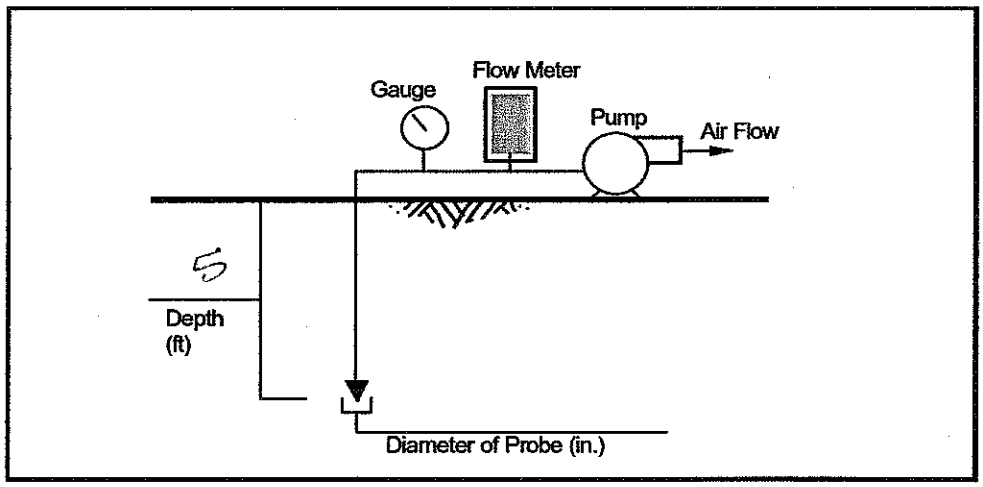
INITIAL CANISTER VACUUM (IN. Hg)	30
TIME CANISTER OPENED (24 HR) S-726	0946

APPLY TRACER GAS WITHIN THE SHROUD

TIME (MINS)	HELIUM (%)	VACUUM (IN. Hg)
2	20.6	26
4	21.0	21
6	22.1	18
8	20.4	15
10	20.0	11
15	21.2	3
20	—	—
30	—	—
40	—	—
50	—	—
60	—	—

TIME CANISTER CLOSED (24 HR)	1001
FINAL CANISTER PRESSURE (IN. Hg):	3
TOTAL SAMPLE TIME (MINS):	15

INTRINSIC PERMEABILITY TESTING



TEST THRU WELL TUBING/NO MANIFOLD	TEST 1	TEST 2	TEST 3	TEST 4
VACUUM (IN. WATER)	—			
FLOW METER READING	—			
FLOW RATE (CC/MIN)	—			
LENGTH OF TEST (SEC)	—			

WEST
Environmental Services & Technology

SOIL VAPOR SAMPLING LOG, SAMPLE ID: W-2-5

PROJECT NAME:	Holliday, TX, 5th Magnolia				
PROJECT LOCATION:	5th & Magnolia				
WEATHER:	Clear skies, low 70's				
DATE:	May 8, 2017				
SAMPLED BY:	RLM				
WELL TYPE, e.g., PERMANENT; TEMPORARY:	Temporary				
SAMPLE DATA	SAMPLE ID:	W-2-5			
	VAPOR PROBE SAMPLE DEPTH (FT):	5			
	SUMMA CANISTER ID:	5-718			
	FLOW CONTROLLER SERIAL NO.:	—			
PURGE VOLUME CALCULATION	BORING/WELL DIAMETER (INCH):	2.25			
	DRY BENTONITE INTERVAL (FT)	3.3 to 4.3			
	SAND PACK INTERVAL (FT):	4.3 to 5.5			
	TUBING TYPE:	Nylaflow			
	TUBING LENGTH (FT):	8			
	TUBING ID (INCH):	0.17			
	PURGE VOLUME (CC):	373			
	PURGE RATE (CC/MIN):	125			
	PURGE TIME 1 WELL VOLUME (MIN):	3.0			
	PURGE WELL VOLUMES (CIRCLE)	1	3	7	10
	PURGE TIME (MIN):	3.0	9.0	—	—
SHUT IN/ 10-MINUTE VACUUM TEST	VACUUM HOLD TEST START TIME (24 HR):	1335			
	INITIAL CANISTER VACUUM (IN. Hg)	9			
	VACUUM HOLD TEST END TIME (24 HR):	1345			
	VACUUM HOLD TEST DURATION (MIN):	10			
	FINAL CANISTER VACUUM (IN. Hg):	9			
PURGE AND SAMPLE TRAIN LEAK TEST	MEASUREMENTS WITHIN SHROUD	TIME (24 HR)	HELIUM (%)		
	PRIOR TO PURGE	1346	24.5		
	DURING PURGE	1351	23.0		
	POST PURGE	1357	21.8		
	MEASUREMENTS FROM SAMPLING TRAIN	TIME (24 HR)	HELIUM (%)	PID (PPMV)	
	PURGE START	1347	0	0.0	
	1 WELL VOLUME	1350	0	0.0	
	3 WELL VOLUMES	1356	0	0.0	
	7 WELL VOLUMES	—	—	—	
	10 WELL VOLUMES	—	—	—	

WEST
Environmental Services & Technology

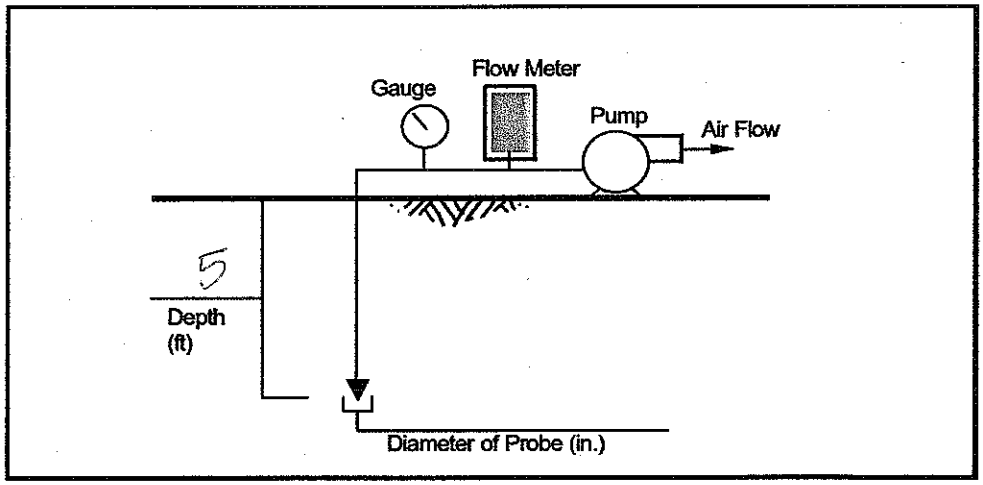
SOIL VAPOR SAMPLING LOG, SAMPLE ID: W-2-5

PROJECT NAME:	Holliday, WO. 5th Magnolia
PROJECT LOCATION:	5th & Magnolia, Oakland
DATE:	May 8, ~~2016~~ 2017

SAMPLE COLLECTION AND TRACER GAS MONITORING

INITIAL CANISTER VACUUM (IN. Hg)	28			
TIME CANISTER OPENED (24 HR) 5-7/8	1357			
APPLY TRACER GAS WITHIN THE SHROUD	TIME (MINS)	HELIUM (%)	VACUUM (IN. Hg)	
	2	22.1	22	
	4	20.8	15	
	6	20.0	8	
	8	21.2	2	
	10	—	—	
	15	—	—	
	20	—	—	
	30	—	—	
	40	—	—	
	50	—	—	
	60	—	—	
TIME CANISTER CLOSED (24 HR)	1405			
FINAL CANISTER PRESSURE (IN. Hg):	2			
TOTAL SAMPLE TIME (MINS):	8			

INTRINSIC PERMEABILITY TESTING



TEST THRU WELL TUBING/NO MANIFOLD	TEST 1	TEST 2	TEST 3	TEST 4
VACUUM (IN. WATER)	—			
FLOW METER READING	—			
FLOW RATE (CC/MIN)	—			
LENGTH OF TEST (SEC)	—			

WEST
Environmental Services & Technology

SOIL VAPOR SAMPLING LOG, SAMPLE ID: W-4-5

PROJECT NAME:	Holliday, WO. 5th Magnolia				
PROJECT LOCATION:	5th & Magnolia, Oakland, CA				
WEATHER:	clear skies, mid 60's, North breeze				
DATE:	May 9, 2017				
SAMPLED BY:	BLM				
WELL TYPE, e.g., PERMANENT; TEMPORARY:	Temporary				
SAMPLE DATA	SAMPLE ID:	W-4-5			
	VAPOR PROBE SAMPLE DEPTH (FT):	5			
	SUMMA CANISTER ID:	5—			
	FLOW CONTROLLER SERIAL NO.:	—			
PURGE VOLUME CALCULATION	BORING/WELL DIAMETER (INCH):	2.25			
	DRY BENTONITE INTERVAL (FT)	3.3 to 4.3			
	SAND PACK INTERVAL (FT):	4.3 to 5.5			
	TUBING TYPE:	Nylaflow			
	TUBING LENGTH (FT):	8			
	TUBING ID (INCH):	0.17			
	PURGE VOLUME (CC):	373			
	PURGE RATE (CC/MIN):	125			
	PURGE TIME 1 WELL VOLUME (MIN):	3.0			
	PURGE WELL VOLUMES (CIRCLE)	1	3	7	10
	PURGE TIME (MIN):	3.0	9.0	—	—
SHUT IN/ 10-MINUTE VACUUM TEST	VACUUM HOLD TEST START TIME (24 HR):	1006			
	INITIAL CANISTER VACUUM (IN. Hg)	12			
	VACUUM HOLD TEST END TIME (24 HR):	1016			
	VACUUM HOLD TEST DURATION (MIN):	10			
	FINAL CANISTER VACUUM (IN. Hg):	12			

PURGE AND SAMPLE TRAIN LEAK TEST	MEASUREMENTS WITHIN SHROUD	TIME (24 HR)	HELIUM (%)		
	PRIOR TO PURGE	1016	23.3		
	DURING PURGE	1021	22.0		
	POST PURGE	1027	20.5		
	MEASUREMENTS FROM SAMPLING TRAIN	TIME (24 HR)	HELIUM (%)	PID (PPMV)	
	PURGE START	1017	0	0.0	
	1 WELL VOLUME	1020	0	0.0	
	3 WELL VOLUMES	1026	0	0.0	
	7 WELL VOLUMES	—	—	—	
	10 WELL VOLUMES	—	—	—	

WEST
Environmental Services & Technology

SOIL VAPOR SAMPLING LOG, SAMPLE ID: W-4-5

PROJECT NAME:	Holliday, WO. 5th Magnolia
PROJECT LOCATION:	5th & Magnolia, Oakland, CA
DATE:	May 9, 2017

SAMPLE COLLECTION AND TRACER GAS MONITORING

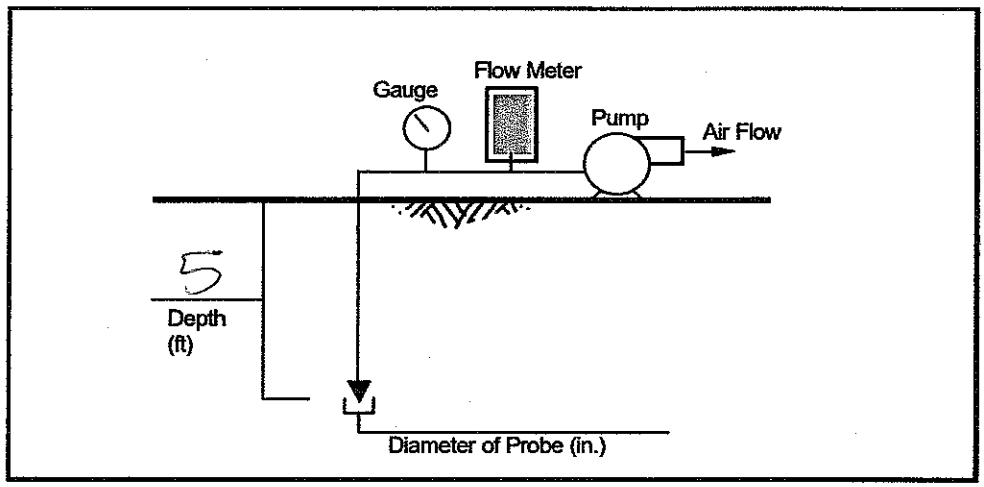
INITIAL CANISTER VACUUM (IN. Hg)	30
TIME CANISTER OPENED (24 HR) S-849	1027

APPLY TRACER GAS WITHIN THE SHROUD

TIME (MINS)	HELIUM (%)	VACUUM (IN. Hg)
2	20.6	22
4	21.3	15
6	20.1	7
8	21.4	3
10	—	—
15	—	—
20	—	—
30	—	—
40	—	—
50	—	—
60	—	—

TIME CANISTER CLOSED (24 HR)	1035
FINAL CANISTER PRESSURE (IN. Hg):	3
TOTAL SAMPLE TIME (MINS):	8

INTRINSIC PERMEABILITY TESTING



TEST THRU WELL TUBING/NO MANIFOLD	TEST 1	TEST 2	TEST 3	TEST 4
VACUUM (IN. WATER)	0.2	0.3	0.4	
FLOW METER READING	20	25	30	
FLOW RATE (CC/MIN)	235	365	537	
LENGTH OF TEST (SEC)	45	45	45	

WEST Environmental Services & Technology

BORING NO. SG-2 & SG-1 | SHEET 1 OF 1

PROJECT NAME: Holliday, W.O. 5th/Magnolia	DRILLING METHOD: Direct Push
PROJECT LOCATION: 5th & Magnolia, Oakland	SAMPLING METHOD: Macrocore
DRILLING DATE: May 8, 2017	TOTAL WELL DEPTH (FT): 5.5
DRILLING COMPANY: ECA	WATER LEVEL AT TIME OF DRILLING (FT): —
LOGGED BY: RLM	STATIC WATER LEVEL (FT): —

WELL CONSTRUCTION	DEPTH (FT)	BLOW COUNTS	CORE INTERVAL (FT)	CORE RECOVERY (FT)	SAMPLE INTERVAL	SAMPLE ID	PID (PPMV)	USCS	SOIL DESCRIPTION
SG-2	0								Asphalt
	1						(0.0)		Baserock, SW/GP, black to gray
							(0.0)	SW	Gravelly sand, SW, 10YR 3/2, fine to gravel, slightly damp, loose
	2		0-3	0-3				SP	sand, SP, 10YR 5/3, brown, fine-grained, slightly damp, loose
	3						(0.0)	SP/SM	color change to 10YR 3/2, v. dk grayish brown
	4		3-5.5	3-5.5			(0.0)	SP/SM	color change 10YR 3/3, dk brown
	5						(0.0)	SP/SM	moist, color change to 10YR 4/3, brown
									v. moist
SG-1	0								Asphalt
	1						(0.0)	SW/GP	Baserock, SW/GP, 10YR 3/1, v. dk gray, slightly damp, fine to med. gravel, subangular clasts, loose
	2		0-3	0-3			(0.0)	SP	sand, SP, 10YR 3/3, v. dk brown, fine-grained, slightly damp, loose to med. dense
	3						(0.0)	SP/SM	color change 10YR 3/2, v. dk gray/brown, shards of glass
	4		3-5.5	3-5.5			(0.0)	SP/SM	color change 10YR 4/3, brown, damp
	5						(0.0)		

BOREHOLE DIAMETER (INCHES): 2.25	SLOTTED SCREEN SIZE (INCHES):	BENTONITE SEAL – WET (FT): FROM TO	
BOREHOLE DEPTH (FT): 5.5	SLOTTED SCREEN INTERVAL (FT): FROM TO	BENTONITE SEAL – DRY (FT): FROM TO	
CASING MATERIAL: CASING DIAMETER (INCHES):	SAND SIZE:	GROUT SEAL (FT): FROM TO	
BLANK WELL CASING INTERVAL (FT): FROM TO	SAND PACK INTERVAL (FT): FROM TO	SURFACE WELL COMPLETION:	

WEST Environmental Services & Technology

BORING NO. SG-5(B-3) & SG-3 **SHEET** 1 **OF** 1

PROJECT NAME: Holliday, WO, 5th Magnolia	DRILLING METHOD: Direct Push
PROJECT LOCATION: 5th & Magnolia, Oakland	SAMPLING METHOD: Macrocore
DRILLING DATE: May 8, 2017	TOTAL WELL DEPTH (FT): 5.5
DRILLING COMPANY: ECA	WATER LEVEL AT TIME OF DRILLING (FT): —
LOGGED BY: RM	STATIC WATER LEVEL (FT): —

WELL CONSTRUCTION	DEPTH (FT)	BLOW COUNTS	CORE INTERVAL (FT)	CORE RECOVERY (FT)	SAMPLE INTERVAL	SAMPLE ID	PID (PPMV)	USCS	SOIL DESCRIPTION
	1				X	B-3-1.5 @1015	(0.0)		Asphalt
							(0.0)	SW/GP	gravelly sand, SW/GP, 10YR 3/2, v. dk grayish brown w/ white yellow staining, fine to gravel, dry to slightly damp, loose, ang/var clasts,
	2							SW/GP	
SG-5	3				X	B-3-3 @1020	(0.0)	SW/GP	
	4						(0.0)	SW/SP	silty sand, SW/SP, 10YR 3/1 to 3/2 v. dk gray/v. dk gray/dk brown, fine grained, damp, loose to med dense - charcoal
	5						(0.0)	SW/SP	- moist
	0								
	1						(0.8)	SW/GP	Asphalt
							(0.1)		gravelly sand, SW/GP, 10YR 4/1, dk gray, fine to gravel, loose dry to damp - large clast 1"+
SG-3	2		0-3	0-3			(0.0)	SW/SP	sand, SW/SP, 10YR 5/4, yellowish brown, fine w/ occ, coarse org gravel, damp, loose to med dense
							(0.0)		- glass shards
	3								
	4		3-5.5	3-5.5			(0.0)	SW/SP	mottled 10YR 4/3 brown to 10YR 3/2 v. dk grayish brown - white staining & charcoal pieces - brick
	5						(0.0)	SW/SP	moist, 10YR 5/4, yellowish brown, more fines

BOREHOLE DIAMETER (INCHES): 2.25	SLOTTED SCREEN SIZE (INCHES):	BENTONITE SEAL – WET (FT): FROM TO	
BOREHOLE DEPTH (FT): 5.5	SLOTTED SCREEN INTERVAL (FT): FROM TO	BENTONITE SEAL – DRY (FT): FROM TO	
CASING MATERIAL: CASING DIAMETER (INCHES):	SAND SIZE:	GROUT SEAL (FT): FROM TO	
BLANK WELL CASING INTERVAL (FT): FROM TO	SAND PACK INTERVAL (FT): FROM TO	SURFACE WELL COMPLETION:	

WEST
Environmental Services & Technology

BORING NO. W-2 & SG-4

SHEET 1 OF 1

PROJECT NAME: Holliday.WO.5th Magnolia	DRILLING METHOD: Direct Push
PROJECT LOCATION: 5th & Magnolia, Oakland	SAMPLING METHOD: Macrocore
DRILLING DATE: May 8, 2017	TOTAL WELL DEPTH (FT): 5.5
DRILLING COMPANY: ECA	WATER LEVEL AT TIME OF DRILLING (FT): —
LOGGED BY: RLM	STATIC WATER LEVEL (FT): —

W-2

WELL CONSTRUCTION	DEPTH (FT)	BLOW COUNTS	CORE INTERVAL (FT)	CORE RECOVERY (FT)	SAMPLE INTERVAL	SAMPLE ID	PID (PPMV)	USCS	SOIL DESCRIPTION
							(0.1)	▨	Asphalt
	1						(0.0)	SW	gravelly sand, SW/GP, 10YR 3/1 v. dk gray to 3/2 v. dk grayish brown, fine to gravel, dry to slightly damp, med dense to loose - dk brown 10YR 3/3
	2		0-3	0-3			(0.0)		
							(0.0)	SP	sand SP, 10YR 3/3, dk brown, fine grained w/ occ. gravel, slightly damp med dense to loose
									- gravelly lens
	3								
							(0.0)	SP/SM	- more silt, 10YR 3/2 to 4/2 dk grayish brown
	4		3-5.5	3-5.5					- damp
	5						(0.0)	SP/SM	- moist

SG-4

WELL CONSTRUCTION	DEPTH (FT)	BLOW COUNTS	CORE INTERVAL (FT)	CORE RECOVERY (FT)	SAMPLE INTERVAL	SAMPLE ID	PID (PPMV)	USCS	SOIL DESCRIPTION
								▨	Asphalt
	1						(0.0)	SW/GP	Gravelly sand (Baserock), SW/GP, 10YR 3/1 v. dark gray, fine to gravel, dry to slightly damp, loose
	2		0-3	0-3			(0.0)	SP/SM	sand SP/SM, 10YR 3/2 v. dk grayish brown, fine-grained, slightly damp, loose to med. dense
							(0.0)		
	3						(0.0)	SM/SP	- color change 10YR 4/2, dk grayish brown
	4		3-5.5	3-5.5			(0.0)		- moist, 10YR 4/3 brown to 5/3 brown
	5								- v. moist

BOREHOLE DIAMETER (INCHES): 2.25	SLOTTED SCREEN SIZE (INCHES):	BENTONITE SEAL – WET (FT): FROM TO
BOREHOLE DEPTH (FT): 5.5	SLOTTED SCREEN INTERVAL (FT): FROM TO	BENTONITE SEAL – DRY (FT): FROM TO
CASING MATERIAL: CASING DIAMETER (INCHES):	SAND SIZE:	GROUT SEAL (FT): FROM TO
BLANK WELL CASING INTERVAL (FT): FROM TO	SAND PACK INTERVAL (FT): FROM TO	SURFACE WELL COMPLETION:

WEST
Environmental Services & Technology

BORING NO. W-4 & B-9 & B-1 | **SHEET** 1 **OF** 1

PROJECT NAME:	Holliday, WO 5th Magnolia	DRILLING METHOD:	Direct Push
PROJECT LOCATION:	5th & Magnolia, Oakland	SAMPLING METHOD:	MacroCore
DRILLING DATE:	May 8, 2017	TOTAL WELL DEPTH (FT):	5.5, 2.5, 2
DRILLING COMPANY:	ECA	WATER LEVEL AT TIME OF DRILLING (FT):	—
LOGGED BY:	RLM	STATIC WATER LEVEL (FT):	—

WELL CONSTRUCTION	DEPTH (FT)	BLOW COUNTS	CORE INTERVAL (FT)	CORE RECOVERY (FT)	SAMPLE INTERVAL	SAMPLE ID	PID (PPMV)	USCS	SOIL DESCRIPTION
W-4									Asphalt
	1						(0.0)	SW/GW	gravelly sand, SW/GW, 10YR 3/1, v. dk gray, fine to gravel, dry to slightly damp, loose, subrounded to subangular clasts
			0-3	0-3			(0.0)	SM/SP	silty sand, SM/SP, 10YR 5/4, yellowish brown, fine-grained, damp, loose to med. dense
	2								
							(0.0)		- gravelly sand lens; - mottled 10YR 5/4 to 10YR 3/2 v. dk grayish brown
	3						(0.0)	SM/SP	- 10YR 3/2
	4		3-5.5	3-5.5			(0.0)	SM/SP	- 10YR 4/3 brown
	5								
B9									Asphalt
	1		0-2.5	0-2.5	X	B-9-1 @1120	(0.0)	SW/GW	gravelly sand, SW/GW, 10YR 3/1, v. dk gray, fine to gravel, dry to slightly damp, loose
								SW	color change to 10YR 5/4, more fine sand, less gravel
	2				X	B-9-2 @1125	(0.0)	SW/GW	gravelly sand, SW/GW, 10YR 5/4, fine to gravel, damp, med dense, angular gravel
B-1	0								Asphalt
	1		0-2	0-2			(0.0)	SW/GW	gravelly sand, SW/GW, 10YR 3/1, v. dk gray, fine to sm. gravel, dry to damp, loose
	2				X	B-1-1.5 @1205			

BOREHOLE DIAMETER (INCHES): 2.25
BOREHOLE DEPTH (FT): 5.5, 2.5, 2
CASING MATERIAL:
CASING DIAMETER (INCHES):
BLANK WELL CASING INTERVAL (FT): FROM TO

SLOTTED SCREEN SIZE (INCHES):
SLOTTED SCREEN INTERVAL (FT): FROM TO
SAND SIZE:
SAND PACK INTERVAL (FT): FROM TO

BENTONITE SEAL – WET (FT): FROM TO
BENTONITE SEAL – DRY (FT): FROM TO
GROUT SEAL (FT): FROM TO
SURFACE WELL COMPLETION:

WEST Environmental Services & Technology

BORING NO. B-5 & B-8 | SHEET 1 OF 1

PROJECT NAME: Holliday W.O. 5th Magnolia	DRILLING METHOD: Direct Push
PROJECT LOCATION: 5th & Magnolia, Oakland	SAMPLING METHOD: Macrocore
DRILLING DATE: ECA May 8, 2017	TOTAL ~~WELL~~ DEPTH (FT): 2
DRILLING COMPANY:	WATER LEVEL AT TIME OF DRILLING (FT): —
LOGGED BY: RLM	STATIC WATER LEVEL (FT): —

WELL CONSTRUCTION	DEPTH (FT)	BLOW COUNTS	CORE INTERVAL (FT)	CORE RECOVERY (FT)	SAMPLE INTERVAL	SAMPLE ID	PID (PPMV)	USCS	SOIL DESCRIPTION
	0								Asphalt
B-5	1		0-2	0-2	X	B-5-1.5 @1325	(0.0)	SW	gravelly sand, SW, 10YR5/3 to 3/2, v. dk grayish brown, fine-grained to gravel (up to 30mm), slightly damp, loose
	2								
	0								Asphalt
B-8	1		0-2	0-2	X	B-8-1.5 @1425	(0.0) (0.0)	SW GW	gravelly sand, SW/GW, 10YR3/1, v. dk gray to 3/2 v. dk gray-dk brown, fine-grained to gravel (20mm), slightly damp, loose
	2								

BOREHOLE DIAMETER (INCHES): 2.25	SLOTTED SCREEN SIZE (INCHES):	BENTONITE SEAL – WET (FT): FROM TO	
BOREHOLE DEPTH (FT): 2	SLOTTED SCREEN INTERVAL (FT): FROM TO	BENTONITE SEAL – DRY (FT): FROM TO	
CASING MATERIAL: CASING DIAMETER (INCHES):	SAND SIZE:	GROUT SEAL (FT): FROM TO	
BLANK WELL CASING INTERVAL (FT): FROM TO	SAND PACK INTERVAL (FT): FROM TO	SURFACE WELL COMPLETION:	

APPENDIX B

LABORATORY DATA CERTIFICATES

AND CHAIN-OF-CUSTODY FORMS

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd.
Santa Rosa CA 95403
Phone: 707 527 7574
FAX: 707 527 7879

TRANSMITTAL

DATE: 5/16/2017

TO: MR. PETER MORRIS
WEST ENVIRONMENTAL S&T
711 GRAND AVENUE, SUITE 220
SAN RAFAEL, CA 94901

Phone: 415-460-6770
Fax: 415-460-6771
Email: main@westenvironmental.com

ACCT: 9946
PROJ: HOLLIDAY.WO.
5THMAGNOLIA

FROM: Richard A. Kagel, Ph.D.
Laboratory Director RAK/mcl 5/16/2017

SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT HOLLIDAY.WO.5THMAGNOLIA

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
B-1-1.5	SOIL	05/08/17	12:05	154474
B-2-1	SOIL	05/08/17	11:50	154475
B-2-2.5	SOIL	05/08/17	11:55	154476
B-3-1.5	SOIL	05/08/17	10:15	154477
B-3-3	SOIL	05/08/17	10:20	154478
B-4-1.5	SOIL	05/08/17	13:15	154479
B-5-1.5	SOIL	05/08/17	13:25	154480
B-6-1	SOIL	05/08/17	14:30	154481
B-6-2.5	SOIL	05/08/17	14:35	154482
B-7-1.5	SOIL	05/08/17	14:15	154483
B-7-2.5	SOIL	05/08/17	14:20	154484
B-8-1.5	SOIL	05/08/17	14:25	154485
B-9-1	SOIL	05/08/17	11:20	154486
B-9-2	SOIL	05/08/17	11:25	154487

The above listed sample group was received on 05/09/17 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information.
Thank you for this opportunity to be of service.

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: GRO-GASOLINE RANGE ORGANICS
REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL
UNITS: mg/Kg

SAMPLE ID	LAB NO.	DATE SAMPLED	TIME SAMPLED	BATCH NO	DATE ANALYZED	MRL	SAMPLE CONC	GRO PATTERN
B-1-1.5	154474	05/08/2017	12:05	050917S1	05/10/2017	1.00	ND	
B-2-1	154475	05/08/2017	11:50	050917S1	05/10/2017	1.00	ND	
B-2-2.5	154476	05/08/2017	11:55	050917S1	05/10/2017	1.00	ND	
B-3-1.5	154477	05/08/2017	10:15	050917S1	05/10/2017	1.00	ND	
B-3-3	154478	05/08/2017	10:20	050917S1	05/10/2017	1.00	ND	
B-4-1.5	154479	05/08/2017	13:15	050917S1	05/10/2017	1.00	ND	
B-5-1.5	154480	05/08/2017	13:25	050917S1	05/10/2017	1.00	ND	
B-6-1	154481	05/08/2017	14:30	050917S1	05/10/2017	1.00	ND	
B-6-2.5	154482	05/08/2017	14:35	050917S1	05/11/2017	1.00	ND	
B-7-1.5	154483	05/08/2017	14:15	050917S1	05/11/2017	1.00	ND	
B-7-2.5	154484	05/08/2017	14:20	050917S1	05/11/2017	1.00	ND	
B-8-1.5	154485	05/08/2017	14:25	050917S1	05/11/2017	1.00	ND	
B-9-1	154486	05/08/2017	11:20	050917S1	05/11/2017	1.00	ND	
B-9-2	154487	05/08/2017	11:25	050917S1	05/11/2017	1.00	ND	

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT
AE - UNKNOWN HYDROCARBON WITH A SINGLE PEAK
AN - UNKNOWN HYDROCARBON WITH SEVERAL PEAKS
AS - HEAVIER HYDROCARBON THAN GASOLINE CONTRIBUTING TO GRO VALUE
CO - HYDROCARBON RESPONSE IN GASOLINE RANGE BUT DOES NOT RESEMBLE GASOLINE

APPROVED BY: TD
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-1-1.5
LAB NO: 154474
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 12:05
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.65	ND
TOLUENE	108-88-3	1.65	ND
ETHYLBENZENE	100-41-4	1.65	ND
XYLENE (M+P)	1330-20-7	1.65	ND
XYLENE (O)	1330-20-7	1.65	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.65	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	90
TOLUENE-D8	109
4-BROMOFLUOROBENZENE	82

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TB
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-2-1
LAB NO: 154475
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 11:50
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.71	ND
TOLUENE	108-88-3	1.71	ND
ETHYLBENZENE	100-41-4	1.71	ND
XYLENE (M+P)	1330-20-7	1.71	ND
XYLENE (O)	1330-20-7	1.71	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.71	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	103
TOLUENE-D8	101
4-BROMOFLUOROBENZENE	74

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TB
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-2-2.5
LAB NO: 154476
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 11:55
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.68	ND
TOLUENE	108-88-3	1.68	ND
ETHYLBENZENE	100-41-4	1.68	ND
XYLENE (M+P)	1330-20-7	1.68	ND
XYLENE (O)	1330-20-7	1.68	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.68	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	97
TOLUENE-D8	103
4-BROMOFLUOROBENZENE	78

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TD
DATE: 5/15/2015

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-3-1.5
LAB NO: 154477
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 10:15
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.72	ND
TOLUENE	108-88-3	1.72	ND
ETHYLBENZENE	100-41-4	1.72	ND
XYLENE (M+P)	1330-20-7	1.72	ND
XYLENE (O)	1330-20-7	1.72	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.72	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	103
TOLUENE-D8	99
4-BROMOFLUOROBENZENE	72

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TD
DATE: 5/15/2016

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-3-3
LAB NO: 154478
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 10:20
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.77	ND
TOLUENE	108-88-3	1.77	ND
ETHYLBENZENE	100-41-4	1.77	ND
XYLENE (M+P)	1330-20-7	1.77	ND
XYLENE (O)	1330-20-7	1.77	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.77	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	98
TOLUENE-D8	106
4-BROMOFLUOROBENZENE	85

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TJ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-4-1.5
LAB NO: 154479
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 13:15
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.57	ND
TOLUENE	108-88-3	1.57	ND
ETHYLBENZENE	100-41-4	1.57	ND
XYLENE (M+P)	1330-20-7	1.57	ND
XYLENE (O)	1330-20-7	1.57	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.57	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	102
TOLUENE-D8	106
4-BROMOFLUOROBENZENE	82

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TF
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-5-1.5
LAB NO: 154480
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 13:25
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.68	ND
TOLUENE	108-88-3	1.68	ND
ETHYLBENZENE	100-41-4	1.68	ND
XYLENE (M+P)	1330-20-7	1.68	ND
XYLENE (O)	1330-20-7	1.68	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.68	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	98
TOLUENE-D8	106
4-BROMOFLUOROBENZENE	81

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TJ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-6-1
LAB NO: 154481
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:30
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.85	ND
TOLUENE	108-88-3	1.85	ND
ETHYLBENZENE	100-41-4	1.85	ND
XYLENE (M+P)	1330-20-7	1.85	ND
XYLENE (O)	1330-20-7	1.85	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.85	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	99
TOLUENE-D8	103
4-BROMOFLUOROBENZENE	83

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TQ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-6-2.5
LAB NO: 154482
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:35
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.72	ND
TOLUENE	108-88-3	1.72	ND
ETHYLBENZENE	100-41-4	1.72	ND
XYLENE (M+P)	1330-20-7	1.72	ND
XYLENE (O)	1330-20-7	1.72	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.72	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	101
TOLUENE-D8	110
4-BROMOFLUOROBENZENE	83

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TA
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-7-1.5
LAB NO: 154483
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:15
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.80	ND
TOLUENE	108-88-3	1.80	ND
ETHYLBENZENE	100-41-4	1.80	ND
XYLENE (M+P)	1330-20-7	1.80	ND
XYLENE (O)	1330-20-7	1.80	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.80	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	99
TOLUENE-D8	109
4-BROMOFLUOROBENZENE	78

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TP
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-7-2.5
LAB NO: 154484
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:20
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.81	ND
TOLUENE	108-88-3	1.81	ND
ETHYLBENZENE	100-41-4	1.81	ND
XYLENE (M+P)	1330-20-7	1.81	ND
XYLENE (O)	1330-20-7	1.81	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.81	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	98
TOLUENE-D8	111
4-BROMOFLUOROBENZENE	88

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TJ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-8-1.5
LAB NO: 154485
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:25
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.70	ND
TOLUENE	108-88-3	1.70	ND
ETHYLBENZENE	100-41-4	1.70	ND
XYLENE (M+P)	1330-20-7	1.70	ND
XYLENE (O)	1330-20-7	1.70	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.70	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	101
TOLUENE-D8	108
4-BROMOFLUOROBENZENE	85

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TD
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-9-1
LAB NO: 154486
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 11:20
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.79	ND
TOLUENE	108-88-3	1.79	ND
ETHYLBENZENE	100-41-4	1.79	ND
XYLENE (M+P)	1330-20-7	1.79	ND
XYLENE (O)	1330-20-7	1.79	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.79	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	102
TOLUENE-D8	96
4-BROMOFLUOROBENZENE	69

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TJ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-9-2
LAB NO: 154487
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 11:25
BATCH NO: 051117S1
DATE ANALYZED: 05/12/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.65	ND
TOLUENE	108-88-3	1.65	ND
ETHYLBENZENE	100-41-4	1.65	ND
XYLENE (M+P)	1330-20-7	1.65	ND
XYLENE (O)	1330-20-7	1.65	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.65	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	99
TOLUENE-D8	108
4-BROMOFLUOROBENZENE	85

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

APPROVED BY: TJ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: DRO
REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL
UNITS: mg/Kg

SAMPLE ID	LAB NO.	DATE SAMPLED	BATCH ID	EXTRACT DATE	DATE ANALYZED	MRL	SAMPLE CONC	DRO PATTERN
B-1-1.5	154474	05/08/2017	051017S1	05/10/2017	05/12/2017	50.0	58.3	AC
B-2-1	154475	05/08/2017	051017S1	05/10/2017	05/12/2017	10.0	10.8	AC,AE
B-2-2.5	154476	05/08/2017	051017S1	05/10/2017	05/12/2017	10.0	ND	
B-3-1.5	154477	05/08/2017	051017S1	05/10/2017	05/12/2017	50.0	59.6	AC
B-3-3	154478	05/08/2017	051017S1	05/10/2017	05/12/2017	10.0	ND	
B-4-1.5	154479	05/08/2017	051017S1	05/10/2017	05/12/2017	10.0	36.3	AC
B-5-1.5	154480	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	22.6	AC
B-6-1	154481	05/08/2017	051017S1	05/10/2017	05/13/2017	50.0	423	AC
B-6-2.5	154482	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	ND	
B-7-1.5	154483	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	ND	
B-7-2.5	154484	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	ND	
B-8-1.5	154485	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	12.1	AC
B-9-1	154486	05/08/2017	051017S1	05/10/2017	05/13/2017	50.0	63.1	AC
B-9-2	154487	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	ND	

NOTES:

DRO	Diesel Range Organics (C12-C23) with Silica Gel Cleanup
ND	Not Detected at or above the stated MRL
NA	Not Applicable or Available
MRL	Method Reporting Limit
AD	Typical Pattern for Diesel
AM	Hydrocarbon response is in the C12-C22 range
AC	Heavier hydrocarbons contributing to diesel range quantitation
AJ	Heavier hydrocarbon than diesel
AK	Lighter hydrocarbon than diesel
AE	Unknown hydrocarbon with a single peak
AN	Unknown hydrocarbon with several peaks

APPROVED BY: TJ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: HRO
REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL
UNITS: mg/Kg

SAMPLE ID	LAB NO.	DATE SAMPLED	BATCH ID	EXTRACT DATE	DATE ANALYZED	MRL	SAMPLE CONC	HRO PATTERN
B-1-1.5	154474	05/08/2017	051017S1	05/10/2017	05/12/2017	50.0	334	
B-2-1	154475	05/08/2017	051017S1	05/10/2017	05/12/2017	10.0	43.8	
B-2-2.5	154476	05/08/2017	051017S1	05/10/2017	05/12/2017	10.0	ND	
B-3-1.5	154477	05/08/2017	051017S1	05/10/2017	05/12/2017	50.0	498	
B-3-3	154478	05/08/2017	051017S1	05/10/2017	05/12/2017	10.0	ND	
B-4-1.5	154479	05/08/2017	051017S1	05/10/2017	05/12/2017	10.0	45.9	
B-5-1.5	154480	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	77.6	
B-6-1	154481	05/08/2017	051017S1	05/10/2017	05/13/2017	50.0	2000	
B-6-2.5	154482	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	10.8	
B-7-1.5	154483	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	29.3	
B-7-2.5	154484	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	21.0	
B-8-1.5	154485	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	64.4	
B-9-1	154486	05/08/2017	051017S1	05/10/2017	05/13/2017	50.0	455	
B-9-2	154487	05/08/2017	051017S1	05/10/2017	05/13/2017	10.0	ND	

NOTES:

HRO	Heavy Range Organics (C24-C34) with Silica Gel Cleanup
ND	Not Detected at or above the stated MRL
NA	Not Applicable or Available
MRL	Method Reporting Limit
AE	Unknown hydrocarbon with a single peak
AN	Unknown hydrocarbon with several peaks

APPROVED BY: TJ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-1-1.5
LAB NO: 154474
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 12:05
BATCH #: 042817S1
DATE EXTRACTED: 05/11/2017
DATE ANALYZED: 05/13/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

COMPOUND NAME	CAS NUMBER	REPORTING LIMIT	SAMPLE CONC
ACENAPHTHENE	83-32-9	2.50	ND
ACENAPHTHYLENE	208-96-8	2.50	14.2
ANTHRACENE	120-12-7	2.50	16.5
BENZO (A) ANTHRACENE	56-55-3	2.50	42.1
BENZO (B) FLUORANTHENE	205-99-2	2.50	70.5
BENZO (K) FLUORANTHENE	207-08-9	2.50	39.8
BENZO (A) PYRENE	50-32-8	2.50	24.7
BENZO (G,H,I) PERYLENE	191-24-2	10.0	114
CHRYSENE	218-01-9	2.50	46.4
DIBENZO (A,H) ANTHRACENE	53-70-3	10.0	28.4
FLUORANTHENE	206-44-0	2.50	55.5
FLUORENE	86-73-7	2.50	ND
INDENO (1,2,3-CD) PYRENE	193-39-5	10.0	59.4
NAPHTHALENE	91-20-3	2.50	5.44
PHENANTHRENE	85-01-8	2.50	36.1
PYRENE	129-00-0	2.50	134

SURROGATE RECOVERY	%
2-FLUOROBIPHENYL	98
P-TERPHENYL-D14	108

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY: TJ
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-2-2.5
LAB NO: 154476
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 11:55
BATCH #: 042817S1
DATE EXTRACTED: 05/11/2017
DATE ANALYZED: 05/12/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

COMPOUND NAME	CAS NUMBER	REPORTING LIMIT	SAMPLE CONC
ACENAPHTHENE	83-32-9	2.50	ND
ACENAPHTHYLENE	208-96-8	2.50	43.8
ANTHRACENE	120-12-7	2.50	98.9
BENZO (A) ANTHRACENE	56-55-3	2.50	70.9
BENZO (B) FLUORANTHENE	205-99-2	2.50	185
BENZO (K) FLUORANTHENE	207-08-9	2.50	115
BENZO (A) PYRENE	50-32-8	2.50	74.2
BENZO (G,H,I) PERYLENE	191-24-2	10.0	231
CHRYSENE	218-01-9	2.50	165
DIBENZO (A,H) ANTHRACENE	53-70-3	10.0	48.0
FLUORANTHENE	206-44-0	2.50	321
FLUORENE	86-73-7	2.50	ND
INDENO (1,2,3-CD) PYRENE	193-39-5	10.0	169
NAPHTHALENE	91-20-3	2.50	103
PHENANTHRENE	85-01-8	2.50	125
PYRENE	129-00-0	2.50	309

SURROGATE RECOVERY	%
2-FLUOROBIPHENYL	97
P-TERPHENYL-D14	105

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY: TB
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-4-1.5
LAB NO: 154479
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 13:15
BATCH #: 042817S1
DATE EXTRACTED: 05/11/2017
DATE ANALYZED: 05/12/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

COMPOUND NAME	CAS NUMBER	REPORTING LIMIT	SAMPLE CONC
ACENAPHTHENE	83-32-9	2.50	ND
ACENAPHTHYLENE	208-96-8	2.50	15.4
ANTHRACENE	120-12-7	2.50	26.4
BENZO (A) ANTHRACENE	56-55-3	2.50	41.1
BENZO (B) FLUORANTHENE	205-99-2	2.50	70.1
BENZO (K) FLUORANTHENE	207-08-9	2.50	42.7
BENZO (A) PYRENE	50-32-8	2.50	33.9
BENZO (G,H,I) PERYLENE	191-24-2	10.0	86.3
CHRYSENE	218-01-9	2.50	64.6
DIBENZO (A,H) ANTHRACENE	53-70-3	10.0	28.7
FLUORANTHENE	206-44-0	2.50	112
FLUORENE	86-73-7	2.50	ND
INDENO (1,2,3-CD) PYRENE	193-39-5	10.0	61.0
NAPHTHALENE	91-20-3	2.50	7.32
PHENANTHRENE	85-01-8	2.50	36.2
PYRENE	129-00-0	2.50	94.9

SURROGATE RECOVERY	%
2-FLUOROBIPHENYL	96
P-TERPHENYL-D14	104

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY: JJ
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-6-2.5
LAB NO: 154482
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:35
BATCH #: 042817S1
DATE EXTRACTED: 05/11/2017
DATE ANALYZED: 05/12/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

COMPOUND NAME	CAS NUMBER	REPORTING LIMIT	SAMPLE CONC
ACENAPHTHENE	83-32-9	2.50	ND
ACENAPHTHYLENE	208-96-8	2.50	19.6
ANTHRACENE	120-12-7	2.50	40.4
BENZO (A) ANTHRACENE	56-55-3	2.50	22.2
BENZO (B) FLUORANTHENE	205-99-2	2.50	65.8
BENZO (K) FLUORANTHENE	207-08-9	2.50	43.6
BENZO (A) PYRENE	50-32-8	2.50	21.0
BENZO (G,H,I) PERYLENE	191-24-2	10.0	66.5
CHRYSENE	218-01-9	2.50	51.1
DIBENZO (A,H) ANTHRACENE	53-70-3	10.0	14.3
FLUORANTHENE	206-44-0	2.50	98.2
FLUORENE	86-73-7	2.50	ND
INDENO (1,2,3-CD) PYRENE	193-39-5	10.0	45.1
NAPHTHALENE	91-20-3	2.50	40.2
PHENANTHRENE	85-01-8	2.50	33.7
PYRENE	129-00-0	2.50	71.1

SURROGATE RECOVERY	%
2-FLUOROBIPHENYL	97
P-TERPHENYL-D14	105

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY: TJ
DATE: 5/15/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-7-2.5
LAB NO: 154484
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:20
BATCH #: 042817S1
DATE EXTRACTED: 05/11/2017
DATE ANALYZED: 05/12/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

COMPOUND NAME	CAS NUMBER	REPORTING LIMIT	SAMPLE CONC
ACENAPHTHENE	83-32-9	2.50	ND
ACENAPHTHYLENE	208-96-8	2.50	14.6
ANTHRACENE	120-12-7	2.50	40.3
BENZO (A) ANTHRACENE	56-55-3	2.50	27.1
BENZO (B) FLUORANTHENE	205-99-2	2.50	36.0
BENZO (K) FLUORANTHENE	207-08-9	2.50	24.9
BENZO (A) PYRENE	50-32-8	2.50	15.7
BENZO (G,H,I) PERYLENE	191-24-2	10.0	47.9
CHRYSENE	218-01-9	2.50	50.2
DIBENZO (A,H) ANTHRACENE	53-70-3	10.0	ND
FLUORANTHENE	206-44-0	2.50	77.4
FLUORENE	86-73-7	2.50	ND
INDENO (1,2,3-CD) PYRENE	193-39-5	10.0	31.4
NAPHTHALENE	91-20-3	2.50	184
PHENANTHRENE	85-01-8	2.50	53.5
PYRENE	129-00-0	2.50	70.2

SURROGATE RECOVERY	%
2-FLUOROBIPHENYL	99
P-TERPHENYL-D14	97

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY: TQ
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-8-1.5
LAB NO: 154485
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:25
BATCH #: 042817S1
DATE EXTRACTED: 05/11/2017
DATE ANALYZED: 05/12/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

COMPOUND NAME	CAS NUMBER	REPORTING LIMIT	SAMPLE CONC
ACENAPHTHENE	83-32-9	2.50	ND
ACENAPHTHYLENE	208-96-8	2.50	9.46
ANTHRACENE	120-12-7	2.50	17.1
BENZO (A) ANTHRACENE	56-55-3	2.50	21.7
BENZO (B) FLUORANTHENE	205-99-2	2.50	36.2
BENZO (K) FLUORANTHENE	207-08-9	2.50	25.9
BENZO (A) PYRENE	50-32-8	2.50	17.0
BENZO (G,H,I) PERYLENE	191-24-2	10.0	47.5
CHRYSENE	218-01-9	2.50	34.9
DIBENZO (A,H) ANTHRACENE	53-70-3	10.0	22.6
FLUORANTHENE	206-44-0	2.50	35.0
FLUORENE	86-73-7	2.50	ND
INDENO (1,2,3-CD) PYRENE	193-39-5	10.0	27.7
NAPHTHALENE	91-20-3	2.50	6.60
PHENANTHRENE	85-01-8	2.50	19.6
PYRENE	129-00-0	2.50	56.6

SURROGATE RECOVERY	%
2-FLUOROBIPHENYL	97
P-TERPHENYL-D14	112

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY: TF
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-9-1
LAB NO: 154486
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 11:20
BATCH #: 042817S1
DATE EXTRACTED: 05/11/2017
DATE ANALYZED: 05/13/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

COMPOUND NAME	CAS NUMBER	REPORTING LIMIT	SAMPLE CONC
ACENAPHTHENE	83-32-9	2.50	4.77
ACENAPHTHYLENE	208-96-8	2.50	97.3
ANTHRACENE	120-12-7	2.50	122
BENZO (A) ANTHRACENE	56-55-3	2.50	311
BENZO (B) FLUORANTHENE	205-99-2	2.50	404
BENZO (K) FLUORANTHENE	207-08-9	2.50	151
BENZO (A) PYRENE	50-32-8	2.50	399
BENZO (G,H,I) PERYLENE	191-24-2	10.0	662
CHRYSENE	218-01-9	2.50	241
DIBENZO (A,H) ANTHRACENE	53-70-3	10.0	216
FLUORANTHENE	206-44-0	2.50	559
FLUORENE	86-73-7	2.50	9.07
INDENO (1,2,3-CD) PYRENE	193-39-5	10.0	453
NAPHTHALENE	91-20-3	2.50	13.0
PHENANTHRENE	85-01-8	2.50	249
PYRENE	129-00-0	2.50	1720

SURROGATE RECOVERY	%
2-FLUOROBIPHENYL	97
P-TERPHENYL-D14	111

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

APPROVED BY: TJ
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-2-2.5
LAB NO: 154476
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 11:55
BATCH ID: 050917S2

METHOD: TOTAL METALS BY ICP/MS
REFERENCE: EPA 3050B/6020A

SAMPLE TYPE: SOIL
UNITS: mg/kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
ANTIMONY	Sb	05/11/2017	2.50	ND
ARSENIC	As	05/11/2017	2.50	4.50
BARIUM	Ba	05/11/2017	2.50	214
BERYLLIUM	Be	05/11/2017	2.50	ND
CADMIUM	Cd	05/11/2017	2.50	ND
CHROMIUM	Cr	05/11/2017	2.50	31.4
COBALT	Co	05/11/2017	2.50	4.05
COPPER	Cu	05/11/2017	2.50	30.8
LEAD	Pb	05/11/2017	2.50	314
MERCURY	Hg	05/11/2017	0.100	0.306
MOLYBDENUM	Mo	05/11/2017	2.50	ND
NICKEL	Ni	05/11/2017	2.50	18.1
SELENIUM	Se	05/11/2017	2.50	ND
SILVER	Ag	05/11/2017	2.50	ND
THALLIUM	Tl	05/11/2017	2.50	ND
VANADIUM	V	05/11/2017	2.50	20.8
ZINC	Zn	05/11/2017	2.50	265

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: TJ
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: TOTAL METALS BY ICP/MS
REFERENCE: EPA 3050B/6020A

SAMPLE ID: B-3-3
LAB NO: 154478
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 10:20
BATCH ID: 050917S2

SAMPLE TYPE: SOIL
UNITS: mg/kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
ANTIMONY	Sb	05/11/2017	2.50	ND
ARSENIC	As	05/11/2017	2.50	4.02
BARIUM	Ba	05/11/2017	2.50	141
BERYLLIUM	Be	05/11/2017	2.50	ND
CADMIUM	Cd	05/11/2017	2.50	ND
CHROMIUM	Cr	05/11/2017	2.50	17.2
COBALT	Co	05/11/2017	2.50	7.07
COPPER	Cu	05/11/2017	2.50	20.2
LEAD	Pb	05/11/2017	2.50	98.0
MERCURY	Hg	05/11/2017	0.100	0.110
MOLYBDENUM	Mo	05/11/2017	2.50	ND
NICKEL	Ni	05/11/2017	2.50	15.4
SELENIUM	Se	05/11/2017	2.50	ND
SILVER	Ag	05/11/2017	2.50	ND
THALLIUM	Tl	05/11/2017	2.50	ND
VANADIUM	V	05/11/2017	2.50	36.1
ZINC	Zn	05/11/2017	2.50	72.8

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: TJ
DATE: 5/16/2017

K PRIME, INC.

LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: TOTAL METALS BY ICP/MS
REFERENCE: EPA 3050B/6020A

SAMPLE ID: B-6-2.5
LAB NO: 154482
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:35
BATCH ID: 050917S2

SAMPLE TYPE: SOIL
UNITS: mg/kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
ANTIMONY	Sb	05/11/2017	2.50	ND
ARSENIC	As	05/11/2017	2.50	3.40
BARIUM	Ba	05/11/2017	2.50	104
BERYLLIUM	Be	05/11/2017	2.50	ND
CADMIUM	Cd	05/11/2017	2.50	ND
CHROMIUM	Cr	05/11/2017	2.50	30.0
COBALT	Co	05/11/2017	2.50	4.39
COPPER	Cu	05/11/2017	2.50	15.4
LEAD	Pb	05/11/2017	2.50	206
MERCURY	Hg	05/11/2017	0.100	0.200
MOLYBDENUM	Mo	05/11/2017	2.50	ND
NICKEL	Ni	05/11/2017	2.50	20.5
SELENIUM	Se	05/11/2017	2.50	ND
SILVER	Ag	05/11/2017	2.50	ND
THALLIUM	Tl	05/11/2017	2.50	ND
VANADIUM	V	05/11/2017	2.50	22.2
ZINC	Zn	05/11/2017	2.50	110

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: TJ
DATE: 5/16/2017

K PRIME, INC.

LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE ID: B-8-1.5
LAB NO: 154485
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 14:25
BATCH ID: 050917S2

METHOD: TOTAL METALS BY ICP/MS
REFERENCE: EPA 3050B/6020A

SAMPLE TYPE: SOIL
UNITS: mg/kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
ANTIMONY	Sb	05/11/2017	2.50	ND
ARSENIC	As	05/11/2017	2.50	3.34
BARIUM	Ba	05/11/2017	2.50	106
BERYLLIUM	Be	05/11/2017	2.50	ND
CADMIUM	Cd	05/11/2017	2.50	ND
CHROMIUM	Cr	05/11/2017	2.50	32.8
COBALT	Co	05/11/2017	2.50	6.22
COPPER	Cu	05/11/2017	2.50	18.7
LEAD	Pb	05/11/2017	2.50	113
MERCURY	Hg	05/11/2017	0.100	0.186
MOLYBDENUM	Mo	05/11/2017	2.50	ND
NICKEL	Ni	05/11/2017	2.50	20.8
SELENIUM	Se	05/11/2017	2.50	ND
SILVER	Ag	05/11/2017	2.50	ND
THALLIUM	Tl	05/11/2017	2.50	ND
VANADIUM	V	05/11/2017	2.50	30.2
ZINC	Zn	05/11/2017	2.50	119

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: TF
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: TOTAL METALS BY ICP/MS
REFERENCE: EPA 3050B/6020A

SAMPLE ID: B-9-2
LAB NO: 154487
DATE SAMPLED: 05/08/2017
TIME SAMPLED: 11:25
BATCH ID: 050917S2

SAMPLE TYPE: SOIL
UNITS: mg/kg

ELEMENT NAME		DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
ANTIMONY	Sb	05/11/2017	2.50	ND
ARSENIC	As	05/11/2017	2.50	4.57
BARIUM	Ba	05/11/2017	2.50	122
BERYLLIUM	Be	05/11/2017	2.50	ND
CADMIUM	Cd	05/11/2017	2.50	ND
CHROMIUM	Cr	05/11/2017	2.50	43.2
COBALT	Co	05/11/2017	2.50	11.5
COPPER	Cu	05/11/2017	2.50	26.1
LEAD	Pb	05/11/2017	2.50	13.6
MERCURY	Hg	05/11/2017	0.100	ND
MOLYBDENUM	Mo	05/11/2017	2.50	ND
NICKEL	Ni	05/11/2017	2.50	38.8
SELENIUM	Se	05/11/2017	2.50	ND
SILVER	Ag	05/11/2017	2.50	ND
THALLIUM	Tl	05/11/2017	2.50	ND
VANADIUM	V	05/11/2017	2.50	36.6
ZINC	Zn	05/11/2017	2.50	43.9

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: TJ
DATE: 5/16/2017

K PRIME, INC.
LABORATORY REPORT

METHOD: TOTAL LEAD
REFERENCE: EPA 3050B/6020A

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

SAMPLE TYPE: SOIL
UNITS: mg/kg

SAMPLE ID	LAB ID	BATCH #	DATE SAMPLED	DATE ANALYZED	REPORTING LIMIT	SAMPLE CONC
B-1-1.5	154474	051017S1	05/08/2017	05/11/2017	2.50	102
B-2-1	154475	051017S1	05/08/2017	05/11/2017	2.50	107
B-3-1.5	154477	051017S1	05/08/2017	05/11/2017	2.50	36.5
B-4-1.5	154479	051017S1	05/08/2017	05/11/2017	2.50	1080
B-5-1.5	154480	051017S1	05/08/2017	05/11/2017	2.50	191
B-6-1	154481	051017S1	05/08/2017	05/11/2017	2.50	49.3
B-7-1.5	154483	051017S1	05/08/2017	05/11/2017	2.50	76.9
B-7-2.5	154484	051017S1	05/08/2017	05/11/2017	2.50	228
B-9-1	154486	051017S1	05/08/2017	05/11/2017	2.50	96.0

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

APPROVED BY: TJ
DATE: 5/16/2017

K PRIME, INC.
LABORATORY QC REPORT

METHOD BLANK ID: B050917S1
BATCH NO: 050917S1
SAMPLE TYPE: SOIL
UNITS: mg/Kg

METHOD: GRO-GASOLINE RANGE ORGANICS
REFERENCE: EPA 8015B

DATE EXTRACTED: 05/09/2017
DATE ANALYZED: 05/09/2017

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
TPH-G	1.00	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

SAMPLE ID: L050917S1
DUPLICATE ID: D050917S1
BATCH NO: 050917S1
SAMPLE TYPE: SOIL
UNITS: mg/Kg

DATE EXTRACTED: 05/09/2017
DATE ANALYZED: 05/09/2017

ACCURACY (MATRIX SPIKE)

COMPOUND NAME	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
TPH-G	5.00	ND	4.55	91	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
TPH-G	1.00	4.55	4.70	3.3	±20

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

K PRIME, INC.
LABORATORY BATCH QC REPORT

METHOD BLANK ID: B051117S1
BATCH NO: 051117S1
DATE ANALYZED: 5/11/2017

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

SAMPLE TYPE: SOIL
UNITS: µg/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
BENZENE	71-43-2	1.50	ND
TOLUENE	108-88-3	1.50	ND
ETHYLBENZENE	100-41-4	1.50	ND
XYLENE (M+P)	1330-20-7	1.50	ND
XYLENE (O)	1330-20-7	1.50	ND
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	1.50	ND

SURROGATE RECOVERY	%
DIBROMOFLUOROMETHANE	116
TOLUENE-D8	110
4-BROMOFLUOROBENZENE	86

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA -NOT APPLICABLE OR AVAILABLE

K PRIME, INC.
LABORATORY BATCH QC REPORT

SAMPLE ID: B051117S1
SPIKE ID: L051117S1
DUPLICATE ID: D051117S1
BATCH NO: 051117S1
DATE ANALYZED: 05/11/2017
SAMPLE TYPE: SOIL
UNITS: µg/Kg

METHOD: VOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 5035/8260

ACCURACY (MATRIX SPIKE)

COMPOUND NAME	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
1,1 DICHLOROETHENE	30.0	ND	26.0	87	60-140
BENZENE	30.0	ND	29.6	99	60-140
TRICHLOROETHENE	30.0	ND	29.0	97	60-140
TOLUENE	30.0	ND	28.0	93	60-140
CHLOROBENZENE	30.0	ND	24.6	82	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
1,1 DICHLOROETHENE	1.50	26.0	26.5	2.1	±20
BENZENE	1.50	29.6	30.6	3.3	±20
TRICHLOROETHENE	1.50	29.0	30.3	4.5	±20
TOLUENE	1.50	28.0	28.2	0.7	±20
CHLOROBENZENE	1.50	24.6	24.8	0.9	±20

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

K PRIME, INC.
LABORATORY QUALITY CONTROL REPORT

BATCH ID: 051017S1
DATE EXTRACTED: 05/10/2017
DATE ANALYZED: 05/12/2017

METHOD: DRO
REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL
UNITS: mg/Kg

METHOD BLANK ID: B051017S1

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
DRO	10.0	ND

SAMPLE ID: L051017S1
DUPLICATE ID: D051017S1

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
DRO	500	ND	436	87	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
DRO	10.0	436	445	2.1	±20

NOTES:
DRO - DIESEL RANGE ORGANICS (C12-C34)
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC.
LABORATORY QUALITY CONTROL REPORT

BATCH ID: 051017S1
DATE EXTRACTED: 05/10/2017
DATE ANALYZED: 05/12/2017

METHOD: DRO
REFERENCE: EPA 8015B

SAMPLE TYPE: SOIL
UNITS: mg/Kg

METHOD BLANK ID: B051017S1

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
DRO	10.0	ND

SAMPLE ID: MS-154476
DUPLICATE ID: MSD-154476

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
DRO	500	ND	423	85	60-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
DRO	10.0	423	460	8.3	±20

NOTES:
DRO - DIESEL RANGE ORGANICS (C12-C34)
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC.
LABORATORY QC REPORT

METHOD BLANK ID: B042817S1
BATCH #: 042817S1
DATE EXTRACTED: 04/28/2017
DATE ANALYZED: 04/28/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

COMPOUND NAME	CAS NO.	REPORTING LIMIT	SAMPLE CONC
ACENAPHTHENE	83-32-9	2.50	ND
ACENAPHTHYLENE	208-96-8	2.50	ND
ANTHRACENE	120-12-7	2.50	ND
BENZO (A) ANTHRACENE	56-55-3	2.50	ND
BENZO (B) FLUORANTHENE	205-99-2	2.50	ND
BENZO (K) FLUORANTHENE	207-08-9	2.50	ND
BENZO (A) PYRENE	50-32-8	2.50	ND
BENZO (G,H,I) PERYLENE	191-24-2	10.0	ND
CHRYSENE	218-01-9	2.50	ND
DIBENZO (A,H) ANTHRACENE	53-70-3	10.0	ND
FLUORANTHENE	206-44-0	2.50	ND
FLUORENE	86-73-7	2.50	ND
INDENO (1,2,3-CD) PYRENE	193-39-5	10.0	ND
NAPHTHALENE	91-20-3	2.50	ND
PHENANTHRENE	85-01-8	2.50	ND
PYRENE	129-00-0	2.50	ND

SURROGATE RECOVERY	%
2-FLUOROBIPHENYL	107
P-TERPHENYL-D14	125

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC.
LABORATORY QC REPORT

SAMPLE ID: L042817S1
DUPLICATE ID: D042817S1
BATCH #: 042817S1
DATE EXTRACTED: 04/28/2017
DATE ANALYZED: 04/28/2017

METHOD: SEMIVOLATILE ORGANIC COMPOUNDS
REFERENCE: EPA 3550/8270-SIM

SAMPLE TYPE: SOIL
UNITS: ug/Kg

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
ACENAPHTHENE	100	ND	92.1	92	40-140
PYRENE	100	ND	104	104	40-140

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
ACENAPHTHENE	2.50	92.1	98.0	6.2	±30
PYRENE	2.50	104	96.1	7.4	±30

K PRIME, INC.

LABORATORY BATCH QC REPORT

SAMPLE ID: L050917S2
DUPLICATE ID: D050917S2
METHOD BLANK ID: B050917S2
BATCH #: 050917S2
DATE ANALYZED: 05/11/2017

METHOD: TOTAL METALS BY ICP/MS
REFERENCE: EPA 3050B/6020A

SAMPLE TYPE: SOIL
UNITS: mg/kg

ELEMENT		MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SPD mg/kg	SP %R	RPD %
ANTIMONY	Sb	<2.50	5.00	0.0	5.21	5.00	104	4.0
ARSENIC	As	<2.50	5.00	0.0	4.71	4.51	94	4.3
BARIUM	Ba	<2.50	5.00	0.0	4.93	5.04	99	2.1
BERYLLIUM	Be	<2.50	5.00	0.0	3.49	3.30	70	5.6
CADMIUM	Cd	<2.50	5.00	0.0	4.79	4.85	96	1.3
CHROMIUM	Cr	<2.50	5.00	0.0	4.38	4.28	88	2.3
COBALT	Co	<2.50	5.00	0.0	4.39	4.36	88	0.7
COPPER	Cu	<2.50	5.00	0.0	4.46	4.40	89	1.5
LEAD	Pb	<2.50	5.00	0.0	5.08	5.27	102	3.6
MERCURY	Hg	<0.100	1.00	0.0	1.01	1.01	101	0.1
MOLYBDENUM	Mo	<2.50	5.00	0.0	5.01	4.90	100	2.1
NICKEL	Ni	<2.50	5.00	0.0	4.46	4.37	89	2.1
SELENIUM	Se	<2.50	5.00	0.0	4.63	4.57	93	1.3
SILVER	Ag	<2.50	2.50	0.0	2.40	2.42	96	1.0
THALLIUM	Tl	<2.50	5.00	0.0	5.14	5.16	103	0.3
VANADIUM	V	<2.50	5.00	0.0	4.34	4.24	87	2.5
ZINC	Zn	<2.50	5.00	0.0	4.50	4.34	90	3.7

NOTES:
ND: NOT DETECTED
MB: METHOD BLANK
SA: SPIKE ADDED
SR: SAMPLE RESULT
SP: SPIKE RESULT
SPD: SPIKE DUPLICATE RESULT
SP(%R): SPIKE % RECOVERY
RPD: RELATIVE PERCENT DIFFERENCE

K PRIME, INC.

LABORATORY BATCH QC REPORT

SAMPLE ID: L051017S1
DUPLICATE ID: D051017S1
METHOD BLANK ID: B051017S1
BATCH #: 051017S1
DATE ANALYZED: 05/11/2017

METHOD: TOTAL METALS BY ICP/MS
REFERENCE: EPA 3050B/6020A

SAMPLE TYPE: SOIL
UNITS: mg/kg

ELEMENT		MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SPD mg/kg	SP %R	RPD %
LEAD	Pb	<2.50	25.0	0.0	26.7	26.4	107	1.2

NOTES:
ND: NOT DETECTED
MB: METHOD BLANK
SA: SPIKE ADDED
SR: SAMPLE RESULT
SP: SPIKE RESULT
SPD: SPIKE DUPLICATE RESULT
SP(%R): SPIKE % RECOVERY
RPD: RELATIVE PERCENT DIFFERENCE

K PRIME, INC.

LABORATORY BATCH QC REPORT

SAMPLE ID: SD154474
DUPLICATE ID: MS154474
METHOD BLANK ID: B051017S1
BATCH #: 051017S1
DATE ANALYZED: 05/11/2017

METHOD: TOTAL METALS BY ICP/MS
REFERENCE: EPA 3050B/6020A

SAMPLE TYPE: SOIL
UNITS: mg/kg

ELEMENT		MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SPD mg/kg	SP %R	RPD %
LEAD	Pb	<2.50	25.0	102	125	111	92	12.0

NOTES:
ND: NOT DETECTED
MB: METHOD BLANK
SA: SPIKE ADDED
SR: SAMPLE RESULT
SP: SPIKE RESULT
SPD: SPIKE DUPLICATE RESULT
SP(%R): SPIKE % RECOVERY
RPD: RELATIVE PERCENT DIFFERENCE

WEST
Environmental Services & Technology
711 Grand Avenue, Suite 220
San Rafael, California 94901
415.460.6770 • Fax 415.460.6771
main@westenvironmental.com

SAMPLE ANALYSIS/COMPOSITE REQUEST FORM

CHAIN-OF-CUSTODY

Invoice to: WEST, Inc.	**Date:** 5/9/17 **Page** 1 of 2
Project: Holliday, WO, 5th Magnolia (Morris)	**Location:** 5th & Magnolia, Oakland, CA
Project Manager: Peter ~~Krasnoff~~, WEST, Inc.	**Phone:** 415/460-6770 **Fax:** 415/460-6771
Laboratory: KPrime, Inc, Santa Rosa, CA	**Turnaround time (days):** 1 / 2 / 3 / 5 / 7 / 10 / Std. — X = 5
Sampler Signature:	**Analyses Requested**

Sample ID	KPI #	Date	Time	Type	# Containers	Composite	TPHg/BTEX (8015M/8260B)	MTBE	TPHd/TPHmo (8015M)*	PAHs (8270C-SIM)	Lead (6020)	Title 22 Metals (6000/7000)	HOLD
B-1-1.5	154474	5/8/17	1205	S	1	—	X	X	X	X	X		
B-2-1	154475	↑	1150	S	1	—	X	X	X		X		
B-2-2.5	154476		1155	S	1	—	X	X	X	X		X	
B-3-1.5	154477		1015	S	1	—	X	X	X		X		
B-3-3	154478		1020	S	1	—	X	X	X			X	
B-4-1.5	154479		1315	S	1	—	X	X	X	X	X		
B-5-1.5	154480		1325	S	1	—	X	X	X		X		
B-6-1	154481		1430	S	1	—	X	X	X		X		
B-6-2.5	154482		1435	S	1	—	X	X	X	X		X	
B-7-1.5	154483		1415	S	1	—	X	X	X		X		
B-7-2.5	154484	↓	1420	S	1	—	X	X	X	X	X		
B-8-1.5	154485	5/9/17	1425	S	1	—	X	X	X	X		X	

NOTES:

* with Silica gel cleanup

☐ EDF Log Code: WESS

Global ID: _____

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	5/9/17 12:01		5/9/17 12:01
	5/9/17 14:30		5/9/17 14:30

WEST
Environmental Services & Technology
711 Grand Avenue, Suite 220
San Rafael, California 94901
415.460.6770 • Fax 415.460.6771
main@westenvironmental.com

SAMPLE ANALYSIS/COMPOSITE REQUEST FORM

CHAIN-OF-CUSTODY

Invoice to: WEST, Inc.	Date: 5/9/17 — Page 2 of 2
Project: Holliday. WO. 5th Magnolia	Location: 5th & Magnolia, Oakland, CA
Project Manager: Peter ~~Krasnoff~~ Morris Pam, WEST, Inc.	Phone: 415/460-6770 — Fax: 415/460-6771
Laboratory: KPrime, Inc, Santa Rosa, CA	Turnaround time (days): 1 / 2 / 3 / 5 X / 7 / 10 / Std.
Sampler Signature: [signature]	Analyses Requested

Sample ID	KPI #	Date	Time	Type	# Containers	Composite	TPHg/BTEX(8015M/8260B)	MTBE	TPHd/TPHmo (8015M)*	PAHs(8270C-SIM)	Lead (6020)	Title 22 Metals (6000/7000)						HOLD
B-9-1	154486	5/8/17	1120	S	1	—	X	X	X	X	X							
B-9-2	154487	5/8/17	1125	S	1	—	X	X	X		**X	X						

NOTES:
* with silica gel cleanup
** Per Peter Morris only report title 22 for 154487 & not lead seperatly

☐ EDF — Log Code: WESS

Global ID: ______

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	5/9/17 12:01	[signature]	5/9/17 12:01
[signature]	5/9/17 14:30	[signature]	5/9/17 14:30

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd.
Santa Rosa CA 95403
Phone: 707 527 7574
FAX: 707 527 7879

TRANSMITTAL

DATE: 5/17/2017

TO: MR. PETER MORRIS
WEST ENVIRONMENTAL S&T
711 GRAND AVENUE, SUITE 220
SAN RAFAEL, CA 94901

Phone: 415-460-6770
Fax: 415-460-6771
Email: main@westenvironmental.com

ACCT: 9946
PROJ: HOLLIDAY.WO. 5THMAGNOLIA

FROM: Richard A. Kagel, Ph.D. RAK 5/17/2017
Laboratory Director

SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT HOLLIDAY.WO.5THMAGNOLIA

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
SG-1-5	AIR	05/08/17	13:11	154488
SG-2-5	AIR	05/08/17	12:25	154489
SG-3-5	AIR	05/09/17	11:01	154490
SG-4-5	AIR	05/09/17	9:10	154491
SG-5-5	AIR	05/09/17	9:46	154492
W-2-5	AIR	05/08/17	13:57	154493
W-4-5	AIR	05/09/17	10:27	154494

The above listed sample group was received on 05/09/17 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information.
Thank you for this opportunity to be of service.

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID:	SG-1-5
LAB NO:	154488
SAMPLE TYPE:	AIR
DATE SAMPLED:	05/08/2017
TIME SAMPLED:	13:11
BATCH ID:	042717A1
DATE ANALYZED:	05/11/2017

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	1.00	ND	4.95	ND
CHLOROMETHANE	74-87-3	1.00	ND	2.07	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	1.00	ND	6.99	ND
VINYL CHLORIDE	75-01-4	1.00	ND	2.56	ND
BROMOMETHANE	74-83-9	1.00	ND	3.88	ND
CHLOROETHANE	75-00-3	1.00	ND	2.64	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.00	1.11	5.62	6.24
1,1-DICHLOROETHENE	75-35-4	1.00	ND	3.97	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.00	ND	7.66	ND
METHYLENE CHLORIDE	75-09-2	1.00	ND	3.47	ND
1,1-DICHLOROETHANE	75-34-3	1.00	ND	4.05	ND
CIS-1,2-DICHLOROETHENE	159-59-2	1.00	ND	3.97	ND
CHLOROFORM	67-66-3	1.00	ND	4.88	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.00	ND	5.46	ND
1,2-DICHLOROETHANE	107-06-2	1.00	ND	4.05	ND
BENZENE	71-43-2	1.00	ND	3.19	ND
CARBON TETRACHLORIDE	56-23-5	1.00	ND	6.29	ND
1,2-DICHLOROPROPANE	78-87-5	1.00	ND	4.62	ND
TRICHLOROETHENE	79-01-6	1.00	ND	5.37	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.00	ND	4.54	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.00	ND	4.54	ND
TOLUENE	108-88-3	1.00	1.29	3.77	4.86
1,1,2-TRICHLOROETHANE	79-00-5	1.00	ND	5.46	ND
1,2-DIBROMOETHANE	106-93-4	1.00	ND	7.68	ND
TETRACHLOROETHENE	127-18-4	1.00	16.1	6.78	109
CHLOROBENZENE	108-90-7	1.00	ND	4.60	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	179601-23-1	2.00	ND	8.68	ND
STYRENE	100-42-5	1.00	ND	4.26	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.00	ND	6.87	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.00	ND	4.92	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.00	ND	4.92	ND
1,3-DICHLOROBENZENE	541-73-1	1.00	ND	6.01	ND
1,4-DICHLOROBENZENE	106-46-7	1.00	ND	6.01	ND
1,2-DICHLOROBENZENE	95-50-1	1.00	ND	6.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND	7.42	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND	10.7	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
RL - REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: RMC
DATE: 5/17/17

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID:	SG-2-5
LAB NO:	154489
SAMPLE TYPE:	AIR
DATE SAMPLED:	05/08/2017
TIME SAMPLED:	12:25
BATCH ID:	042717A1
DATE ANALYZED:	05/10/2017

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	2.00	ND	9.89	ND
CHLOROMETHANE	74-87-3	2.00	ND	4.13	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	2.00	ND	14.0	ND
VINYL CHLORIDE	75-01-4	2.00	ND	5.11	ND
BROMOMETHANE	74-83-9	2.00	ND	7.77	ND
CHLOROETHANE	75-00-3	2.00	ND	5.28	ND
TRICHLOROFLUOROMETHANE	75-69-4	2.00	ND	11.2	ND
1,1-DICHLOROETHENE	75-35-4	2.00	ND	7.93	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	2.00	ND	15.3	ND
METHYLENE CHLORIDE	75-09-2	2.00	ND	6.95	ND
1,1-DICHLOROETHANE	75-34-3	2.00	ND	8.10	ND
CIS-1,2-DICHLOROETHENE	159-59-2	2.00	ND	7.93	ND
CHLOROFORM	67-66-3	2.00	ND	9.77	ND
1,1,1-TRICHLOROETHANE	71-55-6	2.00	ND	10.9	ND
1,2-DICHLOROETHANE	107-06-2	2.00	ND	8.09	ND
BENZENE	71-43-2	2.00	5.82	6.39	18.6
CARBON TETRACHLORIDE	56-23-5	2.00	ND	12.6	ND
1,2-DICHLOROPROPANE	78-87-5	2.00	ND	9.24	ND
TRICHLOROETHENE	79-01-6	2.00	ND	10.7	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.00	ND	9.08	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.00	ND	9.08	ND
TOLUENE	108-88-3	2.00	10.2	7.54	38.4
1,1,2-TRICHLOROETHANE	79-00-5	2.00	ND	10.9	ND
1,2-DIBROMOETHANE	106-93-4	2.00	ND	15.4	ND
TETRACHLOROETHENE	127-18-4	2.00	2.06	13.6	14.0
CHLOROBENZENE	108-90-7	2.00	ND	9.21	ND
ETHYLBENZENE	100-41-4	2.00	ND	8.68	ND
XYLENE (M+P)	179601-23-1	4.00	ND	17.4	ND
STYRENE	100-42-5	2.00	ND	8.52	ND
XYLENE (O)	95-47-6	2.00	ND	8.68	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	2.00	ND	13.7	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	2.00	ND	9.83	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	2.00	ND	9.83	ND
1,3-DICHLOROBENZENE	541-73-1	2.00	ND	12.0	ND
1,4-DICHLOROBENZENE	106-46-7	2.00	ND	12.0	ND
1,2-DICHLOROBENZENE	95-50-1	2.00	ND	12.0	ND
1,2,4-TRICHLOROBENZENE	120-82-1	2.00	ND	14.8	ND
HEXACHLOROBUTADIENE	87-68-3	2.00	ND	21.3	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
RL - REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: RMM
DATE: 5/17/17

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID:	SG-3-5
LAB NO:	154490
SAMPLE TYPE:	AIR
DATE SAMPLED:	05/09/2017
TIME SAMPLED:	11:01
BATCH ID:	042717A1
DATE ANALYZED:	05/10/2017

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	2.00	ND	9.89	ND
CHLOROMETHANE	74-87-3	2.00	ND	4.13	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	2.00	ND	14.0	ND
VINYL CHLORIDE	75-01-4	2.00	ND	5.11	ND
BROMOMETHANE	74-83-9	2.00	ND	7.77	ND
CHLOROETHANE	75-00-3	2.00	ND	5.28	ND
TRICHLOROFLUOROMETHANE	75-69-4	2.00	ND	11.2	ND
1,1-DICHLOROETHENE	75-35-4	2.00	ND	7.93	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	2.00	ND	15.3	ND
METHYLENE CHLORIDE	75-09-2	2.00	6.98	6.95	24.2
1,1-DICHLOROETHANE	75-34-3	2.00	ND	8.10	ND
CIS-1,2-DICHLOROETHENE	159-59-2	2.00	ND	7.93	ND
CHLOROFORM	67-66-3	2.00	ND	9.77	ND
1,1,1-TRICHLOROETHANE	71-55-6	2.00	ND	10.9	ND
1,2-DICHLOROETHANE	107-06-2	2.00	ND	8.09	ND
BENZENE	71-43-2	2.00	ND	6.39	ND
CARBON TETRACHLORIDE	56-23-5	2.00	ND	12.6	ND
1,2-DICHLOROPROPANE	78-87-5	2.00	ND	9.24	ND
TRICHLOROETHENE	79-01-6	2.00	ND	10.7	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.00	ND	9.08	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.00	ND	9.08	ND
TOLUENE	108-88-3	2.00	ND	7.54	ND
1,1,2-TRICHLOROETHANE	79-00-5	2.00	ND	10.9	ND
1,2-DIBROMOETHANE	106-93-4	2.00	ND	15.4	ND
TETRACHLOROETHENE	127-18-4	2.00	ND	13.6	ND
CHLOROBENZENE	108-90-7	2.00	ND	9.21	ND
ETHYLBENZENE	100-41-4	2.00	ND	8.68	ND
XYLENE (M+P)	179601-23-1	4.00	ND	17.4	ND
STYRENE	100-42-5	2.00	ND	8.52	ND
XYLENE (O)	95-47-6	2.00	ND	8.68	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	2.00	ND	13.7	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	2.00	ND	9.83	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	2.00	ND	9.83	ND
1,3-DICHLOROBENZENE	541-73-1	2.00	ND	12.0	ND
1,4-DICHLOROBENZENE	106-46-7	2.00	ND	12.0	ND
1,2-DICHLOROBENZENE	95-50-1	2.00	ND	12.0	ND
1,2,4-TRICHLOROBENZENE	120-82-1	2.00	ND	14.8	ND
HEXACHLOROBUTADIENE	87-68-3	2.00	ND	21.3	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
RL - REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: RMC
DATE: 5/17/17

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID:	SG-4-5
LAB NO:	154491
SAMPLE TYPE:	AIR
DATE SAMPLED:	05/09/2017
TIME SAMPLED:	09:10
BATCH ID:	042717A1
DATE ANALYZED:	05/10/2017

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	1.00	ND	4.95	ND
CHLOROMETHANE	74-87-3	1.00	ND	2.07	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	1.00	ND	6.99	ND
VINYL CHLORIDE	75-01-4	1.00	ND	2.56	ND
BROMOMETHANE	74-83-9	1.00	ND	3.88	ND
CHLOROETHANE	75-00-3	1.00	ND	2.64	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.00	2.52	5.62	14.2
1,1-DICHLOROETHENE	75-35-4	1.00	ND	3.97	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.00	ND	7.66	ND
METHYLENE CHLORIDE	75-09-2	1.00	ND	3.47	ND
1,1-DICHLOROETHANE	75-34-3	1.00	ND	4.05	ND
CIS-1,2-DICHLOROETHENE	159-59-2	1.00	ND	3.97	ND
CHLOROFORM	67-66-3	1.00	ND	4.88	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.00	ND	5.46	ND
1,2-DICHLOROETHANE	107-06-2	1.00	ND	4.05	ND
BENZENE	71-43-2	1.00	ND	3.19	ND
CARBON TETRACHLORIDE	56-23-5	1.00	ND	6.29	ND
1,2-DICHLOROPROPANE	78-87-5	1.00	ND	4.62	ND
TRICHLOROETHENE	79-01-6	1.00	ND	5.37	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.00	ND	4.54	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.00	ND	4.54	ND
TOLUENE	108-88-3	1.00	ND	3.77	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.00	ND	5.46	ND
1,2-DIBROMOETHANE	106-93-4	1.00	ND	7.68	ND
TETRACHLOROETHENE	127-18-4	1.00	1.99	6.78	13.5
CHLOROBENZENE	108-90-7	1.00	ND	4.60	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	179601-23-1	2.00	ND	8.68	ND
STYRENE	100-42-5	1.00	ND	4.26	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.00	ND	6.87	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.00	ND	4.92	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.00	ND	4.92	ND
1,3-DICHLOROBENZENE	541-73-1	1.00	ND	6.01	ND
1,4-DICHLOROBENZENE	106-46-7	1.00	ND	6.01	ND
1,2-DICHLOROBENZENE	95-50-1	1.00	ND	6.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND	7.42	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND	10.7	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
RL - REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: MMC
DATE: 5/17/17

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID:	SG-5-5
LAB NO:	154492
SAMPLE TYPE:	AIR
DATE SAMPLED:	05/09/2017
TIME SAMPLED:	09:46
BATCH ID:	042717A1
DATE ANALYZED:	05/11/2017

COMPOUND NAME	CAS NO.	PPB (V/V) RL	PPB (V/V) SAMPLE CONC	µg/cu. m RL	µg/cu. m SAMPLE CONC
DICHLORODIFLUOROMETHANE	75-71-8	2.00	ND	9.89	ND
CHLOROMETHANE	74-87-3	2.00	ND	4.13	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	2.00	ND	14.0	ND
VINYL CHLORIDE	75-01-4	2.00	ND	5.11	ND
BROMOMETHANE	74-83-9	2.00	ND	7.77	ND
CHLOROETHANE	75-00-3	2.00	ND	5.28	ND
TRICHLOROFLUOROMETHANE	75-69-4	2.00	ND	11.2	ND
1,1-DICHLOROETHENE	75-35-4	2.00	ND	7.93	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	2.00	ND	15.3	ND
METHYLENE CHLORIDE	75-09-2	2.00	ND	6.95	ND
1,1-DICHLOROETHANE	75-34-3	2.00	ND	8.10	ND
CIS-1,2-DICHLOROETHENE	159-59-2	2.00	ND	7.93	ND
CHLOROFORM	67-66-3	2.00	ND	9.77	ND
1,1,1-TRICHLOROETHANE	71-55-6	2.00	ND	10.9	ND
1,2-DICHLOROETHANE	107-06-2	2.00	ND	8.09	ND
BENZENE	71-43-2	2.00	ND	6.39	ND
CARBON TETRACHLORIDE	56-23-5	2.00	ND	12.6	ND
1,2-DICHLOROPROPANE	78-87-5	2.00	ND	9.24	ND
TRICHLOROETHENE	79-01-6	2.00	ND	10.7	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.00	ND	9.08	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.00	ND	9.08	ND
TOLUENE	108-88-3	2.00	ND	7.54	ND
1,1,2-TRICHLOROETHANE	79-00-5	2.00	ND	10.9	ND
1,2-DIBROMOETHANE	106-93-4	2.00	ND	15.4	ND
TETRACHLOROETHENE	127-18-4	2.00	3.14	13.6	21.3
CHLOROBENZENE	108-90-7	2.00	ND	9.21	ND
ETHYLBENZENE	100-41-4	2.00	ND	8.68	ND
XYLENE (M+P)	179601-23-1	4.00	ND	17.4	ND
STYRENE	100-42-5	2.00	ND	8.52	ND
XYLENE (O)	95-47-6	2.00	ND	8.68	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	2.00	ND	13.7	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	2.00	ND	9.83	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	2.00	ND	9.83	ND
1,3-DICHLOROBENZENE	541-73-1	2.00	ND	12.0	ND
1,4-DICHLOROBENZENE	106-46-7	2.00	ND	12.0	ND
1,2-DICHLOROBENZENE	95-50-1	2.00	ND	12.0	ND
1,2,4-TRICHLOROBENZENE	120-82-1	2.00	ND	14.8	ND
HEXACHLOROBUTADIENE	87-68-3	2.00	ND	21.3	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
RL - REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: NMC
DATE: 5/17/17

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID:	W-2-5
LAB NO:	154493
SAMPLE TYPE:	AIR
DATE SAMPLED:	05/08/2017
TIME SAMPLED:	13:57
BATCH ID:	042717A1
DATE ANALYZED:	05/11/2017

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	1.00	ND	4.95	ND
CHLOROMETHANE	74-87-3	1.00	ND	2.07	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	1.00	ND	6.99	ND
VINYL CHLORIDE	75-01-4	1.00	ND	2.56	ND
BROMOMETHANE	74-83-9	1.00	ND	3.88	ND
CHLOROETHANE	75-00-3	1.00	ND	2.64	ND
TRICHLOROFLUOROMETHANE	75-69-4	1.00	1.16	5.62	6.52
1,1-DICHLOROETHENE	75-35-4	1.00	ND	3.97	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	1.00	ND	7.66	ND
METHYLENE CHLORIDE	75-09-2	1.00	1.46	3.47	5.07
1,1-DICHLOROETHANE	75-34-3	1.00	ND	4.05	ND
CIS-1,2-DICHLOROETHENE	159-59-2	1.00	ND	3.97	ND
CHLOROFORM	67-66-3	1.00	ND	4.88	ND
1,1,1-TRICHLOROETHANE	71-55-6	1.00	ND	5.46	ND
1,2-DICHLOROETHANE	107-06-2	1.00	ND	4.05	ND
BENZENE	71-43-2	1.00	ND	3.19	ND
CARBON TETRACHLORIDE	56-23-5	1.00	ND	6.29	ND
1,2-DICHLOROPROPANE	78-87-5	1.00	ND	4.62	ND
TRICHLOROETHENE	79-01-6	1.00	ND	5.37	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	1.00	ND	4.54	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	1.00	ND	4.54	ND
TOLUENE	108-88-3	1.00	ND	3.77	ND
1,1,2-TRICHLOROETHANE	79-00-5	1.00	ND	5.46	ND
1,2-DIBROMOETHANE	106-93-4	1.00	ND	7.68	ND
TETRACHLOROETHENE	127-18-4	1.00	6.64	6.78	45.0
CHLOROBENZENE	108-90-7	1.00	ND	4.60	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	179601-23-1	2.00	ND	8.68	ND
STYRENE	100-42-5	1.00	ND	4.26	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	1.00	ND	6.87	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	1.00	ND	4.92	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	1.00	ND	4.92	ND
1,3-DICHLOROBENZENE	541-73-1	1.00	ND	6.01	ND
1,4-DICHLOROBENZENE	106-46-7	1.00	ND	6.01	ND
1,2-DICHLOROBENZENE	95-50-1	1.00	ND	6.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	1.00	ND	7.42	ND
HEXACHLOROBUTADIENE	87-68-3	1.00	ND	10.7	ND

NOTES:
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APPROVED BY: RMC
DATE: 5/17/17

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

SAMPLE ID:	W-4-5
LAB NO:	154494
SAMPLE TYPE:	AIR
DATE SAMPLED:	05/09/2017
TIME SAMPLED:	10:27
BATCH ID:	042717A1
DATE ANALYZED:	05/11/2017

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	2.00	ND	9.89	ND
CHLOROMETHANE	74-87-3	2.00	ND	4.13	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	2.00	ND	14.0	ND
VINYL CHLORIDE	75-01-4	2.00	ND	5.11	ND
BROMOMETHANE	74-83-9	2.00	ND	7.77	ND
CHLOROETHANE	75-00-3	2.00	ND	5.28	ND
TRICHLOROFLUOROMETHANE	75-69-4	2.00	ND	11.2	ND
1,1-DICHLOROETHENE	75-35-4	2.00	ND	7.93	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	2.00	ND	15.3	ND
METHYLENE CHLORIDE	75-09-2	2.00	ND	6.95	ND
1,1-DICHLOROETHANE	75-34-3	2.00	ND	8.10	ND
CIS-1,2-DICHLOROETHENE	159-59-2	2.00	ND	7.93	ND
CHLOROFORM	67-66-3	2.00	ND	9.77	ND
1,1,1-TRICHLOROETHANE	71-55-6	2.00	ND	10.9	ND
1,2-DICHLOROETHANE	107-06-2	2.00	ND	8.09	ND
BENZENE	71-43-2	2.00	ND	6.39	ND
CARBON TETRACHLORIDE	56-23-5	2.00	ND	12.6	ND
1,2-DICHLOROPROPANE	78-87-5	2.00	ND	9.24	ND
TRICHLOROETHENE	79-01-6	2.00	ND	10.7	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	2.00	ND	9.08	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	2.00	ND	9.08	ND
TOLUENE	108-88-3	2.00	ND	7.54	ND
1,1,2-TRICHLOROETHANE	79-00-5	2.00	ND	10.9	ND
1,2-DIBROMOETHANE	106-93-4	2.00	ND	15.4	ND
TETRACHLOROETHENE	127-18-4	2.00	26.9	13.6	182
CHLOROBENZENE	108-90-7	2.00	ND	9.21	ND
ETHYLBENZENE	100-41-4	2.00	ND	8.68	ND
XYLENE (M+P)	179601-23-1	4.00	ND	17.4	ND
STYRENE	100-42-5	2.00	ND	8.52	ND
XYLENE (O)	95-47-6	2.00	ND	8.68	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	2.00	ND	13.7	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	2.00	ND	9.83	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	2.00	ND	9.83	ND
1,3-DICHLOROBENZENE	541-73-1	2.00	ND	12.0	ND
1,4-DICHLOROBENZENE	106-46-7	2.00	ND	12.0	ND
1,2-DICHLOROBENZENE	95-50-1	2.00	ND	12.0	ND
1,2,4-TRICHLOROBENZENE	120-82-1	2.00	ND	14.8	ND
HEXACHLOROBUTADIENE	87-68-3	2.00	ND	21.3	ND

NOTES:
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RL - REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: MM
DATE: 5/17/17

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9946
CLIENT PROJECT: HOLLIDAY.WO.5THMAGNOLIA

METHOD: HELIUM **SAMPLE TYPE:** AIR
REFERENCE: ASTM D 1946 **UNITS:** %-V

SAMPLE ID	LAB NO	BATCH NO	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SG-1-5	154488	051017A2	05/08/2017	13:11	05/10/2017	0.100	ND
SG-2-5	154489	051017A2	05/08/2017	12:25	05/10/2017	0.100	ND
SG-3-5	154490	051017A2	05/09/2017	11:01	05/10/2017	0.100	ND
SG-4-5	154491	051017A2	05/09/2017	09:10	05/10/2017	0.100	ND
SG-5-5	154492	051017A2	05/09/2017	09:46	05/10/2017	0.100	ND
W-2-5	154493	051017A2	05/08/2017	13:57	05/10/2017	0.100	ND
W-4-5	154494	051017A2	05/09/2017	10:27	05/10/2017	0.100	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: RMK
DATE: 5/17/17

K PRIME, INC.
LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B042717A1
SAMPLE TYPE: AIR

BATCH ID: 042717A1
DATE ANALYZED: 04/28/2017

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	**CAS NO.**	**RL**	**SAMPLE CONC**	**RL**	**SAMPLE CONC**
DICHLORODIFLUOROMETHANE	75-71-8	0.500	ND	2.47	ND
CHLOROMETHANE	74-87-3	0.500	ND	1.03	ND
DICHLOROTETRAFLUOROETHANE	76-14-2	0.500	ND	3.50	ND
VINYL CHLORIDE	75-01-4	0.500	ND	1.28	ND
BROMOMETHANE	74-83-9	0.500	ND	1.94	ND
CHLOROETHANE	75-00-3	0.500	ND	1.32	ND
TRICHLOROFLUOROMETHANE	75-69-4	0.500	ND	2.81	ND
1,1-DICHLOROETHENE	75-35-4	0.500	ND	1.98	ND
TRICHLOROTRIFLUOROETHANE	76-13-1	0.500	ND	3.83	ND
METHYLENE CHLORIDE	75-09-2	0.500	ND	1.74	ND
1,1-DICHLOROETHANE	75-34-3	0.500	ND	2.02	ND
CIS-1,2-DICHLOROETHENE	159-59-2	0.500	ND	1.98	ND
CHLOROFORM	67-66-3	0.500	ND	2.44	ND
1,1,1-TRICHLOROETHANE	71-55-6	0.500	ND	2.73	ND
1,2-DICHLOROETHANE	107-06-2	0.500	ND	2.02	ND
BENZENE	71-43-2	0.500	ND	1.60	ND
CARBON TETRACHLORIDE	56-23-5	0.500	ND	3.15	ND
1,2-DICHLOROPROPANE	78-87-5	0.500	ND	2.31	ND
TRICHLOROETHENE	79-01-6	0.500	ND	2.69	ND
CIS-1,3-DICHLOROPROPENE	10061-01-5	0.500	ND	2.27	ND
TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.500	ND	2.27	ND
TOLUENE	108-88-3	0.500	ND	1.88	ND
1,1,2-TRICHLOROETHANE	79-00-5	0.500	ND	2.73	ND
1,2-DIBROMOETHANE	106-93-4	0.500	ND	3.84	ND
TETRACHLOROETHENE	127-18-4	0.500	ND	3.39	ND
CHLOROBENZENE	108-90-7	0.500	ND	2.30	ND
ETHYLBENZENE	100-41-4	0.500	ND	2.17	ND
XYLENE (M+P)	179601-23-1	1.00	ND	4.34	ND
STYRENE	100-42-5	0.500	ND	2.13	ND
XYLENE (O)	95-47-6	0.500	ND	2.17	ND
1,1,2,2-TETRACHLOROETHANE	79-34-5	0.500	ND	3.43	ND
1,3,5-TRIMETHYLBENZENE	108-67-8	0.500	ND	2.46	ND
1,2,4-TRIMETHYLBENZENE	95-63-6	0.500	ND	2.46	ND
1,3-DICHLOROBENZENE	541-73-1	0.500	ND	3.01	ND
1,4-DICHLOROBENZENE	106-46-7	0.500	ND	3.01	ND
1,2-DICHLOROBENZENE	95-50-1	0.500	ND	3.01	ND
1,2,4-TRICHLOROBENZENE	120-82-1	0.500	ND	3.71	ND
HEXACHLOROBUTADIENE	87-68-3	0.500	ND	5.33	ND

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING **LIMIT**
MRL - METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

K PRIME, INC.
LABORATORY QUALITY CONTROL REPORT

LAB CONTROL ID: L042717A1
LAB CONTROL DUPLICATE ID: D042717A1

SAMPLE TYPE: AIR
BATCH ID: 042717A1
DATE ANALYZED: 04/28/2017

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

COMPOUND NAME	SPIKE ADDED (PPB)	REPORTING LIMIT (PPB)	SAMPLE CONC (PPB)	SPIKE CONC (PPB)	SPIKE REC (%)	REC LIMITS (%)
1,1-DICHLOROETHENE	10.0	0.500	ND	11.4	114	60 - 140
BENZENE	10.0	0.500	ND	12.0	120	60 - 140
TRICHLOROETHENE	10.0	0.500	ND	9.41	94	60 - 140
TOLUENE	10.0	0.500	ND	11.6	116	60 - 140
TETRACHLOROETHENE	10.0	0.500	ND	8.40	84	60 - 140

COMPOUND NAME	SPIKE ADDED (PPB)	SPIKE DUP CONC (PPB)	SPIKE DUP REC (%)	RPD (%)	QC LIMITS RPD (%)	QC LIMITS REC (%)
1,1-DICHLOROETHENE	10.0	11.7	117	2.3	25	60 - 140
BENZENE	10.0	12.3	123	2.1	25	60 - 140
TRICHLOROETHENE	10.0	9.55	96	1.5	25	60 - 140
TOLUENE	10.0	11.8	118	1.4	25	60 - 140
TETRACHLOROETHENE	10.0	8.63	86	2.7	25	60 - 140

NOTES:
NA - NOT APPLICABLE OR AVAILABLE
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

K PRIME, INC.
LABORATORY BATCH QC REPORT

SAMPLE ID: B051017A2
SPIKE ID: L051017A2
DUPLICATE ID: D051017A2
BATCH NO: 051017A2
DATE ANALYZED: 05/10/2017

METHOD: HELIUM
REFERENCE: ASTM D 1946

SAMPLE TYPE: AIR
UNITS: %-V

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE RESULT
HELIUM	0.050	ND

ACCURACY (MATRIX SPIKE)

COMPOUND NAME	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
HELIUM	10.0	ND	9.53	95.3	70-130

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
HELIUM	0.050	9.53	9.86	3.40	±20

NOTES:
ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

WEST
Environmental Services & Technology
711 Grand Avenue, Suite 220
San Rafael, California 94901
415.460.6770 • Fax 415.460.6771
main@westenvironmental.com

SAMPLE ANALYSIS/COMPOSITE REQUEST FORM

CHAIN-OF-CUSTODY

Invoice to: WEST, Inc.		**Date:** 5/9/17	**Page** 1 of 1
Project: Holliday, WO - 5th Magnolia		**Location:** 5th & Magnolia, Oakland, CA	
Project Manager: ~~Peter Krasnoff~~ Morris Flom, WEST, Inc.		**Phone:** 415/460-6770	**Fax:** 415/460-6771
Laboratory: KPrime, Inc, Santa Rosa, CA		**Turnaround time (days):** 1 / 2 / 3 / 5 / 7 / 10 / Std. (X)	
Sampler Signature:		**Analyses Requested**	

Sample ID	Summa ID	Date	Time	Type	# Containers	Composite	VOCs (TO-15)	Heluim						KPI #	HOLD
SG-1-5	S-612	5/8/17	1311 / 1326	A	1	—	X	X						154488	
SG-2-5	S-360	5/8/17	1225 / 1239	A	1	—	X	X						154489	
SG-3-5	S-716	5/9/17	1101 / 1115	A	1	—	X	X						154490	
SG-4-5	S-230	5/9/17	0910 / 0917	A	1	—	X	X						154491	
SG-5-5	S-728	5/9/17	0946 / 1001	A	1	—	X	X						154492	
W-2-5	S-718	5/8/17	1357 / 1405	A	1	—	X	X						154493	
W-4-5	S-849	5/9/17	1027 / 1035	A	1	—	X	X						154494	

NOTES:

☐ EDF Log Code: WESS

Global ID: _____

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	5/9/17 1201		12:04 6/9/17
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	5/9/17 1430		5/9/17 14:30