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October 6, 2016

Alameda County Environmental Health
1131 Harbor Bay Pkwy
Alameda, CA 94502

Re: Work Plan Submittal to ACEH Website (Case# RO3226)

To Whom It May Concern:

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.

Sincerely,

DocuSigned by:
Ronnie Turner
6EBA61229E5C49F...

Date: 10/6/2016

Ronnie Turner
Turner Development Resource Group

DocuSigned by:
Bradford Flewellen
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Date: 10/6/2016

Brad Flewellen
CEF Realty Advisors

CORNERSTONE EARTH GROUP

Type of Services	**Conceptual Site Model and Data Gap Investigation Work Plan**
Location	**914 W. Grand Avenue** **Oakland, California**
Client	**Turner Resource Development Group**
Client Address	**4100 Redwood Road, Suite 170** **Oakland, California 94619**
Project Number	**914-1-3**
Date	**October 4, 2016**

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CORNERSTONE EARTH GROUP

Type of Services	**Conceptual Site Model and Data Gap Investigation Work Plan**
Location	**914 W. Grand Avenue** **Oakland, California**

SECTION 1: INTRODUCTION

On behalf of Turner Development Resource Group, Cornerstone Earth Group (Cornerstone) prepared this Conceptual Site Model (CSM) and Data Gap Investigation Work Plan at 914 W. Grand Avenue, in Oakland, California (Site) (Figures 1 and 2). This report was prepared for Turner Development Resource Group / CEF Realty Advisors, Inc. (TCD/CEF) in accordance with our September 15, 2016 agreement.

TCD/CEF is preparing the Site for residential development. Current plans consist of a 142-unit, six-level apartment building constructed with a concrete podium. The ground level will consist of at-grade parking, with a retail/commercial area at the southwest corner of the project. The ground floor of the planned development is shown on Figure 2. TCD/CEF entered into a Voluntary Cleanup Agreement (VCA) with Alameda County Department of Environmental Health (County Health) for oversight associated with investigation and soil management activities. The purpose of this CSM and work plan is to provide information that will be used for the preparation of a Soil Management Plan (SMP) in support of the planned residential development.

SECTION 2: SITE BACKGROUND AND ENVIRONMENTAL SITE HISTORY

2.1 SITE HISTORY

The northern portion of the Site was historically occupied by single-family dwellings from the early 1900s until the 1960s. The central portion of the Site has been occupied by various commercial businesses since at least 1925 including the Imperial Electric Sign Company, Gridd Stone Company; Bay Cities Venetian Blind Company; Lorentzen Company Linoleum and Carpet; Loralite Company; Bell Sheet Metal Company; The Oakland Terrazzo Company; and A&C Truck Repair. The southern portion of the Site has historically been used by automotive filling and repair businesses since approximately 1963 and includes Lean's Mohawk Service Gasoline Station, LJ Auto Service, 3A Tire Service, and Courtesy Auto Clinic. During the 2015 Phase I ESA, (Salem Engineering, 2015) the Site occupants were observed to be Enrique's Auto Repair and West Oakland Tire Repair (914 West Grand Avenue), and JAC Truck Repair (2236 Myrtle Street). The gasoline service station appears to have operated from approximately the mid-1960s to at least the mid-1970s. The remainder of the Site was vacant or used for storage purposes.

2.2 PREVIOUS ENVIRONMENTAL STUDIES

Results of prior investigations are summarized in Tables 1 through 5 in the Tables section of this report, and selected analytical results are shown on Figures 3 through 6.

2.2.1 On-Site Investigations

In 2005, Aqua Science performed a Phase II Investigation that consisted of the collection of soil samples from nine locations and ground water grab samples from two locations. Soil samples were collected to depths of up to approximately 11½ feet. Elevated concentrations of gasoline-range petroleum hydrocarbons (TPHg) (2,100 milligrams per kilogram [mg/kg]); diesel-range petroleum hydrocarbons (TPHd) (370 mg/kg); and the volatile organic compounds (VOCs) ethylbenzene (27 mg/kg), total xylenes (6.1 mg/kg), and naphthalene (20 mg/kg) were detected in the approximately 11½ foot soil sample collected from boring BH-B, located at the southwest corner of the Site near the former gasoline service station and the south (up-gradient) property boundary. Ground water grab samples collected detected TPHg (40,000 micrograms per liter [µg/L]), oil-range petroleum hydrocarbons (TPHo) (3,300 µg/L), TPHg (150,000 µg/L), dissolved lead (42 µg/L), ethylbenzene (4,500 µg/L), total xylenes (1,800 µg/L), and naphthalene (820 µg/L). A free product sheen reportedly was also observed in ground water while advancing this boring. The approximate locations of former sampling locations are shown on Figure 2.

In 2012, Salem performed a series of Site investigations that consist of a geophysical survey and soil, soil vapor, and ground water sample collection. In February 2012, a geophysical survey identified three subsurface anomalies and several areas of disturbed soil on the western side of 914 West Grand Avenue. However, many miscellaneous items (i.e., cars, car parts, etc.) were present on-Site that could have affected the results of the survey. A follow-up geophysical survey was performed in May 2012 after these items were cleared. The follow-up survey did not identify the three subsurface anomalies. A pothole investigation was conducted in the areas of disturbed fill. The fill materials encountered at these locations reportedly had a petroleum odor. Salem concluded that these areas formerly contained underground storage tanks (USTs) associated with the historic filling station. No USTs were encountered during the potholing.

In February 2012, Salem collected soil and soil vapor samples from the Site. The soil samples were collected along a railroad spur that was formerly located on-Site, and were analyzed for lead and arsenic. The detected lead and arsenic concentrations were below the residential screening criteria and published background levels. The concentration of benzene detected in soil vapor exceeded its current Tier 1 Environmental Screening Level (ESL, Water Board, 2016) of 48 micrograms per cubic meter (µg/m^3) in 1 of 14 samples analyzed (sample B-3; 520 µg/m^3). This elevated benzene concentration was detected in a soil vapor sample collected from a depth of approximately 10 feet and near the reported former UST location. Benzene was not detected in the sample collected from a depth of 5 feet at this location, or in the other soil vapor samples analyzed.

Tetrachloroethene (PCE, a common dry cleaning compound), was detected in soil vapor sample B-5 at a depth of 10 feet. PCE was not detected in the sample collected at B-5 from a depth of 5 feet or in the other soil vapor samples analyzed.

In May 2012, Salem installed three ground water wells (MW-1, MW-2, and MW-3). Ground water was observed at a depth of approximately 10 feet; no free product was observed. The ground water flow reportedly was to the northwest. No VOCs, TPHd, or TPHg were detected in

the ground water samples collected from well MW-2, which was installed north of the suspected former UST location. Chlorinated VOCs (cis-1,2-dichloroethene [cDCE] and trichloroethene [TCE]) were detected in the samples collected from MW-3, which was installed east of the former UST location and near the up-gradient property boundary. Benzene, ethylbenzene, naphthalene, xylenes, and TPHg were detected above their current ground water ESLs (Water Board, 2016) in the sample collected from MW-1, which was installed adjacent to the former UST locations. Salem concluded that UST impacts are present, but appeared to be limited to the area immediately adjacent to the former UST locations.

2.2.2 Off-Site Investigations

Readily available information obtained from the Geotracker website for adjacent properties was reviewed for the following purposes: 1) Evaluate whether petroleum hydrocarbons detected in ground water beneath the Site may be from off-Site sources based on off-Site sampling data and reported ground water flow directions, and; 2) Identify ground water quality results on neighboring properties that may be useful in determining whether off-Site an investigation is necessary once the data gap investigation described in Section 4 is completed. A summary of selected off-Site information is presented below, and selected ground water quality data is presented on Figure 7. The locations of nearby fuel leak incidents and former service stations also are shown on Figure 7. Historical service stations shown on Figure 7 include a service station located approximately 70 feet east of the Site (up-gradient to cross-gradient of the Site), across Market Street; no information was available for this service station on the state Geotracker website.

The Burke Property

The Burke Property is located at 949 West Grand Avenue and is adjacent and south of the Site, across West Grand Avenue. This property is listed in the leaking underground storage tank (LUST) database. According to documents obtained from the Water Board's Geotracker Database (The Consulting Group, 2012), a dry cleaning facility and automotive storage/repair business were formerly located at this property. Several soil and ground water investigations were conducted at this property between 2002 and 2005. Analyses of these samples identified TPHg, TPHd, fuel-related VOCs (benzene, toluene, ethylbenzene, and xylenes [BTEX]), and chlorinated VOCs (cDCE, TCE, and PCE). Ground water grab samples collected from the north portion of the Burk property, and approximately 90 feet south (up-gradient) of the Site, detected up to 8,800 µg/L TPHg, 18,000 µg/L TPHd, 9.8 µg/L benzene and 6.2 µg/L TCE (Golden Gate Tank Removal, 2006). Based on ground water flow direction measured on-Site and on the nearby Arco station (discussed below), the Burke property appears to be located up-gradient of the Site with respect to the shallow ground water flow direction.

According to documents filed with the Alameda County Department of Environmental Health (ADCEH), two monitoring wells (MW-1 and MW-3) are located the Burke Property, and one monitoring well (MW-2) is located on Myrtle Street approximately 150 feet south of the Site. Quarterly monitoring reportedly was conducted in 2005, and one sampling event reportedly was conducted in June 2012. VOCs were not detected in wells MW-1 and MW-3. However, free product reportedly was observed in monitoring well MW-2. The free product thickness was not provided.

Based on the information reviewed, the reported impacts from this property could have contributed to the TPH and VOC impacts detected in soil, soil vapor, and ground water beneath the Site.

MAC Auto Repair Facility

The MAC Auto Repair facility was located at 905 West Grand Avenue (adjacent and south of the Site across West Grand Avenue). According to documents reviewed (Delta Environmental Labs, 1999), soil and ground water impacts were discovered during the removal of three USTs in 1999. The UST pit was over-excavated to further remove petroleum-impacted soil. After removal, the DEH indicated that *"very low concentrations of contaminants remain in the immediate former underground tank pit*" and *"the contaminant plume appears contained within the site*". The DEH granted closure in a letter dated March 6, 2000. Based on the information reviewed, the impacts from this leaking UST are not expected to significantly impact the Site.

ARCO Station #2169

ARCO Station #2169 is located at 889 West Grand Avenue (east of Market Street and south of Grand Avenue). According to documents reviewed (Broadbent, 2014), ground water contamination does not appear to have migrated significantly off of the Arco property. During quarterly and semi-annual ground water monitoring performed between 2000 and 2014, the ground water flow direction reportedly was estimated to range between the northeast to northwest.

2240 Filbert Street

City Ventures is developing the property adjacent to the north of the site (various parcels) and the property across Myrtle Street (2240 Filbert Street) to the west of the site. City Ventures submitted to ACDEH a Soil Management Plan (SMP) for excavation of near-surface soil with lead contamination on the adjacent property. The SMP summarized ground water sampling performed on the City Ventures property in 1994 and 2005. In 2005, five ground water grab samples were collected from the property adjacent to the north. Laboratory analyses of these samples detected elevated concentrations of TPHg (up to 110,000 ug/L) in two samples collected near Market Street, with the highest concentration detected in the sample nearest 2281 Market Street (see Figure 7). Laboratory analyses of the other three samples did not detected TPHg or VOCs. Based on the ground water flow direction, the TPHg detected on the adjacent property appears likely to be associated with a former service station to the east of the Site.

The SMP also summarized ground water analytical results for samples collected in 1994 from the southeast corner of the City Ventures property and directly across Myrtle Street from 914 West Grand Avenue (see Figure 7). Laboratory analyses of ground water samples collected from one monitoring well and three exploratory borings located nearest to the site did not detect TPHg, benzene, toluene, ethylbenzene or xylenes, with the exception of 100 ug/L TPHg detected in one of the samples. These ground water sample locations are located approximately 60 to 70 feet down-gradient of the former on-Site service station. Because the former on-Site service station pre-dates the 1994 sampling event, a significant on-Site release likely would have been detected in the 1994 sample results.

2.3 AUGUST 2016 GROUND WATER SAMPLING

On August 26,2016, the three on-Site ground water monitoring wells were sampled to evaluate current ground water quality and flow direction. Based on the measured depth to ground water and surveyed wellhead elevations, the ground water flow was measured to the northwest (see Figure 2).

The ground water samples were collected using low flow methodology in accordance with the August 15, 2016 Scope of Work submitted to County Health. Sampling methodology and field sampling logs are presented in Appendix A.

The ground water samples were analyzed for the following:

- Volatile organic compounds (VOCs) and gasoline-range petroleum hydrocarbons (TPHg) (EPA Test Method 8260).
- Total petroleum hydrocarbons in the diesel range (TPHd) and motor oil (TPHmo) (EPA Test Method 8015) with and without silica gel cleanup.

Analytical results are summarized in Tables 3 and 4 in the Tables section of this report and are discussed below. The laboratory analytical report and chain of custody documentation is presented in Appendix B.

SECTION 3: CONCEPTUAL SITE MODEL

A tabular Conceptual Site Model (CSM) is presented in Tables 6 and 7, and a graphical representation is presented in Figure 8. The CSM and components used to develop the CSM are discussed below.

3.1 HISTORICAL SITE USE

Based on the information reviewed during this study, the Site appears to have been developed since at least the late 1800s. During the late 1800s to early 1900s, the Site was primarily used for residential purposes and consisted of single-family homes. By at least 1950, much of the Site was used for commercial/industrial purposes, consisting of a sheet metal manufacturing business, carpet warehouse, a venetian blind facility, and a linoleum warehouse. Residential structures were still present at the northwestern corner of the Site. By the 1960s, a gasoline station was present at 914 West Grand Avenue and an automotive repair business was present at 2226 Myrtle Street. The residential structures were no longer present by approximately 1970. Since approximately 1970, the Site has been used for commercial and industrial purposes.

3.2 CURRENT SITE AND VICINITY CHARACTERISTICS

Currently, the Site was observed to consist of a truck repair business (2226 Myrtle Drive), an automotive repair business (914 West Grand Avenue [western side]), a tire shop (914 West Grand Avenue [eastern side]), and an inaccessible structure (2271 Market Street). The structures were surrounded by asphalt-paved parking areas, and each business was separated and secured with a chain-linked fence.

3.3 GEOLOGY AND HYDROGEOLOGY

Based on monitoring well boring logs completed by Salem (2012), the subsurface material consists of sandy silt to clay material. Shallow ground water has been measured at depths of approximately 10 feet beneath the Site, and generally flows northeast to northwest. Generalized subsurface materials and ground water depth are shown on the cross sections on Figures 5 and 6.

3.4 PROPERTY-WIDE ENVIRONMENTAL CONDITIONS

TPH and VOC-impacted soil has been detected along the southern portion of the Site. Data from one soil sample collected from a depth of approximately 11.5 feet near the southern property boundary detected TPHd, TPHo, ethyl benzene, and total xylenes above their respective screening criteria.

The petroleum hydrocarbons TPHd, TPHo and TPHg, and the VOCs benzene, ethyl benzene, total xylenes, naphthalene, cDCE, tDCE, 1,1-dichloroethene (1,1-DCE), PCE, TCE, and vinyl chloride were detected above their respective ESLs in ground water samples in collected near the southern property boundary of the Site.

In addition, benzene was detected above its residential soil vapor ESL in one soil vapor sample collected at a depth of approximately 10 feet near the southwestern corner of the Site.

3.5 PRIMARY SOURCE

The primary source of the elevated VOCs and TPH detected in soil and ground water samples at the south property boundary appear to be from off-Site, up-gradient sources, and/or possibly from the former on-Site USTs.

3.6 CONTAMINANTS OF POTENTIAL CONCERN

Based on the soil, ground water, and soil vapor samples collected on Site, the contaminants of potential concern (COPC) are TPHd, TPHo, TPHg, benzene, ethyl benzene, xylenes, PCE, TCE, naphthalene, cDCE, tDCE, and 1,1,-DCE.

The remaining VOCs were detected at concentrations below their respective residential ESLs. Therefore, these detected VOCs are not considered COPCs.

3.7 EXTENT OF ENVIRONMENTAL IMPACTS

3.7.1 Soil

Elevated concentrations of TPH and VOCs were detected in one sample collected at a depth of 11.5 feet from located BH-B (Figure 2). Soil samples collected from the upper 2 feet of soil from 2220 Myrtle Street, 2226 Myrtle Street, and 2281 Market Street did not detect TPH, arsenic, lead, or VOCs above their respective screening levels of published natural background concentrations for metals.

Based on these detections, the extent of impacts encountered appear to be localized along the southern portion of the property. However, additional on-Site investigation is proposed to help determine the extent of on-Site impacts.

3.7.2 Ground Water

Elevated concentrations of TPH and VOCs were detected in ground water samples collected from locations within 914 West Grand Avenue along the southern portion of the property (MW-1, MW-3, BH-A, and BH-B) (Figure 2). Samples collected from 2220 Myrtle Street did not detect TPH or VOCs above their respective screening levels.

Based on these detections, and the ground water samples collected from the adjacent properties to the north and west, the extent of impacted ground water appear to be localized along the southern portion of the property.

3.7.3 Soil Vapor

VOC compounds in soil or ground water can volatilize and produce soil vapor that can migrate into structures. Benzene was detected above its residential soil vapor ESL in one sample collected at a depth of approximately ten feet from temporary soil vapor probe B-3, which was located near the reported location of one of the former on-Site USTs. No other VOCs reportedly were detected above their respective soil vapor ESLs in the remaining soil vapor probes sampled at the Site. Based on these data, is likely due to residual impacts from the reported USTs and appears to be restricted to the area adjacent to the former UST location.

3.8 TRANSPORT MECHANISMS

3.8.1 Direct Contact with Soil

Direct contact with soil will be addressed in the Soil Management Plan to be prepared by Cornerstone to establish controls and best practices for management, handling, and disposal of contaminated soil during site development. The entire property will be covered with a concrete podium. Therefore, direct contact should be considered an incomplete pathway with the completion of the SMP.

3.8.2 Direct Contact with Ground Water

Direct contact with ground water is not considered a pathway for potential contamination due to the depth of ground water beneath the site and the shallow foundation system planned for the building. In the event shallow ground water is encountered during construction, the SMP will address protocols for management, handling and disposal of ground water, if needed.

3.8.3 Volatilization

Volatilization is considered an incomplete pathway for the future development, based on the design elements of the planned structure. Further evaluation of on-Site soil vapor quality is discussed below in Section 4.

3.8.4 Leaching into Ground Water

Leaching into ground water is considered an incomplete pathway due to the low COPC and VOC concentrations detected in soil samples collected from the Site; the elevated concentrations of TPH and VOCs detected in a soil sample collected from BH-B from the top of the shallow ground water appear to be from an off-Site source. However, there could be pockets of soil in the former on-Site UST areas that exceed leaching-based ESLs. Implementation of the data gap work plan discussed below is intended to identify whether soil is present on-Site that would require removal during construction.

3.9 POTENTIAL RECEPTORS

3.9.1 On and Off-Site Receptors

The planned residential usage for the site indicates that future occupants and on-Site construction workers are potential receptors. The design elements of the planned development are expected to eliminate exposure routes to future occupants, and the SMP will provide protocols that limit the exposure of construction workers to the potentially impacted soil.

3.9.2 Ecological

The nearest surface water body is located approximately 5,400 feet east of the Site (Lake Merritt). Based on this distance, this surface water body is not likely to be impacted by contaminated ground water.

3.10 EXPOSURE PATHWAY EVALUATION

Volatilization of VOCs to gas is considered a potential pathway for exposure, but will be mitigated by design elements of the planned development (e.g., podium structure with no ground-level residences, sub-slab vapor membrane). Additional soil vapor quality evaluation is presented below, and mitigation measures will be presented in the SMP based on the results of our investigation.

All other pathways are considered incomplete due to the proposed SMP and/or the detected COPCs and their concentrations.

SECTION 4: DATA GAP ANALYSIS

Based on the CSM and the data collected to date, additional soil, ground water, and soil vapor samples will be collected to address potential data gaps for subsurface conditions on-Site. In general, the data gaps identified include the following: 1) additional near-surface soil quality for pesticides, metals, polyaromatic hydrocarbons (PAHs), TPHd, TPHo, VOCs, and TPHg throughout the Site to help determine appropriate soil management during construction and quality of soil remaining after excavation for construction of the ground level floor and foundations; 2) soil and soil vapor quality evaluation in the planned elevator pit; 3) quality of backfill from the reported former UST areas; and 4) additional soil, soil vapor, and ground water quality in the former service station area.

There are subsurface hydraulic lifts located within the existing shop building. One ground water grab sample will be collected from a boring located down-gradient of the shop building and will be analyzed for TPH as hydraulic oil. The SMP discussed in Section 5 will include protocol for sampling soil during the removal of the hydraulic lifts.

4.1 PRE-FIELD ACTIVITIES

<u>Utility Clearance and Permitting</u>

Prior to performing field work, we will mark our boring locations at least two working days prior to beginning our explorations as required by law, and notify the regional utility notification center – Underground Service Alert (USA), so that public and private utilities can be identified and marked at the ground surface.

A permit from the Alameda County Department of Public Works will be obtained to complete the borings.

4.2 SOIL SAMPLE COLLECTION

To preliminary profile soil quality, our field geologist or engineer will continuously log in general accordance with the Unified Soil Classification System (ASTM D-2487), and sample up to sixteen exploratory borings advanced to depths of approximately 5 to 10 feet.

The borings will be advanced using limited access direct push technology equipped with a Dual Wall Sampling System. The Dual Wall Sampling System will help prevent cross contamination between sampling intervals. The Dual Wall Sampler is comprised of two main components: an exterior steel casing and an inner sample barrel. The outer casing has a 2-inch outer diameter (OD) and a 1.5-inch inner diameter (ID). The sample barrel is 5 feet in length with a 1.375-inch OD and a 1-inch ID. The Dual Wall sample barrel is loaded with a 5-foot acetate liner and installed inside the outer casing. The outer drive casing and inner sample barrel are then hydraulically pushed to a depth of approximately 5 feet. As these tools are advanced, the inner sampling barrel collects the soil core sample. This sampler is then retrieved while the outer casing remains in place, protecting the integrity of the hole. A new sampler is lowered into place and advanced another 5 feet to collect the next soil sample. This process continues until the desired depth has been reached. The boring advanced for the collection of a ground water sample will be advanced approximately 5 feet into the first water yielding zone. The boring will be tremie grouted upon completion.

4.3 OVM MONITORING

Soil samples will be monitored with a MiniRAE 3000 Organic Vapor Meter (OVM) to record VOC vapors. The soil will be screened by drilling a small diameter hole in the acetate liner extending approximately ½ inch into the soil core. The OVM probe tip will then inserted into the created void space to record an OVM reading. OVM readings will be listed on the boring logs.

4.4 SOIL SAMPLE COLLECTION AND ANALYSES

Three exploratory borings will be advanced at 2226 and 2236 Myrtle Street, and 2281 Market Street to depths of approximately 5 feet for the collection of near-surface soil samples. One boring will be advanced to a depth of approximately 10 feet at the planned elevator pit located at 2220 Myrtle Street, and two borings will be advanced to a depth of approximately 10 feet near the south and east property boundaries one 2220 Myrtle Street and 2277 Market Street. Ten exploratory borings will be advanced at 914 West Grand Ave to depths of approximately 10 feet.

The sample depths and frequencies for each location are provided in Table 1. Note that the sample intervals may change and/or additional samples may be retained based on OVM measurements and/or visible signs of apparent contamination. The proposed boring locations are provided on the attached figure.

If UST backfill material is encountered in the former gas station area, we will collect up to 4 samples from the material to varying depths based upon field observations, OVM measurements, and/or visible signs of apparent contamination.

4.5 LABORATORY ANALYSIS

The soil samples will be collected in acetate liners, capped, labeled with a unique identification number, and placed in an ice-chilled cooler for transport to the project laboratory under chain of custody control. Samples analyzed for VOCs will be collected in three 5-gram Core-N-One capsules. The samples collected will be analyzed for the following analyzes including 17 California Assessment Manual (CAM) metals (EPA Test Method 6000/7000), petroleum hydrocarbons in the diesel (TPHd) and oil (TPHo) ranges (EPA Test Method 8015), polynuclear aromatic hydrocarbons (PAHs) (EPA Test Method 8270SIM), organochlorine pesticides (OCPs) (EPA Test Method 8081), polychlorinated biphenyls (PCBs) (EPA Test Method 8082), and VOCs and gasoline range petroleum hydrocarbons (TPHg) (EPA Test Method 8260B).

The number of samples analyzed will be performed per the frequency specified in Table 1.
Table 1: Soil Sample Analyses

Sample Frequency – 2220 to 2236 Myrtle Street and 2277 to 2281 Market Street

Depth	CAM-17	TPHd/o	OCPs	PAHs
Upper 1 foot	6	6	6	6
2-3 feet	6	6	H	H
4-5 feet	H	H	H	H
6-7 feet	H*	H*	H*	H*

* Sample collected from boring at future elevator pit.

Sample Frequency – 914 West Grand

Depth	CAM-17	TPHd/o	OCPs	VOCs/TPHg	PAHs
Upper 1 foot	3**	3**	3**	---	3**
2-3 feet	H	10	H	10	H
4-5 feet	H	10	H	10	H
9-10 feet	H	10	H	10	H

** Samples from three randomly selected borings

Sample Frequency – UST Backfill (if observed)

Depth	CAM-17	TPHd/o	PAHs	OCPs	PCBs	VOCs/TPHg
Various	4	4	4	4	4	4

H- Denotes sample will be held at the laboratory pending initial results

4.6 GROUND WATER SAMPLE COLLECTION

Ground water samples will be collected from six of the exploratory borings. Based on recent ground water data, we anticipate ground water to occur at a depth of approximately 10 feet beneath the site. The exploratory borings for ground water grab sampling will be advanced to depths of approximately 15 feet. At each location, a section a slotted PVC pipe will be lowered into the exploratory boring to facilitate ground water sample collection. Ground water samples will be collected using a peristaltic pump and clean tubing. The five ground water grab samples will be analyzed for TPHd, TPHo, TPHg, and VOCs. Analyses for TPHd and TPHo will be

performed with and without silica gel cleanup. The borings will be filled with grout after sample collection.

4.7 SOIL VAPOR SAMPLE COLLECTION

Four temporary soil vapor probes will be installed to depths of approximately 7 to 10 feet beneath the Site for the collection of soil vapor samples. The soil vapor sampling locations will be co-located with the exploratory borings advanced for ground water or soil sample collection. The probes will be installed using stainless steel tubing and in accordance with DTSC guidelines. Each probe will be allowed to equilibrate for at least 2 hours prior to sample collection per DTSC guidance. Soil vapor samples will be collected and analyzed for VOCs and TPHg (EPA Test Method TO-15) and methane (ASTM D-1946). If plastic components are used during the construction or sampling of the soil vapor probes, the soil vapor samples will additionally be analyzed for naphthalene using EPA Test Method TO-17. Otherwise, the naphthalene analysis will be included in EPA Test Method TO-15. One sample will also be collected from the sampling shroud for isopropyl alcohol to evaluate if the effect of the shroud atmosphere on the samples collected, if any. The soil vapor probes will be removed and borings filled with grout after sample collection.

We will provide a report of these results in the Site Management Plan prepared under Section 7.

4.8 SAMPLE STORAGE AND SAMPLE TRANSPORT

The soil, ground water grab, and soil vapor samples will be collected in laboratory-provided containers (preserved where appropriate). The soil samples will be collected in acetate liner and capped. The soil and ground water grab samples will be placed in an ice chilled cooler for transport to the laboratory. Chains of custody will be maintained for all samples.

4.9 QUALITY ASSURANCE / QUALITY CONTROL

Quality assurance / Quality control (QA/QC) will consist field measures (trip blank [ground water sample] and soil vapor shroud sample [isopropyl alcohol] and measures performed by the laboratory, (i.e., laboratory method blanks, matrix spike/matrix spike duplicate, and laboratory control samples). All QA/QC measures will be evaluated to determine the precision and accuracy of the laboratory analyses.

SECTION 5: SITE MANAGEMENT PLAN

We will prepare a Site Management Plan (SMP) that will be submitted to the ACDEH for review and approval. The Plan will include a summary of the site history, previous analytical results, and the results obtained from the Section 4. The SMP will also include the following components: a description of site characterization activities and the nature and extent of contamination; goals to be achieved by the removal action; a description of the techniques and methods to be used in the removal action, including any excavating, storing, handling, transporting, treating, and disposing of material on or off-site; sampling and analysis plan to confirm effectiveness of the selected removal action; and a description of methods employed during the removal action to help protect the health and safety of workers and the public.

SECTION 6: SCHEDULE

The subsurface exploration/sampling currently is scheduled for the week of October 24. The field activities will take up to three days to complete. A SMP will be submitted to County Health for review following completion of the field activities.

SECTION 7: LIMITATIONS

Cornerstone prepared this Data Gap Investigation Work Plan and Conceptual Site Model to support Turner Development Resource Group. Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

SECTION 8: REFERENCES.

Aqua Science Engineers, Inc., 2005 *Report of Soil and Ground Water Assessment, 2271-2281 Market Street, 2220-2236 Myrtle Street, and 914 West Grand Avenue, Oakland, California.*

Broadbent & Associates, Inc., 2014. *First Quarter 2014 Monitoring Report, Atlantic Richfield Company Station #2169, 889 West Grand Avenue, Oakland, Alameda County, California.*

Cornerstone Earth Group, 2016. *Phase I Environmental Site Assessment, 914 West Grand Avenue, 2220, 2226, and 2236 Myrtle Street, and 2277 and 2281 Market Street*

Gold Gate Tank Removal, Inc., 2006. *Report on the Search for Underground Storage Tanks and Environmental Site Condition, 925-949 West Grand Avenue, Oakland, California.*

McCulley, Frick and Gilman, Inc., 1994. Report on Investigation of Impacts from Off-Site Sources, Former Safeway Ice Cream Plant, 2240 Filbert Street, Oakland, California.

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CORNERSTONE EARTH GROUP

TABLES

CORNERSTONE EARTH GROUP

Table 1. Analytical Results of Soil Samples - TPH, Arsenic, Lead, PCBs

(Concentrations in mg/kg)

Sample Location	Sample ID	Date	Depth (feet)	TPHd	TPHo	TPHg	Total Arsenic	Total Lead	PCBS
APN: 5-431-18-3 914 West Grand Ave	BH-A	3/23/2005	11.5	<1.0	<1.0	<1.0	---	7.1	<0.0025
	BH-B	3/23/2005	11.5	**370**	<50	**2,100**	---	20	<0.0025
	B-1	2/15/2012	1.0	**---**	---	**---**	2.8	11	---
	B-2	2/15/2012	1.0	**---**	---	**---**	<3.5	9.9	---
	B-3	2/15/2012	1.0	**---**	---	**---**	<3.5	8.5	---
	B-4	2/16/2012	1.0	**---**	---	**---**	<3.5	5.4	---
	B-5	2/16/2012	1.0	**---**	---	**---**	<3.5	8	---
APN: 5-431-21-4 2226 Myrtle Street	BH-C	3/23/2005	2.0	<1.0	<1.0	<5.0	---	28	<0.0025
APN: 5-431-19-2 2220 Myrtle Street	BH-D	3/23/2005	2.0	<1.0	<1.0	<5.0	---	8.1	<0.0025
	BH-E	3/23/2005	2.0	<1.0	<1.0	<5.0	---	37	<0.0025
	BH-F	3/23/2005	2.0	<1.0	<1.0	<5.0	---	8.1	<0.0025
	BH-G	3/23/2005	2.0	<1.0	<1.0	<5.0	---	28	<0.0025
	BH-H	3/23/2005	2.0	<1.0	<1.0	<5.0	---	7.8	<0.0025
APN: 5-431-15-4 2281 Market Street	BH-I	3/23/2005	2.0	<1.0	<1.0	<5.0	---	24	<0.0025
Residential ESL[1]				230	5,100	100	0.067/11 [2]	80	0.25

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region, Tier 1 – February 2016, Revision 3.
2 Direct exposure residential ESL/puslished background level (Duverge, 2011)
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
Bold Concentration exceeds selected environmental screening criteria
Blue Indicates sample expected to be removed during construction.

CORNERSTONE EARTH GROUP

Table 2. Analytical Results of Soil Samples - VOCs
(Concentrations in mg/kg)

Sample Location	Sample ID	Date	Depth (feet)	n-Butyl Benzene	Isopropyl Benzene	Ethyl Beneze	Total Xylenes	Methyl Tert-Butyl Ether (MTBE)	1,2,4-Trimethyl Benezne	1,3,5-Trimethyl Benzene	sec-Butyl Benzene	Napthalene	n-Propyl Benzene	Tetrachloroethene	Other VOCs
APN: 5-431-18-3 914 West Grand Ave	BH-A	3/23/2005	11.5	<0.005	<0.005	<0.005	<0.0054	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-B	3/23/2005	11.5	14	5.7	**27**	**6.1**	<1.0	2.7	<.0	3.8	20	24	<1.0	ND
APN: 5-431-21-4 2226 Myrtle Street	BH-C	3/23/2005	2.0	<0.005	<0.005	<0.005	0.018	<0.005	0.0079	0.0052	<0.005	<0.005	<0.005	<0.005	ND
APN: 5-431-19-2 2220 Myrtle Street	BH-D	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-E	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-F	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-G	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
	BH-H	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
APN: 5-431-15-4 2281 Market Street	BH-I	3/23/2005	2.0	<0.005	<0.005	<0.005	<0.005	0.0018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND
Residential ESL[1]				3,900 [2]	1,900 [2]	14	2.3	0.023	58 [2]	780 [2]	7,800 [2]	0.033	3,800 [2]	0.42	Various

1 Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region – February 2016
2 Regional Screening Level (RSL), USEPA Region 9 - May, 2016
< Not detected at or above laboratory reporting limit
ND None detected
BOLD Concentration exceeds selected environmental screening criteria
Blue Indicates sample expected to be removed during construction.

CORNERSTONE EARTH GROUP

Table 3. Analytical Results of Ground Water Samples - TPH, Lead, PCBs

(Concentrations in µg/L)

Sample Location	Sample ID	Date	TPHd*	TPHo*	TPHg	Dissolved Lead	PCBS
APN: 5-431-18-3 914 West Grand Ave	BH-A	3/23/2005	<50	**550**	**3,300**	<0.5	<2.5
	BH-B	3/23/2005	**150,000**	<5,000	**40,000**	**42**	<2.5
	MW-1	6/4/2012	<0.05	---	**3,300**	**---**	**---**
	MW-1	8/24/2016	<50	<100	<50	**---**	**---**
	MW-3	6/4/2012	<0.05	---	<50	**---**	**---**
	MW-3 (Duplicate)	6/4/2012	<0.05	---	<50	**---**	**---**
	MW-3	8/24/2016	<50	<100	**150**	**---**	**---**
APN: 5-431-19-2 2220 Myrtle Street	MW-2	6/4/2012	<0.05	---	<50	**---**	---
	MW-2	8/24/2016	<52	<100	<50	**---**	---
	MW-2 (Duplicate)	8/24/2016	<51	<100	<50	**---**	---
Residential ESL[1]			100	100	100	2.5	0.0019

1 Environmental Screening Levles (ESLs). Regional Water Quality Control Board - February 2016. Table GW-2, Final Freshwater Goal

< Not detected at or above laboratory reporting limit

* Samples collected 8/24/2016 were analyzed with and without silica gel cleanup.

NE Not Established

--- Not Analyzed

BOLD Concentration exceeds selected environmental screening criteria

Red Indicates detection limit that exceeds Tier 1 ESL

CORNERSTONE EARTH GROUP

Table 4. Analytical Results of Ground Water Samples - VOCs
(Concentrations in µg/L)

Sample Location	Sample ID	Date	Benzene	n-Butyl Benzene	Isopropyl Benzene	p-Isopropyl Toulene	Ethyl Beneze	Total Xylenes	MTBE	1,2,4-Trimethyl Benezne	1,3,5-Trimethyl Benzene	sec-Butyl Benzene	Napthalene	n-Propyl Benzene	1,1-Dichloroethane	cis-1,2,-Dichlorothene	trans-1,2-Dichloroethene	1,1-Dichloroethene	PCE (Tetracholroethane)	TCE (Trichloroethane)	Vinyl Chloride	Other VOCs
APN: 5-431-18-3 914 West Grand Ave	BH-A	3/23/2005	<0.5	<0.5	<0.5	<0.5	1.0	3.4	<0.5	<0.5	<0.5	<0.5	**1.1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	BH-B	3/23/2005	<100	180	190	<100	**4,500**	**1,800**	<100	1,800	300	<100	**820**	850	<100	<100	<100	<100	<100	<100	<100	ND
	MW-1	6/4/2012	**1.2**	3.7	10	3.0	**79**	**188**	<1.0	110	59	---	**37**	29	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	MW-1	8/24/2016	<0.50	<1.0	<0.50	<1.0	<0.50	<1.0	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ND
	MW-3	6/4/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.6	<1.0	<1.0	---	<1.0	<1.0	3.8	**110**	<1.0	**14**	**11**	<1.0	<1.0	ND
	MW-3 (Duplicate)	6/4/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.4	<1.0	<1.0	---	<1.0	<1.0	<1.0	**120**	<1.0	**16**	**11**	<1.0	<1.0	ND
	MW-3	8/24/2016	<0.50	<1.0	<0.50	<1.0	<0.50	<1.0	1.3	<0.50	<0.50	<1.0	<1.0	<1.0	<0.50	**190**	**19**	0.58	<0.50	**53**	**1.8**	ND
APN: 5-431-19-2 2220 Myrtle Street	MW-2	6/4/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	MW-2	8/24/2016	<0.50	<1.0	<0.50	<1.0	<0.50	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	ND	<0.50	<0.50	<0.50	<0.50	ND
	MW-2 (Duplicate)	8/24/2016	<0.50	<1.0	<0.50	<1.0	<0.50	<1.0	<0.50	<1.0	<0.50	<1.0	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ND
Residential ESL[1]			1.0	NE	NE	NE	13	20	5	NE	NE	NE	0.12	NE	5.0	6.0	10	3.2	3.0	5.0	0.061	Various

1 Environmental Screening Levles (ESLs). Regional Water Quality Control Board - February 2016. GW Tier 1 ESL
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria or is outside of the published background range.
ND Not detected
Red Indicates detection limit that exceeds Tier 1 ESL

CORNERSTONE EARTH GROUP

Table 5. Analytical Results of Soil Vapor Samples
(Concentrations in µg/m³)

Sample Location	Sample ID	Date	Depth (feet)	Benzene	Ethylbenzene	Isopropylbenzene	n-Propylbenzene	n-Butylbenzene	Butylbenzene	Teatrachloroethene	Toluene	Xylenes	Other VOCs
APN: 5-431-18-3 914 West Grand Ave	B-1	2/15/2012	5	<36	<50	<50	<50	<50	<50	<50	51	<150	ND
			10	<36	<50	<50	<50	<50	<50	<50	<50	<150	ND
	B-2	2/15/2012	5	<36	<50	<50	<50	<50	<50	<50	<50	<150	ND
			10	<36	<50	<50	<50	<50	<50	<50	<50	<150	ND
	B-3 @ 1 Volume	2/15/2012	5	<36	<50	<50	<50	<50	<50	<50	98	<150	ND
	B-3 @ 3 Volumes			<36	<50	<50	<50	<50	<50	<50	190	170	ND
	B-3 @ 7 Volumes			<36	<50	<50	<50	<50	<50	<50	160	293	ND
	B-3		10	**520**	110	2,500	3,800	670	2,200	<50	220	<150	ND
	B-4	2/15/2012	5	<72	<100	<100	<100	<100	<100	<100	<100	<300	ND
			5 (Duplicate)	<72	<100	<100	<100	<100	<100	<100	<100	<300	ND
			10	<72	<100	<100	<100	<100	<100	<100	<100	<300	ND
APN: 5-431-19-2 2220 Myrtle Street	B-5	2/15/2012	5	<40	<55	<55	<55	<55	<55	<55	<55	<165	ND
			10	<36	<50	<50	<50	<50	<50	84	<50	<150	ND
	B-6	2/15/2012	5	<36	<50	<50	<50	<50	<50	<50	63	<150	ND
			10	<72	<100	<100	<100	<100	<100	<100	110	<300	ND
	B-7	2/15/2012	5	<36	<50	<50	<50	<50	<50	<50	150	120	ND
			10	<72	<100	<100	<100	<100	<100	<100	150	<300	ND
Residential ESL[1]				48	560	NE	NE	NE	NE	240	160,000	52,000	Various

1 Environmental Screening Levles (ESLs). Regional Water Quality Control Board - February 2016.
< Not detected at or above laboratory reporting limit
NE Not Established
--- Not Analyzed
BOLD Concentration exceeds selected environmental screening criteria or is outside of the published background range.

CORNERSTONE EARTH GROUP

Table 6. Site Conceptual Model

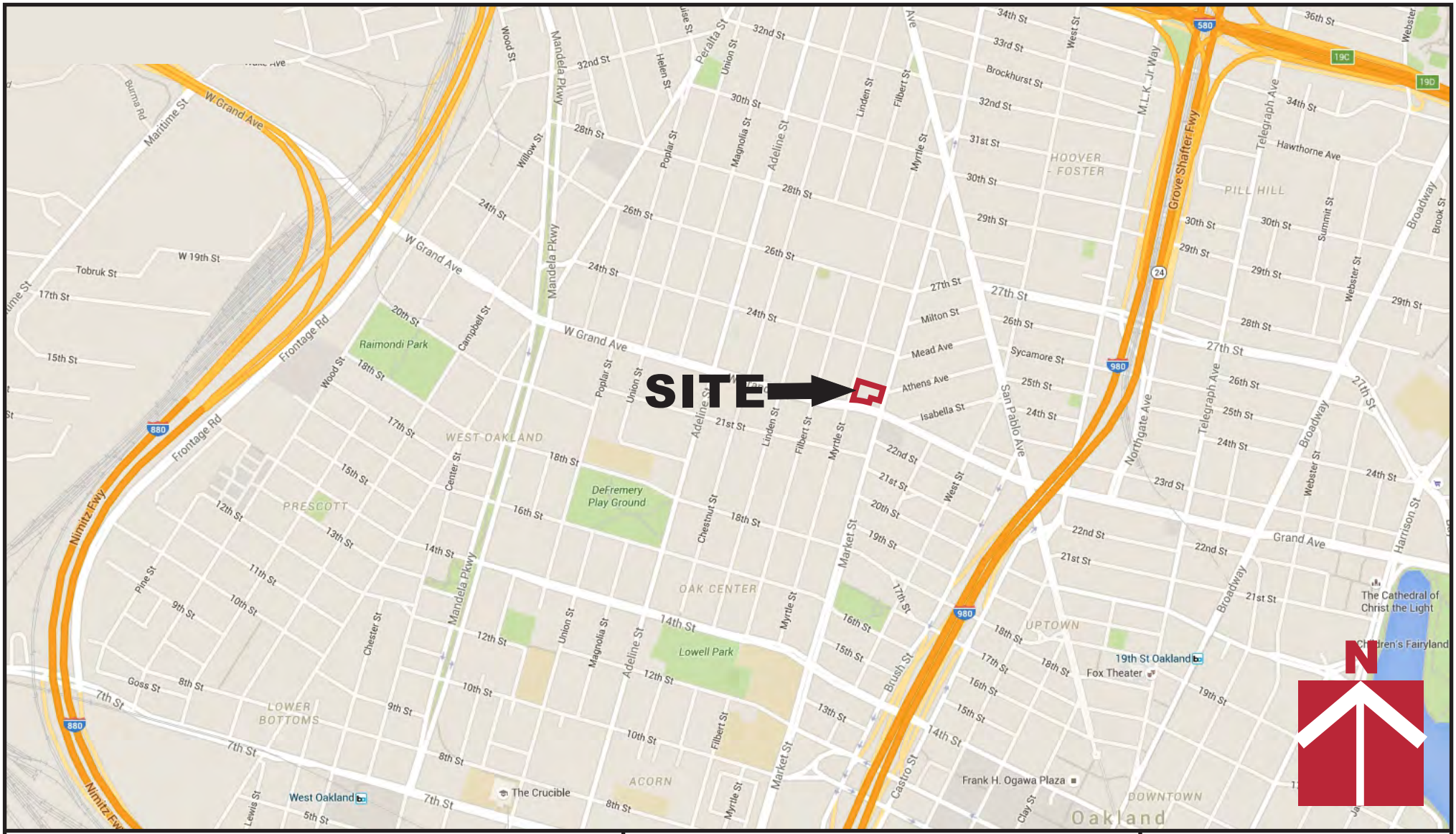
SCM Element	SCM Sub-Element	Description	Potential Data Gap(s)	How to Address
Geology and Hydrogeology	Regional	Regional geology consists of alluvial material within the Site vicinity that transitions to rocks from the Fransiscan Complex to the east, which corresponds to an increase in topography.	None	N/A
	Site	Native material consisting of silty to sandy-clay material; with lean clay to gravel encountered at approximatley 20 feet; Ground water occurs at a depth of approximately 10 feet with flow to the north-northwest	Soil, ground water, and soil vapor quality throughout the site	1) additional near-surface soil quality for pesticides, metals, PAHs, TPHd, TPHo, VOCs and TPHg throughout the Site to help determine appropriate soil management during construction and quality of soil remaining after excavation for construction of the ground level floor and foundations; 2) soil and soil vapor quality evaluation in the planned elevator pit; 3) quality of backfill from the reported former UST areas, and: 4) additional soil, soil vapor, and ground water quality in the former service station area.
Nearby Release Sites	Burke Property and Adjacent Sites	949 West Grand adjacent and south of the Site. This property is listed in the leaking underground storage tank (LUST) database. Analyses of these samples identified TPHg, TPHd, fuel related VOCs (benzene, toluene, ethylbenzene, and xylenes [BTEX]), and chlorinated VOCs (cDCE, TCE, and tetrachloroethene [PCE]). Potential source of COPC detected beneath south portion of the Site.	None	N/A
On-Site Source	Former Underground Storage Tanks	A pothole investigation was conducted in the areas of disturbed fill. The fill materials encountered at these locations reportedly had a petroleum odor. Salem concluded that these areas formerly contained underground storage tanks (USTs) associated with the historic filling station.	Potential Impact from Former Tanks	Advancement of exploratory borings to approximately 10 feet in the purposed areas of the former UST to collect soil samples. If UST Backfill is enoucntered, and additional 4 samples collected to determine backfill quality
Contaminants of Concern	COPC	TPHd, TPHo, TPHg, benzene, ethyl benzene, xylenes, PCE, TCE, naphthalene, cDCE, tDCE , and 1,1,-dichloroethene	Soil, ground water, and soil vapor quality throughout the site	Additional soil, ground water, and soil vapor samples will be collected throughout the site, as outlined above
Transport Mechanisms	Direct Contact with Soil	Incomplete pathway - Soil Management Plan will provide measures to prevent ingestion, inhalation, and dermal contact with soil to Site Workers and Construction/Trench Workers	Soil quality throughout the site	Additional soil samples will be collected throughout the site to prepare a Soil Mangement Plan to address best practice for handling and management of potentially contaminated soil
	Volatilization	Incomplete pathway for the future development, based on the design elements of the planned structure	Current soil vapor quality	Additional soil vapor samples collected as outlined above, to determine soil vapor quality on-Site
	Leaching to Ground Water	Incomplete pathway due to controls that will be implemented in the Soil Management Plan.	TPH detected in ground water	Additional ground water samples will be collected as outlined above, to determine ground water quality on-Site
Potential Receptors	Residential	Incomplete pathway due to controls that will be implemented in the Soil Management Plan.	None	N/A
	Commercial Site Occupant	Incomplete pathway due to controls that will be implemented in the Soil Management Plan.	None	N/A
	Construction/Trench Worker	Incomplete pathway due to controls that will be implemented in the Soil Management Plan.	None	N/A

Table 7. Potential Data Gaps and Proposed Investigation

Potential Data Gap(s)	Proposed Investigation
Soil, ground water, and soil vapor quality throughout the site	1) additional near-surface soil quality for pesticides, metals, PAHs, TPHd, TPHo, VOCs and TPHg throughout the Site to help determine appropriate soil management during construction and quality of soil remaining after excavation for construction of the ground level floor and foundations; 2) soil and soil vapor quality evaluation in the planned elevator pit; 3) quality of backfill from the reported former UST areas, and: 4) additional soil, soil vapor, and ground water quality in the former service station area.
Hydraulic Lift Sampling and Removal	One ground water grab sample will be located down-gradient of the shop building and will be analyzed for TPH as hydraulic oil. The SMP discussed in Section 5 will include protocol for sampling soil during the removal of the hydraulic lifts.

CORNERSTONE EARTH GROUP

FIGURES

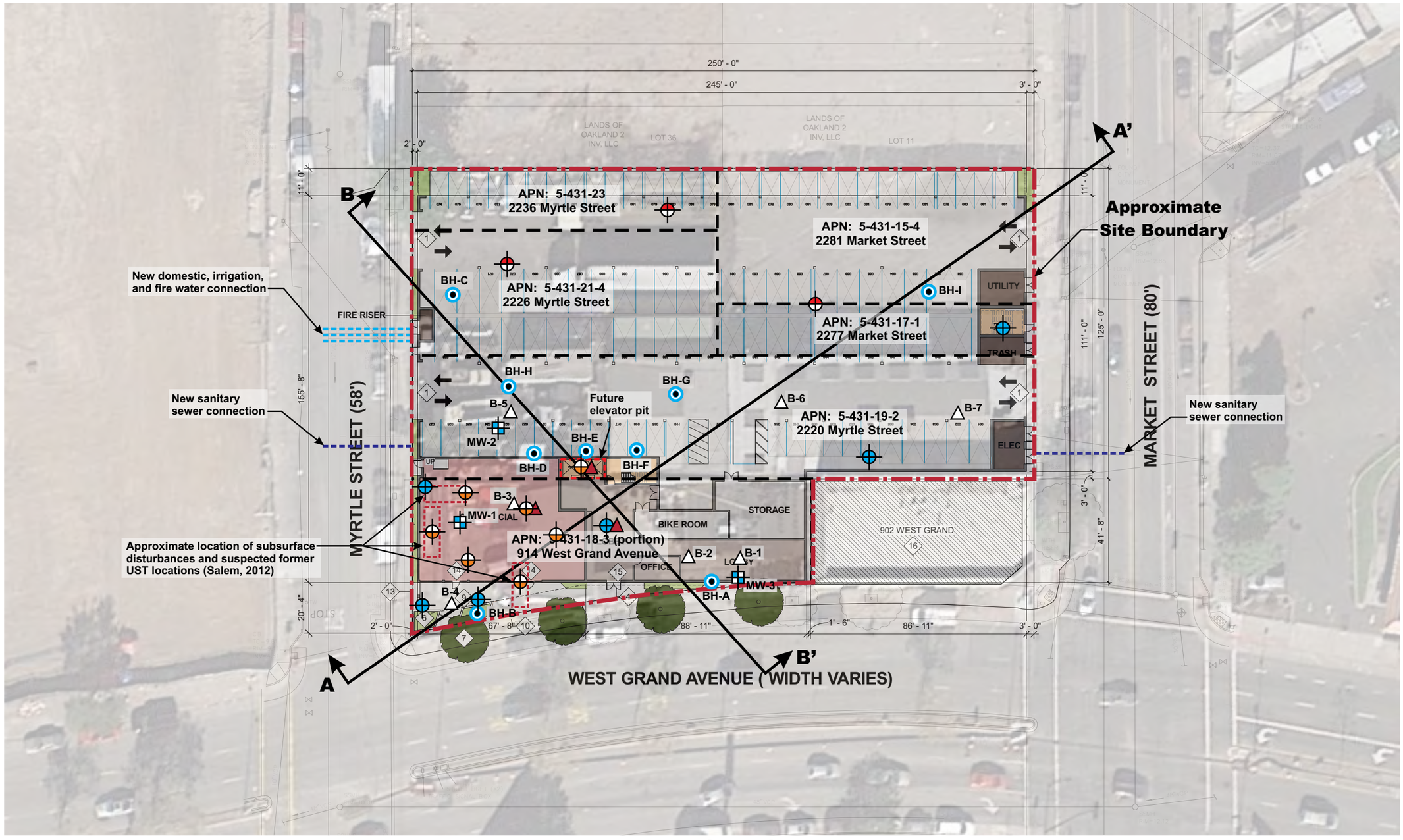


CORNERSTONE EARTH GROUP

Vicinity Map

914 West Grand Avenue Residential Development Oakland, CA

Project Number	914-1-3
Figure Number	Figure 1
Date	October 2016
Drawn By	RRN



Legend

- Approximate location of proposed boring for soil sample collection - 5 feet deep
- Approximate location of proposed boring for soil sample collection - 10 feet deep
- Approximate location of proposed boring for soil sample and ground water grab sample
- Approximate location of proposed soil vapor sample
- Approximate location of ground water monitoring well (Salem, June 2012)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- A A' Approximate location of cross section

N

0 40 80

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 10/30/2015
Overlay by Lowney Architecture, Site Plan - A1.1, dated 8/29/2016

Project Number 914-1-3

Figure Number Figure 2

Drawn By RRN

Date October 2016

Site Plan

914 West Grand Avenue Residential Development Oakland, CA

CORNERSTONE EARTH GROUP

Screening Levels

	Residential ESL [1]
TPHd (diesel)	100
TPHo (oil)	100
TPHg (gasoline)	100
Ethyl Benzene	13
Xylenes	20
Napthalene	0.12
TCE	5.0
cDCE	6.0
Vinyl Chloride	0.061

Concentrations measured in µg/L

[1] Environmental Screening Level (ESL), Regional Water Control Board - February 2016, GW Tier 1 ESL

< Not detected at or above laboratory reporting limit

BOLD Concentration exceeds selected environmental screening criteria or is outside of the published background range

MW-2	6/4/2012
TPHd	<0.05
TPHo	---
TPHg	<50
Ethyl Benzene	<1.0
Xylenes	<1.0
Napthalene	<1.0
TCE	<1.0
cDCE	<1.0
Vinyl Chloride	<1.0
	8/24/2016
TPHd	<52
TPHo	<100
TPHg	<50
Ethyl Benzene	<0.50
Xylenes	<1.0
Napthalene	<1.0
TCE	<0.50
cDCE	<0.50
Vinyl Chloride	<0.50

MW-1	6/4/2012
TPHd	<0.05
TPHo	---
TPHg	**3,300**
Ethyl Benzene	**79**
Xylenes	**188**
Napthalene	**37**
TCE	<1.0
cDCE	<1.0
Vinyl Chloride	<1.0
	8/24/2016
TPHd	<50
TPHo	<100
TPHg	<50
Ethyl Benzene	<0.50
Xylenes	<1.0
Napthalene	<1.0
TCE	<0.50
cDCE	<0.50
Vinyl Chloride	<0.50

BH-B	3/23/2005
TPHd	**150,000**
TPHo	<5,000
TPHg	**40,000**
Ethyl Benzene	**4,500**
Xylenes	**1,800**
Napthalene	**820**
TCE	<100
cDCE	<100
Vinyl Chloride	<100

BH-A	3/23/2005
TPHd	<50
TPHo	**550**
TPHg	**3,300**
Ethyl Benzene	1.0
Xylenes	3.4
Napthalene	**1.1**
TCE	<0.5
cDCE	<0.5
Vinyl Chloride	<0.5

MW-3	6/4/2012
TPHd	<0.05
TPHo	---
TPHg	<50
Ethyl Benzene	<1.0
Xylenes	<1.0
Napthalene	<1.0
TCE	<1.0
cDCE	**110**
Vinyl Chloride	<1.0
	8/24/2016
TPHd	<50
TPHo	<100
TPHg	**150**
Ethyl Benzene	<0.50
Xylenes	<1.0
Napthalene	<1.0
TCE	**53**
cDCE	**190**
Vinyl Chloride	**1.8**

Approximate Site Boundary

APN: 5-431-23
2236 Myrtle Street

APN: 5-431-15-4
2281 Market Street

APN: 5-431-21-4
2226 Myrtle Street

APN: 5-431-17-1
2277 Market Street

APN: 5-431-19-2
2220 Myrtle Street

APN: 5-431-18-3 (portion)
914 West Grand Avenue

2014 Flow Gradient 0.001 Ft/Ft

8/24/2016 Flow Gradient 0.002 Ft/Ft

2.3'

2.4

2.5'

MW-1 2.24 (8/24/16)

MW-2 2.35 (8/24/16)

MW-3 2.50 (8/24/16)

Approximate location of subsurface disturbances and suspected former UST locations (Salem, 2012)

BH-A, BH-B, BH-C, BH-D, BH-E, BH-F, BH-G, BH-H, BH-I

B-1, B-2, B-3, B-4, B-5, B-6, B-7

ATHENS ST (45.30')

MARKET STREET (80')

D AVENUE (WIDTH VARIES)

LANDS OF OAKLAND 2 INV, LLC

LANDS OF HAHN (TR) DEED DOC. 2005479053 39,133± SQ.FT. 0.90± ACRES

LANDS OF CHEN (TR)

Legend

- Approximate location of ground water monitoring well (Salem, June 2012)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)
- 2.5' Ground water elevation (feet above mean sea level [ft msl])

N

0 40 80

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 10/30/2015
Overlay by Lea & Braze Engineering, Inc., Boundary and Topographic Survey - C-1, dated 8/26/2016

Project Number 914-1-3

Figure Number Figure 3

Drawn By RRN

Date October 2016

On-Site Ground Water Results

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

Screening Levels

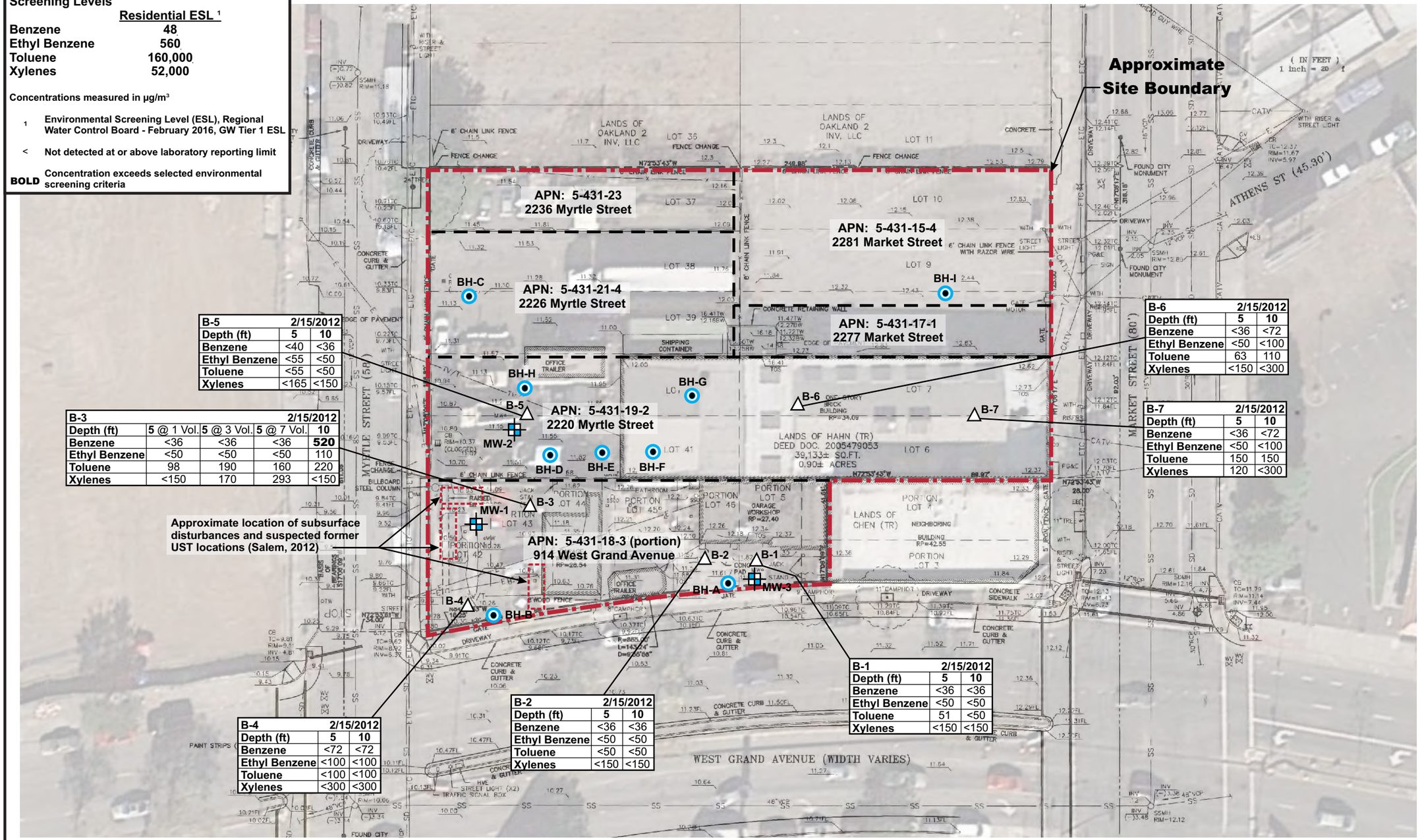
	Residential ESL [1]
Benzene	48
Ethyl Benzene	560
Toluene	160,000
Xylenes	52,000

Concentrations measured in µg/m³

1 Environmental Screening Level (ESL), Regional Water Control Board - February 2016, GW Tier 1 ESL

< Not detected at or above laboratory reporting limit

BOLD Concentration exceeds selected environmental screening criteria



B-5	2/15/2012	
Depth (ft)	5	10
Benzene	<40	<36
Ethyl Benzene	<55	<50
Toluene	<55	<50
Xylenes	<165	<150

B-3	2/15/2012			
Depth (ft)	5 @ 1 Vol.	5 @ 3 Vol.	5 @ 7 Vol.	10
Benzene	<36	<36	<36	**520**
Ethyl Benzene	<50	<50	<50	110
Toluene	98	190	160	220
Xylenes	<150	170	293	<150

B-4	2/15/2012	
Depth (ft)	5	10
Benzene	<72	<72
Ethyl Benzene	<100	<100
Toluene	<100	<100
Xylenes	<300	<300

B-2	2/15/2012	
Depth (ft)	5	10
Benzene	<36	<36
Ethyl Benzene	<50	<50
Toluene	<50	<50
Xylenes	<150	<150

B-1	2/15/2012	
Depth (ft)	5	10
Benzene	<36	<36
Ethyl Benzene	<50	<50
Toluene	51	<50
Xylenes	<150	<150

B-6	2/15/2012	
Depth (ft)	5	10
Benzene	<36	<72
Ethyl Benzene	<50	<100
Toluene	63	110
Xylenes	<150	<300

B-7	2/15/2012	
Depth (ft)	5	10
Benzene	<36	<72
Ethyl Benzene	<50	<100
Toluene	150	150
Xylenes	120	<300

Legend

- Approximate location of ground water monitoring well (Salem, June 2012)
- Approximate location of soil boring and soil vapor probe (Salem, February 2012)
- Approximate location of soil boring and ground water grab sample (ASE, April 2005)

N

0 40 80

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 10/30/2015
Overlay by Lea & Braze Engineering, Inc., Boundary and Topographic Survey - C-1, dated 8/26/2016

Project Number 914-1-3

Figure Number Figure 4

Drawn By RRN

Date October 2016

On_Site Soil Vapor Results

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

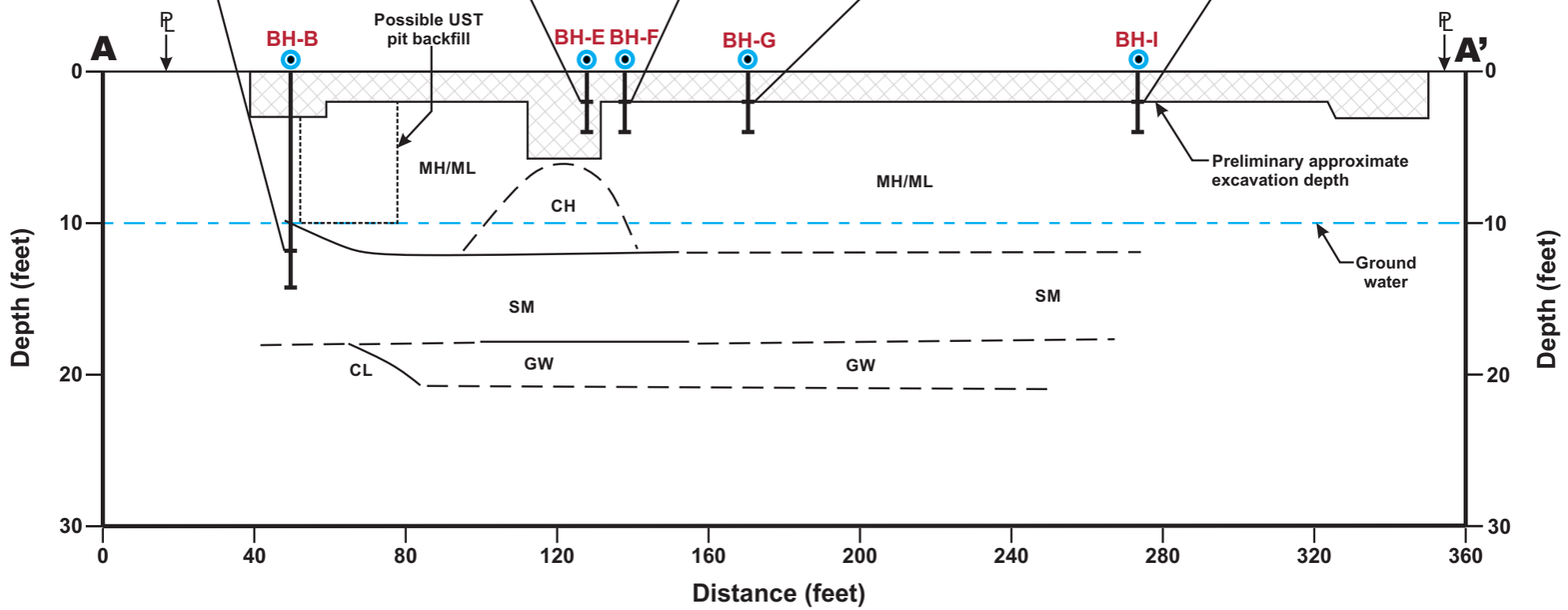
BH-B	3/23/2005
Sample depth (ft)	11.5
TPHd	370
TPHg	2,100
Ethyl Benzene	27
Xylenes	6.1

BH-E	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

BH-F	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

BH-G	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

BH-I	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005



Section A-A'

(View Looking Northwest)
1"=40' Horizontal
1"=10' Vertical

Symbols

CL	Lean Clay or sandy clay
CH	Fat Clay
ML	Silt
MH	Elastic Silt
SM	Silty Sand
GW	Well Graded Gravel
◉	Approximate location of soil boring and ground water grab sample (ASE, April 2005)
PL	Property line

Environmental Screening Levels

TPHd	230 mg/kg
TPHg	100 mg/kg
Ethyl Benzene	14 mg/kg
Total Xylenes	6.1 mg/kg

Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016

Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 2 for location of cross section.

Project Number 914-1-2

Figure Number Figure 5

Drawn By RRN

Date September 2016

Geologic Cross Section A-A' with Soil Results

914 West Grand Avenue Residential Development Oakland, CA

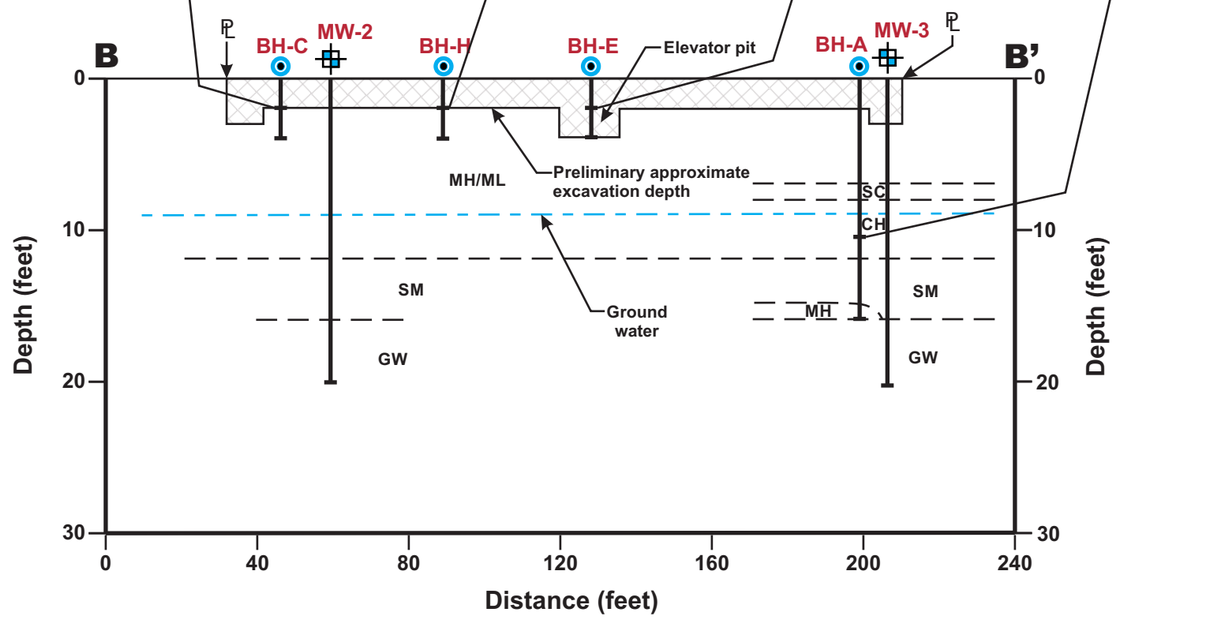
CORNERSTONE EARTH GROUP

BH-C	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	0.018

BH-H	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

BH-E	3/23/2005
Sample depth (ft)	2.0
TPHd	<1.0
TPHg	<5.0
Ethyl Benzene	<0.005
Xylenes	<0.005

BH-A	3/23/2005
Sample depth (ft)	11.5
TPHd	<1.0
TPHg	<1.0
Ethyl Benzene	<0.005
Xylenes	<0.0054



Section B-B'

(View Looking East)
1"=40' Horizontal
1"=10' Vertical

Symbols

CL	Lean Clay or sandy clay
CH	Fat Clay
ML	Silt
MH	Elastic Silt
SM	Silty Sand
GW	Well Graded Gravel
⊕	Approximate location of ground water monitoring well (Salem, June 2012)
◉	Approximate location of soil boring and ground water grab sample (ASE, April 2005)
PL	Property line

Environmental Screening Levels

TPHd	230 mg/kg
TPHg	100 mg/kg
Ethyl Benzene	14 mg/kg
Total Xylenes	6.1 mg/kg

Environmental Screening Level (ESL), RWQCB, San Francisco Bay Region - February 2016

Notes:
1) Surficial fills associated with existing pavements, landscaping or utilities are not shown.
2) The subsurface profile is conceptual and is based on limited subsurface data obtained from widely spaced borings. Actual subsurface conditions may vary significantly between borings.
3) See Figure 2 for location of cross section.

Project Number 914-1-3

Figure Number Figure 6

Drawn By RRN

Date October 2016

Geologic Cross Section B-B' with Soil Results

914 West Grand Avenue Residential Development Oakland, CA

CORNERSTONE EARTH GROUP

Screening Levels	Environmental Screening Levels
TPHg	100
TPHd	100
Benzene	1.0
MTBE	5.0
1,2-DCA	0.5
Cis-1,2-DCE	6.0
Trans-1,2-DCE	10
TCE	5.0
Vinyl Chloride	0.061

Concentration measured in µg/L

B-25	1994
Benzene	<0.0005
Toluene	<0.0005
Ethyl Benzene	<0.0005
Total Xylenes	<0.002
TPHg	0.1
VOCs	---

B-47	1994
Benzene	<0.0005
Toluene	<0.0005
Ethyl Benzene	<0.0005
Total Xylenes	<0.002
TPHg	<0.05
VOCs	---

MW	1994
Benzene	<0.0005
Toluene	<0.0005
Ethyl Benzene	<0.0005
Total Xylenes	<0.002
TPHg	<0.05
VOCs	---

B-1	1994
Benzene	<0.0005
Toluene	<0.0005
Ethyl Benzene	<0.0005
Total Xylenes	<0.002
TPHg	<0.05
VOCs	---

SB-N	4/26/2005
TPHg	8,800
TPHd	18,000
Benzene	<0.5
MTBE	24
1,2-DCA	0.82
Cis-1,2-DCE	15
Trans-1,2-DCE	1.0
TCE	<5.0
Vinyl Chloride	1.5

SB-M	4/26/2005
TPHg	1,500
TPHd	<400
Benzene	9.8
MTBE	22
1,2-DCA	<0.5
Cis-1,2-DCE	7.9
Trans-1,2-DCE	0.55
TCE	<10
Vinyl Chloride	0.72

SB-J	4/25/2005
TPHg	57,000
TPHd	<80,000
Benzene	170
MTBE	18
1,2-DCA	<1.5
Cis-1,2-DCE	<2.5
Trans-1,2-DCE	<1.5
TCE	<5.0
Vinyl Chloride	<1.5

MW-2	6/23/2005
TPHg	16,000
TPHd	<6,000
Benzene	170
MTBE	8.6
1,2-DCA	<3.0
Cis-1,2-DCE	3.9
TCE	<3.0
Vinyl Chloride	<3.0

SB-5	3/7/2002
1,2-DCA	<5.0
Cis-1,2-DCE	550
Trans-1,2-DCE	<5.0
TCE	<5.0
Vinyl Chloride	36

SB-I	4/25/2005
TPHg	48,000
TPHd	<300,000
Benzene	1,000
MTBE	19
1,2-DCA	<5.0
Cis-1,2-DCE	48
Trans-1,2-DCE	<5.0
TCE	<5.0
Vinyl Chloride	20

SB-K	4/25/2005
TPHg	86,000
TPHd	<80,000
Benzene	1,600
MTBE	<25
1,2-DCA	<25
Cis-1,2-DCE	510
Trans-1,2-DCE	<25
TCE	<25
Vinyl Chloride	<25

E	5/5/2003
TPHg	4,300
TPHd	NA
Benzene	<0.5
MTBE	<10
1,2-DCA	<5.0
Cis-1,2-DCE	<10
TCE	<10
Vinyl Chloride	<5.0

SB-L	4/26/2005
TPHg	4,700
TPHd	<3,000
Benzene	0.82
MTBE	7.5
1,2-DCA	<0.5
Cis-1,2-DCE	<0.5
Trans-1,2-DCE	<0.5
TCE	<0.5
Vinyl Chloride	<0.5

SB-O	4/26/2005
TPHg	140
TPHd	310
Benzene	0.72
MTBE	24
1,2-DCA	0.78
Cis-1,2-DCE	37
Trans-1,2-DCE	3.1
TCE	2.9
Vinyl Chloride	1.4

SB-G	8/9/2004
TPHg	1,200
TPHd	4,900
Benzene	<0.5
MTBE	32
1,2-DCA	0.95
Cis-1,2-DCE	60
Trans-1,2-DCE	5.8
TCE	6.2
Vinyl Chloride	4.6

MW-3	6/23/2005
TPHg	<50
TPHd	210
Benzene	<0.5
MTBE	2.4
1,2-DCA	0.56
Cis-1,2-DCE	<0.5
Trans-1,2-DCE	<0.5
TCE	<0.5
Vinyl Chloride	<0.5

B-5	
TPHg	<50
Benzene	<1.0
Toluene	<1.0
Ethyl-Benzene	<1.0
Total Xylenes	<2.0
MTBE	<4.0

B-4	
TPHg	<50
Benzene	<1.0
Toluene	<1.0
Ethyl-Benzene	<1.0
Total Xylenes	<2.0
MTBE	<4.0

B-1	
TPHg	<50
Benzene	<1.0
Toluene	<1.0
Ethyl-Benzene	<1.0
Total Xylenes	<2.0
MTBE	<4.0

B-2	
TPHg	30,000
Benzene	52
Toluene	240
Ethyl-Benzene	37
Total Xylenes	430
MTBE	<4.0

B-3	
TPHg	110,000
Benzene	<1.0
Toluene	120
Ethyl-Benzene	140
Total Xylenes	910
MTBE	44

Myrtle Street

Market Street

West Grand Avenue

Approximate Site Boundary

Former gasoline station

Former dry cleaner

Former gasoline station

Current gasoline station

B-1 B-2 B-3 B-4 B-5 B-25 B-47 MW-1 MW-2 MW-3 SB-5 SB-G SB-I SB-J SB-K SB-L SB-M SB-N SB-O E

Legend

- Approximate location of previous soil boring (B) (1994)
- Approximate location of former ground water monitoring well (MW) (1994)
- Approximate location of previous soil boring (B) (Stantec, 2005)
- Approximate location of previous boring (SB) (Golden Gate Tank Removal, Inc., March 2002)
- Approximate location of previous boring (SB) (Golden Gate Tank Removal, Inc., May 2003)
- Approximate location of previous boring (SB) (Golden Gate Tank Removal, Inc., August 2004)
- Approximate location of previous monitoring well (MW) (Golden Gate Tank Removal, Inc., August 2004)
- Approximate location of previous boring (SB) (Golden Gate Tank Removal, Inc., April 2005)

N

0 80 160

APPROXIMATE SCALE (FEET)

Base by Google Earth, dated 10/30/2015

Project Number 914-1-3

Figure Number Figure 7

Drawn By RRN

Date October 2016

Off-Site Ground Water Data

914 West Grand Avenue
Residential Development
Oakland, CA

CORNERSTONE EARTH GROUP

CORNERSTONE EARTH GROUP

APPENDIX A – SAMPLING PROTOCOL AND FIELD SAMPLING LOGS

CORNERSTONE EARTH GROUP

914 West Grand Avenue
Existing Ground Water Monitoring Well Scope of Work

The purpose of this brief work scope is to sample the three existing ground water monitoring wells located at 914 West Grand Avenue. The three monitoring wells, MW-1, MW-2 and MW-3 are shown on the attached site map.

GROUND WATER MONITORING WELL SAMPLING

Ground Water Elevation Measurement and Gradient Evaluation

The depth to ground water will be measured in each well to the nearest 0.01 foot using an electronic depth sounder. The measured ground water elevations will be used to calculate the ground water flow direction in the monitoring well area. The presence and thickness of free product will also be noted if observed.

Well Development

Because the wells have not been sampled since 2012, the three existing wells will be developed prior to sampling. The well development is intended to help provide more representative ground water analytical results.

Well development will first be conducted by surge and bail methods to remove sediment. After surging and bailing, a pump system will be used to further develop the wells. During development activities, water conditions will be monitored using field equipment. These measurements will include ground water levels, volume of development water removed, and field parameters, including pH, specific conductivity, temperature, and turbidity. The goal for development is to achieve turbidity readings of less than 5 Nephelometric Turbidity Units (NTU). The well will be considered properly developed if turbidity is less than or equal to 5 NTU and the other field parameters are stable (+/- 10% for specific conductivity and temperature, and +/- 1 pH unit between three consecutive samples). If the turbidity cannot be lowered to 5 NTU or less after reasonable development time, but other field parameters are stable and the well is producing water, the well will be considered developed.

Monitoring Well Sampling

Ground water monitoring wells MW-1, MW-2 and MW-3 will be sampled in general accordance with EPA guidelines, ASTM D 4448-01, 'Standard Guide for Sampling Ground Water Monitoring Wells' and ASTM D 6771-02, 'Standard Practice for Low-Flow Purging and Sampling for Wells and Devices Used for Ground Water Quality Investigations'. Water that stands within a monitoring well for a long period of time may become unrepresentative of formation water because chemical or biochemical change may alter water quality. Well purging will be performed prior to sampling using a withdrawal rate that minimizes drawdown while attempting to satisfy time constraints. According to Barcelona, Wehrmann and Varlien (1994) and Puls and Powell (1992), purging less than 1 L/min (approximately 0.25 gallons per minute) provides more reproducible VOCs and metal analytical results than purging at high rates. This method, commonly termed low-flow sampling, is based on the premise that at low pumping rates, there is little mixing of the water column and laminar ground water flow through the screen provides a more consistent sample. Note that a monitoring well with a low yield may not be applicable to this technique since it may be difficult to reduce the pumping rate sufficiently to prevent mixing of the water column in the well casing in such a well.

The water level in the well being sampled will be continuously monitored using an electronic water-level indicator during low-flow sampling. The water-level indicator will be set below the water surface after sufficient water has been withdrawn to fill the pump and tubing. When the well is purged, if the water level falls below the water-level indicatory probe, the signal indicates that the water level has fallen below the maximum allowable drawdown, and the pumping rate will be decreased. Pumping will be started at approximately 100mL/min and gradually adjusted to attempt to match the well's recharge rate.

During purging, pH, temperature, dissolved oxygen and conductivity measurements will be recorded. Once these parameters stabilize (pH within approximately 0.2 pH units, conductivity within approximately 3% of reading, dissolved oxygen within 10% of reading or 0.2 mg/L, and Eh or oxygen reduction potential with 20 mV), the ground water samples will be collected. Allowable drawdown during sampling will not exceed the distance between the top of the well screen and the pump intake, which will be positioned near the mid-point of the screen. If the yield is low and the well is pumped dry, the well will be allowed to recharge to approximately 80 percent of the original level before sampling.

Ground water samples will be collected in appropriate laboratory-supplied containers, labeled, and placed into an ice-chilled cooler for transportation to a state-certified laboratory. Chain of custody documentation will be maintained for the samples.

Ground water samples will not be collected from wells where free product is observed.

Laboratory Analyses
The following laboratory analyses will be performed on ground water samples from the three wells.

- Volatile organic compounds (VOCs) and gasoline-range petroleum hydrocarbons (TPHg) (EPA Test Method 8260).
- Total petroleum hydrocarbons in the diesel range (TPHd) (EPA Test Method 8015).

A silica gel cleanup will be performed for the TPHd analysis to help remove naturally occurring organic compounds that can be picked up in the diesel scan, providing false positive results.

Equipment Decontamination
Sampling and ground water elevation measurement equipment either will be cleaned in a solution of laboratory grade detergent and rinsed with distilled water or steam cleaned prior to use.

Purged Ground Water and Cleaning Rinse Solution
Purged ground water and cleaning rinse solution will be removed from the Site for appropriate off-Site disposal.

Report Preparation
We will prepare a letter presenting the analytical results and our conclusions and recommendations. The letter will include a site plan showing the well locations, well sampling logs and copies of the analytical reports. Our conclusions and recommendations will be based on our interpretation of the analytical data and measured ground water flow direction.

WELL GAUGING DATA

Project # 160824-AC1 Date 8/24/16 Client CEG

Site 914 W. GRAND AVE. OAKLAND CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	1000	4	-	-	-	-	10.53	20.20		
MW-2	0836	4	-	-	-	-	11.77	19.80		
MW-3	1045	4	-	-	-	-	11.78	19.60	↓	

WELL DEVELOPMENT DATA SHEET

Project #: 160824-AC1	Client: Cornerstone Earth Group
Developer: MM	Date Developed: 8-24-16
Well I.D. MW-1	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 20.20 After 20.20	Depth to Water: Before 10.53 After 10.85
Reason not developed:	If Free Product, thickness: —
Additional Notations: 80% = 12.46	

Volume Conversion Factor (VCF):
$\{12 \times (d^2/4) \times \pi\} / 231$
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

6.3	X	10	=	63
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump PAD Middleburg
Other equipment used Myron Ultrameter II, HACH Turbidity, Interface Probe

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1005	swab	well for	15 MIN			Hard Bottom
1022	START	PURGE W/	PAD PUMP			
1029	67.8	6.33	1037	>1000	6.3	Gray w/ silt
1035	67.5	6.72	960	>1000	12.6	light gray silt clearing
1043	67.8	6.71	915	676	18.9	↓ ↓
1049	67.7	6.65	882	157	25.2	cloudy, Hard Bottom
1055	67.6	6.55	880	72	31.5	slightly cloudy
1101	67.7	6.61	892	600	37.8	cloudy
1108	67.7	6.67	883	216	44.1	slightly cloudy
1115	67.9	6.62	881	98	50.4	↓ ↓
1121	67.9	6.67	877	42	56.7	clear, Hard Bottom
1127	67.8	6.64	875	25	63.0	↓ ↓
	STOP PURGE W/	PAD PUMP				DTW: 10.85 TD: 20.20

Did Well Dewater? NO	If yes, note above.	Gallons Actually Evacuated:	63

WELL DEVELOPMENT DATA SHEET

Project #: 160824-AC1	Client: CEG
Developer: AC	Date Developed: 8/29/16
Well I.D. MW-7	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 19.80 After 19.80	Depth to Water: Before 11.27 After 16.51
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

5.5	X	10		55
1 Case Volume		Specified Volumes	=	gallons

Purging Device:

- ☐ Bailer
- ☐ Suction Pump
- ☑ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump PAO MIDDLEBURG, 3" ES

Other equipment used MYRON ULTRA A, HACH TURBIDIMETER, I.P.

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
0841	BEGIN	SWAB				
0856	END SWAB	-	HARD	BOTTOM		
0905	BEGIN	DEV W/	PAD	PUMP		
0915	67.2	7.95	903	>1000	5.5	CLEARING, LIGHT BROWN
0923	66.7	7.51	886	>1000	11.0	" "
0930	66.8	7.10	868	467	16.5	TURB <1000, HARD BTM, NO DRAWDOWN - SWITCH TO 3"ES
0934	67.1	6.98	869	225	22.0	CLEARING
0935	67.0	6.99	862	201	27.5	"
0936	69.4	6.98	861	191	33.0	"
0937	69.9	6.98	859	170	38.5	"
0938	69.9	6.98	856	138	44.0	"
0939	69.8	6.99	858	129	49.5	"
0940	66.7	6.99	858	115	55.0	" 10 CV DTW 16.51
Did Well Dewater?		If yes, note above.		Gallons Actually Evacuated:	55.0	TD 19.80

WELL DEVELOPMENT DATA SHEET

Project #: 160824-AC1	Client: LEG
Developer: AC	Date Developed: 8/24/16
Well I.D. MW-3	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 19.60 After 19.60	Depth to Water: Before 11.78 After 12.60
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
{12 x (d^2/4) x π} /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

5.1	X	10	=	51
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump PAD MIDDLEBURG
Other equipment used MYRON L ULTRA II, HACH TURBIDIMETER, I. P.

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1048	BEGIN	WELL SWAB				
1103	END SWAB					HARD BOTTOM
1110	67.5	7.78	950	>1000	5.1	BROWN, SAND & SILT
1115	68.2	7.47	949	>1000	10.2	LIGHT BROWN, CLEARING
1122	68.4	7.32	945	709	15.3	CLEARING
1129	68.3	7.33	947	371	20.4	"
1136	68.7	7.28	945	134	25.5	"
1143	68.7	7.53	943	85	30.6	"
1150	68.7	7.55	945	36	35.7	"
1157	69.4	7.55	945	12	40.8	"
1204	69.3	7.47	946	12	45.9	"
1211	68.1	7.38	947	12	51.0	"

Did Well Dewater?	If yes, note above.	Gallons Actually Evacuated:	51.0

LOW FLOW WELL MONITORING DATA SHEET

Project #: 160824-4C1	Client: CEG
Sampler: AC	Start Date: 8/24/16
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 20.20	Depth to Water Pre: 10.44 Post: 10.44
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI PRO +

Purge Method: 2" Grundfos Pump | Watterra | Peristaltic Pump | (Bladder Pump) | Other ___

Sampling Method: Dedicated Tubing | Disp Bailer | (New Tubing) | Other ___

Flow Rate: 100 ML/MIN Pump Depth: 15'

1258 Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	DTW / Observations
1301	21.3	6.86	817	20	4.47	28.3	300	10.44
1304	21.2	6.84	817	15	4.14	29.2	600	10.44
1307	21.1	6.82	818	15	3.83	28.9	900	10.44
1310	21.0	6.80	820	13	3.20	26.8	1200	10.44
1313	21.2	6.79	821	12	3.16	25.6	1500	10.44
1316	21.1	6.79	823	11	3.08	24.5	1800	10.44

Did well dewater? Yes (No) Amount actually evacuated: 1800 gals. or (ml)

Sampling Time: 1320 Sampling Date: 8/24/16

Sample I.D.: MW-1 Laboratory: TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SEE COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 160824-AC1	Client: Cornerstone Earth Group
Sampler: MM	Start Date: 8-24-16
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.80	Depth to Water Pre: 11.30 Post: 11.30
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI PRO PLUS

Purge Method: 2" Grundfos Pump | Watterra | Peristaltic Pump | (Bladder Pump) | Other ____

Sampling Method: Dedicated Tubing | Disp Bailer | (New Tubing) | Other ____

Flow Rate: 200 mL/min START PURGE: 1222 Pump Depth: 15.5' 5/1.5-20

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	DTW / Observations	
1225	21.2	6.93	845	57	3.06	109.3	600	11.30	clear
1228	21.2	6.82	842	52	2.93	108.9	1200	11.30	
1231	21.1	6.77	842	48	2.92	107.8	1800	11.30	
1234	21.0	6.75	841	45	2.95	106.6	2400	11.30	
1237	20.9	6.73	839	43	2.88	105.5	3000	11.30	
1240	20.9	6.72	839	41	2.95	105.1	3600	11.30	

Did well dewater? Yes (No) Amount actually evacuated: 3600 gals. or (ml)

Sampling Time: 1241 Sampling Date: 8-24-16

Sample I.D.: MW-2 Laboratory: TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.: DUP-1 @ 1250

LOW FLOW WELL MONITORING DATA SHEET

Project #: 160824-ALI	Client: LEG
Sampler: AC	Start Date: 8/24/16
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.60	Depth to Water Pre: 11.70 Post: 11.70
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI PRO+

Purge Method: 2" Grundfos Pump | Watterra | Peristaltic Pump | (Bladder Pump) | Other ___

Sampling Method: Dedicated Tubing | Disp Bailer | (New Tubing) | Other ___

Flow Rate: 100 ML/MIN | Pump Depth: 16'

1407 Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	DTW / Observations
1410	21.8	7.03	875	13	0.11	16.0	300	11.70
1413	21.6	6.99	873	16	0.02	9.1	600	11.70
1416	21.3	6.98	873	14	0.03	8.1	900	11.70
1419	21.3	6.98	873	12	0.03	3.0	1200	11.70
1422	21.7	6.98	868	13	0.01	1.0	1500	11.70

Did well dewater? Yes (No) Amount actually evacuated: 1500 gals. or ml

Sampling Time: 1425 Sampling Date: 8/24/16

Sample I.D.: MW-3 Laboratory: TA

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

WELLHEAD INSPECTION CHECKLIST

Client CEG Date 8/24/16

Site Address 914 W. GRAND AVE. OAKLAND CA

Job Number 160824-AC1 Technician AC

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	X							
MW-2	X							
MW-3	X							

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 914 Grand Ave. Oakland, CA				PROJECT NUMBER 160824-AC1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
MYRON L ULTRAMETER	6215733	8-24-16 0600	pH 7.0 10.0 4.0	pH 7.05 10.01 4.04	yes		mm
↓	↓	↓	Cond. 3900 µS	Cond. 3904 µS	yes		mm
YSI PRO PLUS	14A102849	8-24-16 0605	pH 7.0 10.0 4.0	pH 7.00 10.01 4.00	yes		MM
↓	↓	↓	Cond. 3900 µS	Cond. 3902 µS	yes		mm
↓	↓	↓	ORP 231.0 mV DO 100%	ORP 229.8 mV DO 100.7%	yes	25°C	mm
YSI PRO +	14A102848	8/24/16 0615	DO 100% COND 3900	100.2% 3903	Y Y		AC
↓	↓	↓	PH 7, 10, 4 ORP	7.00, 10.00, 4.00 231.4	Y Y	24.9°C	AC
MYRON L ULTRA II	6207755	0627	COND 3900 PH 7, 10, 4	3902 7.00, 10.00, 4.00	Y Y		AC

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY
BTS #

CLIENT: Cornerstone Eearth Group

SITE: 914 W. Grand Ave.
Oakland, CA

CONDUCT ANALYSIS TO DETECT

LAB: Test America SF | DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION _____

SPECIAL INSTRUCTIONS

Invoice and Report to: Randall Bleichner
rbleichner@cornerstoneearth.com
925.988.9500 ext. 15

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H_2O	CONTAINERS TOTAL		TPH-g, Full Scen VOC's (8260B)	TPH-d, mo with and without SGC (8015f							ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-1	8/24/16	1320	W	6	6 GLASS MIK	X	X										
MW-2		1241	W	6		X	X										
MW-3		1425	W	6		X	X										
DUP-1		1250	W	6	✓	X	X										
TB-1	↓	1430	W	3	VOAS	X											

SAMPLING COMPLETED: DATE 8/24/16 TIME 1430
SAMPLING PERFORMED BY: ALEX CARLINO, MARK MCCULLOCH

RESULTS NEEDED NO LATER THAN: Standard TAT

		DATE	TIME		DATE	TIME
RELEASED BY		8/24/16	1635	RECEIVED BY	(CUSTODIAN)	8/24/16 1635
RELEASED BY	(Sample Custodian)	8/25/16	1030	RECEIVED BY		8/25/16 1030
RELEASED BY				RECEIVED BY		

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	

CORNERSTONE EARTH GROUP

APPENDIX B – LABORATORY REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-74147-1
Client Project/Site: 914 W. Grand Ave.

For:
Cornerstone Earth Group
1270 Springbrook Road, Suite 101
Walnut Creek, California 94597

Attn: Mr. Randall Bleichner

Authorized for release by:
9/1/2016 11:17:17 AM

Afsaneh Salimpour, Senior Project Manager
(925)484-1919
afsaneh.salimpour@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Job ID: 720-74147-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-74147-1

Comments
No additional comments.

Receipt
The samples were received on 8/25/2016 1:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.7º C.

GC/MS VOA
Method(s) 8260B: The Gasoline Range Organics (GRO) concentration reported for the following samples are due to the presence of discrete peaks: MW-3 (720-74147-3). cis-1,2-Dichloroethene, trans-1,2-Dichloroethene and Trichloroethene

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method(s) 3510C: EPA 8015B: A matrix spike/matrix spike duplicate was not included in batch 208406 because insufficient sample volume was available.

Method(s) 3510C SGC: EPA 8015B: A matrix spike/matrix spike duplicate was not included in batch 208428 because insufficient sample volume was available.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Client Sample ID: MW-1 — Lab Sample ID: 720-74147-1

No Detections.

Client Sample ID: MW-2 — Lab Sample ID: 720-74147-2

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 720-74147-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	1.3		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
1,1-Dichloroethene	0.58		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
cis-1,2-Dichloroethene	190		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
trans-1,2-Dichloroethene	19		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Trichloroethene	53		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Vinyl chloride	1.8		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	150		50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: DUP-1 — Lab Sample ID: 720-74147-4

No Detections.

Client Sample ID: TB-1 — Lab Sample ID: 720-74147-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Client Sample ID: MW-1
Date Collected: 08/24/16 13:20
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-1
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/31/16 02:15	1
Acetone	ND		50		ug/L			08/31/16 02:15	1
Benzene	ND		0.50		ug/L			08/31/16 02:15	1
Dichlorobromomethane	ND		0.50		ug/L			08/31/16 02:15	1
Bromobenzene	ND		1.0		ug/L			08/31/16 02:15	1
Chlorobromomethane	ND		1.0		ug/L			08/31/16 02:15	1
Bromoform	ND		1.0		ug/L			08/31/16 02:15	1
Bromomethane	ND		1.0		ug/L			08/31/16 02:15	1
2-Butanone (MEK)	ND		50		ug/L			08/31/16 02:15	1
n-Butylbenzene	ND		1.0		ug/L			08/31/16 02:15	1
sec-Butylbenzene	ND		1.0		ug/L			08/31/16 02:15	1
tert-Butylbenzene	ND		1.0		ug/L			08/31/16 02:15	1
Carbon disulfide	ND		5.0		ug/L			08/31/16 02:15	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/16 02:15	1
Chlorobenzene	ND		0.50		ug/L			08/31/16 02:15	1
Chloroethane	ND		1.0		ug/L			08/31/16 02:15	1
Chloroform	ND		1.0		ug/L			08/31/16 02:15	1
Chloromethane	ND		1.0		ug/L			08/31/16 02:15	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/16 02:15	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/16 02:15	1
Chlorodibromomethane	ND		0.50		ug/L			08/31/16 02:15	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/16 02:15	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/16 02:15	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/16 02:15	1
1,3-Dichloropropane	ND		1.0		ug/L			08/31/16 02:15	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/16 02:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/16 02:15	1
Ethylene Dibromide	ND		0.50		ug/L			08/31/16 02:15	1
Dibromomethane	ND		0.50		ug/L			08/31/16 02:15	1
Dichlorodifluoromethane	ND		0.50		ug/L			08/31/16 02:15	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/16 02:15	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/16 02:15	1
1,1-Dichloroethene	ND		0.50		ug/L			08/31/16 02:15	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/16 02:15	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/16 02:15	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/16 02:15	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/16 02:15	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/16 02:15	1
Ethylbenzene	ND		0.50		ug/L			08/31/16 02:15	1
Hexachlorobutadiene	ND		1.0		ug/L			08/31/16 02:15	1
2-Hexanone	ND		50		ug/L			08/31/16 02:15	1
Isopropylbenzene	ND		0.50		ug/L			08/31/16 02:15	1
4-Isopropyltoluene	ND		1.0		ug/L			08/31/16 02:15	1
Methylene Chloride	ND		5.0		ug/L			08/31/16 02:15	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			08/31/16 02:15	1
Naphthalene	ND		1.0		ug/L			08/31/16 02:15	1
N-Propylbenzene	ND		1.0		ug/L			08/31/16 02:15	1
Styrene	ND		0.50		ug/L			08/31/16 02:15	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/16 02:15	1

Client Sample ID: MW-1
Date Collected: 08/24/16 13:20
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-1
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/16 02:15	1
Tetrachloroethene	ND		0.50		ug/L			08/31/16 02:15	1
Toluene	ND		0.50		ug/L			08/31/16 02:15	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			08/31/16 02:15	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			08/31/16 02:15	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/16 02:15	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/16 02:15	1
Trichloroethene	ND		0.50		ug/L			08/31/16 02:15	1
Trichlorofluoromethane	ND		1.0		ug/L			08/31/16 02:15	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/16 02:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/16 02:15	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/16 02:15	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/16 02:15	1
Vinyl acetate	ND		10		ug/L			08/31/16 02:15	1
Vinyl chloride	ND		0.50		ug/L			08/31/16 02:15	1
Xylenes, Total	ND		1.0		ug/L			08/31/16 02:15	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/16 02:15	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/31/16 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*67 - 130*		*08/31/16 02:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*		*08/31/16 02:15*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/31/16 02:15*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		08/29/16 10:47	08/29/16 18:53	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/29/16 10:47	08/29/16 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*89*		*23 - 156*	*08/29/16 10:47*	*08/29/16 18:53*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		08/29/16 16:17	08/31/16 16:36	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/29/16 16:17	08/31/16 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*08/29/16 16:17*	*08/31/16 16:36*	*1*
p-Terphenyl	*78*		*31 - 150*	*08/29/16 16:17*	*08/31/16 16:36*	*1*

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Client Sample ID: MW-2
Date Collected: 08/24/16 12:41
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-2
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/31/16 02:44	1
Acetone	ND		50		ug/L			08/31/16 02:44	1
Benzene	ND		0.50		ug/L			08/31/16 02:44	1
Dichlorobromomethane	ND		0.50		ug/L			08/31/16 02:44	1
Bromobenzene	ND		1.0		ug/L			08/31/16 02:44	1
Chlorobromomethane	ND		1.0		ug/L			08/31/16 02:44	1
Bromoform	ND		1.0		ug/L			08/31/16 02:44	1
Bromomethane	ND		1.0		ug/L			08/31/16 02:44	1
2-Butanone (MEK)	ND		50		ug/L			08/31/16 02:44	1
n-Butylbenzene	ND		1.0		ug/L			08/31/16 02:44	1
sec-Butylbenzene	ND		1.0		ug/L			08/31/16 02:44	1
tert-Butylbenzene	ND		1.0		ug/L			08/31/16 02:44	1
Carbon disulfide	ND		5.0		ug/L			08/31/16 02:44	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/16 02:44	1
Chlorobenzene	ND		0.50		ug/L			08/31/16 02:44	1
Chloroethane	ND		1.0		ug/L			08/31/16 02:44	1
Chloroform	ND		1.0		ug/L			08/31/16 02:44	1
Chloromethane	ND		1.0		ug/L			08/31/16 02:44	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/16 02:44	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/16 02:44	1
Chlorodibromomethane	ND		0.50		ug/L			08/31/16 02:44	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/16 02:44	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/16 02:44	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/16 02:44	1
1,3-Dichloropropane	ND		1.0		ug/L			08/31/16 02:44	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/16 02:44	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/16 02:44	1
Ethylene Dibromide	ND		0.50		ug/L			08/31/16 02:44	1
Dibromomethane	ND		0.50		ug/L			08/31/16 02:44	1
Dichlorodifluoromethane	ND		0.50		ug/L			08/31/16 02:44	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/16 02:44	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/16 02:44	1
1,1-Dichloroethene	ND		0.50		ug/L			08/31/16 02:44	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/16 02:44	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/16 02:44	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/16 02:44	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/16 02:44	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/16 02:44	1
Ethylbenzene	ND		0.50		ug/L			08/31/16 02:44	1
Hexachlorobutadiene	ND		1.0		ug/L			08/31/16 02:44	1
2-Hexanone	ND		50		ug/L			08/31/16 02:44	1
Isopropylbenzene	ND		0.50		ug/L			08/31/16 02:44	1
4-Isopropyltoluene	ND		1.0		ug/L			08/31/16 02:44	1
Methylene Chloride	ND		5.0		ug/L			08/31/16 02:44	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			08/31/16 02:44	1
Naphthalene	ND		1.0		ug/L			08/31/16 02:44	1
N-Propylbenzene	ND		1.0		ug/L			08/31/16 02:44	1
Styrene	ND		0.50		ug/L			08/31/16 02:44	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/16 02:44	1

Client Sample ID: MW-2
Date Collected: 08/24/16 12:41
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-2
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/16 02:44	1
Tetrachloroethene	ND		0.50		ug/L			08/31/16 02:44	1
Toluene	ND		0.50		ug/L			08/31/16 02:44	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			08/31/16 02:44	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			08/31/16 02:44	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/16 02:44	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/16 02:44	1
Trichloroethene	ND		0.50		ug/L			08/31/16 02:44	1
Trichlorofluoromethane	ND		1.0		ug/L			08/31/16 02:44	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/16 02:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/16 02:44	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/16 02:44	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/16 02:44	1
Vinyl acetate	ND		10		ug/L			08/31/16 02:44	1
Vinyl chloride	ND		0.50		ug/L			08/31/16 02:44	1
Xylenes, Total	ND		1.0		ug/L			08/31/16 02:44	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/16 02:44	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/31/16 02:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*08/31/16 02:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*08/31/16 02:44*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/31/16 02:44*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		08/29/16 10:47	08/29/16 19:17	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/29/16 10:47	08/29/16 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*85*		*23 - 156*	*08/29/16 10:47*	*08/29/16 19:17*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		08/29/16 16:17	08/31/16 17:06	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/29/16 16:17	08/31/16 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*08/29/16 16:17*	*08/31/16 17:06*	*1*
p-Terphenyl	*81*		*31 - 150*	*08/29/16 16:17*	*08/31/16 17:06*	*1*

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Client Sample ID: MW-3
Date Collected: 08/24/16 14:25
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-3
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	**1.3**		0.50		ug/L			08/31/16 03:42	1
Acetone	ND		50		ug/L			08/31/16 03:42	1
Benzene	ND		0.50		ug/L			08/31/16 03:42	1
Dichlorobromomethane	ND		0.50		ug/L			08/31/16 03:42	1
Bromobenzene	ND		1.0		ug/L			08/31/16 03:42	1
Chlorobromomethane	ND		1.0		ug/L			08/31/16 03:42	1
Bromoform	ND		1.0		ug/L			08/31/16 03:42	1
Bromomethane	ND		1.0		ug/L			08/31/16 03:42	1
2-Butanone (MEK)	ND		50		ug/L			08/31/16 03:42	1
n-Butylbenzene	ND		1.0		ug/L			08/31/16 03:42	1
sec-Butylbenzene	ND		1.0		ug/L			08/31/16 03:42	1
tert-Butylbenzene	ND		1.0		ug/L			08/31/16 03:42	1
Carbon disulfide	ND		5.0		ug/L			08/31/16 03:42	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/16 03:42	1
Chlorobenzene	ND		0.50		ug/L			08/31/16 03:42	1
Chloroethane	ND		1.0		ug/L			08/31/16 03:42	1
Chloroform	ND		1.0		ug/L			08/31/16 03:42	1
Chloromethane	ND		1.0		ug/L			08/31/16 03:42	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/16 03:42	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/16 03:42	1
Chlorodibromomethane	ND		0.50		ug/L			08/31/16 03:42	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/16 03:42	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/16 03:42	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/16 03:42	1
1,3-Dichloropropane	ND		1.0		ug/L			08/31/16 03:42	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/16 03:42	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/16 03:42	1
Ethylene Dibromide	ND		0.50		ug/L			08/31/16 03:42	1
Dibromomethane	ND		0.50		ug/L			08/31/16 03:42	1
Dichlorodifluoromethane	ND		0.50		ug/L			08/31/16 03:42	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/16 03:42	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/16 03:42	1
1,1-Dichloroethene	**0.58**		0.50		ug/L			08/31/16 03:42	1
cis-1,2-Dichloroethene	**190**		0.50		ug/L			08/31/16 03:42	1
trans-1,2-Dichloroethene	**19**		0.50		ug/L			08/31/16 03:42	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/16 03:42	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/16 03:42	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/16 03:42	1
Ethylbenzene	ND		0.50		ug/L			08/31/16 03:42	1
Hexachlorobutadiene	ND		1.0		ug/L			08/31/16 03:42	1
2-Hexanone	ND		50		ug/L			08/31/16 03:42	1
Isopropylbenzene	ND		0.50		ug/L			08/31/16 03:42	1
4-Isopropyltoluene	ND		1.0		ug/L			08/31/16 03:42	1
Methylene Chloride	ND		5.0		ug/L			08/31/16 03:42	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			08/31/16 03:42	1
Naphthalene	ND		1.0		ug/L			08/31/16 03:42	1
N-Propylbenzene	ND		1.0		ug/L			08/31/16 03:42	1
Styrene	ND		0.50		ug/L			08/31/16 03:42	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/16 03:42	1

Client Sample ID: MW-3
Date Collected: 08/24/16 14:25
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-3
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/16 03:42	1
Tetrachloroethene	ND		0.50		ug/L			08/31/16 03:42	1
Toluene	ND		0.50		ug/L			08/31/16 03:42	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			08/31/16 03:42	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			08/31/16 03:42	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/16 03:42	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/16 03:42	1
Trichloroethene	**53**		0.50		ug/L			08/31/16 03:42	1
Trichlorofluoromethane	ND		1.0		ug/L			08/31/16 03:42	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/16 03:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/16 03:42	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/16 03:42	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/16 03:42	1
Vinyl acetate	ND		10		ug/L			08/31/16 03:42	1
Vinyl chloride	**1.8**		0.50		ug/L			08/31/16 03:42	1
Xylenes, Total	ND		1.0		ug/L			08/31/16 03:42	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/16 03:42	1
Gasoline Range Organics (GRO) -C5-C12	**150**		50		ug/L			08/31/16 03:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*08/31/16 03:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*08/31/16 03:42*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/31/16 03:42*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		08/29/16 10:47	08/29/16 19:42	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/29/16 10:47	08/29/16 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*78*		*23 - 156*	*08/29/16 10:47*	*08/29/16 19:42*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		08/29/16 16:17	08/31/16 17:35	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/29/16 16:17	08/31/16 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*08/29/16 16:17*	*08/31/16 17:35*	*1*
p-Terphenyl	*75*		*31 - 150*	*08/29/16 16:17*	*08/31/16 17:35*	*1*

Client Sample ID: DUP-1
Date Collected: 08/24/16 12:50
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-4
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/31/16 03:12	1
Acetone	ND		50		ug/L			08/31/16 03:12	1
Benzene	ND		0.50		ug/L			08/31/16 03:12	1
Dichlorobromomethane	ND		0.50		ug/L			08/31/16 03:12	1
Bromobenzene	ND		1.0		ug/L			08/31/16 03:12	1
Chlorobromomethane	ND		1.0		ug/L			08/31/16 03:12	1
Bromoform	ND		1.0		ug/L			08/31/16 03:12	1
Bromomethane	ND		1.0		ug/L			08/31/16 03:12	1
2-Butanone (MEK)	ND		50		ug/L			08/31/16 03:12	1
n-Butylbenzene	ND		1.0		ug/L			08/31/16 03:12	1
sec-Butylbenzene	ND		1.0		ug/L			08/31/16 03:12	1
tert-Butylbenzene	ND		1.0		ug/L			08/31/16 03:12	1
Carbon disulfide	ND		5.0		ug/L			08/31/16 03:12	1
Carbon tetrachloride	ND		0.50		ug/L			08/31/16 03:12	1
Chlorobenzene	ND		0.50		ug/L			08/31/16 03:12	1
Chloroethane	ND		1.0		ug/L			08/31/16 03:12	1
Chloroform	ND		1.0		ug/L			08/31/16 03:12	1
Chloromethane	ND		1.0		ug/L			08/31/16 03:12	1
2-Chlorotoluene	ND		0.50		ug/L			08/31/16 03:12	1
4-Chlorotoluene	ND		0.50		ug/L			08/31/16 03:12	1
Chlorodibromomethane	ND		0.50		ug/L			08/31/16 03:12	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/31/16 03:12	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/31/16 03:12	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/31/16 03:12	1
1,3-Dichloropropane	ND		1.0		ug/L			08/31/16 03:12	1
1,1-Dichloropropene	ND		0.50		ug/L			08/31/16 03:12	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/31/16 03:12	1
Ethylene Dibromide	ND		0.50		ug/L			08/31/16 03:12	1
Dibromomethane	ND		0.50		ug/L			08/31/16 03:12	1
Dichlorodifluoromethane	ND		0.50		ug/L			08/31/16 03:12	1
1,1-Dichloroethane	ND		0.50		ug/L			08/31/16 03:12	1
1,2-Dichloroethane	ND		0.50		ug/L			08/31/16 03:12	1
1,1-Dichloroethene	ND		0.50		ug/L			08/31/16 03:12	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/31/16 03:12	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/31/16 03:12	1
1,2-Dichloropropane	ND		0.50		ug/L			08/31/16 03:12	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/31/16 03:12	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/31/16 03:12	1
Ethylbenzene	ND		0.50		ug/L			08/31/16 03:12	1
Hexachlorobutadiene	ND		1.0		ug/L			08/31/16 03:12	1
2-Hexanone	ND		50		ug/L			08/31/16 03:12	1
Isopropylbenzene	ND		0.50		ug/L			08/31/16 03:12	1
4-Isopropyltoluene	ND		1.0		ug/L			08/31/16 03:12	1
Methylene Chloride	ND		5.0		ug/L			08/31/16 03:12	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			08/31/16 03:12	1
Naphthalene	ND		1.0		ug/L			08/31/16 03:12	1
N-Propylbenzene	ND		1.0		ug/L			08/31/16 03:12	1
Styrene	ND		0.50		ug/L			08/31/16 03:12	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/31/16 03:12	1

Client Sample ID: DUP-1
Date Collected: 08/24/16 12:50
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-4
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/31/16 03:12	1
Tetrachloroethene	ND		0.50		ug/L			08/31/16 03:12	1
Toluene	ND		0.50		ug/L			08/31/16 03:12	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			08/31/16 03:12	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			08/31/16 03:12	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/31/16 03:12	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/31/16 03:12	1
Trichloroethene	ND		0.50		ug/L			08/31/16 03:12	1
Trichlorofluoromethane	ND		1.0		ug/L			08/31/16 03:12	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/31/16 03:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/31/16 03:12	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/31/16 03:12	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/31/16 03:12	1
Vinyl acetate	ND		10		ug/L			08/31/16 03:12	1
Vinyl chloride	ND		0.50		ug/L			08/31/16 03:12	1
Xylenes, Total	ND		1.0		ug/L			08/31/16 03:12	1
2,2-Dichloropropane	ND		0.50		ug/L			08/31/16 03:12	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/31/16 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*08/31/16 03:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*		*08/31/16 03:12*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/31/16 03:12*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		08/29/16 10:47	08/29/16 20:06	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/29/16 10:47	08/29/16 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*88*		*23 - 156*	*08/29/16 10:47*	*08/29/16 20:06*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		08/29/16 16:17	08/31/16 18:04	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/29/16 16:17	08/31/16 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*08/29/16 16:17*	*08/31/16 18:04*	*1*
p-Terphenyl	*80*		*31 - 150*	*08/29/16 16:17*	*08/31/16 18:04*	*1*

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Client Sample ID: TB-1
Date Collected: 08/24/16 14:30
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-5
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/30/16 23:50	1
Acetone	ND		50		ug/L			08/30/16 23:50	1
Benzene	ND		0.50		ug/L			08/30/16 23:50	1
Dichlorobromomethane	ND		0.50		ug/L			08/30/16 23:50	1
Bromobenzene	ND		1.0		ug/L			08/30/16 23:50	1
Chlorobromomethane	ND		1.0		ug/L			08/30/16 23:50	1
Bromoform	ND		1.0		ug/L			08/30/16 23:50	1
Bromomethane	ND		1.0		ug/L			08/30/16 23:50	1
2-Butanone (MEK)	ND		50		ug/L			08/30/16 23:50	1
n-Butylbenzene	ND		1.0		ug/L			08/30/16 23:50	1
sec-Butylbenzene	ND		1.0		ug/L			08/30/16 23:50	1
tert-Butylbenzene	ND		1.0		ug/L			08/30/16 23:50	1
Carbon disulfide	ND		5.0		ug/L			08/30/16 23:50	1
Carbon tetrachloride	ND		0.50		ug/L			08/30/16 23:50	1
Chlorobenzene	ND		0.50		ug/L			08/30/16 23:50	1
Chloroethane	ND		1.0		ug/L			08/30/16 23:50	1
Chloroform	ND		1.0		ug/L			08/30/16 23:50	1
Chloromethane	ND		1.0		ug/L			08/30/16 23:50	1
2-Chlorotoluene	ND		0.50		ug/L			08/30/16 23:50	1
4-Chlorotoluene	ND		0.50		ug/L			08/30/16 23:50	1
Chlorodibromomethane	ND		0.50		ug/L			08/30/16 23:50	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/30/16 23:50	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/30/16 23:50	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/30/16 23:50	1
1,3-Dichloropropane	ND		1.0		ug/L			08/30/16 23:50	1
1,1-Dichloropropene	ND		0.50		ug/L			08/30/16 23:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/30/16 23:50	1
Ethylene Dibromide	ND		0.50		ug/L			08/30/16 23:50	1
Dibromomethane	ND		0.50		ug/L			08/30/16 23:50	1
Dichlorodifluoromethane	ND		0.50		ug/L			08/30/16 23:50	1
1,1-Dichloroethane	ND		0.50		ug/L			08/30/16 23:50	1
1,2-Dichloroethane	ND		0.50		ug/L			08/30/16 23:50	1
1,1-Dichloroethene	ND		0.50		ug/L			08/30/16 23:50	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/30/16 23:50	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/30/16 23:50	1
1,2-Dichloropropane	ND		0.50		ug/L			08/30/16 23:50	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/30/16 23:50	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/30/16 23:50	1
Ethylbenzene	ND		0.50		ug/L			08/30/16 23:50	1
Hexachlorobutadiene	ND		1.0		ug/L			08/30/16 23:50	1
2-Hexanone	ND		50		ug/L			08/30/16 23:50	1
Isopropylbenzene	ND		0.50		ug/L			08/30/16 23:50	1
4-Isopropyltoluene	ND		1.0		ug/L			08/30/16 23:50	1
Methylene Chloride	ND		5.0		ug/L			08/30/16 23:50	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			08/30/16 23:50	1
Naphthalene	ND		1.0		ug/L			08/30/16 23:50	1
N-Propylbenzene	ND		1.0		ug/L			08/30/16 23:50	1
Styrene	ND		0.50		ug/L			08/30/16 23:50	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/30/16 23:50	1

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Client Sample ID: TB-1
Date Collected: 08/24/16 14:30
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-5
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/30/16 23:50	1
Tetrachloroethene	ND		0.50		ug/L			08/30/16 23:50	1
Toluene	ND		0.50		ug/L			08/30/16 23:50	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			08/30/16 23:50	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			08/30/16 23:50	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/30/16 23:50	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/30/16 23:50	1
Trichloroethene	ND		0.50		ug/L			08/30/16 23:50	1
Trichlorofluoromethane	ND		1.0		ug/L			08/30/16 23:50	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/30/16 23:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/30/16 23:50	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/30/16 23:50	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/30/16 23:50	1
Vinyl acetate	ND		10		ug/L			08/30/16 23:50	1
Vinyl chloride	ND		0.50		ug/L			08/30/16 23:50	1
Xylenes, Total	ND		1.0		ug/L			08/30/16 23:50	1
2,2-Dichloropropane	ND		0.50		ug/L			08/30/16 23:50	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/30/16 23:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*67 - 130*		*08/30/16 23:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*08/30/16 23:50*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*08/30/16 23:50*	*1*

Surrogate Summary

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-74147-1	MW-1	92	100	101
720-74147-2	MW-2	93	101	101
720-74147-3	MW-3	93	101	101
720-74147-4	DUP-1	93	100	101
720-74147-5	TB-1	92	101	102
720-74164-A-1 MS	Matrix Spike	98	97	102
720-74164-A-1 MSD	Matrix Spike Duplicate	98	98	102
LCS 720-208509/5	Lab Control Sample	101	97	103
LCS 720-208509/7	Lab Control Sample	98	100	104
LCSD 720-208509/6	Lab Control Sample Dup	101	100	103
LCSD 720-208509/8	Lab Control Sample Dup	98	100	103
MB 720-208509/4	Method Blank	94	99	102

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		PTP1
Lab Sample ID	Client Sample ID	(23-156)
720-74147-1	MW-1	89
720-74147-2	MW-2	85
720-74147-3	MW-3	78
720-74147-4	DUP-1	88
LCS 720-208406/2-A	Lab Control Sample	82
LCSD 720-208406/3-A	Lab Control Sample Dup	76
MB 720-208406/1-A	Method Blank	83

Surrogate Legend

PTP = p-Terphenyl

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)	
		NDA1	PTP1
Lab Sample ID	Client Sample ID	(0-5)	(31-150)
720-74147-1	MW-1	0	78
720-74147-2	MW-2	0	81
720-74147-3	MW-3	0	75
720-74147-4	DUP-1	0	80
LCS 720-208428/2-A	Lab Control Sample		82
LCSD 720-208428/3-A	Lab Control Sample Dup		74
MB 720-208428/1-A	Method Blank	0	69

Surrogate Legend

Surrogate Summary

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

NDA = Capric Acid (Surr)
PTP = p-Terphenyl

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-208509/4
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			08/30/16 19:30	1
Acetone	ND		50		ug/L			08/30/16 19:30	1
Benzene	ND		0.50		ug/L			08/30/16 19:30	1
Dichlorobromomethane	ND		0.50		ug/L			08/30/16 19:30	1
Bromobenzene	ND		1.0		ug/L			08/30/16 19:30	1
Chlorobromomethane	ND		1.0		ug/L			08/30/16 19:30	1
Bromoform	ND		1.0		ug/L			08/30/16 19:30	1
Bromomethane	ND		1.0		ug/L			08/30/16 19:30	1
2-Butanone (MEK)	ND		50		ug/L			08/30/16 19:30	1
n-Butylbenzene	ND		1.0		ug/L			08/30/16 19:30	1
sec-Butylbenzene	ND		1.0		ug/L			08/30/16 19:30	1
tert-Butylbenzene	ND		1.0		ug/L			08/30/16 19:30	1
Carbon disulfide	ND		5.0		ug/L			08/30/16 19:30	1
Carbon tetrachloride	ND		0.50		ug/L			08/30/16 19:30	1
Chlorobenzene	ND		0.50		ug/L			08/30/16 19:30	1
Chloroethane	ND		1.0		ug/L			08/30/16 19:30	1
Chloroform	ND		1.0		ug/L			08/30/16 19:30	1
Chloromethane	ND		1.0		ug/L			08/30/16 19:30	1
2-Chlorotoluene	ND		0.50		ug/L			08/30/16 19:30	1
4-Chlorotoluene	ND		0.50		ug/L			08/30/16 19:30	1
Chlorodibromomethane	ND		0.50		ug/L			08/30/16 19:30	1
1,2-Dichlorobenzene	ND		0.50		ug/L			08/30/16 19:30	1
1,3-Dichlorobenzene	ND		0.50		ug/L			08/30/16 19:30	1
1,4-Dichlorobenzene	ND		0.50		ug/L			08/30/16 19:30	1
1,3-Dichloropropane	ND		1.0		ug/L			08/30/16 19:30	1
1,1-Dichloropropene	ND		0.50		ug/L			08/30/16 19:30	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			08/30/16 19:30	1
Ethylene Dibromide	ND		0.50		ug/L			08/30/16 19:30	1
Dibromomethane	ND		0.50		ug/L			08/30/16 19:30	1
Dichlorodifluoromethane	ND		0.50		ug/L			08/30/16 19:30	1
1,1-Dichloroethane	ND		0.50		ug/L			08/30/16 19:30	1
1,2-Dichloroethane	ND		0.50		ug/L			08/30/16 19:30	1
1,1-Dichloroethene	ND		0.50		ug/L			08/30/16 19:30	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			08/30/16 19:30	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			08/30/16 19:30	1
1,2-Dichloropropane	ND		0.50		ug/L			08/30/16 19:30	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			08/30/16 19:30	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			08/30/16 19:30	1
Ethylbenzene	ND		0.50		ug/L			08/30/16 19:30	1
Hexachlorobutadiene	ND		1.0		ug/L			08/30/16 19:30	1
2-Hexanone	ND		50		ug/L			08/30/16 19:30	1
Isopropylbenzene	ND		0.50		ug/L			08/30/16 19:30	1
4-Isopropyltoluene	ND		1.0		ug/L			08/30/16 19:30	1
Methylene Chloride	ND		5.0		ug/L			08/30/16 19:30	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			08/30/16 19:30	1
Naphthalene	ND		1.0		ug/L			08/30/16 19:30	1
N-Propylbenzene	ND		1.0		ug/L			08/30/16 19:30	1
Styrene	ND		0.50		ug/L			08/30/16 19:30	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-208509/4
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			08/30/16 19:30	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			08/30/16 19:30	1
Tetrachloroethene	ND		0.50		ug/L			08/30/16 19:30	1
Toluene	ND		0.50		ug/L			08/30/16 19:30	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			08/30/16 19:30	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			08/30/16 19:30	1
1,1,1-Trichloroethane	ND		0.50		ug/L			08/30/16 19:30	1
1,1,2-Trichloroethane	ND		0.50		ug/L			08/30/16 19:30	1
Trichloroethene	ND		0.50		ug/L			08/30/16 19:30	1
Trichlorofluoromethane	ND		1.0		ug/L			08/30/16 19:30	1
1,2,3-Trichloropropane	ND		0.50		ug/L			08/30/16 19:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			08/30/16 19:30	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			08/30/16 19:30	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			08/30/16 19:30	1
Vinyl acetate	ND		10		ug/L			08/30/16 19:30	1
Vinyl chloride	ND		0.50		ug/L			08/30/16 19:30	1
Xylenes, Total	ND		1.0		ug/L			08/30/16 19:30	1
2,2-Dichloropropane	ND		0.50		ug/L			08/30/16 19:30	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/30/16 19:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*67 - 130*		*08/30/16 19:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*		*08/30/16 19:30*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*08/30/16 19:30*	*1*

Lab Sample ID: LCS 720-208509/5
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	26.4		ug/L		105	62 - 130
Acetone	125	104		ug/L		83	26 - 180
Benzene	25.0	26.7		ug/L		107	79 - 130
Dichlorobromomethane	25.0	27.0		ug/L		108	70 - 130
Bromobenzene	25.0	25.0		ug/L		100	70 - 130
Chlorobromomethane	25.0	27.0		ug/L		108	70 - 130
Bromoform	25.0	26.0		ug/L		104	68 - 136
Bromomethane	25.0	27.0		ug/L		108	43 - 151
2-Butanone (MEK)	125	105		ug/L		84	54 - 130
n-Butylbenzene	25.0	25.9		ug/L		104	70 - 142
sec-Butylbenzene	25.0	25.8		ug/L		103	70 - 134
tert-Butylbenzene	25.0	24.8		ug/L		99	70 - 135
Carbon disulfide	25.0	26.3		ug/L		105	58 - 130
Carbon tetrachloride	25.0	26.7		ug/L		107	70 - 146
Chlorobenzene	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	26.1		ug/L		104	62 - 138
Chloroform	25.0	26.6		ug/L		106	70 - 130

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-208509/5
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	25.0	26.6		ug/L		107	52 - 175
2-Chlorotoluene	25.0	25.2		ug/L		101	70 - 130
4-Chlorotoluene	25.0	25.3		ug/L		101	70 - 130
Chlorodibromomethane	25.0	25.7		ug/L		103	70 - 145
1,2-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130
1,3-Dichlorobenzene	25.0	25.9		ug/L		104	70 - 130
1,4-Dichlorobenzene	25.0	26.1		ug/L		104	70 - 130
1,3-Dichloropropane	25.0	26.6		ug/L		106	70 - 130
1,1-Dichloropropene	25.0	26.5		ug/L		106	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.7		ug/L		95	70 - 136
Ethylene Dibromide	25.0	28.8		ug/L		115	70 - 130
Dibromomethane	25.0	26.5		ug/L		106	70 - 130
Dichlorodifluoromethane	25.0	30.4		ug/L		122	32 - 158
1,1-Dichloroethane	25.0	26.0		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	26.1		ug/L		104	61 - 132
1,1-Dichloroethene	25.0	26.2		ug/L		105	64 - 128
cis-1,2-Dichloroethene	25.0	27.1		ug/L		109	70 - 130
trans-1,2-Dichloroethene	25.0	27.3		ug/L		109	68 - 130
1,2-Dichloropropane	25.0	27.3		ug/L		109	70 - 130
cis-1,3-Dichloropropene	25.0	28.3		ug/L		113	70 - 130
trans-1,3-Dichloropropene	25.0	27.4		ug/L		110	70 - 140
Ethylbenzene	25.0	26.1		ug/L		105	80 - 120
Hexachlorobutadiene	25.0	26.4		ug/L		106	70 - 130
2-Hexanone	125	99.2		ug/L		79	60 - 164
Isopropylbenzene	25.0	26.9		ug/L		108	70 - 130
4-Isopropyltoluene	25.0	26.0		ug/L		104	70 - 130
Methylene Chloride	25.0	25.8		ug/L		103	70 - 147
4-Methyl-2-pentanone (MIBK)	125	100		ug/L		80	58 - 130
Naphthalene	25.0	24.9		ug/L		99	50 - 130
N-Propylbenzene	25.0	24.9		ug/L		100	70 - 130
Styrene	25.0	26.3		ug/L		105	70 - 130
1,1,1,2-Tetrachloroethane	25.0	25.3		ug/L		101	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		98	70 - 130
Tetrachloroethene	25.0	28.5		ug/L		114	70 - 130
Toluene	25.0	25.8		ug/L		103	78 - 120
1,2,3-Trichlorobenzene	25.0	27.0		ug/L		108	70 - 130
1,2,4-Trichlorobenzene	25.0	26.4		ug/L		106	70 - 130
1,1,1-Trichloroethane	25.0	26.4		ug/L		106	70 - 130
1,1,2-Trichloroethane	25.0	27.3		ug/L		109	70 - 130
Trichloroethene	25.0	27.7		ug/L		111	70 - 130
Trichlorofluoromethane	25.0	26.5		ug/L		106	66 - 132
1,2,3-Trichloropropane	25.0	25.2		ug/L		101	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	28.0		ug/L		112	42 - 162
1,2,4-Trimethylbenzene	25.0	25.3		ug/L		101	70 - 132
1,3,5-Trimethylbenzene	25.0	25.6		ug/L		102	70 - 130
Vinyl acetate	25.0	27.4		ug/L		110	43 - 163
Vinyl chloride	25.0	26.2		ug/L		105	54 - 135

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-208509/5
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	25.0	26.2		ug/L		105	70 - 142
o-Xylene	25.0	26.1		ug/L		104	70 - 130
2,2-Dichloropropane	25.0	27.4		ug/L		110	70 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCS 720-208509/7
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	491		ug/L		98	71 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 720-208509/6
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	27.4		ug/L		110	62 - 130	4	20
Acetone	125	113		ug/L		91	26 - 180	9	30
Benzene	25.0	26.3		ug/L		105	79 - 130	2	20
Dichlorobromomethane	25.0	26.9		ug/L		108	70 - 130	0	20
Bromobenzene	25.0	24.8		ug/L		99	70 - 130	1	20
Chlorobromomethane	25.0	27.3		ug/L		109	70 - 130	1	20
Bromoform	25.0	26.8		ug/L		107	68 - 136	3	20
Bromomethane	25.0	27.1		ug/L		108	43 - 151	0	20
2-Butanone (MEK)	125	112		ug/L		90	54 - 130	6	20
n-Butylbenzene	25.0	25.2		ug/L		101	70 - 142	3	20
sec-Butylbenzene	25.0	25.2		ug/L		101	70 - 134	2	20
tert-Butylbenzene	25.0	24.3		ug/L		97	70 - 135	2	20
Carbon disulfide	25.0	26.2		ug/L		105	58 - 130	1	20
Carbon tetrachloride	25.0	26.3		ug/L		105	70 - 146	1	20
Chlorobenzene	25.0	25.6		ug/L		102	70 - 130	1	20
Chloroethane	25.0	26.0		ug/L		104	62 - 138	0	20
Chloroform	25.0	26.5		ug/L		106	70 - 130	0	20
Chloromethane	25.0	26.7		ug/L		107	52 - 175	0	20
2-Chlorotoluene	25.0	24.6		ug/L		98	70 - 130	2	20
4-Chlorotoluene	25.0	24.8		ug/L		99	70 - 130	2	20
Chlorodibromomethane	25.0	26.1		ug/L		104	70 - 145	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-208509/6
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichlorobenzene			25.0	25.4		ug/L		101	70 - 130	2	20
1,3-Dichlorobenzene			25.0	25.3		ug/L		101	70 - 130	2	20
1,4-Dichlorobenzene			25.0	25.8		ug/L		103	70 - 130	1	20
1,3-Dichloropropane			25.0	26.9		ug/L		108	70 - 130	1	20
1,1-Dichloropropene			25.0	26.2		ug/L		105	70 - 130	1	20
1,2-Dibromo-3-Chloropropane			25.0	25.0		ug/L		100	70 - 136	5	20
Ethylene Dibromide			25.0	29.3		ug/L		117	70 - 130	2	20
Dibromomethane			25.0	26.8		ug/L		107	70 - 130	1	20
Dichlorodifluoromethane			25.0	30.2		ug/L		121	32 - 158	1	20
1,1-Dichloroethane			25.0	25.9		ug/L		104	70 - 130	0	20
1,2-Dichloroethane			25.0	26.1		ug/L		104	61 - 132	0	20
1,1-Dichloroethene			25.0	26.0		ug/L		104	64 - 128	1	20
cis-1,2-Dichloroethene			25.0	27.0		ug/L		108	70 - 130	0	20
trans-1,2-Dichloroethene			25.0	26.8		ug/L		107	68 - 130	2	20
1,2-Dichloropropane			25.0	27.1		ug/L		108	70 - 130	1	20
cis-1,3-Dichloropropene			25.0	28.3		ug/L		113	70 - 130	0	20
trans-1,3-Dichloropropene			25.0	27.8		ug/L		111	70 - 140	1	20
Ethylbenzene			25.0	25.6		ug/L		102	80 - 120	2	20
Hexachlorobutadiene			25.0	25.7		ug/L		103	70 - 130	3	20
2-Hexanone			125	107		ug/L		86	60 - 164	8	20
Isopropylbenzene			25.0	26.3		ug/L		105	70 - 130	3	20
4-Isopropyltoluene			25.0	25.5		ug/L		102	70 - 130	2	20
Methylene Chloride			25.0	25.9		ug/L		104	70 - 147	1	20
4-Methyl-2-pentanone (MIBK)			125	108		ug/L		86	58 - 130	7	20
Naphthalene			25.0	25.6		ug/L		102	50 - 130	3	20
N-Propylbenzene			25.0	24.3		ug/L		97	70 - 130	3	20
Styrene			25.0	26.1		ug/L		104	70 - 130	1	20
1,1,1,2-Tetrachloroethane			25.0	25.2		ug/L		101	70 - 130	0	20
1,1,2,2-Tetrachloroethane			25.0	24.9		ug/L		100	70 - 130	2	20
Tetrachloroethene			25.0	27.8		ug/L		111	70 - 130	2	20
Toluene			25.0	25.5		ug/L		102	78 - 120	1	20
1,2,3-Trichlorobenzene			25.0	27.1		ug/L		108	70 - 130	0	20
1,2,4-Trichlorobenzene			25.0	26.4		ug/L		105	70 - 130	0	20
1,1,1-Trichloroethane			25.0	26.2		ug/L		105	70 - 130	1	20
1,1,2-Trichloroethane			25.0	27.6		ug/L		110	70 - 130	1	20
Trichloroethene			25.0	27.2		ug/L		109	70 - 130	2	20
Trichlorofluoromethane			25.0	26.5		ug/L		106	66 - 132	0	20
1,2,3-Trichloropropane			25.0	25.9		ug/L		104	70 - 130	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane			25.0	27.8		ug/L		111	42 - 162	1	20
1,2,4-Trimethylbenzene			25.0	24.8		ug/L		99	70 - 132	2	20
1,3,5-Trimethylbenzene			25.0	24.8		ug/L		99	70 - 130	3	20
Vinyl acetate			25.0	28.2		ug/L		113	43 - 163	3	20
Vinyl chloride			25.0	26.0		ug/L		104	54 - 135	1	20
m-Xylene & p-Xylene			25.0	25.6		ug/L		102	70 - 142	2	20
o-Xylene			25.0	25.6		ug/L		102	70 - 130	2	20
2,2-Dichloropropane			25.0	27.0		ug/L		108	70 - 140	1	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-208509/6
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 720-208509/8
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			500	483		ug/L		97	71 - 125	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	*98*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: 720-74164-A-1 MS
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	ND		500	534		ug/L		107	60 - 138
Acetone	ND		2500	1980		ug/L		79	60 - 140
Benzene	12		500	553		ug/L		108	60 - 140
Dichlorobromomethane	ND		500	545		ug/L		109	60 - 140
Bromobenzene	ND		500	504		ug/L		101	60 - 140
Chlorobromomethane	ND		500	546		ug/L		109	60 - 140
Bromoform	ND		500	517		ug/L		103	56 - 140
Bromomethane	ND		500	538		ug/L		108	23 - 140
2-Butanone (MEK)	ND		2500	2110		ug/L		84	60 - 140
n-Butylbenzene	ND		500	510		ug/L		102	60 - 140
sec-Butylbenzene	ND		500	522		ug/L		104	60 - 140
tert-Butylbenzene	ND		500	501		ug/L		100	60 - 140
Carbon disulfide	ND		500	522		ug/L		104	38 - 140
Carbon tetrachloride	ND		500	526		ug/L		105	60 - 140
Chlorobenzene	ND		500	520		ug/L		104	60 - 140
Chloroethane	ND		500	520		ug/L		104	51 - 140
Chloroform	ND		500	534		ug/L		107	60 - 140
Chloromethane	ND		500	527		ug/L		105	52 - 140
2-Chlorotoluene	ND		500	508		ug/L		102	60 - 140
4-Chlorotoluene	ND		500	510		ug/L		102	60 - 140
Chlorodibromomethane	ND		500	519		ug/L		104	60 - 140
1,2-Dichlorobenzene	ND		500	524		ug/L		105	60 - 140
1,3-Dichlorobenzene	ND		500	521		ug/L		104	60 - 140
1,4-Dichlorobenzene	ND		500	525		ug/L		105	60 - 140
1,3-Dichloropropane	ND		500	546		ug/L		109	60 - 140
1,1-Dichloropropene	ND		500	527		ug/L		105	60 - 140

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-74164-A-1 MS
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	ND		500	498		ug/L		100	60 - 140
Ethylene Dibromide	ND		500	587		ug/L		117	60 - 140
Dibromomethane	ND		500	543		ug/L		109	60 - 140
Dichlorodifluoromethane	ND		500	601		ug/L		120	38 - 140
1,1-Dichloroethane	ND		500	518		ug/L		104	60 - 140
1,2-Dichloroethane	ND		500	526		ug/L		105	60 - 140
1,1-Dichloroethene	ND		500	521		ug/L		103	60 - 140
cis-1,2-Dichloroethene	1600		500	2300		ug/L		133	60 - 140
trans-1,2-Dichloroethene	18		500	554		ug/L		107	60 - 140
1,2-Dichloropropane	ND		500	550		ug/L		110	60 - 140
cis-1,3-Dichloropropene	ND		500	562		ug/L		112	60 - 140
trans-1,3-Dichloropropene	ND		500	551		ug/L		110	60 - 140
Ethylbenzene	ND		500	522		ug/L		104	60 - 140
Hexachlorobutadiene	ND		500	515		ug/L		103	60 - 140
2-Hexanone	ND		2500	2020		ug/L		81	60 - 140
Isopropylbenzene	ND		500	534		ug/L		107	60 - 140
4-Isopropyltoluene	ND		500	520		ug/L		104	60 - 140
Methylene Chloride	ND		500	511		ug/L		102	40 - 140
4-Methyl-2-pentanone (MIBK)	ND		2500	2100		ug/L		84	58 - 130
Naphthalene	ND		500	517		ug/L		103	56 - 140
N-Propylbenzene	ND		500	501		ug/L		100	60 - 140
Styrene	ND		500	524		ug/L		105	60 - 140
1,1,1,2-Tetrachloroethane	ND		500	503		ug/L		101	60 - 140
1,1,2,2-Tetrachloroethane	ND		500	508		ug/L		102	60 - 140
Tetrachloroethene	ND		500	561		ug/L		112	60 - 140
Toluene	ND		500	517		ug/L		103	60 - 140
1,2,3-Trichlorobenzene	ND		500	539		ug/L		108	60 - 140
1,2,4-Trichlorobenzene	ND		500	522		ug/L		104	60 - 140
1,1,1-Trichloroethane	ND		500	525		ug/L		105	60 - 140
1,1,2-Trichloroethane	ND		500	553		ug/L		111	60 - 140
Trichloroethene	84		500	649		ug/L		113	60 - 140
Trichlorofluoromethane	ND		500	520		ug/L		104	60 - 140
1,2,3-Trichloropropane	ND		500	529		ug/L		106	60 - 140
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		500	550		ug/L		110	60 - 140
1,2,4-Trimethylbenzene	ND		500	511		ug/L		102	60 - 140
1,3,5-Trimethylbenzene	ND		500	514		ug/L		103	60 - 140
Vinyl acetate	ND		500	562		ug/L		112	40 - 140
Vinyl chloride	41		500	573		ug/L		106	58 - 140
m-Xylene & p-Xylene	ND		500	517		ug/L		103	60 - 140
o-Xylene	ND		500	517		ug/L		103	60 - 140
2,2-Dichloropropane	ND		500	533		ug/L		107	60 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-74164-A-1 MSD
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	ND		500	538		ug/L		108	60 - 138	1	20
Acetone	ND		2500	2030		ug/L		81	60 - 140	3	20
Benzene	12		500	546		ug/L		107	60 - 140	1	20
Dichlorobromomethane	ND		500	533		ug/L		107	60 - 140	2	20
Bromobenzene	ND		500	508		ug/L		102	60 - 140	1	20
Chlorobromomethane	ND		500	537		ug/L		107	60 - 140	2	20
Bromoform	ND		500	523		ug/L		105	56 - 140	1	20
Bromomethane	ND		500	526		ug/L		105	23 - 140	2	20
2-Butanone (MEK)	ND		2500	2130		ug/L		85	60 - 140	1	20
n-Butylbenzene	ND		500	497		ug/L		99	60 - 140	3	20
sec-Butylbenzene	ND		500	518		ug/L		104	60 - 140	1	20
tert-Butylbenzene	ND		500	500		ug/L		100	60 - 140	0	20
Carbon disulfide	ND		500	514		ug/L		103	38 - 140	1	20
Carbon tetrachloride	ND		500	519		ug/L		104	60 - 140	1	20
Chlorobenzene	ND		500	506		ug/L		101	60 - 140	3	20
Chloroethane	ND		500	517		ug/L		103	51 - 140	1	20
Chloroform	ND		500	529		ug/L		106	60 - 140	1	20
Chloromethane	ND		500	529		ug/L		106	52 - 140	0	20
2-Chlorotoluene	ND		500	509		ug/L		102	60 - 140	0	20
4-Chlorotoluene	ND		500	501		ug/L		100	60 - 140	2	20
Chlorodibromomethane	ND		500	506		ug/L		101	60 - 140	3	20
1,2-Dichlorobenzene	ND		500	517		ug/L		103	60 - 140	1	20
1,3-Dichlorobenzene	ND		500	514		ug/L		103	60 - 140	1	20
1,4-Dichlorobenzene	ND		500	517		ug/L		103	60 - 140	1	20
1,3-Dichloropropane	ND		500	529		ug/L		106	60 - 140	3	20
1,1-Dichloropropene	ND		500	520		ug/L		104	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		500	499		ug/L		100	60 - 140	0	20
Ethylene Dibromide	ND		500	570		ug/L		114	60 - 140	3	20
Dibromomethane	ND		500	532		ug/L		106	60 - 140	2	20
Dichlorodifluoromethane	ND		500	604		ug/L		121	38 - 140	0	20
1,1-Dichloroethane	ND		500	519		ug/L		104	60 - 140	0	20
1,2-Dichloroethane	ND		500	524		ug/L		105	60 - 140	0	20
1,1-Dichloroethene	ND		500	513		ug/L		101	60 - 140	2	20
cis-1,2-Dichloroethene	1600		500	2300		ug/L		133	60 - 140	0	20
trans-1,2-Dichloroethene	18		500	552		ug/L		107	60 - 140	0	20
1,2-Dichloropropane	ND		500	540		ug/L		108	60 - 140	2	20
cis-1,3-Dichloropropene	ND		500	553		ug/L		111	60 - 140	2	20
trans-1,3-Dichloropropene	ND		500	540		ug/L		108	60 - 140	2	20
Ethylbenzene	ND		500	509		ug/L		102	60 - 140	3	20
Hexachlorobutadiene	ND		500	505		ug/L		101	60 - 140	2	20
2-Hexanone	ND		2500	2000		ug/L		80	60 - 140	1	20
Isopropylbenzene	ND		500	530		ug/L		106	60 - 140	1	20
4-Isopropyltoluene	ND		500	515		ug/L		103	60 - 140	1	20
Methylene Chloride	ND		500	512		ug/L		102	40 - 140	0	20
4-Methyl-2-pentanone (MIBK)	ND		2500	2070		ug/L		83	58 - 130	1	20
Naphthalene	ND		500	517		ug/L		103	56 - 140	0	20
N-Propylbenzene	ND		500	499		ug/L		100	60 - 140	0	20
Styrene	ND		500	515		ug/L		103	60 - 140	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-74164-A-1 MSD
Matrix: Water
Analysis Batch: 208509

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		500	494		ug/L		99	60 - 140	2	20
1,1,2,2-Tetrachloroethane	ND		500	516		ug/L		103	60 - 140	2	20
Tetrachloroethene	ND		500	536		ug/L		107	60 - 140	5	20
Toluene	ND		500	513		ug/L		103	60 - 140	1	20
1,2,3-Trichlorobenzene	ND		500	532		ug/L		106	60 - 140	1	20
1,2,4-Trichlorobenzene	ND		500	505		ug/L		101	60 - 140	3	20
1,1,1-Trichloroethane	ND		500	522		ug/L		104	60 - 140	1	20
1,1,2-Trichloroethane	ND		500	538		ug/L		108	60 - 140	3	20
Trichloroethene	84		500	632		ug/L		110	60 - 140	3	20
Trichlorofluoromethane	ND		500	520		ug/L		104	60 - 140	0	20
1,2,3-Trichloropropane	ND		500	537		ug/L		107	60 - 140	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		500	538		ug/L		108	60 - 140	2	20
1,2,4-Trimethylbenzene	ND		500	505		ug/L		101	60 - 140	1	20
1,3,5-Trimethylbenzene	ND		500	513		ug/L		103	60 - 140	0	20
Vinyl acetate	ND		500	571		ug/L		114	40 - 140	2	20
Vinyl chloride	41		500	565		ug/L		105	58 - 140	1	20
m-Xylene & p-Xylene	ND		500	506		ug/L		101	60 - 140	2	20
o-Xylene	ND		500	511		ug/L		102	60 - 140	1	20
2,2-Dichloropropane	ND		500	536		ug/L		107	60 - 140	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-208406/1-A
Matrix: Water
Analysis Batch: 208391

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 208406

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		08/29/16 10:47	08/30/16 01:21	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		08/29/16 10:47	08/30/16 01:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*83*		*23 - 156*	*08/29/16 10:47*	*08/30/16 01:21*	*1*

Lab Sample ID: LCS 720-208406/2-A
Matrix: Water
Analysis Batch: 208391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 208406

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	2190		ug/L		88	34 - 115		

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 720-208406/2-A
Matrix: Water
Analysis Batch: 208391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 208406

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	82		23 - 156

Lab Sample ID: LCSD 720-208406/3-A
Matrix: Water
Analysis Batch: 208391

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 208406

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	2070		ug/L		83	34 - 115	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
p-Terphenyl	76		23 - 156

Lab Sample ID: MB 720-208428/1-A
Matrix: Water
Analysis Batch: 208532

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 208428

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		08/29/16 16:17	08/31/16 19:03	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		08/29/16 16:17	08/31/16 19:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 5	08/29/16 16:17	08/31/16 19:03	1
p-Terphenyl	69		31 - 150	08/29/16 16:17	08/31/16 19:03	1

Lab Sample ID: LCS 720-208428/2-A
Matrix: Water
Analysis Batch: 208532

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 208428

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1080		ug/L		43	32 - 119		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	82		31 - 150

Lab Sample ID: LCSD 720-208428/3-A
Matrix: Water
Analysis Batch: 208532

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 208428

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1120		ug/L		45	32 - 119	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
p-Terphenyl	74		31 - 150

GC/MS VOA

Analysis Batch: 208509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74147-1	MW-1	Total/NA	Water	8260B/CA_LUFT MS	
720-74147-2	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
720-74147-3	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
720-74147-4	DUP-1	Total/NA	Water	8260B/CA_LUFT MS	
720-74147-5	TB-1	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-208509/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-208509/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-208509/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-208509/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-208509/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
720-74164-A-1 MS	Matrix Spike	Total/NA	Water	8260B/CA_LUFT MS	
720-74164-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/CA_LUFT MS	

GC Semi VOA

Analysis Batch: 208391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-208406/1-A	Method Blank	Total/NA	Water	8015B	208406
LCS 720-208406/2-A	Lab Control Sample	Total/NA	Water	8015B	208406
LCSD 720-208406/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	208406

Analysis Batch: 208392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74147-1	MW-1	Total/NA	Water	8015B	208406
720-74147-2	MW-2	Total/NA	Water	8015B	208406
720-74147-3	MW-3	Total/NA	Water	8015B	208406
720-74147-4	DUP-1	Total/NA	Water	8015B	208406

Prep Batch: 208406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74147-1	MW-1	Total/NA	Water	3510C	
720-74147-2	MW-2	Total/NA	Water	3510C	
720-74147-3	MW-3	Total/NA	Water	3510C	
720-74147-4	DUP-1	Total/NA	Water	3510C	
MB 720-208406/1-A	Method Blank	Total/NA	Water	3510C	
LCS 720-208406/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-208406/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 208428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74147-1	MW-1	Silica Gel Cleanup	Water	3510C SGC	

GC Semi VOA (Continued)

Prep Batch: 208428 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74147-2	MW-2	Silica Gel Cleanup	Water	3510C SGC	
720-74147-3	MW-3	Silica Gel Cleanup	Water	3510C SGC	
720-74147-4	DUP-1	Silica Gel Cleanup	Water	3510C SGC	
MB 720-208428/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-208428/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-208428/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 208532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-208428/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	208428
LCS 720-208428/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	208428
LCSD 720-208428/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	208428

Analysis Batch: 208533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-74147-1	MW-1	Silica Gel Cleanup	Water	8015B	208428
720-74147-2	MW-2	Silica Gel Cleanup	Water	8015B	208428
720-74147-3	MW-3	Silica Gel Cleanup	Water	8015B	208428
720-74147-4	DUP-1	Silica Gel Cleanup	Water	8015B	208428

Lab Chronicle

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Client Sample ID: MW-1
Date Collected: 08/24/16 13:20
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208509	08/31/16 02:15	JRM	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			208428	08/29/16 16:17	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	208533	08/31/16 16:36	JXL	TAL PLS
Total/NA	Prep	3510C			208406	08/29/16 10:47	NDU	TAL PLS
Total/NA	Analysis	8015B		1	208392	08/29/16 18:53	JXL	TAL PLS

Client Sample ID: MW-2
Date Collected: 08/24/16 12:41
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208509	08/31/16 02:44	JRM	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			208428	08/29/16 16:17	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	208533	08/31/16 17:06	JXL	TAL PLS
Total/NA	Prep	3510C			208406	08/29/16 10:47	NDU	TAL PLS
Total/NA	Analysis	8015B		1	208392	08/29/16 19:17	JXL	TAL PLS

Client Sample ID: MW-3
Date Collected: 08/24/16 14:25
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208509	08/31/16 03:42	JRM	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			208428	08/29/16 16:17	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	208533	08/31/16 17:35	JXL	TAL PLS
Total/NA	Prep	3510C			208406	08/29/16 10:47	NDU	TAL PLS
Total/NA	Analysis	8015B		1	208392	08/29/16 19:42	JXL	TAL PLS

Client Sample ID: DUP-1
Date Collected: 08/24/16 12:50
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208509	08/31/16 03:12	JRM	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			208428	08/29/16 16:17	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	208533	08/31/16 18:04	JXL	TAL PLS
Total/NA	Prep	3510C			208406	08/29/16 10:47	NDU	TAL PLS
Total/NA	Analysis	8015B		1	208392	08/29/16 20:06	JXL	TAL PLS

Lab Chronicle

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Client Sample ID: TB-1

Date Collected: 08/24/16 14:30
Date Received: 08/25/16 13:45

Lab Sample ID: 720-74147-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	208509	08/30/16 23:50	JRM	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-18

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Cornerstone Earth Group
Project/Site: 914 W. Grand Ave.

TestAmerica Job ID: 720-74147-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-74147-1	MW-1	Water	08/24/16 13:20	08/25/16 13:45
720-74147-2	MW-2	Water	08/24/16 12:41	08/25/16 13:45
720-74147-3	MW-3	Water	08/24/16 14:25	08/25/16 13:45
720-74147-4	DUP-1	Water	08/24/16 12:50	08/25/16 13:45
720-74147-5	TB-1	Water	08/24/16 14:30	08/25/16 13:45

rel#170624

BLAINE
TECH SERVICES, INC

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

720-74147

CHAIN OF CUSTODY BTS #

CLIENT: Cornerstone Eearth Group

SITE: 914 W. Grand Ave.
Oakland, CA

CONDUCT ANALYSIS TO DETECT

LAB: Test America SF DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ LIA ☐ OTHER ☐ RWQCB REGION _____

9/1/2016

SPECIAL INSTRUCTIONS

Invoice and Report to: Randall Bleichner
rbleichner@cornerstoneearth.com
925.988.9500 ext. 15

SAMPLE I.D.	DATE	TIME	MATRIX S= SOIL W=H_2O	CONTAINERS TOTAL		TPH-g, Full Scen VOC's (8260B)	TPH-d, mo with and without SGC (8015f	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-1	8/24/16	1320	W	6	GLASS MIX	X	X				
MW-2		1241	W	6		X	X				
MW-3		1425	W	6		X	X				
DUP-1		1250	W	6	✓	X	X				
TB-1	↓	1430	W	3	VOAS	X					

720-74147 Chain of Custody

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SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
	8/24/16	1430	ALEX CARLINO, MARK McCULLOCH	Standard TAT

		DATE	TIME		DATE	TIME
RELEASED BY		8/24/16	1635	RECEIVED BY	(CUSTODIAN) 8/24/16	1635
RELEASED BY	(Sample Custodian)	8/25/16	1030	RECEIVED BY	8/25/16	1030
RELEASED BY		8/25/16	1345	RECEIVED BY	8/25/16	139

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

5.7

Login Sample Receipt Checklist

Client: Cornerstone Earth Group

Job Number: 720-74147-1

Login Number: 74147
List Number: 1
Creator: Arauz, Dennis

List Source: TestAmerica Pleasanton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	