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By Alameda County Environmental Health 10:03 am, May 20, 2016

May 18, 2016

Mark Detterman
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Alameda, CA 94502

Email: mark.detterman@acgov.org

Subject: Alameda County Environmental Health Case Number RO0003175
Geotracker Global ID Number T10000007707
500 Grand Ave, Oakland, CA

Dear Mr. Detterman:

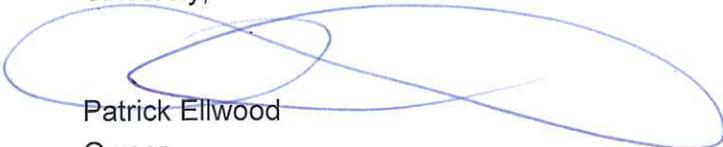
As per our May 5, 2016 meeting we have completed the attached *Supplemental Investigation Report* for 500 Grand Avenue, Oakland, CA (Site). The Report includes:

- Updated conceptual site model reflecting the location of residual petroleum hydrocarbons with respect to the proposed development.
- There is no evidence of perchloroethylene (PCE) in the soil or groundwater at the Site.
- Clear presentation of the current and historic data on the respective figures for rapid review.
- Site specific human health risk analysis (HHRA) indicating there is no vapor intrusion risk associated with the planned redevelopment of the Site.
- Ecological risk evaluation that indicates there is no risk of impact to Lake Merritt.
- Data consistency analysis demonstrating that groundwater continues to exhibit decreasing trends and that no new issues were discovered.
- A summary statement indicating that the original 2011 ACEH closure recommendation was correct and that proposed redevelopment of the Site is consistent with the closure recommendation of no further remedial action.

The architect plans dated May 2nd for the proposed redevelopment of the Site will be uploaded along with the Report.

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,



Patrick Ellwood

Owner

Ellwood Commercial Real Estate

May 18, 2016

Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Email: mark.detterman@acgov.org

Subject: Alameda County Environmental Health Case Number RO0003175
Geotracker Global ID Number T10000007707
500 Grand Ave, Oakland, CA

Dear Mr. Detterman:

We would like thank you and the Alameda County Environmental Health (ACEH) in completing the rapid review of 500 Grand Avenue, Oakland, CA (Site). We are finalizing the Supplemental Site Investigation Report that closed the data gaps identified in our April 5th meeting and subsequently reviewed in our May 4th meeting. Our findings remain unchanged from those discussed during our May 4th meeting. The Source Group (SGI) has issued the report and uploaded it to the web portal along with the requested set of architect development plans dated May 2, 2016.

As per our May 4th conversation the Supplemental Site Investigation Report includes the following:

- Updated conceptual site model (CSM) reflecting the location of residual petroleum hydrocarbons with respect to the proposed development.
- There is no evidence of tetrachloroethylene (PCE) in the soil or groundwater at the Site.
- Clear presentation of the current and historic data on the respective figures for rapid review.
- Site specific human health risk analysis (HHRA) completed by ACEH approved toxicologist Ivy Inouye that indicates there is no vapor intrusion risk associated with the planned redevelopment of the Site.
- Ecological risk evaluation that indicates there is no risk of impact to Lake Merritt.
- Data consistency analysis demonstrating that groundwater continues to exhibit decreasing trends and that no new issues were discovered.
- A summary statement indicating that the original 2011 ACEH closure recommendation was correct and that proposed redevelopment of the Site is consistent with the closure recommendation of no further remedial action.
- Any residual petroleum hydrocarbons would be managed under a standard Soil Management Plan.

We are working with Patrick Ellwood to develop a schedule that facilitates the proposed redevelopment. In order to restart the review process with the City of Oakland and meet the redevelopment schedule, we would like to request approval of the project for redevelopment, pending full review of the Supplemental Site Investigation Report by ACEH. The tentative approval could be amended upon review of the final submissions from SGI.

Regards,

A handwritten signature in blue ink, appearing to read "J. Glen Smith".

J. Glen Smith
Senior Project Manager
The Source Group

Cc: Dilan Roe, ACEH
Jonathan Redding, Wendel, Rosen, Black & Dean LLP
Patrick Ellwood

**2016 SUPPLEMENTAL INVESTIGATION
FINDINGS AND CONCLUSIONS
(Including HHRA, ERA, and Current CSM)**

**Ellwood Development
500 Grand Avenue
Oakland, California**

01-ECR-001

Prepared For:

Ellwood Commercial Real Estate
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Prepared By:



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May 17, 2016

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Steve Hickey, P.E.
Senior Project Engineer

A handwritten signature in black ink, appearing to read 'Ivy Inouye'.

Ivy Inouye
Senior Toxicologist

A handwritten signature in blue ink, appearing to read 'J. Glen Smith'.

J. Glen Smith
Senior Project Manager

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EXECUTIVE SUMMARY

Ellwood Commercial Real Estate (ECR) authorized The Source Group, Inc. (SGI) to conduct a Supplemental Investigation to establish current baseline conditions for the property located at 500 Grand Avenue in Oakland, California (Site). The investigation activities performed were detailed in SGI's *Supplemental Investigation Work Plan* (Work Plan), dated April 8, 2016. The Work Plan was refined during an April 5, 2016 meeting with Alameda County Department of Environmental Health (ACDEH). During our discussion, the following four (4) areas of investigation were identified as necessary to establish baseline environmental conditions consistent with the ECR proposed redevelopment of 500 Grand Avenue, Oakland, CA:

1. Delineate residual petroleum hydrocarbon concentrations identified in native soil within soil and groundwater parallel to the Grand Ave property line, bracketed by excavation sample locations CEW WS5 and CEW WS2.
2. Delineate residual petroleum hydrocarbon concentrations identified in native soil and groundwater in the southeastern corner of the site, bracketed by sample locations AW SB2 and CRA SV7. In addition, evaluate possible sources for tetrachloroethene (PCE) previously identified in a single soil gas sample in this area.
3. Evaluate the former waste oil underground storage tank (UST) as a potential PCE source area.
4. Evaluate excavation backfill samples to determine if "clean" material was utilized to backfill the UST, dispenser island, and waste oil UST excavations.

SGI implemented the Work Plan, assessed the areas for residual petroleum hydrocarbons and PCE, and developed the following conclusions and recommendations.

- Residual petroleum hydrocarbon concentrations above California Regional Water Quality Control Board (CRWQCB) Environmental Screening Levels (ESLs) for commercial/industrial land use were identified and delineated in native soils and groundwater parallel to the Grand Ave property line. Petroleum hydrocarbon and naphthalene concentrations were also encountered in native soil and groundwater in the southeastern corner of the site. Residual petroleum hydrocarbon and naphthalene impacts are localized and limited to native soils along the perimeter of the commercial area of the planned ECR development (Figure 2-3).
- Site specific human health risk analysis (HHRA) indicates there is no vapor intrusion risk associated with the planned redevelopment of the Site (Figure 6-1).
- Ecological risk evaluation that indicates there is no risk of impact to Lake Merritt (Table 6-1 and Appendix G).
- Data consistency analysis demonstrating that groundwater continues to exhibit decreasing trends (Appendix G) and that no new issues were discovered.

- Residual petroleum hydrocarbon concentrations greater than CRWQCB ESLs for commercial/industrial land use (adjacent to Grand Avenue) for direct contact by construction workers will be managed in accordance with a site specific Soil Management Plan (Figures 2-3 and 2-4).
- Vapor intrusion risk associated with residual petroleum hydrocarbons present in the groundwater were evaluated using the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) vapor intrusion model and site specific geotechnical data. Results of the model indicated that the residual petroleum hydrocarbons present in the groundwater did not present a vapor intrusion risk for the planned ECR development (Appendix I).
- No evidence of PCE was identified in soil or groundwater at the Site (Tables 2-1 and 2-2).
- Clean material was utilized to backfill the UST, dispenser island, and waste oil UST excavations (Table 2-1, 4-5-feet below ground surface sample depths).

Based on the currently encountered residual petroleum hydrocarbon concentrations and distribution, in conjunction with the proposed ECR development, no further remediation of soils or groundwater is considered necessary. No observations made during this Supplemental Investigation indicate contradicting conditions that are inconsistent with ACEH's decision to close the site for commercial use in 2011. Furthermore, the specific mixed use development proposed by ECR, can occur without any remedial actions or restrictions and issue a certificate of completion. Any minor residual contamination that may be encountered during development can be dealt with in accordance with a Soils Management Plan.

1.0 INTRODUCTION

The Source Group, Inc. (SGI) has prepared this report that provides the findings and conclusions of the 2016 supplemental investigation on behalf of Ellwood Commercial Real Estate (ECR) for the property at 500 Grand Avenue in Oakland, California (the Site). The investigation activities performed were detailed in SGI's *Supplemental Investigation Work Plan* (Work Plan), dated April 8, 2016. This Work Plan identified the methods and rationale to obtain required information necessary to establish current baseline conditions present within areas of concern identified during our April 5, 2016 meeting with the Alameda County Environmental Health (ACEH). During our discussion, the following four (4) areas of investigation were identified:

5. Soil and groundwater parallel to the Grand Ave property line, bracketed by excavation sample locations CEW WS5 and CEW WS2. Residual petroleum hydrocarbon concentrations identified in native soil within this area but not delineated at depth and no current groundwater data were available.
6. Soil and groundwater in the southeastern corner of the Site, bracketed by sample locations AW SB2 and CRA SV7. Residual petroleum hydrocarbon concentrations identified in native soil within this area but not delineated at depth and no current groundwater data were available. In addition, a single detection of PCE was previously identified in soil gas in this area.
7. Potential PCE source area. Suspect former waste oil underground storage tank (UST) but no data available to confirm if PCE remains localized to the southeast corner of the Site.
8. Excavation backfill samples. No data available to indicate "clean" material was utilized to backfill the UST, dispenser island, and waste oil UST excavations.

Based on the above objectives, SGI proposed a scope of work to assess those areas for residual petroleum hydrocarbons and PCE and determine the impact, if any, on the proposed redevelopment. Prior to preparing this report, the following field activities were completed from April 16 through 21, 2016:

- Advanced 11 continuously cored direct push borings (DPT) to a maximum depth of 12-feet below ground surface (bgs);
- Logged and field screened soil samples;
- Collected a total of 21 discrete soil samples from targeted soil bore intervals and DPT locations;
- Collected a total of 10 grab groundwater samples from selected DPT locations;
- Soil and groundwater samples were analyzed for contaminants of concern (COCs) including volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH [gasoline, diesel, and motor oil]). Selected samples were analyzed for semi-volatile organic compounds (SVOCs); and
- Prepared this report to summarize investigation findings and update the conceptual site model (CSM).

2.0 SITE BACKGROUND

2.1 Site Description

The Site is located on the northeast corner of Euclid Avenue and Grand Avenue in Oakland, California. The property address is 500 Grand Avenue (Figure 2-1). An adjacent parcel to the north is being incorporated into the planned development. That parcel's previous address was 401 through 403 Burk Street. The Site is within an urbanized environment approximately 200 feet north of Lake Merritt. The surrounding properties are a mixture of commercial and residential (both single and multi-family housing). Topography slopes gently toward Lake Merritt. Surface drainage is intercepted by street curbing and collected into the municipal storm water system.

Since 1992 the property has been covered with asphalt pavement and serves as a commercial parking lot. Current redevelopment plans include a multi-story building with first floor for commercial use and upper floors for residential use.

2.1.1 Site Conditions

The property was an active commercial service station from at least 1946 until closure in 1991. The service station was demolished in 1992 and remaining USTs, piping, and fuel dispensers were removed at that time. A significant portion of the property was over excavated after demolition to remove residual impacted soils. Prior reports (Conestoga-Rovers & Associates [CRA], 2009) indicate the excavation was approximately 7 to 9 feet deep. Preliminary environmental investigations and remedial actions were initiated in 1988 and continued intermittently through 2011, when site "closure" was approved by ACEH. Terms of the closure approval limited future land use to commercial development and required future excavation and construction in potentially impacted areas to be implemented by the developing party with "appropriate health and safety procedures." A copy of the closure finding by ACEH titled "Closure Transmittal, Fuel Leak Case No. RO0000391, 500 Grand Avenue, Oakland" dated September 21, 2011 is attached as Appendix A.

Figure 2-2 shows the locations of the previous service station related infrastructure that was previously removed and boundaries of previous soil excavations. Figure 2-3 shows locations of planned lower floor structure layout and the locations of residual hydrocarbons identified in soils during the current 2016 supplemental investigation.

2.1.2 Geology and Hydrogeology

Much of the Site's shallow soils are compacted backfill ranging in depth 3.5 to 12 feet bgs. There is also a discontinuous deposit of pea gravel underlying a portion of the sand/gravel backfill. Native soils consist of quaternary alluvial sands and clays, with the upper strata being predominantly composed of silts and clays. Figures 2-4, 2-5, and 2-6 provide cross sectional interpretations based on the recent drilling logs. Cross section orientations are shown on Figure 2-3.

2.1.3 Groundwater Elevation and Flow Conditions

Groundwater was encountered approximately five (5) feet below existing ground surface during the 2016 supplemental investigation. All groundwater monitoring wells at the Site have been abandoned, so static water levels are not available. Previous studies have indicated the gradient to be toward the southeast and water levels have been observed to fluctuate 2.5 to 3 feet (Harding Lawson, 1990).

2.1.4 Distribution of Constituents of Concern

Based on the results of the 2016 supplemental investigation, residual contamination above California Regional Water Quality Control Board (CRWQCB) environmental screening levels (ESLs), dated February 2016, for commercial/industrial land use appears to be limited to the unexcavated edge of the property adjacent to Grand Avenue and the southeastern corner of the property (Figure 2-3). Contaminants identified in the two borehole samples include petroleum hydrocarbons (characterized as TPHd) above commercial ESLs in one sample and naphthalene (above residential ESLs in three boreholes (including two samples collected in 2015 by Allwest [2015])). Other low level TPH, VOCs, and SVOCs were reported in several other samples. Table 2-1 provides a summary of laboratory analytical results for soil samples. PCE was not reported in any of the samples submitted for laboratory analysis.

Grab groundwater samples collected from ten of the DPT borings indicate relatively low level hydrocarbons in groundwater underlying the Site and concentrations above commercial ESLs for benzene and ethylbenzene in samples collected from SGI-SB-02 and SGI-SB-03. Table 2-2 provides a summary of laboratory analytical results for grab groundwater samples.

A screening-level risk assessment for the data collected during the 2016 supplemental investigation is further discussed in Section 6.7.

3.0 PREFIELD ACTIVITIES

SGI performed the following prefield activities as part of the 2016 supplemental investigation:

- Developed a preliminary CSM;
- Prepared the Supplemental Investigation Work Plan, following consultation with the ACEH;
- Prepared a site-specific Health and Safety Plan (HASP);
- Obtained drilling permits;
- Completed a utility survey; and
- Secured access agreements from the property owner.

A site-specific HASP was prepared, which complies with Federal Occupational Safety and Health Administration (OSHA) regulations (29 CFR, Section 1910.120). All SGI personnel and subcontractors associated with the project were required to be familiar and comply with all provisions of the site-specific HASP.

Exploratory boring permit applications for borings were submitted to and approved by ACEH. Copies of the approved permits are included in Appendix B.

SGI conducted a Site visit to mark the locations of the proposed borings at the Site. Following the Site visit, Underground Services Alert (USA) marked the offsite locations of underground utilities in the vicinity of the proposed soil borings. Hand augering of the first five (5) feet was performed in areas of undisturbed soil as an extra safety measure to protect against damage to any underground utilities.

4.0 DPT INVESTIGATION: SOIL AND GROUNDWATER SAMPLING

All prior groundwater monitoring wells at the Site have been grout sealed and abandoned, and are no longer available for the collection of groundwater samples. Target sample locations (Figure 4-1) and depths were based on historic data, prior operations, footprint of the proposed redevelopment, and our April 5, 2016 ACEH meeting. The goal of the 2016 supplemental investigation was to provide SGI with an updated soil and groundwater data set to evaluate residual petroleum hydrocarbons and any potential human health or ecological risk to future receptors associated with planned redevelopment of the Site. Table 4-1 provides a summary of the sample program rationale, which details how the soil and groundwater sample locations were selected to focus on known areas of the Site where residual petroleum hydrocarbons are present above the commercial ESLs and where PCE was previously detected. Samples obtained from these locations were used to establish a new baseline for the Site in context of the planned redevelopment.

4.1 Methodology: DPT Investigation

A total of 10 DPT borings (SGI-SB-01 through SGI-SB-10) were advanced as shown on Figure 1. One additional shallow soil sample was collected (2.5 feet bgs) and is shown as SGI-SB-11, but was not logged. The first occurrence of groundwater was noted and then depth to groundwater at time of sampling was recorded. Hand augering of the first five (5) feet was performed in areas of undisturbed soil as an extra safety measure to protect against potential damage to any unknown underground utilities. Continuous soil cores were collected to depth using a split-spoon sampler, core barrel, or equivalent. Soil samples were collected by advancing the direct push rods lined with acetate sleeves into the subsurface until the desired sampling depth was reached.

Soil samples from each borehole were visually evaluated and observations noted on the DPT sample logs. Visual descriptions of soil samples generally include the following information:

- Percentage of sample recovery;
- Depth to first encountered groundwater;
- Grain size classification (Unified Soil Classification System (USCS); percentages of gravel, sand, silt, and clay);
- Color (Munsell color chart);
- Density;
- Odor; and
- Degree of moisture.

Soil samples were screened in the field for VOCs using an organic vapor monitor (OVM) equipped with a photo-ionization (10.6 eV bulb) detector. Approximately 20 grams of saturated or unsaturated soil from every one (1)-foot interval was placed in a self-sealing plastic bag to allow the pore space to volatilize. The headspace in the plastic bag was then monitored for VOCs with the OVM. Soil samples for laboratory analysis were retained based on field indications of impacts (visual or OVM

detections), proximity to groundwater and at changes in lithology. A chain-of-custody record was initiated in the field to accompany the samples to the laboratory. Twenty-one (21) selected soil samples from the borings were analyzed in a California certified laboratory for TPH and VOCs using EPA Methods 8260B and 8015 and for SVOCs using EPA Method 8270.

Grab groundwater samples were collected from 10 specified borings. Samples were collected using a Hydropunch™ sampler (or equivalent) equipped with a retrievable stainless steel screen. The groundwater sampler operates by advancing 1 3/4-inch hollow-push rods with a filter tip in a closed configuration to the base of the desired sampling interval. Once at the desired sample depth, the push rods are retracted; exposing the encased filter screen and allowing groundwater to infiltrate hydrostatically from the formation into the inlet screen. A small diameter bailer or peristaltic pump was then used for sample collection. Upon completion of sample collection, the push rods and sampler are retrieved.

Samples were collected in laboratory provided containers appropriate for the analysis to be performed. The containers were capped with Teflon™ septa, labeled, and placed on ice for transport to the analytical laboratory.

A chain-of-custody record was initiated in the field to accompany the samples to the laboratory. The soil and groundwater samples were analyzed for the following TPH and VOCs using EPA Methods 8260B and 8015 and for SVOCs using EPA Method 8270. Rationale for sample locations and analytical parameters are provided in Table 4-1. The actual depth of soil samples and number of samples collected from each borehole varied from the depths listed on Table 4-1 and Appendix C due to field observations. Actual sample collection depths are shown in Table 2-1.

4.2 Geotechnical Soil Sampling and Analysis

Two soil samples (SB-6-4 and SB-10-10) were selected and analyzed for geotechnical data (i.e., bulk density, total porosity, soil grain-size diameter, moisture content, and fraction organic carbon) to determine physical properties in accordance with California Environmental Protection Agency Department of Toxic Substances Control (DTSC) vapor intrusion guidance. Soil sample SB-6-4 was selected as it underlies the planned elevator and stairwell shaft. Soil sample SB-10-10 was selected based on proximity to residual contamination adjacent to Grand Avenue. Soil stratigraphy and geotechnical data were used in estimating fate and transport properties of soil vapor in the vadose zone (Section 6.8).

4.3 Boring Completion

After the groundwater sampling was complete, the boreholes were grouted to surface with a bentonite slurry. The slurry was pumped into the hole using a tremie pipe from the bottom up, to approximately one (1) foot bgs. The remainder of the boring was filled with concrete or asphalt to match surface conditions. The DPT locations were surveyed to a common datum and plotted on the base map.

4.4 Equipment Decontamination

To minimize the potential for cross-contamination between sampling locations, sampling equipment was decontaminated prior to initiating work at each drilling location. The boring rods did not come into contact with the soil samples, but were brushed clean of soil between samples. All non-disposable sampling equipment was cleaned with a non-phosphate detergent solution, rinsed with tap water, and rinsed a third time with deionized water prior to each sampling event.

5.0 RESULTS OF DPT INVESTIGATION

In April 2016, 10 DPT borings were completed at the Site to refine our understanding of subsurface conditions. The DPT investigation activities included the following:

- Advancement and completion of 10 DPT borings (Note: a shallow soils sample (2.5 feet bgs) was collected at SGI-SB-11, although that boring was not logged or advanced beyond that depth); and
- Collection of 10 groundwater “grab” samples from the underlying aquifer at ten separate locations.

Figure 4-1 shows the location and designation of each DPT boring. A list of sampling depths for each location is included on Table 2-1.

5.1 Soil Boring Observations and Logging

Interpretation of the subsurface geology by DPT is based on continuous core samples that were retrieved as the rods were advanced to final depth. The samples were inspected by the SGI field geologist and observations recorded on the individual DPT logs (Appendix C).

Figures 2-4, 2-5, and 2-6 provide interpretive cross sections showing the depth and extent of the previous excavation and backfill material. The figures also show the proposed foundation and floor elevation for the new development and summaries of the analytical results from the soil samples collected. Figure 4-1 provides orientations of each cross section and the locations of the soil borings.

Boring confirmed the lateral extent of previous over-excavation and backfill. Backfill ranged from 2.5 feet bgs near the north end of the 500 Grand Avenue parcel to 12 feet bgs within the southeast quadrant (in the vicinity of the removed USTs). Underlying native soils were generally clays, with interbedded silts and sands.

5.2 Soil Sample Collection

Soil sample analytical results are provided in Table 2-1 and summarized below:

- Residual petroleum hydrocarbon soil impacts exceeding commercial ESLs for direct contact are limited to two localized areas within soils outside of the previous excavation activities. One location is adjacent to the property boundary next to Grand Avenue and the other is located near the southeast corner of the Site. Both locations are shown on Figure 2-3.
- Only one sample indicated concentrations exceeding commercial/industrial ESLs. This was for TPH diesel encountered in SGI-SB-3 (three feet bgs within the unexcavated soils adjacent to Grand Avenue, described above).
- Recent samples exceeding residential ESLs are also limited to the two areas described above. Soil boring SGI-SB-01, SGI-SB-02, AW SB-2, and AW SB-5 contained either diesel or naphthalene exceedances within the upper five feet.
- PCE was not detected in any of the soil samples collected.

- Soil samples collected from within the backfill material placed after excavation of USTs and other impacted appear to confirm the backfill is free of contaminants above residential ESLs.

Soil sample laboratory analytical reports are provided in Appendix D.

Geotechnical analysis of soil samples SGI-SB-6-4 and SGI-SB-10-10 were performed to determine physical properties in accordance with DTSC vapor intrusion guidance. Soil sample SB-10-10 was selected as representative of native soils near to the localized impacted soils adjacent to Grand Avenue. Soil sample SB-6-4 was selected as representative of the backfill material and is located within the planned elevator and stairwell shaft for the new building. A copy of the geotechnical laboratory report is provided in Appendix E.

5.3 Grab Groundwater Sample Collection

Grab groundwater samples were collected to fill groundwater VOC concentration data gaps and to determine current groundwater conditions in the residual impacted areas adjacent to Grand Avenue and the southeast corner of the site. Groundwater sampling depths were selected based on the data generated during the DPT boring and logging.

All monitoring wells previously installed and sampled at the Site have been abandoned and are no longer available for sample collection.

Depth-discrete grab groundwater samples were collected using the DPT rig equipped with a Hydropunch™ style groundwater-sampling tip. The sampling tip consisted of a stainless steel screen and disposable plastic tubing covered by a retractable stainless steel sheath. At each sampling location, the sampling tip was advanced to the desired sampling depth. When the proper depth was obtained, the sheath was retracted and the groundwater sample was extracted through the stainless steel screen and disposable plastic tubing with the use of a disposable Teflon bailer or a pump. Each groundwater sample container was specially packaged, placed on ice and transported under chain-of-custody protocols to Curtis & Tompkins, Ltd, located in Berkeley, California (state-certified laboratory), to be analyzed by U.S. Environmental Protection Agency (USEPA) Methods 8015 (TPH), 8260B (VOCs), and 8270 (SVOCs). Laboratory reports are provided in Appendix F.

Groundwater samples were collected from 10 separate locations (SGI-SB-1 through though SB-10) on April 2016. Sample results are included in Table 2-2 and are summarized below:

- Benzene and ethylbenzene in concentrations above commercial/Industrial ESLs was encountered in one water sample (GW-02) collected within the residual contamination adjacent to Grand Avenue and one sample (GW-03) collected within the southeast corner within the vicinity of the planned stairwell at that location. Benzene concentrations for these two samples ranged from 55 µg/L to 740 µg/L and ethylbenzene ranged from 130 µg/L to 710 µg/L.
- Other contaminants above residential ESLs were only encountered in the same two water samples as listed above (GW-02 and GW-03) and consisted of xylenes and naphthalene.

- Low levels of MTBE (ranging from 0.6 µg/L to 5.9 µg/L) was encountered six of the 10 grab samples scattered throughout the site. The leak-check compound (1,1-difluoroethane) was not detected in any of the samples analyzed.
- Low levels of TPHg (highest concentration 15,000 µg/L), THPd (highest concentration 3,000 µg/L), and TPHmo (highest concentration 4,400 µg/L) were also reported in multiple groundwater samples.

As an evaluation of the potential impacts of the current groundwater contaminants to downgradient receptor, SGI analyzed previous monitoring well results recorded by others from 1989 to 2009. Monitoring wells MW-8I and MW-8H were selected as both wells are approximately 30 feet downgradient of the property boundary. For the contaminants evaluated concentrations were plotted over time. Plots are shown in Appendix G. The contaminants consistently demonstrated a declining trend within each well over the period of time the wells were sampled. It is anticipated that due to the low porosity of the silt and clay soils underlying the site, off-site migration of contaminants will be relatively slow and the demonstrated natural attenuation will continue.

5.4 Data Consistency

Analytical results and observations made during DPT boring logs appear consistent with the prior reported findings of remediation activities. The imported backfill appears to be generally distributed as reported and SGI's sample collection confirms the material is free of chemical impacts. The residual native soils at the boundary of the property demonstrate chemical impacts consistent with the prior COCs found at the Site. No recent observations of Site conditions appear to conflict with the conceptual site model and the conclusions regarding remediation effectiveness that led to the 2011 findings that the Site warranted certification of completed remedial actions.

6.0 HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS AND CONCEPTUAL SITE MODEL

Based on the data collected during the 2016 supplemental investigation, a human health risk assessment (HHRA) and ecological risk assessment (ERA) were conducted for the Site. To develop a conceptual understanding of the Site, information regarding potential chemical source, chemical release and transport mechanisms, locations of potentially exposed human and ecological receptors, and potential exposure routes were assessed. This information is outlined schematically in a conceptual site model (CSM) shown on Figure 6-1.

The CSM assists in quantifying potential impacts to human health by identifying potentially exposed hypothetical receptors and the most likely ways they might be exposed to chemicals at the Site. Based on the CSM, the soil and grab groundwater data were screened with the CRWQCB ESLs, dated February 2016. Based on the results of the screening-level risk assessment, a site-specific risk assessment was conducted to further evaluate potential exposures associated with proposed development, in order to identify the need for additional remediation or engineering solutions to adequately protect human and ecological health.

As defined by the U.S. Environmental Protection Agency (USEPA, 1989), all of the following four components are necessary for a chemical exposure pathway to be considered complete and for chemical exposure to occur:

- A chemical source and a mechanism of chemical release to the environment;
- An environmental transport medium (e.g., soil) for the released chemical;
- A point of contact between the contaminated medium and the receptor (i.e., the exposure point); and
- An exposure route (e.g., dermal contact with chemically-impacted soils) at the exposure point.

The following sections describe these components and provide a basis for the CSM.

6.1 Potential Sources

The sources of potential contamination at a Site are related to exposure setting (site characteristics and past and current site operations) and land and groundwater uses at the Site and surrounding area. The primary sources for potential contamination at the Site are related to former Site operations as a retail service station and subsequent releases to onsite soil. Following a release to soil, secondary sources may include ambient air, fugitive dust, groundwater, and surface water.

6.2 Exposure Setting and Land Use

The Site is approximately 0.31 acre in size and was formerly occupied by retail service stations. The former service stations included underground storage tanks (USTs) for gasoline and waste oil, dispenser islands, and associated piping (Figure 2-2). In 1992, the buildings and all aboveground

and underground facilities were removed from the Site. Since the mid-1990's, the Site has operated as a paved public parking lot. Currently, there are no buildings or structures onsite.

The Site is located in a mixed commercial and residential use area. Based on the City of Oakland planning code, the Site and surrounding area are zoned as Neighborhood Center Commercial Zone (CN-2) and Residential Parking Combining Zone (S-12). The CN-2 zone is intended for mixed use neighborhood commercial centers. The S-12 zone is for off-street parking for high density residential neighborhoods and adjacent commercial areas to alleviate on-street parking congestion. There are no known schools or hospitals (i.e., sensitive receptors) located within a ½-mile downgradient of the Site. The nearest residential areas are located upgradient and crossgradient of the Site. In the downgradient direction, the Site is bordered by Grand Avenue and recreational areas associated with Lake Merritt. Lake Merritt is the nearest surface water body and is located approximately 200 feet south of the Site. Lake Merritt is a large tidal lagoon that receives water from high and low tidal flows from the estuary and storm drain outfalls around the lake; therefore, it has brackish water (a mixture of fresh and salt water; Lake Merritt Institute, 2016). Based on the Site Conceptual Model and Case Closure Request (CRA, 2009), dated December 14, 2009, no public water supply wells within a quarter-mile of the Site were identified in well surveys conducted in 1988, 2001, and 2009. Drinking water in the area of the Site is supplied by the East Bay Municipal Utility District (EBMUD).

Future long-term use of the Site is expected to be mixed use (commercial and residential). Future development plans include construction of a multi-story building that will overlay the entire surface of the property (Figure 2-3). The ground floor of the building will include parking and retail space, and building services and a lobby for the upper floor residential apartments. The upper second through sixth floors will include residential apartments. As indicated on Figure 4-1, an elevator will be located in the southwestern portion of the building. Other than the elevator shaft and utilities, no other additional subgrade structures are planned. An emergency exit stairway will be located in the southeastern corner of the building, but the design and construction of the stairway will be open to ambient air on one side. Hence this stairway will not represent an enclosed indoor space.

6.3 Chemical Release Mechanisms and Identification of Transport Media

Chemical properties of the Site-related chemicals and the physical characteristics of the Site were reviewed to identify the factors that might allow the release of a chemical to the environment, and transport to or through soil, soil vapor, and groundwater.

Future development plans include a multi-story building covering the entire Site. The building footprint and sidewalks will generally preclude leaching of surface water through impacted subsurface soil; therefore, leaching is not expected to occur at the Site to any significant extent. Additionally, the anticipated cover across the Site is expected to preclude direct contact with soil for an onsite commercial/industrial worker receptor. However, during redevelopment of the Site, an onsite construction worker receptor may be directly exposed to onsite soil.

Other routes of exposure may be associated with the release of chemicals through volatilization, wind and/or mechanical erosion (i.e., during construction), lateral migration of chemicals in

groundwater, or migration of chemicals via stormwater runoff. These types of releases may result in chemical vapor or dust (with sorbed chemicals) emissions in air, or the movement of chemicals in groundwater or stormwater runoff. These potential release mechanisms are discussed in more detail below.

6.3.1 Volatilization of Chemical Vapors

Some of the chemicals detected at the Site are VOCs. These chemicals typically have a low organic-carbon partition coefficient (K_{oc}), a low molecular weight, and a high Henry's Law constant, indicating that these chemicals may volatilize. Therefore, volatilization of VOCs was considered in this risk assessment.

6.3.2 Emission of Fugitive Dust

Some chemicals (e.g., metals in soil) adsorb readily to dust particles. Chemicals adsorbed to soil particles can be blown into the air by wind and/or mechanical erosion. This is referred to as fugitive dust. The predominant Site-related contaminants include TPH and VOCs, which typically volatilize. Therefore, exposure to chemicals in soil via fugitive dust emissions was not considered a significant release mechanism for Site-related contaminants.

6.3.3 Lateral Migration of Groundwater into Offsite Surface Water

In the downgradient direction, the Site is bordered by Grand Avenue and Lake Merritt. Lake Merritt, a large tidal lagoon, is approximately 200 feet south of the Site. Any Site-related contaminants in groundwater may migrate offsite and potentially impact Lake Merritt. It is anticipated that due to the low porosity of the silt and clay soils underlying the site, off-site migration of contaminants will be relatively slow and the demonstrated natural attenuation will continue. Additionally, due to the distance to Lake Merritt from the Site and significant dilution upon groundwater discharging into Lake Merritt, any potential migration of Site-related contaminants in groundwater into Lake Merritt is not expected to be significant. However, it was considered as a potential release mechanism in this risk assessment.

6.3.4 Stormwater Runoff

Stormwater runoff from areas of contaminated soil has the potential to transport contaminants bound to soil particles. However, future development plans include a large multi-story building across the entire Site. Redevelopment at the Site will include engineering controls to control stormwater runoff from the Site. Additionally, Site-related contaminants are more likely to volatilize and less likely to be adsorbed to any surface soil runoff. Although the potential chemical release via stormwater runoff is possible, it is not identified as a significant chemical release mechanism for Site-related contaminants.

6.4 Potential Human Receptors

The third component necessary for an exposure pathway to be complete is identification of potential receptors at the Site. Hypothetical human and ecological receptors were identified on the basis of proximity to the Site, proposed activities that could possibly result in direct or indirect contact with Site-related chemicals, and anticipated Site use. The following hypothetical receptors were evaluated in this risk assessment:

Hypothetical Human Receptors:

- Onsite Construction Worker Receptor;
- Onsite Commercial/Industrial Worker Receptor;
- Onsite Resident Receptor; and

Hypothetical Ecological Receptor:

- Offsite Fish and Aquatic Invertebrate Receptor.

These potential receptors are described further in Section 6.6.

6.5 Potential Exposure Points

The other portion of the third component necessary for an exposure pathway to be complete is a point of contact between the contaminated medium and the receptor (i.e., the exposure point). This risk assessment evaluates potential exposure of receptors assuming that access to the Site is unrestricted and that onsite receptors are exposed directly to contaminated soil (construction exposure scenario only) and indirectly to soil vapor and groundwater. During redevelopment of the Site, outdoor construction worker receptors may be directly exposed to soil. Post-construction, the building foundation and concrete/asphalt paving across the Site will preclude direct contact with soil for the onsite commercial/industrial worker and onsite resident receptors. For soil, the exposure point is assumed to be the area within the Site boundaries.

In general, any hypothetical onsite construction worker receptor will be performing activities consistent with an SMP and a Site-specific HASP. The HASP will require the use of proper personal protective equipment (PPE) and the best management practices (BMPs) will require dewatering to preclude any direct contact with groundwater for workers at the Site. Therefore, direct contact with groundwater for onsite workers was not evaluated in this risk assessment.

Volatile compounds can be released from the subsurface into outdoor and indoor air resulting in an indirect exposure to contaminants in soil, soil vapor, and groundwater. Inhalation of VOCs in outdoor air is generally negligible due to dispersion in ambient air. For the volatilization pathway into indoor air, exposure to subsurface contamination is best characterized through the collection of soil vapor or groundwater samples. Due to subsurface soil conditions and shallow groundwater, reliable soil vapor data could not be collected at the Site. In the absence of soil vapor data, grab groundwater data was used in the evaluation of indoor air impacts for the onsite commercial/industrial worker receptors. For onsite receptors, the exposure point for groundwater is assumed to be the

groundwater within the Site boundaries, specifically beneath area occupied by onsite commercial/industrial worker receptors on ground floor of future building.

The nearest surface water body, Lake Merritt, is located approximately 200 feet downgradient of the Site. Site-related contaminants in onsite groundwater may migrate offsite towards Lake Merritt. In 1989, offsite groundwater monitoring wells MW-8F and MW-8G were installed across Grand Avenue to the south-southeast of the Site. In 1990, additional offsite groundwater monitoring wells MW-8H, MW-8I, and MW-8J were installed along Grand Avenue, between the Site and wells MW-8F and MW-8G. In Appendix H, as prepared by CRA (2009), Figures 5 and 6 show the locations of these five offsite wells and historical analytical results in soil and groundwater and Table 1 summarizes the historical groundwater monitoring data. For offsite ecological receptors in Lake Merritt, the exposure point is assumed to be the groundwater in the offsite groundwater monitoring wells. The use of offsite groundwater data for this evaluation is conservative, considering that any concentrations in groundwater will be significantly diluted upon discharging into Lake Merritt. Consequently, actual exposure point concentrations for ecological receptors in Lake Merritt are expected to be significantly less than the concentrations assumed in this risk assessment.

6.6 Exposure Pathways Considered Potentially Complete and Significant

The fourth and final component, a complete exposure pathway (i.e., route of exposure) is discussed in combination with the third component (i.e., presence of receptors at an exposure point) to define those exposure pathways considered to be complete and significant. The following sections summarize those pathways considered complete and significant for each receptor.

6.6.1 Hypothetical Onsite Construction Worker Receptor

The hypothetical onsite construction worker receptor is included in this HHRA in the event any construction or re-development occurs at the Site. This receptor spends the workday outdoors performing construction-related tasks. This receptor is expected to come in contact with soil. Inhalation of chemical vapors while indoors was not considered a complete and significant exposure pathway because this receptor is not expected to be working inside buildings. The exposure pathways assumed to be complete and significant for the hypothetical onsite construction worker receptor include:

- Incidental ingestion of soil;
- Dermal contact with soil; and
- Inhalation of dust in outdoor air.

6.6.2 Hypothetical Onsite Commercial/Industrial Worker Receptor

The proposed multi-story building will include retail space and building services and a lobby for the upper floor residential apartments. Based on this expected future land use, the hypothetical onsite commercial/industrial worker receptor is included in this HHRA. This receptor spends the workday (8 hours per day) conducting activities primarily indoors with limited outdoor exposure. Although inhalation of vapors in outdoor air may be complete, outdoor air concentrations are typically lower

than indoor air concentrations due to dispersion; such relatively minor exposures are subsumed by the assumption that all exposure is from indoor air. The Site is expected to be capped by a building and concrete/asphalt paving, which would preclude any direct contact with soil while outdoors. The exposure pathway assumed to be complete and significant for the hypothetical onsite commercial/industrial worker receptor includes:

- Inhalation of vapors in indoor air.

6.6.3 Hypothetical Onsite Resident Receptor

Floors 2 through 6 of the proposed multi-story building will include residential apartments; therefore, the hypothetical resident receptor is included in this HHRA. The Site is expected to be capped by a building and concrete/asphalt paving, which would preclude any direct contact with soil while outdoors. The residential apartments are not located on the ground floor; therefore, the only potential preferential pathway to the upper residential floors would be the elevator shaft located in the southwestern portion of the Site. The exposure pathway assumed to be complete and significant for the hypothetical onsite resident receptor includes:

- Inhalation of vapors in indoor air via the elevator shaft.

Although this is a potentially complete exposure pathway, there is no known regulatory-recommended or approved method to evaluate this exposure pathway. The DTSC recommended vapor intrusion model assumes the receptor resides directly over the ground surface. The evaluation of this exposure pathway introduces significant uncertainty, when estimating the concentrations in vapor that enter the elevator shaft, mix with ambient air, then diffuse into ambient air on upper floors of a multi-story building. Therefore, this exposure pathway is qualitatively discussed in this HHRA but cannot be quantitatively evaluated.

6.6.4 Hypothetical Offsite Fish and Aquatic Invertebrate Receptor in Lake Merritt

The hypothetical offsite fish and aquatic invertebrate receptor is included in this ERA based on the Site's proximity to Lake Merritt. Lake Merritt is a large tidal lagoon with brackish waters (freshwater and saltwater influence) that is approximately 140 acres in size (LMI, 2016). The exposure pathway assumed to be complete and significant for the hypothetical offsite fish and aquatic invertebrate receptor includes:

- Incidental ingestion of groundwater (as surface water); and
- Dermal contact with groundwater (as surface water).

As mentioned previously, this exposure pathway is conservatively evaluated using offsite groundwater concentrations. It is expected that any potential groundwater concentrations will be significantly diluted upon discharging into Lake Merritt.

6.7 Human Health and Ecological Screening-Level Risk Evaluation

Typically, only the most toxic, persistent, and prevalent site-related chemicals detected at a site are fully evaluated in a risk assessment. In this way, the assessment can focus solely on those

chemicals that are expected to account for the majority of the estimated health impacts at the Site. These selected chemicals are known as chemicals of potential concern (COPCs). The nature and extent of contaminants was discussed in Section 2.1.4. The following sections discuss which chemical concentrations exceed applicable screening levels by media. For the human health screening-level risk evaluation, this section focuses on the data collected by SGI during the April 2016 site investigation. For the ecological screening-level risk evaluation, this section focuses on the historical data collected in offsite groundwater monitoring wells by previous consultants.

The CRWQCB ESLs (CRWQCB, 2016) include a broad scope of screening levels, some of which are not strictly risk-based. The human health risk-based ESLs correspond to an excess cancer risk of 1×10^{-6} or a hazard quotient of one (1), based on standardized equations that combine exposure assumptions with agency-derived toxicity data. The human health risk-based ESLs are developed for direct contact with soil exposure scenarios (i.e., ingestion, dermal contact, and inhalation of dust/vapor in outdoor air) and indoor air exposure scenarios. For soil, in the absence of a chemical-specific ESL, a USEPA Regional Screening Level (RSL; USEPA, 2015) was used if available. USEPA RSLs are not available for the evaluation of vapor intrusion from groundwater. The ecological ESLs are aquatic habitat goals for protection of freshwater and saltwater aquatic habitats which are appropriate for a tidal lagoon with brackish waters; such as, Lake Merritt.

6.7.1 Soil

Based on a comparison of Site data and the CRWQCB ESLs, COPCs were identified in soil at the Site. Table 2-1 provides a summary of laboratory analytical results for soil samples and applicable screening levels. No TPH, VOC, or SVOC was detected at concentrations above the soil ESL for construction land use. Based on proposed development plans, the Site is expected to be capped by a building and concrete/asphalt paving, which would preclude any direct contact with soil for residential or commercial/industrial receptors. As summarized below, only TPH as diesel (TPHd) and naphthalene were detected at concentration above the soil ESL for residential or commercial/industrial land use.

6.7.1.1 Total Petroleum Hydrocarbons (TPH)

TPH as gasoline (TPHg) and TPH as motor oil (TPHmo) were not detected above the soil ESL for residential or commercial/industrial land use. TPHd was detected in 20 of 21 soil samples. The following table summarizes the detected concentrations that are above the soil ESLs.

Sample	Date Sampled	Depth (feet bgs)	Chemical	Concentration (mg/kg)	Soil ESL Residential (mg/kg)	Soil ESL Commercial (mg/kg)
SGI-SB-01-3	04-16-16	3	TPHd	2,100	230	1,100
SGI-SB-02-2	04-16-16	2	TPHd	610	230	1,100

6.7.1.2 Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs)

No VOCs or SVOCs were detected above the soil ESLs for commercial/industrial land use. Naphthalene was the only VOC detected above the soil ESL for residential land use. Naphthalene was detected in 6 of 21 soil samples. The following table summarizes the detected concentrations that are above the soil ESLs.

Sample	Date Sampled	Depth (feet bgs)	Chemical	Concentration (mg/kg)	Soil ESL Residential (mg/kg)	Soil ESL Commercial (mg/kg)
SGI-SB-02-2	04-16-16	2	Naphthalene (by 8260)	3,600	3,300	14,000
			Naphthalene (by 8270)	1,100	3,300	14,000
SGI-SB-02-5	04-16-16	5	Naphthalene (by 8260)	3,900	3,300	14,000
			Naphthalene (by 8270)	3,200	3,300	14,000

As shown in the above table, the VOC analysis by USEPA Method 8260 indicated higher concentrations of naphthalene which only slightly exceeded the soil ESL for residential land use. The SVOC analysis by USEPA Method 8270 indicated lower concentrations of naphthalene, which did not exceed the soil ESLs for residential land use.

Although TPHd and naphthalene concentrations in a few soil samples exceed the soil ESLs, these soil ESLs are protective of direct contact with soil. Under the proposed development, the proposed multi-story building will cover the entire Site, which will preclude any direct contact with soil. Only under a redevelopment/construction worker exposure scenario will direct contact with soil be a complete exposure pathway. As mentioned previously, TPH, VOCs, and SVOCs were not detected at concentrations exceeding the soil ESLs for construction land use. Therefore, soil does not pose a human health risk to potential onsite construction worker receptors. During redevelopment of the Site, site activities will be managed consistent with a Soil Management Plan.

6.7.2 Groundwater

For groundwater, the only complete exposure pathway is inhalation of vapors volatilizing from groundwater into indoor air. Based on a comparison of grab groundwater data and the CRWQCB ESLs for vapor intrusion from shallow groundwater, COPCs were identified in groundwater at the Site. Table 2-2 provides a summary of laboratory analytical results for grab groundwater samples and applicable screening levels. As summarized below, only benzene, ethylbenzene, total xylenes, and naphthalene were detected at concentrations above the groundwater vapor intrusion ESLs for commercial/industrial land use.

In the area of the proposed elevator shaft, the only potential preferential pathway to the upper residential floors, grab groundwater sample SGI-GW-06 was collected. No TPH or VOCs were detected above the groundwater vapor intrusion ESLs for residential or commercial/industrial land

use. Therefore, groundwater does not pose a human health risk to potential onsite resident receptors.

The use of grab groundwater data is conservative because chemical concentrations detected in grab groundwater samples tend to be higher than concentrations detected from developed groundwater monitoring wells that have been properly purged prior to sampling. In addition, there is a potential for grab groundwater samples to contain soil particles that may increase chemical concentrations in dissolved groundwater.

6.7.2.1 Total Petroleum Hydrocarbons (TPH)

TPHg, TPHd, and TPHmo were detected some of the grab groundwater samples. No groundwater ESLs for vapor intrusion from shallow groundwater were available for TPH. Therefore, vapor intrusion impacts associated with TPH mixtures is evaluated based on the more toxic components of TPH (i.e., benzene, toluene, ethylbenzene, total xylenes [BTEX], methyl tert-butyl ether [MTBE], and polyaromatic hydrocarbons [PAHs]) by analysis of VOCs and SVOCs.

6.7.2.2 Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs)

Benzene and ethylbenzene were detected above the groundwater vapor intrusion ESLs for commercial/industrial land use. Benzene was detected in 2 of 11 grab groundwater samples. Ethylbenzene was detected in 3 of 11 grab groundwater samples. The following table summarizes the detected concentrations that are above the groundwater ESLs for vapor intrusion from shallow groundwater.

Sample	Date Sampled	Depth (feet bgs)	Chemical	Concentration (ug/L)	Groundwater ESL Commercial (ug/L)
SGI-GW-02	04-16-16	5.5	Benzene	55	9.7
			Ethylbenzene	130	110
SGI-GW-03	04-21-16	>13	Benzene	740	9.7
			Ethylbenzene	710	110

Based on the screening-level risk evaluation, benzene and ethylbenzene were identified as COPCs in groundwater. Therefore, vapor intrusion from shallow groundwater for the commercial/industrial exposure scenario was further evaluated in a Site-specific vapor intrusion evaluation in Section 6.8.

6.7.3 Offsite Downgradient Groundwater

Historically, there were five offsite groundwater monitoring wells located downgradient of the Site. South of the Site, wells MW-8H, MW-8I, and MW-8J were located in Grand Avenue. Wells MW-8F and MW-8G were located across Grand Avenue, closest to Lake Merritt. In Appendix H, as prepared by Conestoga-Rovers & Associates (CRA, 2009), Table 1 summarizes the historical groundwater monitoring data which indicate that some Site-related COPCs have been detected in the offsite groundwater monitoring wells. However, for most COPCs, concentrations decreased to

concentrations below the laboratory detection limits. During Site closure activities in 2009, as approved by ACDEH, these offsite wells were abandoned. The last two sampling events conducted in June and October 2009 are summarized in Table 6-1. In 2009, at the wells closest to Lake Merritt (MW-8F and MW-8G), only low concentrations of TPHd were detected above laboratory reporting limits. Historical data shows low and decreasing concentrations over time, which suggests that any residual onsite groundwater impacts are not impacting downgradient offsite groundwater migrating towards Lake Merritt. Therefore, during the recent Allwest and SGI site investigations, additional offsite downgradient groundwater samples were not collected.

An ecological screening-level risk assessment was conducted to evaluate the potential effects of dissolved site-related contaminants on aquatic life. For the purposes of this ecological screening-level risk evaluation, historical offsite groundwater data are compared with the aquatic habitat goal ESLs for protection of freshwater and saltwater aquatic habitats because Lake Merritt is considered a brackish environment with both freshwater and saltwater influences. No TPH or VOCs were detected above the ESLs for protection of freshwater or saltwater aquatic habitats. Therefore, groundwater does not pose an ecological risk to potential offsite aquatic receptors in Lake Merritt.

6.8 Site-Specific Human Health Risk Assessment

Based on the human health and ecological screening-level risk assessment, the only exposure pathway requiring further evaluation is vapor intrusion from shallow groundwater for the onsite commercial/industrial worker receptor. This site-specific HHRA uses specific equations and exposure factors to estimate doses for potentially exposed receptors via vapor intrusion from groundwater. The methods used to conduct this HHRA are consistent with the U.S. Environmental Protection Agency (USEPA, 1989 and 1991), and California Environmental Protection Agency Department of Toxic Substances Control (DTSC, 2011 and 2013) guidance.

The CalEPA DTSC modified version of the USEPA Johnson and Ettinger (J/E) model (DTSC, 2014) was used to evaluate volatilization of chemicals from groundwater, migration of vapors to the soil surface, and mixing with indoor air for the hypothetical onsite commercial/industrial worker receptor. A detailed description of the equations used in this model is provided in the *User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings* (USEPA, 2004). Site conditions were generalized to create a simplified conceptual model to estimate vapor concentration in indoor air. The conceptual approach to modeling, model input parameters, risk characterization, uncertainties, and results are described in the following sections.

6.8.1 Sources of VOC Vapors

Vapor sources were modeled based on the following assumptions:

- VOCs are uniformly distributed in groundwater; and
- The concentrations of VOCs remain constant over time.

These assumptions are highly conservative for source media because the distribution of COPCs is likely more limited than was assumed, and because the mass of the source will deplete over time as natural attenuation processes occur, thereby lowering actual concentrations in the source over time.

6.8.2 Chemical Transport Mechanisms

The model simulates two basic transport mechanisms:

- Chemical partitioning between phases;
- Vapor migration from groundwater to the ground surface; and
- Mixing of groundwater emissions with indoor air.

6.8.2.1 Chemical Partitioning Between Phases

Chemicals are assumed to partition between groundwater (C_{gw}) and soil gas ($C_{soil\ gas}$) under equilibrium adsorption conditions.

6.8.2.2 Vapor Migration from Groundwater to Ground Surface

Vertical migration of chemicals in groundwater to the ground surface was assumed to occur by steady-state diffusion induced by a chemical concentration gradient between the groundwater source and the soil surface. The indoor air pathway analysis also accounted for the effects of steady-state advection induced by an assumed pressure differential between the exterior and interior of the building. Chemical diffusion of soil gas through the vadose zone and building foundations was characterized by effective diffusion coefficients, D_s^{eff} (vadose zone) and D_f^{eff} (building foundations). Advection of chemicals dissolved in soil moisture was assumed to be negligible. This assumption is conservative because soil moisture tends to migrate downward, decreasing the overall flux of chemical toward the surface. Chemical and biological transformations were conservatively assumed not to occur during migration to the surface.

6.8.2.3 Mixing of Groundwater Emissions with Indoor Air

The analysis of indoor air simulated vapor-phase advection and diffusion of chemicals near the building foundation. Vapor diffusion of chemicals upward was assumed to occur across a solid foundation with a total area (A) and fraction of open area in the foundation (η) (i.e., through cracks in the foundation). Advective transport of soil vapor was assumed to occur as a result of a simulated pressure differential between inside (lower pressure) and outside (higher pressure) of the building. Such underpressurization is generally induced by temperature differentials, wind loading, and operation of devices such as furnaces and exhaust fans. Underpressurization is highly variable over time, but was conservatively assumed to be constant in the model. This approach is highly conservative for periods when structures are neutrally or positively pressurized, as these conditions will inhibit migration of soil vapor into the building. The simulation assumes that the advective flux occurs through an open area (A_{crack}) equal to the product total area (A) and fraction of open area in

the foundation (η). The mixing of vapor-phase chemicals with ambient indoor air was simulated using a constant building ventilation rate ($Q_{building}$).

6.8.3 Model Input Parameters

Using the CalEPA DTSC J/E model (DTSC, 2014) and the concentrations of chemicals measured in groundwater, the resultant chemical concentrations in indoor air and associated human health risks from vapor intrusion into indoor air were estimated for the onsite commercial/industrial worker receptor. The variables and assumptions used in the model are described below.

6.8.3.1 Source Concentrations and Site-Specific Physical Parameters

Using the CalEPA DTSC J/E model (DTSC, 2014) and site-specific soil properties, indoor air concentrations were modeled from dissolved VOC concentrations in groundwater samples collected in April 2016 (Table 2-2). Potential vapor intrusion impacts to indoor air were evaluated using the maximum detected concentrations for all VOCs detected in groundwater (Table 6-2).

Site-specific physical soil property analyses (i.e., particle size distribution, dry bulk density, and porosity) were performed on two soil samples collected at the Site. The soil characterization analytical report is provided in Appendix E. One soil sample, SB-6-4', was collected to characterize the backfill material at approximately 4.35 feet bgs in the former dispenser island excavation area. This soil sample was collected at the location of soil boring SGI-SB-06 (Figure 4-1). Based on proximity to the residual contamination adjacent to Grand Avenue and the proposed building elevator shaft, a second soil sample, SB-10-10, was collected to characterize the native material at approximately 10.5 feet bgs. This soil sample was collected at the location of soil boring SGI-SB-10 (Figure 4-1). As mentioned previously, native soil underlying the Site primarily consists of fine-grained material (clays and silts) with some sand. Consistent with these determinations, the soil property analyses results for sample SB-10-10 indicated a fine-grained material that was approximately 50-percent silt, 25-percent clay and 25-percent sand. This soil sample represents the predominant soil type encountered in areas beyond the limits of the former excavations, including areas where residual impacts in soil and groundwater were encountered along Grand Avenue. Therefore, for the purposes of this evaluation, the soil properties for sample SB-10-10 were used in the vapor intrusion model.

The results from the soil physical properties analyses for sample SB-10-10 (Appendix E) were used to determine the appropriate soil conservation service (SCS) soil textural classification within the Site. The particle size distribution analysis indicates a "loam" SCS soil textural classification. Therefore, loam was selected as the Vadose Zone SCS Soil Type input parameter for the vapor intrusion model. The reported values for dry bulk density (1.63 g/cm^3), total porosity (0.383), and water-filled porosity (0.326) were used as model input parameters. Depth below grade to water table varies across the Site. However, in the areas of residual contamination along Grand Avenue (soil borings SGI-SB-01 and SGI-SB-02), depth to first encountered groundwater ranged from 8.5 feet bgs to 12.5 feet bgs with soil impacts extending from 1.5 feet bgs to 8.5 feet bgs. For this evaluation, depth to groundwater was assumed to be 8.5 feet bgs. In accordance with CalEPA (DTSC, 2014),

default values of 24 degrees Celsius for average soil temperature and 15 centimeters (cm) for depth to the bottom of an enclosed space floor for slab-on-grade construction were used as vapor intrusion model input parameters.

The site-specific soil properties used in the fate and transport model for vapor migration from groundwater to indoor air are summarized in the table below.

Equation Variables – Vapor Migration from Groundwater to Indoor Air		
Properties	Symbol	Assumed Value
Depth Below Grade to Bottom of Enclosed Space Floor	L_F	15 cm
Depth Below Grade to Water Table	L_{WT}	259 cm (8.5 feet)
SCS Soil Type Directly Above Water Table Vadose Zone SCS Soil Type	--	Loam (L)
Average Groundwater Temperature	T_s	24°C
Average Vapor Flow Rate into Building	Q_{Soil}	5 L/m
Vadose Zone Soil Dry Bulk Density	ρ_b	1.63 g/cm ³
Vadose Zone Soil Total porosity	θ_T	0.383
Vadose Zone Soil Water-filled porosity	θ_w	0.326
Vadose Zone Soil Air-filled porosity	θ_a	0.057

6.8.3.2 Chemical-Specific Properties

The values for the dimensionless Henry's Law constant, organic carbon-water partition coefficient (K_{oc}), and molecular diffusion coefficients in air and water, D_i and D_w , were obtained from CalEPA (DTSC, 2014).

6.8.3.3 Building Properties

The CalEPA DTSC J/E model assumes default values for a residential single-family dwelling (DTSC, 2014). Although the proposed multi-story building will be significantly larger than an assumed typical residential dwelling, the default values for residential land use were used for building area and volume under a commercial/industrial exposure scenario. However, the building air exchange rate of 1.0 for a commercial/industrial exposure scenario (DTSC, 2014) was used.

6.8.4 Risk Characterization

The risk characterization process incorporates estimated chemical intakes, exposure assumptions, and toxicity values to estimate noncancer adverse health effects and excess cancer risks from assumed exposure to chemical vapors in indoor air. Consistent with USEPA (1989; 1991)

guidelines, the following general equations were used in the CalEPA DTSC J/E model to estimate noncancer adverse health effects (expressed as hazard quotient) and carcinogenic effects (expressed as excess cancer risk):

$$\text{Hazard Quotient} = \frac{C_{\text{building}} \times EF \times ED \times ET}{RfC \times AT_n}$$

$$\text{Excess Cancer Risk} = \frac{C_{\text{building}} \times EF \times ED \times ET \times URF}{AT_c}$$

Where:	C_{building}	=	Chemical concentration in indoor air ($\mu\text{g}/\text{m}^3$).
	EF	=	Exposure frequency (250 days/year).
	ED	=	Exposure duration (25 years).
	ET	=	Exposure Time (8 hours/day).
	AT	=	Averaging time (hours). For noncarcinogenic effects, $AT = ED \times 365 \text{ days/year} \times 24 \text{ hours/day}$. For carcinogenic effects, $AT = \text{Lifetime (70 years)} \times 365 \text{ days/year} \times 24 \text{ hours/day}$.
	URF	=	Inhalation unit risk factor for carcinogenic chemicals ($\mu\text{g}/\text{m}^3$) ⁻¹ .
	RfC	=	Inhalation reference concentration for noncarcinogenic chemicals ($\mu\text{g}/\text{m}^3$).

The commercial/industrial and residential exposure parameters (EF, ED, ET, and AT) listed above are standard default values used by USEPA, CalEPA DTSC, and CRWQCB. The toxicity values (URF and RfC) used in the above equations were obtained from CalEPA (DTSC, 2014).

Exposure to multiple noncarcinogenic chemicals is evaluated by summing the HQs for each individual chemical, resulting in a hazard index (HI). Similarly, exposure to carcinogenic chemicals is evaluated by summing the excess cancer risk for individual chemicals, resulting in a total excess cancer risk. The spreadsheets containing input parameters and results of the CalEPA DTSC J/E model, for subsurface vapor intrusion into buildings (DTSC, 2014) are presented in Appendix I.

6.8.5 Uncertainty Analysis

The procedures used in evaluating vapor migration and estimating exposure point concentrations (EPCs) are subject to various degrees of uncertainty. A significant amount of conservatism has been incorporated into the fate and transport modeling process to address this uncertainty. Specifically, the Johnson and Ettinger (1991) model employs a series of simplified analytical solutions to predict chemical transport, often resulting in overestimation of EPCs. The conservatism inherent to the formulation of these models is supplemented by additional conservatism associated with selection of model input data and conceptualization of site conditions imposed by model users. As a result of this multilevel conservatism, actual EPCs and corresponding health risks are likely to be significantly lower than were estimated for the inhalation exposure pathway (i.e., the results from the model are representative of a worst-case scenario). Examples of conservative assumptions incorporated into the vapor intrusion model include:

- Loss mechanisms - The absence of loss mechanisms such as biodegradation and vapor-phase adsorption result in overestimation of vapor emissions to indoor air, yielding higher EPCs.
- Depleting contaminant source - The use of a nondepleting, constant source results in an unlimited supply of contaminated vapor and an overestimation of vapor emissions to indoor air, yielding higher EPCs.
- Water movement - The assumed absence of water (and dissolved chemical) movement through unsaturated soil results in an overestimation of chemical mass in vapor-phase available for transport to indoor air, yielding higher EPCs.
- Neutral or positive pressurization - The assumption of continuously under-pressurized buildings neglects significant periods where neutral or positive pressurized conditions exist, thereby over-estimating advective transport of contaminated vapors to indoor air, yielding higher EPCs.
- One-dimensional transport - The assumption of vapor transport under a single (vertical) dimension ignores the potential for vapor migration in multiple directions away from the source area, resulting in an over-estimation of vapor emissions and higher EPCs.
- Indoor points of exposure (buildings) are assumed to directly overlie locations of sources in groundwater.
- COPCs are assumed to be uniformly distributed in groundwater and soil vapor, with no spatial and temporal changes in concentrations.
- Averaging time for estimation of EPCs is 25 years for commercial/industrial exposure scenario.

As a result of these conservative assumptions, estimated emissions to indoor air are maximized, yielding EPCs and corresponding human health risks that are biased high.

In some cases, the CalEPA DTSC J/E model-derived soil vapor to indoor air attenuation factor was less than 6×10^{-5} (a threshold value that DTSC considers “reasonable” (DTSC, 2014)). In these cases, DTSC recommends that the use of attenuation factors less than 6×10^{-5} should be explained and justified with site-specific information and a weight-of-evidence approach. As mentioned previously, both the soil boring logs and soil physical property analytical data indicated a high percentage of fine grained material (clays and silts) with some sand in native soil underlying the Site. This native soil is encountered in areas beyond the limits of the former excavations, including areas where residual impacts in soil and groundwater were encountered along Grand Avenue. The physical property analytical data for this fine-grained material indicated high water-filled porosity and low air-filled porosity, which resulted in low attenuation factors. Although some of the model-derived attenuation factors were low, consistent with soil boring logs and laboratory data, this model was based on site-specific data representing Site conditions in areas of residual impacts at the Site.

6.8.6 Results of the Site-Specific Human Health Risk Assessment

A HHRA was performed using the CalEPA DTSC J/E model (DTSC, 2014) to assess potential human health risks associated with soil vapor intrusion to indoor air. In accordance with the

applicable guidance, for noncancer adverse health effects, the resultant HI was compared to the CalEPA and USEPA acceptable HI of 1 (USEPA, 1989). The resultant excess cancer risk was compared to the USEPA acceptable excess cancer risk range of 1×10^{-6} (one-in-one-million) to 1×10^{-4} (one-in-ten-thousand). The most stringent end of the acceptable excess cancer risk range of 1×10^{-6} is generally acceptable for unrestricted land use and the point of departure of risk management decisions for all receptors.

This HHRA evaluates potential human health risks based on exposure to maximum detected groundwater concentrations detected during the most recent April 2016 Site investigation. This evaluation assumes the proposed building will be built on the areas of maximum VOC concentrations. As shown in the Table 6-2, the HI is below the CalEPA and USEPA acceptable HI of 1 and the excess cancer risk is equal to the most stringent end of the USEPA acceptable excess cancer risk range of 1×10^{-6} and is acceptable for hypothetical onsite commercial/industrial receptors.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of the 2016 supplemental investigation activities was to investigate current subsurface conditions related to COC concentrations underlying the Site. Following the acquisition of soil and groundwater data, SGI performed an analysis in regard to the planned development as required under the 2001 Site closure. Results of the subsurface investigation indicate that concentrations are generally low over most of the Site; however, concentrations currently remain above commercial ESLs at two locations, suggesting a potential for vapor intrusion through the commercial ground floor spaces of the development.

The DPT investigation results were consistent with previous 2015 soil samples indicating TPH and VOC contamination above Commercial CRWQCB ESLs are present in native soils adjacent to the southern boundary parallel to Grand Avenue and near the southeast corner of the property. Analytical data from grab groundwater samples collected from the underlying shallow groundwater indicate that VOC impacts are primarily isolated to the same two locations. Analytical VOC data collected indicate that groundwater concentrations that exceed vapor intrusion ESLs are limited to the vicinity of the southeast stairwell and southern Site boundary.

A HHRA and ERA was prepared in order to identify whether the existing soil and groundwater contamination poses a risk to human and ecological receptors. Based on the human health and ecological screening-level risk assessment, the only exposure pathway requiring further evaluation is vapor intrusion from shallow groundwater for the onsite commercial/industrial worker receptor. Results of the site-specific HHRA indicate the HI is below the CalEPA and USEPA acceptable HI of 1 and the excess cancer risk is equal to the most stringent end of the USEPA acceptable excess cancer risk range of 1×10^{-6} and is acceptable for hypothetical onsite commercial/industrial receptors.

Based on the results and interpretation of the site investigation and historical data, the following conclusions and recommendations are made:

- Contaminants encountered in soils were detected in concentrations below direct contact CRWQCB ESLs for construction worker exposure scenarios.
- COCs in soil and groundwater have been fully delineated. Recent and historic groundwater samples collected from the shallow aquifer confirm that impacts are primarily confined to the southern boundary of the property and natural attenuation will improve conditions within a reasonable timeframe. Appendix G provides trend charts for two historical monitoring wells (since abandoned) that demonstrate residual dissolved plume contaminants will degrade in a reasonable timeframe. In addition, excavation of structural foundations will further reduce the mass of contamination within shallow soils at the southern boundary.
- Based on the human health risk evaluation, no direct exposure pathways are available for future commercial and residential receptors. Subsurface soils and groundwater underlying the elevator and stair well shaft planned for the west side of the building indicate no detectable compounds are currently present other than MTBE, which was detected at a concentration below ESLs for shallow groundwater. The stairwell located at the southeast

corner of the building is intended for emergency use only and will remain isolated from the commercial and residential occupancy spaces by normally closed fire doors. In addition, the exterior wall of the stairwell will be composed of open lattice, ensuring the space remains open to ambient air and does not represent an enclosed indoor space.

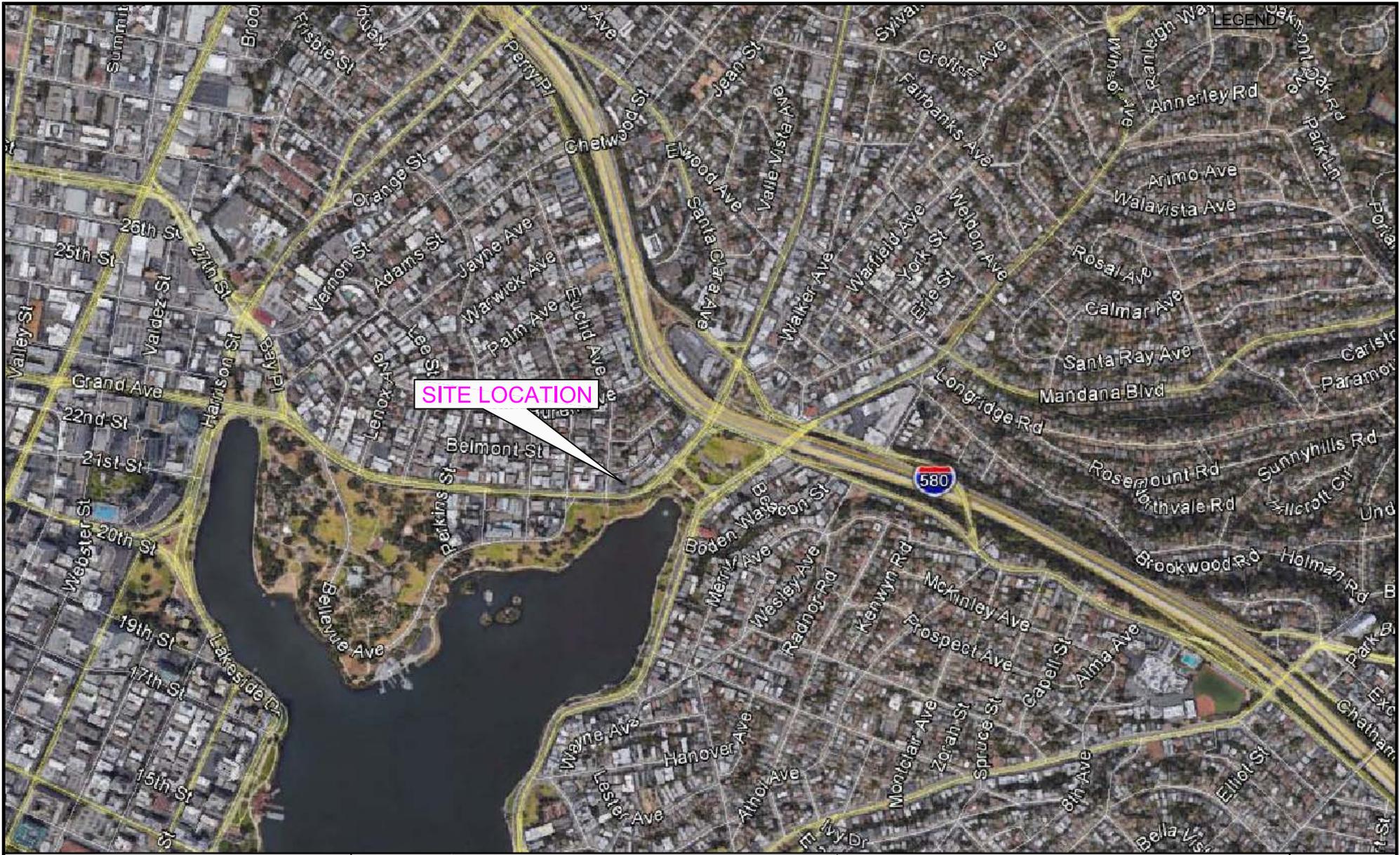
- For the previously identified contaminants of concern, PCE was not encountered in any of the soil or groundwater samples collected. In addition, the backfill material placed at the site following removal of USTs and previous excavation of impacted soils appears free of significant impacts.
- Current subsurface concentrations do not pose a significant risk to human health. Modeled indoor air concentrations for the commercial/industrial worker (based on modeled results and actual concentrations measured in the field) are at levels where the HI is below the CalEPA and USEPA acceptable HI of 1 and the excess cancer risk is equal to the most stringent end of the USEPA acceptable excess cancer risk range of 1×10^{-6} and is acceptable for hypothetical onsite commercial/industrial receptors.
- Historical data for offsite groundwater monitoring wells shows low and decreasing concentrations over time, which suggests that any residual onsite groundwater impacts are not impacting downgradient offsite groundwater migrating towards Lake Merritt. It is anticipated that due to the low porosity of the silt and clay soils underlying the site, off-site migration of contaminants will be relatively slow and the demonstrated natural attenuation will continue. Based on a comparison of historical offsite groundwater data with the aquatic habitat goal ESLs for protection of freshwater and saltwater aquatic habitats, no TPH or VOCs were detected above the ESLs. Therefore, groundwater does not pose an ecological risk to potential offsite aquatic receptors in Lake Merritt.

Based on the currently encountered residual petroleum hydrocarbon concentrations and distribution, in conjunction with the proposed ECR development, no further remediation of soils or groundwater is considered necessary. No observations made during this Supplemental Investigation indicate contradicting conditions that are inconsistent with ACEH's decision to close the site for commercial use in 2011. Furthermore, the specific mixed use development proposed by ECR, can occur without any remedial actions or restrictions and issue a certificate of completion. Any minor residual contamination that may be encountered during development can be dealt with in accordance with a Soils Management Plan.

8.0 REFERENCES

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FIGURES



SITE LOCATION

SGI THE SOURCE GROUP, Inc.
 environmental
 3478 BUSKIRK AVENUE, SUITE 100
 PLEASANT HILL, CA 94523

500 GRAND AVENUE
 OAKLAND, CA

SITE LOCATION MAP



PROJECT NO. 01-WSR-001	DATE 05/16/16	DR. BY: ZA	APP. BY: GS
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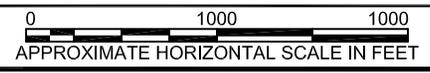
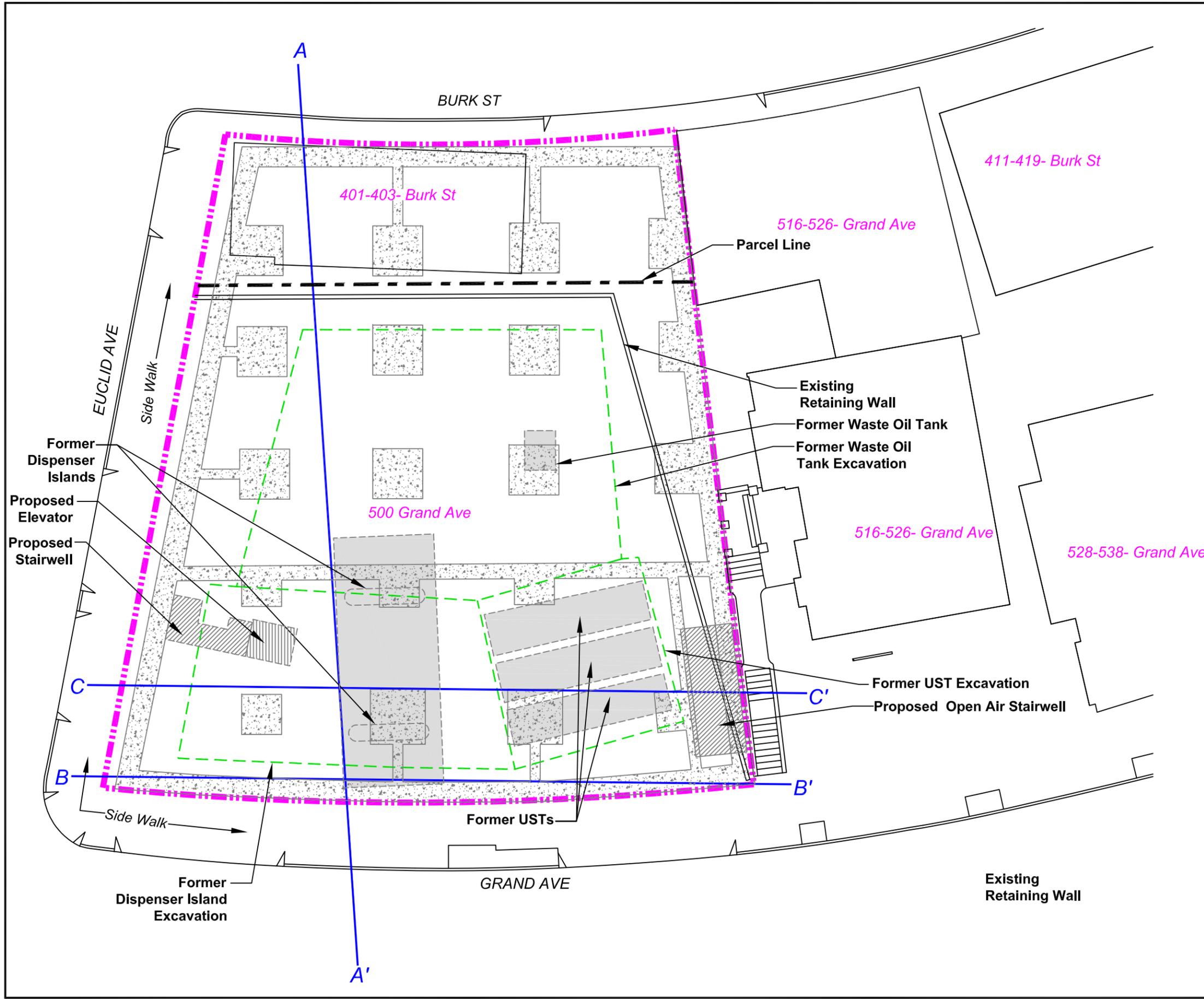


FIGURE 2-1

S:\Clients A - F\Elwood Commercial Real Estate\Data Gap Work Plan\Figures\Fig.2-2-Proposed Redevelopment Footprint.dwg



LEGEND

- - - - - Property Line
- - - - - Base of UST, Dispenser, and Waste Oil Tank Over-Excavation
- Cement Footers
- A — A' Cross Section location

**PROPOSED REDEVELOPMENT
FOOTPRINT WITH FOOTERS**

500 GRAND AVENUE
OAKLAND, CA

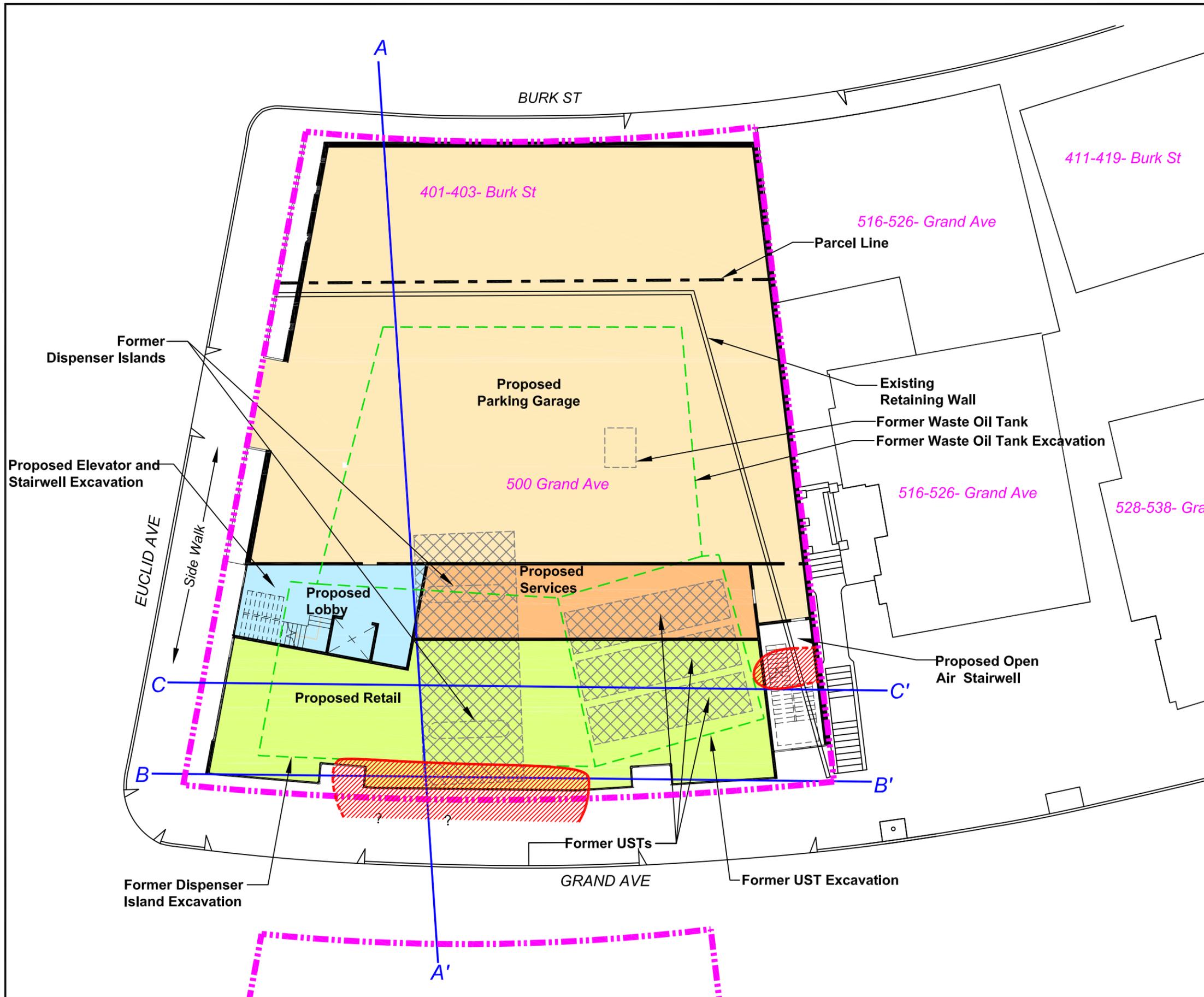
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01-ECR-001	03/21/16	ZA	GS



THE SOURCE GROUP, INC.
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

**FIGURE
2-2**

S:\Clients A - F\Elwood Commercial Real Estate\Data Gap Work Plan\Figures\Fig.2-3-Proposed Redevelopment Footprint with Ground Floor Layout & Residual Petroleum Hydrocarbon Impacts.dwg



LEGEND

-  Property Line
-  Base of UST, Dispenser, and Waste Oil Tank Over-Excavation
-  Cross Section location
-  Aerial Extent of Residual Petroleum Hydrocarbons in Soil and Groundwater >Commercial Exceedance

PROPOSED REDEVELOPMENT FOOTPRINT WITH GROUND FLOOR LAYOUT AND RESIDUAL PETROLEUM HYDROCARBON IMPACTS

500 GRAND AVENUE
OAKLAND, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-ECR-001	03/21/16	ZA	GS



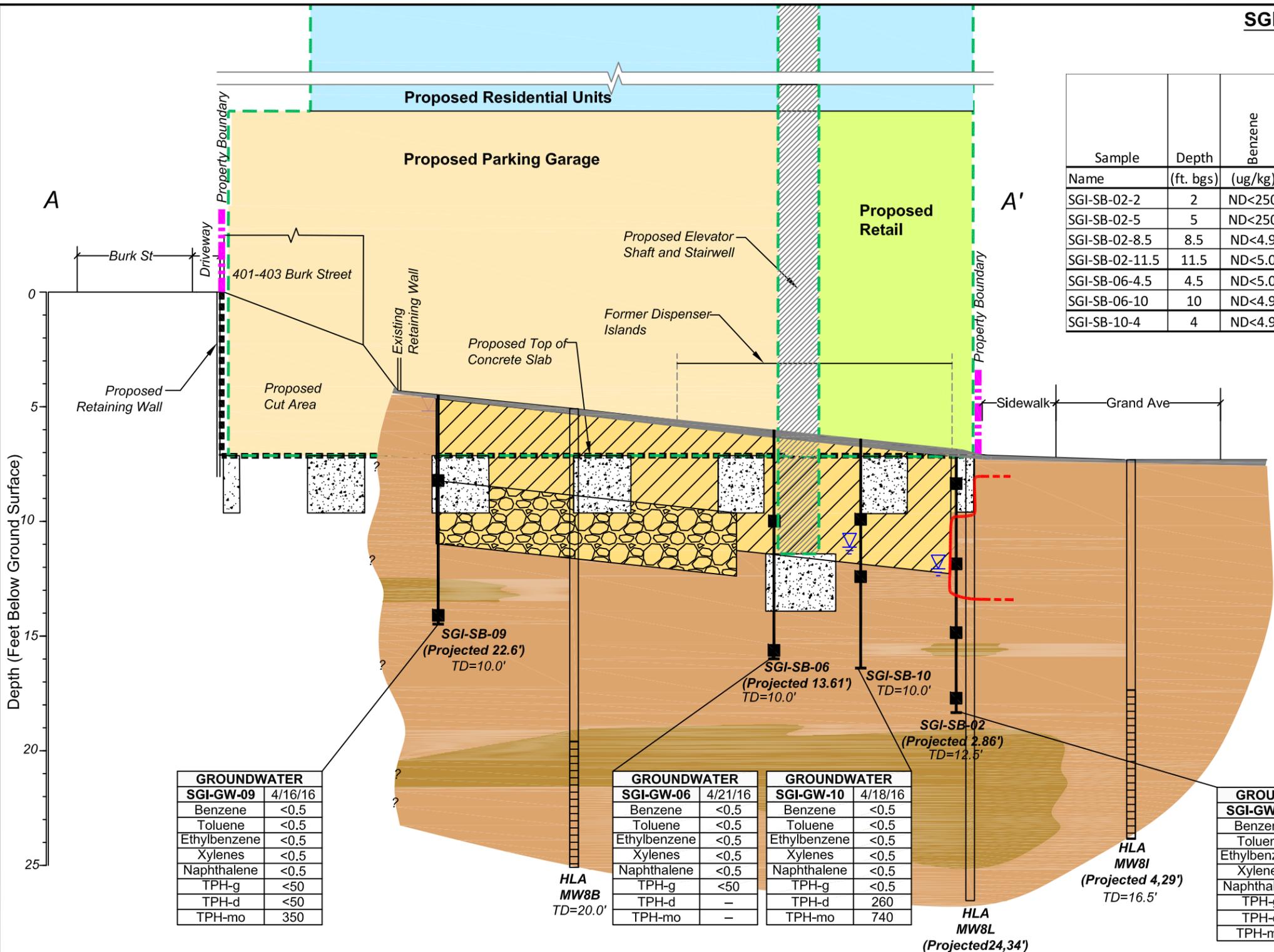
SGI THE SOURCE GROUP, INC.
environmental
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523



FIGURE 2-3

SGI SOIL ANALYTICAL SUMMARY
APRIL 2016

Sample Name	Depth (ft. bgs)	Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Total Xylenes (ug/kg)	Naphthalene (ug/kg)	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
SGI-SB-02-2	2	ND<250	ND<250	410	310	3600	510	610	77
SGI-SB-02-5	5	ND<250	ND<250	4300	5900	3900	550	150	ND<5.0
SGI-SB-02-8.5	8.5	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	3.2	6.1	ND<5.0
SGI-SB-02-11.5	11.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<0.98	ND<1.0	ND<5.0
SGI-SB-06-4.5	4.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<0.97	34	91
SGI-SB-06-10	10	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<0.96	2.3	ND<5.0
SGI-SB-10-4	4	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<1.1	11	88



GROUNDWATER	
SGI-GW-09	4/16/16
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
Naphthalene	<0.5
TPH-g	<50
TPH-d	<50
TPH-mo	350

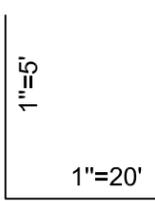
GROUNDWATER	
SGI-GW-06	4/21/16
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
Naphthalene	<0.5
TPH-g	<50
TPH-d	-
TPH-mo	-

GROUNDWATER	
SGI-GW-10	4/18/16
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
Naphthalene	<0.5
TPH-g	<0.5
TPH-d	260
TPH-mo	740

GROUNDWATER	
SGI-GW-02	4/16/16
Benzene	55
Toluene	4.5
Ethylbenzene	130
Xylenes	141.3
Naphthalene	72
TPH-g	6,100
TPH-d	3,000
TPH-mo	<300

- Notes:
1. Sample concentration in micrograms per liter (ug/L).
 2. TPHg = Total petroleum hydrocarbons as gasoline.
 3. TPHd = Total petroleum hydrocarbons as diesel.
 4. TPHmo = Total petroleum hydrocarbons as motor oil.
 5. Bold values exceed residential ESLs.
 6. Bold and highlighted values exceed commercial ESLs.

LEGEND			
	Backfill		Groundwater Level (First Encounter)
	Pea Gravel		Depth to Groundwater (Hi/Lo Range)
	Asphalt		Proposed Top Of Concrete Slab
	Sand / Gravels		Proposed Building Envelope
	Sands		Cement Footers
	Silt / Clay		Approximate Extent of Soil Impacts >Commercial ESLs
			Soil Sample Location
			Screened Interval



500 GRAND AVENUE OAKLAND, CA			
PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-ECR-001	04/01/16	ZA	GS

GROUNDWATER CROSS SECTION A-A'
(CURRENT SITE CONDITIONS)
(Looking East From Euclid Ave.)

3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

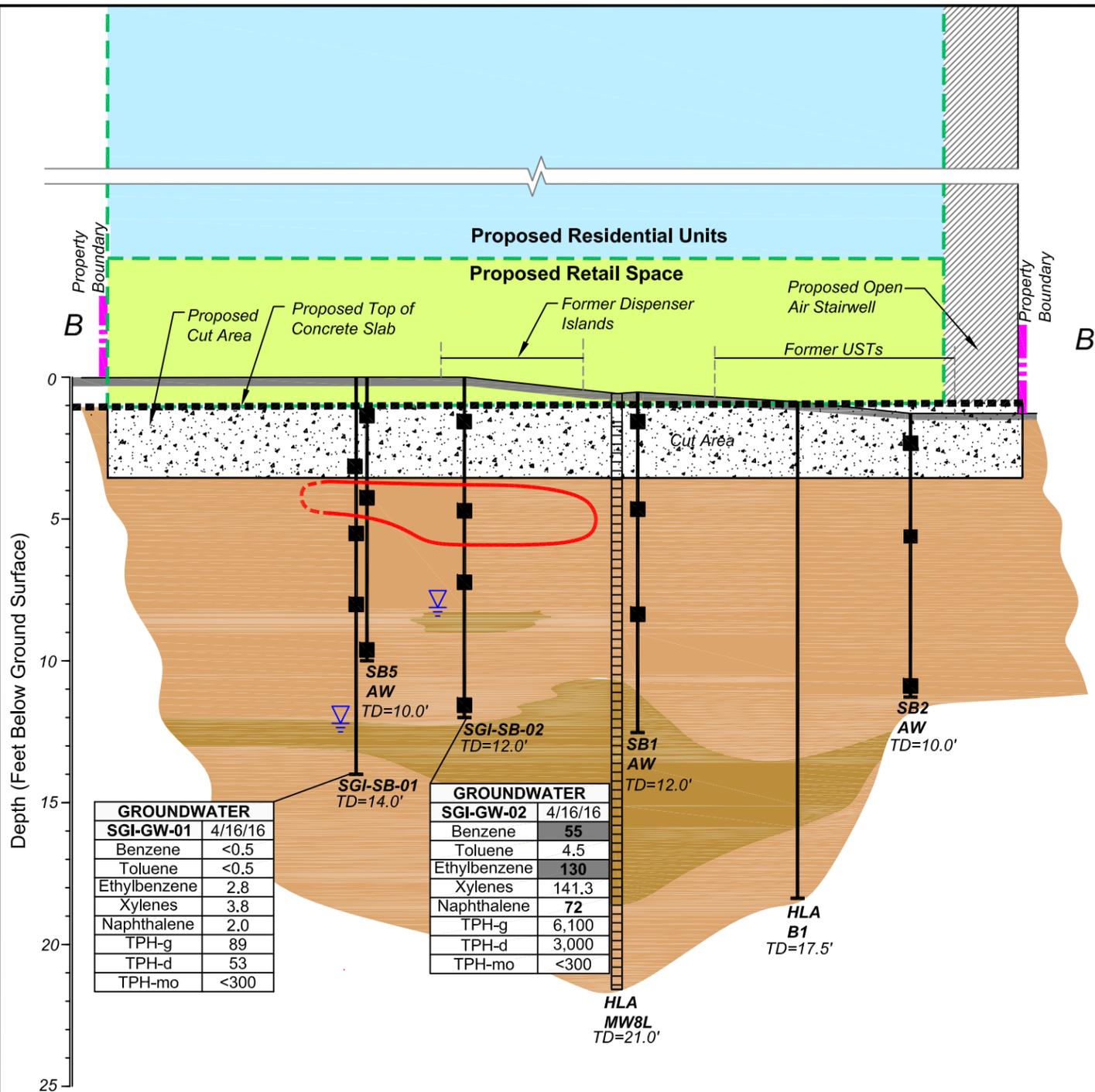
FIGURE 2-4

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SGI AND ALL WESTSOIL ANALYTICAL SUMMARY
APRIL 16, 2016 & NOVEMBER 23, 2015

Sample	Depth	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	TPHg	TPHd	TPHmo
Name	(ft. bgs)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Sgi-SB-01-3	3	ND<250	ND<250	ND<250	ND<250	2600	590	2100	ND<50
Sgi-SB-01-5.5	5.5	ND<250	ND<250	2300	5710	1800	230	60	ND<5.0
Sgi-SB-01-8.5	8.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0	6.6	1.4	1.1	ND<5.0
Sgi-SB-01-10	10	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<0.94	2.0	ND<5.0
Sgi-SB-02-2	2	ND<250	ND<250	410	310	3600	510	610	77
Sgi-SB-02-5	5	ND<250	ND<250	4300	5900	3900	550	150	ND<5.0
Sgi-SB-02-8.5	8.5	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	3.2	6.1	ND<5.0
Sgi-SB-02-11.5	11.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<0.98	ND<1.0	ND<5.0
AW SB-1	1.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	ND<0.25	ND<1.0	ND<5.0
AW SB-1	8.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0	3.7	2.5	16	390
AW SB-2	1.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	110	30	5.4
AW SB-2	10	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	ND<0.25	ND<1.0	ND<5.0
AW SB-5	1.5	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	ND<0.25	1.5	36
AW SB-5	4.5	ND<5.0	ND<5.0	3	6.6	6.5	200	170	230

- Notes:
1. Sample concentration in micrograms per liter (µg/L).
 2. TPHg = Total petroleum hydrocarbons as gasoline.
 3. TPHd = Total petroleum hydrocarbons as diesel.
 4. TPHmo = Total petroleum hydrocarbons as motor oil.
 5. Bold values exceed residential ESLs.
 6. Bold and highlighted values exceed commercial ESLs.



GROUNDWATER	
Sgi-GW-01	4/16/16
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	2.8
Xylenes	3.8
Naphthalene	2.0
TPH-g	89
TPH-d	53
TPH-mo	<300

GROUNDWATER	
Sgi-GW-02	4/16/16
Benzene	55
Toluene	4.5
Ethylbenzene	130
Xylenes	141.3
Naphthalene	72
TPH-g	6,100
TPH-d	3,000
TPH-mo	<300

LEGEND

	Backfill		Groundwater Level (First Encounter)		Cement Footers
	Pea Gravel		Depth to Groundwater (Hi/Lo Range)		Approximate Extent of Soil Impacts >Commercial ESLs
	Asphalt		Proposed Top Of Concrete Slab		Soil Sample Location
	Sand / Gravels		Proposed Building Envelope		Screened Interval
	Sands				
	Silt / Clay				

500 GRAND AVENUE
OAKLAND, CA

CROSS SECTION B-B'
(WITH PROPOSED FOOTERS AND FOUNDATION)

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-ECR-001	04/01/16	ZA	GS

THE SOURCE GROUP, INC.
 3478 BUSKIRK AVENUE, SUITE 100
 PLEASANT HILL, CA 94523

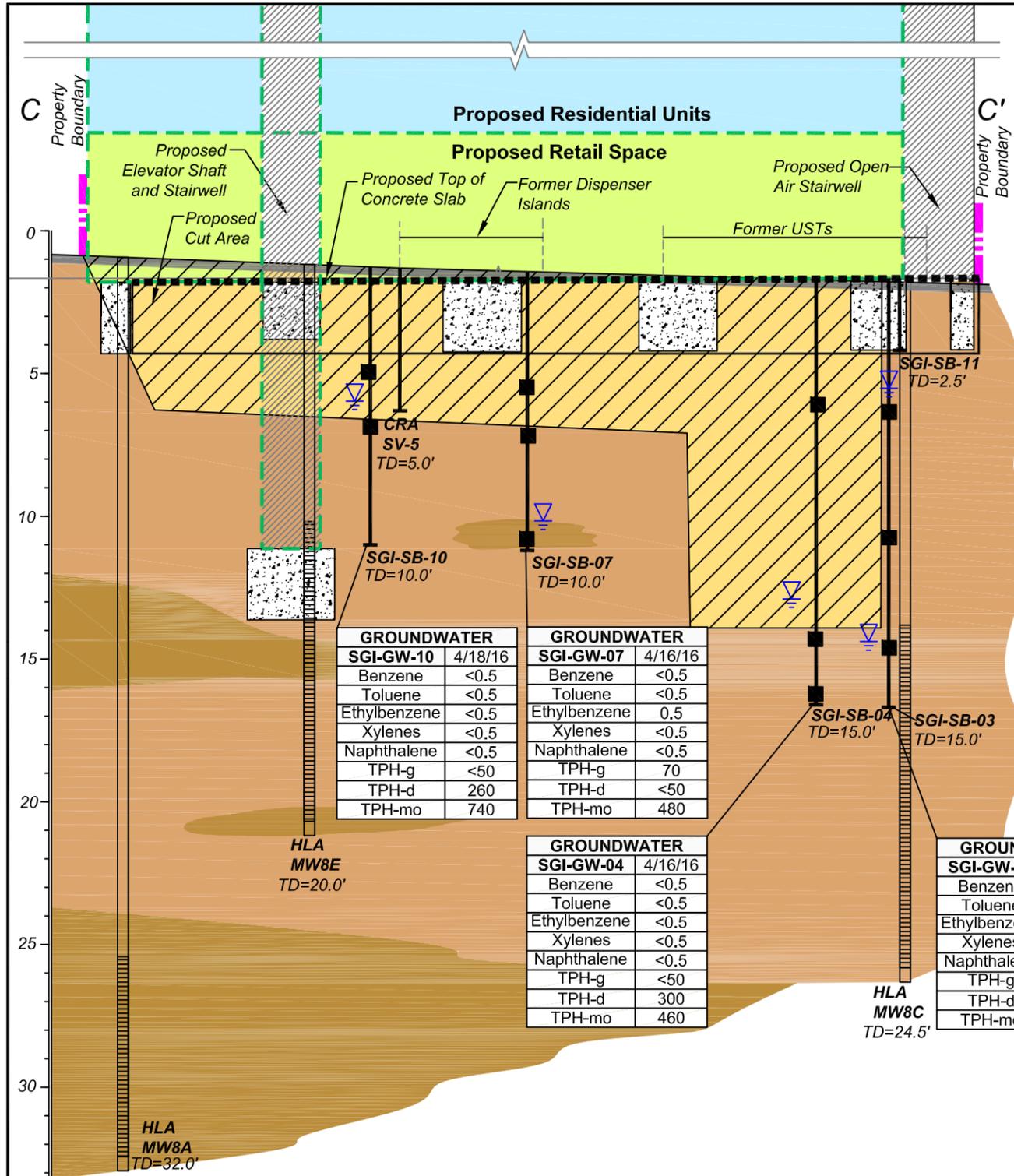
FIGURE 2-5

S:\Clients A - File\Wood Commercial Real Estate\Data Gap Work Plan\Figures\Fig.2-5-Cross Section B-B'.dwg

SGI SOIL ANALYTICAL SUMMARY
APRIL 16, 2016

Sample	Depth	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	TPHg	TPHd	TPHmo
Name	(ft. bgs)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SGI-SB-03-5	5	ND<4.7	ND<4.7	ND<4.7	ND<4.7	4.8	ND<1.1	2.7	ND<5.0
SGI-SB-03-13	13	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<0.97	1.8	ND<5.0
SGI-SB-04-4.5	4.5	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<1.0	23	71
SGI-SB-04-4.5D	4.5	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<1.1	31	100
SGI-SB-04-12.5	12.5	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<1.1	2.3	ND<5.0
SGI-SB-07-4.5	4.5	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<1.1	24	86
SGI-SB-10-4	4	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<1.1	11	88
SGI-SB-11-2.5	2.5	ND<10	ND<10	ND<10	ND<10	ND<10	27	30	32

- Notes:
1. Sample concentration in micrograms per liter (µg/L).
 2. TPHg = Total petroleum hydrocarbons as gasoline.
 3. TPHd = Total petroleum hydrocarbons as diesel.
 4. TPHmo = Total petroleum hydrocarbons as motor oil.
 5. Bold values exceed residential ESLs.
 6. Bold and highlighted values exceed commercial ESLs.



GROUNDWATER	
SGI-GW-10	4/18/16
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
Naphthalene	<0.5
TPH-g	<50
TPH-d	260
TPH-mo	740

GROUNDWATER	
SGI-GW-07	4/16/16
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	0.5
Xylenes	<0.5
Naphthalene	<0.5
TPH-g	70
TPH-d	<50
TPH-mo	480

GROUNDWATER	
SGI-GW-04	4/16/16
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
Naphthalene	<0.5
TPH-g	<50
TPH-d	300
TPH-mo	460

GROUNDWATER	
SGI-GW-03	4/21/16
Benzene	740
Toluene	110
Ethylbenzene	710
Xylenes	1,720
Naphthalene	150
TPH-g	15,000
TPH-d	-
TPH-mo	-

LEGEND

- Backfill
- Pea Gravel
- Asphalt
- Sand / Gravels
- Sands
- Silt / Clay
- Groundwater Level (First Encounter)
- Depth to Groundwater (Hi/Lo Range)
- Proposed Top Of Concrete Slab
- Proposed Building Envelope
- Cement Footers
- Approximate Extent of Soil Impacts >Commercial ESLs
- Soil Sample Location
- Screened Interval

500 GRAND AVENUE
OAKLAND, CA

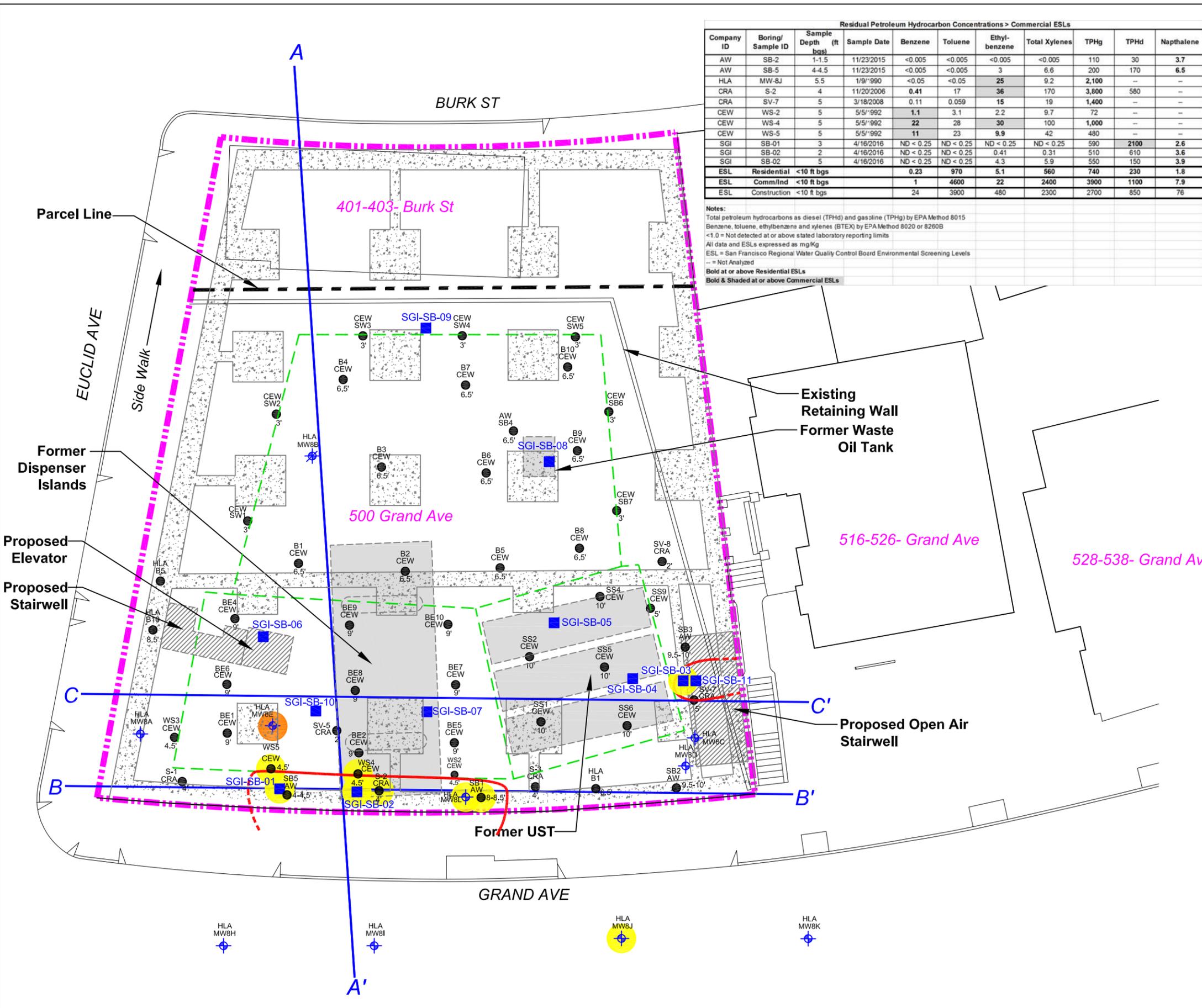
PROJECT NO. 01-ECR-001 DATE 04/01/16 DRAWN BY: ZA APP. BY: GS

1"=5'
1"=20'

CROSS SECTION C-C'
(WITH PROPOSED FOOTERS AND FOUNDATION)

SGI THE SOURCE GROUP, INC.
environmental
3478 BUSKIRK AVENUE, SUITE 100
PLEASANT HILL, CA 94523

FIGURE 2-6



Residual Petroleum Hydrocarbon Concentrations > Commercial ESLs										
Company ID	Boring/ Sample ID	Sample Depth (ft bgs)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPHg	TPHd	Napthalene
AW	SB-2	1-1.5	11/23/2015	<0.005	<0.005	<0.005	<0.005	110	30	3.7
AW	SB-5	4-4.5	11/23/2015	<0.005	<0.005	3	6.6	200	170	6.5
HLA	MW-8J	5.5	1/9/1990	<0.05	<0.05	25	9.2	2,100	--	--
CRA	S-2	4	11/20/2006	0.41	17	36	170	3,800	580	--
CRA	SV-7	5	3/18/2008	0.11	0.059	15	19	1,400	--	--
CEW	WS-2	5	5/5/1992	1.1	3.1	2.2	9.7	72	--	--
CEW	WS-4	5	5/5/1992	22	28	30	100	1,000	--	--
CEW	WS-5	5	5/5/1992	11	23	9.9	42	480	--	--
SGI	SB-01	3	4/16/2016	ND < 0.25	ND < 0.25	ND < 0.25	ND < 0.25	590	2100	2.6
SGI	SB-02	2	4/16/2016	ND < 0.25	ND < 0.25	0.41	0.31	510	610	3.6
SGI	SB-02	5	4/16/2016	ND < 0.25	ND < 0.25	4.3	5.9	550	150	3.9
ESL	Residential	<10 ft bgs		0.23	970	5.1	560	740	230	1.8
ESL	Comm/Ind	<10 ft bgs		1	4600	22	2400	3900	1100	7.9
ESL	Construction	<10 ft bgs		24	3900	480	2300	2700	850	76

Notes:
 Total petroleum hydrocarbons as diesel (TPHD) and gasoline (TPHg) by EPA Method 8015
 Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020 or 8260B
 <1.0 = Not detected at or above stated laboratory reporting limits
 All data and ESLs expressed as mg/Kg
 ESL = San Francisco Regional Water Quality Control Board Environmental Screening Levels
 -- = Not Analyzed
Bold at or above Residential ESLs
Bold & Shaded at or above Commercial ESLs

LEGEND

- Property Line
- Limit of Depth of Excavation
- HLA (Harding Lawson & Associates) Soil Boring Locations
- CEW (Converse Environment West) Soil Boring Locations
- AW (All West) Soil Boring Locations
- CRA (Connestoga Rovers Associates) Soil Boring Location
- HLA (Harding Lawson & Associates) Monitoring Well Location
- Destroyed Monitoring Well
- Sample Depth in Ft BGS (Feet Below Ground Surface)
- SGI Soil Boring Locations
- Residuals Petroleum Hydrocarbon Commercial ESL Exceedance
- Groundwater Hotspot Pre-over-excavation
- Aerial Extent of Residual Petroleum Hydrocarbons in Soil and Groundwater
- Proposed Cement Footers
- Cross Section location

Note:
 Sampling event - SGI-SB1+SB11-April 2016
 AW-SB1+SB5-2015
 CRA-S1+SV8-2006
 CEW-SW+SW7-1993
 CEW-B1+B10-1993
 CEW-BE1+BE10-1992
 CEW-WS2+WS5-1992
 CEW-SS1+SS9-1992
 HLA-MW8A+MW8L-1989

**SUPPLEMENTAL INVESTIGATION
 SAMPLE LOCATIONS**

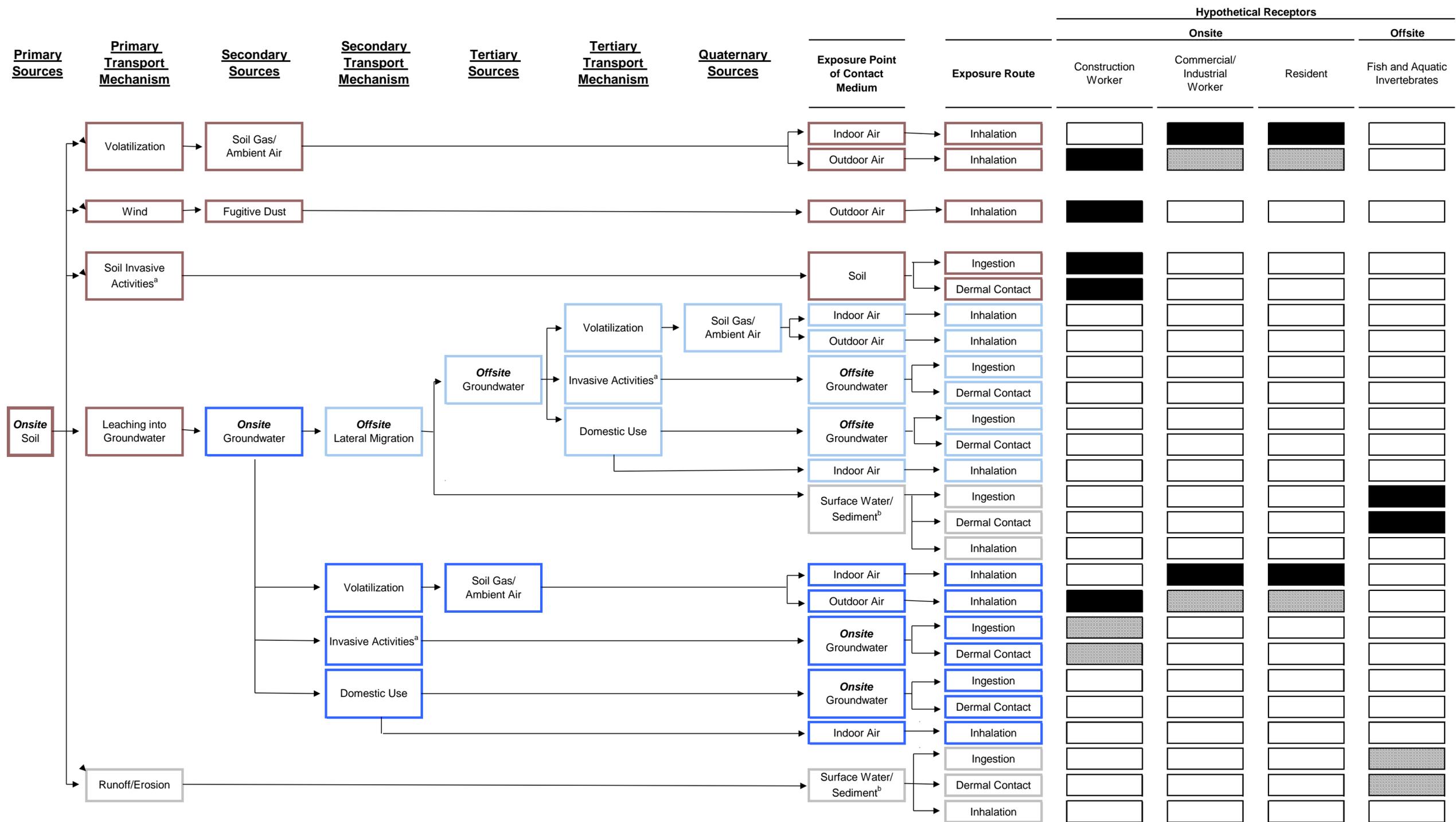
500 GRAND AVENUE
 OAKLAND, CA

PROJECT NO.	DATE	DRAWN BY:	APP. BY:
01-ECR-001	03/21/16	ZA	GS

0 20 40
 HORIZONTAL SCALE IN FEET

THE SOURCE GROUP, INC.
 environmental
 3478 BUSKIRK AVENUE, SUITE 100
 PLEASANT HILL, CA 94523

**FIGURE
 4-1**



- CSM components related to soil.
- CSM components related to onsite groundwater.
- CSM components related to offsite groundwater.
- CSM components related to surface water.
- Receptor likely to be exposed via this route, so pathway is considered potentially complete.
- Receptor may be exposed via this route, so pathway is considered potentially complete; however, pathway is considered minor.
- Pathway is incomplete, no further evaluation required.

^a Soil invasive activities include construction and development for commercial/industrial land use.

^b The Site is approximately 200 feet north (upgradient) of Lake Merritt.

500 GRAND AVENUE OAKLAND, CALIFORNIA				CONCEPTUAL SITE MODEL	
PROJECT NO.	DATE	DRAWN BY	APP. BY	 3478 BUSKIRK AVENUE, SUITE 100 PLEASANT HILL, CA 94523	
01-ECR-001	05/10/16	II	II		

TABLES

Table 2-1
Summary of Recent Soil Data
 Ellwood Commercial Real Estate
 500 Grand Avenue, Oakland, California

Sample			Total Petroleum Hydrocarbons			Volatile Organic Compounds																	Semi-Volatile Organic Compounds				
			TPHg	TPHd	TPHmo	Acetone	MTBE	2-Butanone	1,2-Dichloroethane	Benzene	Toluene	Ethylbenzene	m,p-xylenes	o-xylenes	Total Xylenes	Isopropylbenzene ⁴	Propylbenzene ⁴	1,3,5-Trimethylbenzene ⁴	1,2,4-Trimethylbenzene ⁴	sec-butylbenzene ⁴	para-isopropyl toluene	n-butylbenzene ⁴	Naphthalene	Naphthalene	2-Methylnaphthalene	Phenanthrene	
Name	Date	Depth	(mg/kg)	(mg/kg)	(mg/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	
CRWQCB Direct Exposure Shallow Soil ESLs ¹ Residential			7.4E+02	2.3E+02	1.1E+04	5.9E+07	4.2E+04	--	3.7E+02	2.3E+02	9.7E+05	5.1E+03	--	--	5.6E+05	1.9E+06	3.8E+06	7.8E+05	5.8E+04	7.8E+06	--	3.9E+06	3.3E+03	3.3E+03	2.4E+05	--	
CRWQCB Direct Exposure Shallow Soil ESLs ² Commercial/Industrial			3.9E+03	1.1E+03	1.4E+05	6.3E+08	1.8E+05	--	1.6E+03	1.0E+03	4.6E+06	2.2E+04	--	--	2.4E+06	9.9E+06	2.4E+07	1.2E+07	2.4E+05	1.2E+08	--	5.8E+07	1.4E+04	1.4E+04	3.0E+06	--	
CRWQCB Direct Exposure Shallow Soil ESLs ³ Construction			7.4E+03	3.8E+03	3.2E+04	3.2E+05	3.7E+03	--	3.7E+01	2.4E+01	2.8E+04	4.8E+02	--	--	6.5+04	--	--	--	--	--	--	--	3.5E+02	3.5E+02	6.7E+02	--	
SGI-SB-01-3	4/16/2016	3	590	2100	ND<50	ND<1000	ND<250	ND<500	ND<250	ND<250	ND<250	ND<250	ND<250	ND<250	ND<250	660	3600	ND<250	ND<250	980	300	4800	2600	2300	5500	760	
SGI-SB-01-5.5	4/16/2016	5.5	230	60	ND<5.0	ND<1000	ND<250	ND<500	ND<250	ND<250	ND<250	2300	5300	410	5710	290	1300	2300	7500	ND<250	ND<250	810	1800	1500	1200	ND<66	
SGI-SB-01-8.5	4/16/2016	8.5	1.4	1.1	ND<5.0	36	ND<5.0	ND<9.9	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	6.9	ND<5.0	ND<5.0	ND<5.0	6.6	ND<66	ND<66	ND<66	
SGI-SB-01-10	4/16/2016	10	ND<0.94	2.0	ND<5.0	ND<18	ND<4.4	ND<8.8	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4
SGI-SB-02-2	4/16/2016	2	510	610	77	ND<1000	ND<250	ND<500	ND<250	ND<250	ND<250	410	310	ND<250	310	520	2400	ND<250	ND<250	670	ND<250	4200	3600	1100	1300	1300	ND<66
SGI-SB-02-5	4/16/2016	5	550	150	ND<5.0	ND<1000	ND<250	ND<500	ND<250	ND<250	ND<250	4300	5900	ND<250	5900	700 J	2000 J	3700	15000	620 J	1100	2100	3900	3200	1300	ND<660	
SGI-SB-02-8.5	4/16/2016	8.5	3.2	6.1	ND<5.0	31	ND<4.9	ND<9.8	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9
SGI-SB-02-11.5	4/16/2016	11.5	ND<0.98	ND<1.0	ND<5.0	ND<20	ND<5.0	ND<10	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
SGI-SB-03-5	4/16/2016	5	ND<1.1	2.7	ND<5.0	83	ND<4.7	37	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7
SGI-SB-03-13	4/16/2016	13	ND<0.97	1.8	ND<5.0	ND<19	ND<4.8	ND<9.6	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8
SGI-SB-04-4.5	4/16/2016	4.5	ND<1.0	23	71	ND<19	ND<4.9	ND<9.7	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	--	--	--
SGI-SB-04-4.5D	4/16/2016	4.5	ND<1.1	31	100	ND<19	ND<4.6	ND<9.3	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	--	--	--
SGI-SB-04-12.5	4/16/2016	12.5	ND<1.1	2.3	ND<5.0	ND<19	ND<4.9	ND<9.7	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	--	--	--
SGI-SB-05-4	4/16/2016	4	ND<1.0	16	51	ND<20	ND<4.9	ND<9.8	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	--	--	--
SGI-SB-06-4.5	4/16/2016	4.5	ND<0.97	34	91	ND<20	ND<5.0	ND<9.9	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	--	--
SGI-SB-06-10	4/16/2016	10	ND<0.96	2.3	ND<5.0	ND<20	ND<4.9	ND<9.8	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	--	--	--
SGI-SB-07-4.5	4/16/2016	4.5	ND<1.1	24	86	ND<19	ND<4.9	ND<9.7	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	--	--	--
SGI-SB-08-3	4/16/2016	3	ND<0.94	2.7	26	ND<20	ND<4.9	ND<9.8	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<66	ND<66
SGI-SB-08-7	4/16/2016	7	ND<0.99	31	130	ND<18	ND<4.6	ND<9.2	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<4.6	ND<67	ND<67	ND<67
SGI-SB-10-4	4/16/2016	4	ND<1.1	11	88	ND<20	ND<4.9	ND<9.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	--	--	--
SGI-SB-11-2.5	4/22/2016	2.5	27	30	32	ND<41	ND<10	ND<20	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<130	230	ND<130
AW SB-1	11/23/2015	1.5	ND<0.25	ND<1.0	ND<5.0	--	--	--	--	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	--	--	--	--	--	--	--	--	--	--	--	--
AW SB-1	11/23/2015	8.5	2.5	16	390	--	--	--	--	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	--	--	--	--	--	--	--	--	--	--	--	--
AW SB-2	11/23/2015	1.5	110	30	5.4	--	--	--	--	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	--	--	--	--	--	--	--	3700	3700	--	--	
AW SB-2	11/23/2015	10	ND<0.25	ND<1.0	ND<5.0	--	--	--	--	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	--	--	--	--	--	--	--	--	--	--	--	--
AW SB-3	11/23/2015	1.5	ND<0.25	ND<1.0	11	--	--	--	--	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	--	--	--	--	--	--	--	--	--	--	--	--
AW SB-3	11/23/2015	10	ND<0.25	ND<1.0	ND<5.0	--	--	--	--	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	--	--	--	--	--	--	--	--	--	--	--	--
AW SB-4	11/23/2015	1.5	ND<0.25	1.1	5.5	--	--	--	--	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	--	--	--	--	--	--	--	--	--	--	--	--
AW SB-5	11/23/2015	1.5	ND<0.25	1.5	36	--	--	--	--	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5	--	--	--	--	--	--	--	--	--	--	--	--
AW SB-5	11/23/2015	4.5	200	170	230	--	--	--	--	ND<5	ND<5	3000	--	--	6600	--	--	--	--	--	--	--	6500	6500	--	--	

Notes:

Bold font indicates value exceeds soil ESL for residential land use.

Bold font and shaded cell indicates value exceeds soil ESL for commercial/industrial land use.

J = Estimated Value

"--" = Not analyzed

¹ Shallow Soil Screening Levels (<3m bgs), Residential - groundwater is not a current or potential drinking water resource (CRWQCB, 2016)

² Shallow Soil Screening Levels (<3m bgs), Commercial/Industrial - groundwater is not a current or potential drinking water resource (CRWQCB, 2016)

³ Shallow Soil Screening Levels (<3m bgs), Construction - groundwater is not a current or potential drinking water resource (CRWQCB, 2016)

⁴ CRWQCB ESL was not available; therefore, the USEPA RSL was used (USEPA, 2015).

Table 2-2
Summary of Recent Grab Groundwater Data
 Ellwood Commercial Real Estate
 500 Grand Avenue, Oakland, California

			Total Petroleum Hydrocarbons			Volatile Organic Compounds																	Semi-Volatile Organic Compounds		
Sample	First Water	(ft. bgs)	TPHg	TPHd	TPHmo	Acetone	MTBE	1,2-Dichloroethane	Benzene	Toluene	Ethylbenzene	m,p-xylenes	o-xylenes	Total Xylenes	Isopropylbenzene	Propylbenzene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	sec-butylbenzene	para-isopropyl toluene	n-bubtylbenzene	Naphthalene	Naphthalene	2-Methylnaphthalene	
Name	Date	(ft. bgs)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
CRWQCB Vapor Intrusion Shallow Groundwater ESLs ¹ Residential Land Use			--	--	--	3.4E+07	1.2E+03	6.1E+00	1.1E+00	3.6E+03	1.3E+01	--	--	1.3E+03	--	--	--	--	--	--	--	2.0E+01	2.0E+01	--	
CRWQCB Vapor Intrusion Shallow Groundwater ESLs ² Commercial/Industrial Land Use			--	--	--	2.9E+08	1.1E+04	5.3E+01	9.7E+00	3.0E+04	1.1E+02	--	--	1.1E+04	--	--	--	--	--	--	--	1.7E+02	1.7E+02	--	
SGI-GW-01	4/16/2016	12.5	89	53	ND<300	ND<10	1.8	ND<0.5	ND<0.5	ND<0.5	2.8	3.8	ND<0.5	3.8	ND<0.5	0.8	0.8	3.5	ND<0.5	ND<0.5	0.7	2.0	ND<9.4	ND<9.4	
SGI-GW-02	4/16/2016	5.5	6100	3000	ND<300	ND<20	ND<1.0	ND<1.0	55	4.5	130	140	1.3	141.3	18	30	41	170	5.8	10	8.4	72	67	ND<47	
SGI-GW-03	4/21/2016	> 13	15000	--	--	240	ND<10	ND<10	740	110	710	1500	220	1720	28	86	160	560	ND<10	ND<10	42	150	--	--	
SGI-GW-04	4/16/2016	11.5	ND<50	300	460	ND<10	0.6	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	
SGI-GW-05	4/16/2016	> 14	76	700	440	ND<10	0.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	
SGI-GW-06	4/21/2016	> 10	ND<50	--	--	ND<10	2.1	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	
SGI-GW-07	4/16/2016	9	70	ND<50	480	ND<10	5.9	ND<0.5	ND<0.5	ND<0.5	0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	
SGI-GW-08	4/16/2016	6.5	ND<50	ND<50	ND<300	ND<10	1.7	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<9.4	
SGI-GW-09	4/16/2016	1	ND<50	ND<50	350	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	
SGI-GW-09 Dup	4/16/2016	1	ND<50	66	800	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	
SGI-GW-10	4/18/2016	5	ND<50	260	740	ND<10	1.1	3.1	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	
AW SB-4	11/23/2015	> 4	ND<50	200	4400	--	--	--	ND<0.5	ND<0.5	ND<0.5	--	--	ND<0.5	--	--	--	--	--	--	--	--	--	--	

Notes:

Bold font indicates value exceeds groundwater ESL for residential land use.

Bold font and shaded cell indicates value exceeds groundwater ESL for commercial/industrial land use.

"--" = Not analyzed

¹ Shallow Groundwater Screening Levels (<3m bgs), Sand Scenario, Residential Land Use (CRWQCB, 2016)

² Shallow Soil Screening Levels (<3m bgs), Sand Scenario, Commercial/Industrial Land Use (CRWQCB, 2016)

Table 4-1 Sample Location Rational

Ellwood Commercial Real Estate
500 Grand Avenue, Oakland, California

Boring/ Sample ID	Sample Media	Approximate Sample Depth (no. 1) (ft bgs)	Analytes	Sample Location Rational
SGI-SB-01	Soil	4-4.5	VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Establish baseline residual petroleum hydrocarbon concentrations in soil near CEW WS5 and AW SB5. Sample location immediately down gradient of former Monitoring Well HLA MW8B and within footprint of proposed development commercial space.
SGI-SB-01	Soil	10-10.5	VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Delineate lower extent of petroleum hydrocarbon concentrations near CEW WS5 and AW SB5. Sample location down gradient of former Monitoring Well HLA MW8B and within footprint of proposed development commercial space.
SGI-GW-01	Water		VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Establish baseline of residual petroleum hydrocarbon concentrations in groundwater near CEW WS5 and AW SB5. Sample location down gradient of former dispenser island and within footprint of proposed development commercial space.
SGI-SB-02	Soil	4-4.5	VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Establish baseline residual petroleum hydrocarbon concentrations in soil near CEW WS4, CEW WS2, and CRA S-2. Down gradient of former dispenser island and within footprint of proposed development commercial space.
SGI-SB-02	Soil	10-10.5	VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Delineate lower extent of petroleum hydrocarbon concentrations near CEW WS4, CEW WS2, and CRA S-2. Sample location down gradient of former dispenser island and within footprint of proposed development commercial space.
SGI-GW-02	Water		VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Establish baseline of residual petroleum hydrocarbon concentrations in groundwater near CEW WS4, CEW WS2, CRA S-2, and HLA MW8L. Sample location down gradient of former dispenser island and within footprint of proposed development commercial space.
SGI-SB-03	Soil	4-4.5	VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Establish baseline residual petroleum hydrocarbon and PCE (if present) concentrations in soil near HLA MW8C, HLA MW8D, AW SB2, and CRA SV-7. Sample location adjacent to former UST excavation and within proposed footprint of development stairwell.
SGI-SB-03	Soil	10-10.5	VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Delineate lower extent of residual petroleum hydrocarbon concentrations and PCE (if any) in soil near HLA MW8C, HLA MW8D, AW SB2, and CRA SV-7. Sample location down gradient of former USTs and within proposed footprint of development stairwell.
SGI-GW-03	Water		VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Establish baseline of residual petroleum hydrocarbon concentrations and PCE in groundwater near HLA MW8C and HLA MW8D. Sample location down gradient of former USTs and within proposed footprint of development stairwell.
SGI-SB-04	Soil	4-4.5	VOCs, CVOCs, TPHg, TPHd, TPHmo	Verify clean backfill used within former UST excavation.

Table 4-1 Sample Location Rational

Ellwood Commercial Real Estate
500 Grand Avenue, Oakland, California

Boring/ Sample ID	Sample Media	Approximate Sample Depth (no. 1) (ft bgs)	Analytes	Sample Location Rational
SGI-SB-04 (Dup)	Soil	4-4.5	VOCs, CVOCs, TPHg, TPHd, TPHmo	Duplicate – for quality control purposes.
SGI-SB-04	Soil	10-10.5	NA	No Sample unless elevated residual petroleum hydrocarbons are detected/observed in field screening of shallower samples. Confirm depth of excavation (log native material).
SGI-GW-04	Water		VOCs, CVOCs, TPHg, TPHd, TPHmo	Compare to any detection of CoCs in soil from saturated zone.
SGI-SB-05	Soil	4-4.5	VOCs, CVOCs, TPHg, TPHd, TPHmo	Verify clean backfill used within former UST excavation.
SGI-SB-05	Soil	10-10.5	NA	No Sample unless elevated residual petroleum hydrocarbons are detected/observed in field screening of shallower samples. Confirm depth of excavation (log native material).
SGI-GW-05	Water		VOCs, CVOCs, TPHg, TPHd, TPHmo	Compare to any detection of CoCs in soil from saturated zone.
SGI-SB-06	Soil	4-4.5	VOCs, CVOCs, TPHg, TPHd, TPHmo	Verify clean backfill used within former dispenser island excavation. Sample location in backfill within former dispenser island excavation. Sample location in backfill within former dispenser island excavation and proposed development elevator shaft
SGI-SB-06	Soil	10-10.5	VOCs, CVOCs, TPHg, TPHd, TPHmo	Establish baseline residual petroleum hydrocarbon concentrations in soil under proposed elevator shaft. Confirm depth of excavation (log native material). Sample location in backfill within former dispenser island excavation and immediately up gradient of HLA MW8B.
SGI-GW-06	Water		VOCs, CVOCs, TPHg, TPHd, TPHmo	Establish baseline of residual petroleum hydrocarbon concentrations in groundwater within area of proposed development elevator shaft. Sample location in backfill within former dispenser island excavation, proposed development elevator shaft, and immediately up gradient of HLA MW8B. Compare to any detection of CoCs in soil from saturated zone.
SGI-SB-07	Soil	4-4.5	VOCs, CVOCs, TPHg, TPHd, TPHmo	Verify clean backfill used within former UST excavation. Sample location in backfill within former dispenser island excavation.
SGI-SB-07	Soil	10-10.5	NA	No Sample unless elevated residual petroleum hydrocarbons are detected/observed in field screening of shallower samples. Confirm depth of excavation (log native material). Sample location in backfill within former dispenser island excavation.

Table 4-1 Sample Location Rational

Ellwood Commercial Real Estate
500 Grand Avenue, Oakland, California

Boring/ Sample ID	Sample Media	Approximate Sample Depth (no. 1) (ft bgs)	Analytes	Sample Location Rational
SGI-GW-07	Water		VOCs, CVOCs, TPHg, TPHd, TPHmo	Verify clean backfill used within former UST excavation. Sample location in backfill within former dispenser island excavation. Compare to any detection of CoCs in soil from saturated zone.
SGI-SB-08	Soil	4-4.5	VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Verify clean backfill used within former waste oil tank excavation. Sample location in backfill within former waste oil tank excavation.
SGI-SB-08	Soil	10-10.5	VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Establish baseline residual petroleum hydrocarbon and PCE concentrations in soil. Confirm depth of excavation (log native material). Initial excavation floor sample within former waste oil tank excavation was not analyzed for PCE.
SGI-GW-08	Water		VOCs, CVOCs, SVOCs, TPHg, TPHd, TPHmo	Establish baseline of residual petroleum hydrocarbon and PCE concentrations in groundwater within vicinity of former waste oil tank. Sample location in backfill within former waste oil tank excavation. Compare to any detection of CoCs in soil from saturated zone.
SGI-SB-09	Soil	4-4.5	NA	Up gradient of all known source areas. Log soils and confirm extent of excavation.
SGI-SB-09	Soil	10-10.5	NA	Up gradient of all known source areas. Log soils and confirm extent of excavation.
SGI-GW-09	Water		VOCs, CVOCs, TPHg, TPHd, TPHmo	Establish baseline of residual petroleum hydrocarbon and PCE concentrations in groundwater at up gradient edge of the site. Compare to any detection of CoCs in soil from saturated zone.
SGI-GW-09 (dup)	Water		VOCs, CVOCs, TPHg, TPHd, TPHmo	Duplicate – for quality control purposes.
SGI-GW-10	Water		VOCs, CVOCs, TPHg, TPHd, TPHmo	Establish baseline of residual petroleum hydrocarbon immediately adjacent to HLA MW8E (pre-over-excavation hot spot for VOCs in groundwater).
VOCs (BTEX and TPHg) - EPA Method 82060B				
CVOCs – EPA Method 8260 (Full List)				
TPHd & TPHmo – EPA Method 8015				
SVOCs – EPA Method 8270				
NA = Not Analyzed				
Note 1: Actual sample depths are shown on Table 2-1 Soil Sample Analytical Results.				

Table 6-1
Summary of Offsite Groundwater Data - June and October 2009
 Ellwood Commercial Real Estate
 500 Grand Avenue, Oakland, California

			Total Petroleum Hydrocarbons		Volatile Organic Compounds					
Sample		Depth to Water	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Total Xylenes	Methyl tert Butyl Ether (by 8020)	Methyl tert Butyl Ether (by 8260)
Name	Date	(ft. bgs)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
SFBRWQCB Vapor Intrusion Shallow Groundwater ESLs ¹ Aquatic Habitat Goal, Freshwater			4.4E+02	6.4E+02	4.6E+01	1.3E+02	2.9E+02	--	6.6E+04	6.6E+04
SFBRWQCB Vapor Intrusion Shallow Groundwater ESLs ² Aquatic Habitat Goal, Saltwater			3.7E+03	6.4E+02	3.5E+02	2.5E+03	4.3E+01	1.0E+02	8.0E+02	8.0E+02
MW-8H	6/10/2009	3.66	<50	78	<0.5	<0.5	<0.5	<0.5	--	0.7
	10/1/2009	4.04	<50	640 ^a	<0.5	<0.5	<0.5	<0.5	--	1
MW-8I	6/10/2009	6.31	420	360	23	<0.5	<0.5	<0.5	--	5
	10/1/2009	6.41	53	92 ^a	2	<0.5	<0.5	<0.5	--	4
MW-8J	6/10/2009	6.41	<50	400	<0.5	<0.5	<0.5	<0.5	--	10
	10/1/2009	6.78	<50	<50 ^a	<0.5	<0.5	<0.5	<0.5	--	<0.5
MW-8F	6/10/2009	12.41	<50	300	<0.5	<0.5	<0.5	<0.5	--	<0.5
	10/1/2009	10.40	<50	81 ^a	<0.5	<0.5	<0.5	<0.5	--	<0.5
MW-8G	6/10/2009	12.35	<50	140	<0.5	<0.5	<0.5	<0.5	--	<0.5
	10/1/2009	11.94	<50	55 ^a	<0.5	<0.5	<0.5	<0.5	--	<0.5

Notes:

^a TPH-DRO with Silica Gel Cleanup

"--" = Not analyzed

¹ Groundwater Screening Levels, Aquatic Habitat Goal, Freshwater (CRWQCB, 2016)

² Groundwater Screening Levels, Aquatic Habitat Goal, Saltwater (CRWQCB, 2016)

**Table 6-2
Summary of Cancer Risks and Noncancer Hazard Indices for Chemicals of Potential Concern (COPCs) in
Groundwater for Commercial/Industrial Exposure Scenario**

Ellwood Commercial Real Estate
500 Grand Avenue, Oakland, California

Chemical of Potential Concern	Cas No.	Groundwater at 8.5 feet bgs	Soil Gas and Indoor Air ¹			Cancer Risk (unitless)	Noncancer Hazard (unitless)
		Maximum Detected Groundwater Concentration (µg/L)	Model-Derived Soil Gas Concentration (µg/m ³)	Model-Derived Soil Vapor to Indoor Air Attenuation Factor (unitless)	Model-Derived Indoor Air Concentration (µg/m ³)		
Acetone	67641	240	3.3E+02	8.0E-05	2.6E-02	NA	1.9E-07
Benzene	71432	740	1.6E+05	3.3E-06	5.3E-01	1.3E-06	4.0E-02
n-Butylbenzene	104518	42	2.6E+04	1.8E-06	4.6E-02	NA	6.0E-05
sec-Butylbenzene	135988	5.8	2.3E+03	1.8E-06	4.2E-03	NA	2.4E-06
1,2-Dichloroethane	107062	3.1	1.4E+02	5.1E-06	7.2E-04	1.5E-09	2.4E-05
Ethylbenzene	100414	710	2.2E+05	2.4E-06	5.3E-01	1.1E-07	1.2E-04
Isopropylbenzene	98828	28	1.2E+04	2.1E-06	2.6E-02	NA	1.5E-05
p-Isopropyltoluene	99876	10	4.4E+03	2.1E-06	9.1E-03	NA	5.2E-06
Methyl tert butyl ether	1634044	5.9	1.4E+02	6.0E-06	8.2E-04	1.7E-11	6.3E-08
Naphthalene	91203	150	2.5E+03	6.8E-06	1.7E-02	4.8E-08	1.3E-03
n-Propylbenzene	103651	86	3.5E+04	2.1E-06	7.2E-02	NA	1.7E-05
Toluene	108883	110	2.8E+04	2.8E-06	8.0E-02	NA	6.1E-05
1,2,4-Trimethylbenzene	95636	560	1.3E+05	2.2E-06	3.0E-01	NA	9.7E-03
1,3,5-Trimethylbenzene	108678	160	5.4E+04	2.1E-06	1.1E-01	NA	7.5E-04
m,p-Xylenes	108383	1,500	4.2E+05	2.5E-06	1.0E+00	NA	2.3E-03
o-Xylenes	95476	220	4.4E+04	2.6E-06	1.1E-01	NA	2.6E-04
					Total	1E-06	5E-02

Notes:

feet bgs = feet below ground surface.

µg/L = micrograms per liter.

µg/m³ = micrograms per cubic meter.

NA = Not applicable.

¹ Maximum detected groundwater concentrations were coupled with CalEPA DTSC vapor intrusion model to estimate attenuation factors and concentrations in soil gas and indoor air.

APPENDIX A
ACEH CLOSURE TRANSMITTAL
500 GRAND AVENUE, OAKLAND
(ATTACHMENTS NOT INCLUDED)

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director



ENVIRONMENTAL HEALTH DEPARTMENT
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 21, 2011

Ms. Olivia Skance
Chevron Environmental Management
6001 Bollinger Canyon Road
San Ramon, CA 94583-2324
(sent via electronic mail to
Olivia.Skance@chevron.com)

Mr. Denis Brown
Shell Oil Products US
20945 S Wilmington Ave
Carson, CA 90810-1039
(sent via electronic mail to
denis.l.browm@shell.com)

Ms Jennifer Sedlachek
Exxon Mobil
4096 Piedmont Ave #194
Oakland, CA 94611
(sent via electronic mail to
jennifer.c.sedlachek@exxonmobil.com)

Mr. Bradford Howard
Bradford Howard et al
516 Grand Avenue
Oakland, CA 94610-3515
(sent via electronic mail to
BHoward@howardtours.net)

Subject: Closure Transmittal; Fuel Leak Case No. RO0000391 (Global ID #T0600101355),
Chevron #21-1137, 500 Grand, Oakland, CA 94611

Dear Ms. Skance, Mr. Brown, Ms. Sedlachek, and Mr. Howard:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

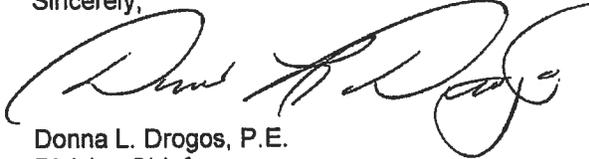
- Residual petroleum hydrocarbon pollution in soil, groundwater, and soil vapor remains in place at this site. The extent of removal excavations was limited to south by sidewalk and utilities, and to east by the foundation of the retaining wall; residually contaminated soil with elevated concentrations remains in place along those perimeters (in soil up to 3,800 mg/kg TPHg, up to 580 mg/kg TPHd, and up to 22 mg/kg benzene remain). The extent of elevated concentrations in soil extends at least to the location of well MW-8J in Grand Avenue. Residual concentrations do not appear to significantly impact groundwater; however, elevated soil vapor is present but does not appear to have a receptor as currently developed. Upon redevelopment this data and current conclusions are to be revisited.
- Case closure for this fuel leak site is granted for the commercial land use only. If a change in land use to any residential or other conservative land use scenario occurs at this site, ACEH must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans.
- Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

Ms. Skance, Mr. Brown, Ms. Sedlachek, and Mr. Howard
RO0000391
September 21, 2011, Page 2

- This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.

If you have any questions, please call Mark Detterman at (510) 567-6876. Thank you.

Sincerely,



Donna L. Drogos, P.E.
Division Chief

Enclosures: 1. Remedial Action Completion Certificate
2. Case Closure Summary

cc: Ms. Cherie McCaulou (w/enc.), SF- Regional Water Quality Control Board, 1515 Clay Street, Suite 1400, Oakland, CA 94612, (sent via electronic mail to CMacaulou@waterboards.ca.gov)

Leroy Griffin, Oakland Fire Department 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (sent via electronic mail to lgriffin@oaklandnet.com)

Donna Drogos, (sent via electronic mail to donna.drogos@acgov.org)
Mark Detterman (sent via electronic mail to mark.detterman@acgov.org)
Case eFile, GeoTracker



ENVIRONMENTAL HEALTH DEPARTMENT
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 21, 2011

Ms. Olivia Skance
Chevron Environmental Management
6001 Bollinger Canyon Road
San Ramon, CA 94583-2324
(sent via electronic mail to
Olivia.Skance@chevron.com)

Mr. Denis Brown
Shell Oil Products US
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Carson, CA 90810-1039
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denis.l.browm@shell.com)

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Exxon Mobil
4096 Piedmont Ave #194
Oakland, CA 94611
(sent via electronic mail to
jennifer.c.sedlachek@exxonmobil.com)

Mr. Bradford Howard
Bradford Howard et al
516 Grand Avenue
Oakland, CA 94610-3515
(sent via electronic mail to
BHoward@howardtours.net)

REMEDIAL ACTION COMPLETION CERTIFICATE

Subject: Fuel Leak Case No. RO0000391 (Global ID #T0600101355), Chevron #21-1137, 500 Grand, Oakland, CA 94611

Dear Ms. Skance, Mr. Brown, Ms. Sedlachek, and Mr. Howard:

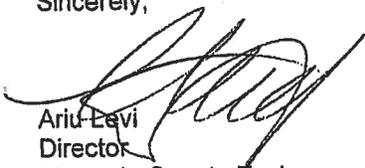
This letter confirms the completion of a site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact our office if you have any questions regarding this matter.

Sincerely,


Ariu Levi
Director
Alameda County Environmental Health

**CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

I. AGENCY INFORMATION

Date: March 3, 2011

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567- 6876
Responsible Staff Person: Mark Detterman	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Chevron #21-1173 / Exxon #7-0237		
Site Facility Address: 500 Grand Avenue, Oakland, CA 94611		
RB Case No.: 01-1467	Local Case No.: STID: 1109	LOP Case No.: RO0000391
URF Filing Date: 2/3/1989	Geotracker ID: T0600101355	APN: 10-780-15-8
Responsible Parties	Addresses	Phone Numbers
Ms. Staci Frerichs	Chevron Environmental Management 6001 Bollinger Canyon Road, Rm 3596 PO Box 6012 San Ramon, CA 94583-2324	925.543.2377
Mr. Denis Brown	Shell Oil Products US 20945 S. Wilmington Ave Caron, CA 90810-1039	707.865.0251
Ms. Jennifer Sedlachek	Exxon Mobil 4096 Piedmont Avenue # 194 Oakland, CA 94611	510.547.8196
Mr. Brandford Howard	Branford Howard et al 516 Grand Avenue Oakland, CA 94610-3515	Unknown

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	10,000	Gasoline	Removed	April 14, 1992
2	10,000	Gasoline	Removed	April 14, 1992
3	10,000	Gasoline	Removed	April 14, 1992
4	550	Waste Oil	Removed	September 25, 1990
Piping			Removed	April 14, 1992

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown. Waste oil tank reported intact at time of removal by inspector. No notes included in gasoline tank removal report or inspector notes.		
Site characterization complete? Yes	Date Approved By Oversight Agency: ----	
Monitoring wells installed? Yes	Number: 12	Proper screened interval? Yes*
Highest GW Depth Below Ground Surface: At ground surface / 5.43 **	Lowest Depth: 11.38 / 13.32 **	Flow Direction: Southwest
Most Sensitive Current Use: Potential drinking water source.		

* In general onsite wells MW-8K & MW-8L were submerged; offsite wells were generally appropriately screened. Previously decommissioned onsite wells MW-8A to MW-8E were not included in this analysis.

** Onsite well / Offsite well

Summary of Production Wells in Vicinity:	
There are no water supply wells within ¼-mile of the site. The closest water supply wells are located to the west in a cross- to upgradient direction at an approximate distance of 3,500 feet (0.66 miles). These two wells (1S4W26R3 & 1S4W35A2) are not expected to be receptors for this site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: Lake Merritt; 200 - 250 feet south
Off-Site Beneficial Use Impacts (Addresses/Locations): None Reported	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and City of Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	One: 550-gallon (Waste Oil) Three: 10,000-gallon (Gas)	Assumed Disposed; Destination Unreported	Unknown
Piping	Unknown	Assumed Disposed; Destination Unreported	Unknown
Free Product	Used oil; unknown	Disposed with groundwater; batch extraction	Fall 1990
Soil	Used oil UST Removal	Assumed Disposed; Destination unreported	1990
	Gasoline UST Removal	540 cubic yards; pea gravel; BFI Class III Landfill, Livermore, CA	May 1992
	Station Overexcavation: May 1992 January 1993	1,100 cubic yards; Destination unreported 828 cubic yards; Redwood Landfill, Novato	Mid 1992 February 1993
Groundwater	5,000 gallons	Destination unreported	December 1989
	5,000 gallons	Destination unreported	June 1990
	25,000 gallons	Destination unreported	April 1992
	5,000 gallons	Destination unreported	Mid 1992
	6,300 gallons	Gibson Environmental, Redwood City	January 1993

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
(Please see Attachments 1 through 6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	3,800 ¹	3,800	56,000	53
TPH (Diesel)	580	580	31,000 ²	92
TPH (Motor Oil)	330	ND	100,000 ²	<500
Oil and Grease	6,900	<330	NA	NA
Benzene	7,700	22 ¹	20,000	2
Toluene	28	28	6,200	<0.5
Ethylbenzene	30	30	1,100	<0.5
Xylenes	100	100	4,900	<0.5
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	48 ³	48 ³	NA	NA
MTBE (EPA 8260) ⁴	<0.0005	<0.0005	4	1
Chlorinated Hydrocarbons (EPA 8010) Semi-Volatile Organics (EPA 8270)	<0.005 ⁵ 6	<0.005 ND (various)	<1 NA	<1 NA

NA Not analyzed

¹ South sidewalk adjacent to sidewalk / street (Grand Avenue)

² Pit grab groundwater samples

³ B-13 @ 2.5 feet bgs: <0.05 Cd ppm; 26 ppm Cr; <0.05 Pb ppm; 41 ppm Zn; <0.5 ppm Cd; 48 ppm Cr; 4.4 ppm Pb; 65 ppm Ni; 61 ppm Zn collected on a remedial excavation stockpile.

⁴ MTBE only; TBA, TAME, ETBE, DIPE, EtOH, EDB, and EDC all not analyzed.

⁵ Exception: TCE 0.06 ppm

⁶ B-13 @ 2.5 feet bgs: 0.90 ppm naphthalene; 1.40 ppm 2 Methyl naphthalene; 0.260 ppm Bis (2-ethylhexyl) phthalate

Site History and Description of Corrective Actions:

May 1988 Sensitive Receptor Survey: In May 1988, HLA performed a sensitive receptor survey of the site vicinity. The survey indicated there were no public water supply wells within 2,500 feet of the site, no private water supply wells within 1,000 feet of the site, and no schools within 1,000 feet of the site.

June 1988 Well Installations: In June 1988, HLA installed four groundwater monitoring wells (MW-8A through MW-8D) at the site to depths of 15.5, 20, 24.5, and 5 feet below grade surface (bgs), respectively. Well MW-8D was designed to intercept perched water just below the ground surface. An additional boring (B-8A) was also drilled to 32 feet bgs that was supposed to be the location of well MW-8A; however, the boring extended through two water-bearing zones (clayey sand at 12 and 23 feet bgs and thus was decommissioned. Well MW-8A was placed adjacent to boring B-8A and constructed to intercept water in the upper water-bearing zone. A soil sample was collected at approximately 1.3 feet bgs from boring MW-8D and analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (BTEX); TPHg, toluene, and xylenes were detected at concentrations of 10, 0.4, and 0.5 milligrams per kilogram (mg/kg), respectively. The initial groundwater samples collected from wells MW-8A, MW-8B, and MW-8C were analyzed for BTEX; well MW-8D was dry. Benzene (5.3 micrograms per liter [µg/L]) was only detected in well MW-8A. Concentrations of toluene, ethylbenzene, and xylenes (up to 13 µg/L) were detected in wells MW-8A and MW-8C. The results of the investigation were presented in HLA's *Subsurface Investigation* report dated July 20, 1988.

September 1988 Soil Gas Survey: In September 1988, HLA conducted a soil gas survey both on and offsite. A

total of 17 soil gas samples were collected from 16 locations at depths ranging from 2 to 6 feet bgs and analyzed for total hydrocarbons and BTEX using a gas chromatograph equipped with a flame ionization detector (FID). Elevated concentrations of total hydrocarbons (up to 360,000 µg/L) and benzene (up to 86,000 µg/L) were detected in two of the samples (SG-04 and SG-05) collected on the west side of the site. Elevated concentrations of total hydrocarbons (up to 1,400,000 µg/L) and benzene (up to 300,000 µg/L) were also detected in two of the samples (SG-12 and SG-15) collected to the south-southwest of the site. Groundwater samples collected from four observation wells (OB-1 through OB-4) located within the gasoline UST pit were also analyzed for total hydrocarbons and BTEX; total hydrocarbons (up to 32,000 µg/L) and benzene (up to 7,700 µg/L) were detected in all four of the samples. The results of the investigation were presented in HLA's *Quarterly Technical Report-First Quarter of 1989* dated May 31, 1989 and *Environmental Assessment Report* dated September 22, 1989.

October 1988 Subsurface Investigation and Well Installation: In October 1988, HLA drilled four exploratory borings (B-1 through B-4) to depths of 8 to 16.5 feet bgs in the vicinity of the gasoline USTs and dispensers. Well MW-8E was also installed adjacent to boring B-3. One soil sample was collected from borings B-1, B-3, B-4, and MW-8E (depths ranging from 3.5 to 6.5 feet bgs) and analyzed for TPHg and BTEX. TPHg (up to 750 mg/kg) was detected in several of the samples; concentrations of toluene, ethylbenzene, and xylenes (up to 26 mg/kg) were also detected. Benzene was only detected in the soil sample collected at 5.5 feet bgs from boring MW-8E (0.82 mg/kg). The initial groundwater sample collected from well MW-8E contained benzene at 1,400 µg/L. The results of the investigation were presented in HLA's *Quarterly Technical Report-First Quarter of 1989* dated May 31, 1989 and *Environmental Assessment Report* dated September 22, 1989.

March 1989 Subsurface Investigation, Well Destruction and Installations: In March 1989, HLA drilled an additional boring (B-5) on the west side of the site in the area where elevated hydrocarbon concentrations were previously detected in soil gas. Soil samples were collected from the boring at depths of 5.5, 10.5, and 16 feet bgs and analyzed for TPHg and BTEX, which were not detected. Well MW-8D was also decommissioned at this time due to a lack of water. Two offsite monitoring wells (MW-8F and MW-8G) were installed to 16.5 feet bgs across Grand Avenue to the south-southeast of the site. Soil samples were collected from boring MW-8F at 11 feet bgs and from boring MW-8G at 6 feet bgs and analyzed for TPHg and BTEX, which were not detected. BTEX were not detected in the initial groundwater samples collected from the wells. The results of the investigation were presented in HLA's *Quarterly Technical Report-First Quarter of 1989* dated May 31, 1989 and *Environmental Assessment Report* dated September 22, 1989.

Fourth Quarter 1989 Subsurface Investigation and Interim Remediation: During fourth quarter 1989, HLA drilled four additional onsite borings (B-6 through B-9) to depths of 3.5 to 5.5 feet bgs. A total of five soil samples were collected at various depths (ranging from 2 to 4.5 feet bgs) from the borings and analyzed for TPHg, BTEX, and TPH as diesel (TPHd). TPHg (up to 580 mg/kg) was only detected in the soil samples collected from borings B-7, B-8, and B-9; concentrations of one or more BTEX compounds (up to 50 mg/kg) were also detected. TPHd was only detected in the soil sample collected at 2.5 feet bgs from boring B-9 (460 mg/kg). Observation wells OB-3 and OB-4 were also re-sampled and elevated concentrations of TPHg (4,000 µg/L) and benzene (up to 500 µg/L) were detected. In December 1989, approximately 5,000 gallons of groundwater were pumped from the gasoline UST pit and disposed offsite as an interim remedial measure. This work was documented in HLA's *Quarterly Technical Report-Fourth Quarter of 1989* dated March 21, 1990.

First Quarter 1990 Subsurface Investigation and Well Installations: During first quarter 1990, HLA drilled seven additional borings. Four soil bores B-8K [offsite], and B-10 through B-12 [onsite] were installed to depths of 6 to 9.5 feet bgs. A total of 15 soil samples were collected at various depths (ranging from 1 to 8.5 feet bgs) from the borings and analyzed for TPHg, BTEX, and TPHd. Concentrations of TPHg (up to 84 mg/kg) and BTEX (up to 5.4 mg/kg) were detected in several of the soil samples. Elevated concentrations of TPHg were detected in the soil samples collected at 1.5 feet bgs from boring B-11 (2,900 mg/kg) and at 4.5 feet bgs from boring B-12 (1,200 mg/kg). TPHd (up to 94 mg/kg) was only detected in three of the samples. Three offsite monitoring wells (MW-8H, MW-8I, and MW-8J) were also installed. Four soil samples were collected at various depths from each well boring and analyzed for TPHg, BTEX, and TPHd. TPHg (up to 550 mg/kg) was detected in the majority of the soil samples. An elevated concentration of TPHg (2,100 mg/kg) was detected in the sample collected at 5.5 feet bgs from boring MW-8J. Concentrations of benzene and toluene were non-detectable in the sample from 5.5 feet, but ethylbenzene was present at 25 mg/kg in the sample. TPHd (up to 83 mg/kg) was only detected in three of the samples. TPHg was detected in the initial groundwater samples collected from wells MW-8H and MW-8I (460 µg/L and 580 µg/L, respectively). Benzene was detected in wells MW-8H, MW-8I, and MW-8J at 14.8 µg/L, 116 µg/L, and 2.7 µg/L, respectively. TPHd was only detected in well MW-8I (440 µg/L). This work was documented in HLA's *Quarterly Technical Report-First Quarter of 1990* dated June 13, 1990.

Second Quarter 1990 Subsurface Investigation: During second quarter 1990, HLA drilled two additional borings (B-13 and B-14) to depths of 4 and 4.5 feet bgs, respectively. The borings were located near the station building; boring B-14 was located adjacent to the waste oil UST. A total of five soil samples were collected at various depths from the borings and analyzed for TPHg, BTEX, TPHd, and TPH "other" (heavier-end hydrocarbons). The soil sample collected from boring B-13 at 2.5 feet bgs was also analyzed for halogenated volatile organic compounds (HVOCs), semi-VOCs, total oil and grease (TOG), and the metals cadmium, chromium, lead, and zinc. TPHg (up to 130 mg/kg) was detected in the majority of the soil samples. Concentrations of toluene, ethylbenzene, and xylenes (up to 5.4 mg/kg) were detected in a few of the samples. TPHd and benzene were not detected in any of the samples. Heavier-end petroleum hydrocarbons (constituents unknown) were detected in four of the samples at concentrations ranging from 62 to 1,000 mg/kg (B-13 at 2.5 feet bgs). The sample collected from boring B-13 at 2.5 feet bgs also contained the semi-VOCs naphthalene (0.9 mg/kg), 2-methylnaphthalene (1.4 mg/kg), and bis(2-ethylhexyl)phthalate (0.26 mg/kg); HVOCs were not detected with the exception of trichloroethane at 0.06 mg/kg; TOG was detected at 5,600 mg/kg; and the metals chromium and zinc were detected at 36 mg/kg and 41 mg/kg, respectively. In June 1990, during work on the waste oil UST, a layer of light non-aqueous phase liquid (LNAPL) was observed on the water in the backfill surrounding the tank. Exxon reportedly had the fluid in the excavation pumped out several times. This work was documented in HLA's *Quarterly Technical Report-Second Quarter of 1990* dated August 30, 1990.

September-October 1990 Waste Oil-UST Removal and Over-Excavation: In September 1990, the 500-gallon, single-walled fiberglass waste oil UST was removed from the site. No apparent holes or cracks were observed in the tank. The excavation was approximately 7.5 feet by 9.5 feet by 8 feet deep. Approximately 1/8 inch of LNAPL was observed on the water in the excavation. A water sample (WOT #1) was collected prior to pumping the water out of the excavation; the sample contained TPHg at 1,900 µg/L, TPHd at 1,400 µg/L, benzene at 320 µg/L, and TOG at 70 µg/L; HVOCs were not detected. Four soil samples (WO#2 through WO#5) were collected at 1.5 feet bgs from the sidewalls of the excavation and analyzed for TPHg, BTEX, TPHd, TOG, and HVOCs. Concentrations of TPHg (up to 15 mg/kg), TPHd (up to 20 mg/kg), and BTEX (benzene up to 0.054 mg/kg, ethylbenzene up to 0.75 mg/kg, and xylenes up to 1.5 mg/kg) were detected in several of the samples. TOG was detected in all four of the samples at concentrations ranging from 100 to 2,600 mg/kg. HVOCs were not detected in any of the samples.

In October 1990, over-excavation of impacted soil was conducted in the area of the soil sample with the highest TOG concentration (WO#3; western sidewall). The upper 3 feet of this sidewall was excavated laterally to the west an additional 3 feet. Additional soil samples were collected at 1.5 (WO#7) and 2 feet bgs (WO#6) from the new western sidewall, and from the bottom of the original excavation on the south side (WO#8). Samples WO#6 and WO#7 contained TOG at 100 mg/kg and 850 mg/kg, respectively. Sample WO#8 was analyzed for TPHg, BTEX, TPHd, and TOG; which were not detected except toluene at 0.016 mg/kg. Two clay pipes were encountered at approximately 1.5 feet bgs in the northwest and northeast corners of the excavation. The excavation was backfilled several days later. This work was documented in HLA's *Soil and Groundwater Sampling During Waste Oil Tank Removal* dated November 8, 1990.

January 1991 Clay Pipe Excavation: In January 1991, the clay pipes were removed. The excavation trench was located on the western side of the former waste oil UST and was approximately 15 feet long, 2.5 feet wide, and 4.5 feet deep. Two water samples (EP-01 and WP-01) were collected from the trench and analyzed for TPHg, TPHd, BTEX, and TPH as motor oil (TPHmo). TPHg (5,200 µg/L and 3,900 µg/L), TPHd (31,000 µg/L and 13,000 µg/L), benzene (280 µg/L and 320 µg/L), and TPHmo (100,000 µg/L and 17,000 µg/L) were detected in both samples. The water sample collected nearest the former UST contained the higher TPH concentrations. Four soil samples were also collected from the sidewalls and bottom of the trench (depths ranging from 1.5 to 4.5 feet bgs) and analyzed for TPHg, BTEX, TOG, and TPHd; three of the samples were also analyzed for TPHmo and HVOCs. Concentrations of TPHg (up to 100 mg/kg), TPHd (up to 190 mg/kg), and BTEX (up to 0.63 mg/kg) were detected in several of the samples. TOG was detected in all four of the samples at concentrations up to 630 mg/kg. TPHmo was detected in the three soil samples analyzed at concentrations up to 330 mg/kg. HVOCs were not detected in the three soil samples analyzed. A small excavation was also made on the east side of the UST excavation and an additional soil sample was collected at 1.5 feet bgs; this sample contained TPHg (1.1 mg/kg), TPHd (110 mg/kg), and TOG (780 mg/kg); BTEX were not detected. The excavation trench was continued to the door of the first service bay. An unknown volume of water was removed from the trench. This work was documented in HLA's *Results of Pipe Excavation and Recent Groundwater Analyses* dated February 12, 1991.

April - May 1992 Station Demolition, Gasoline UST Removal, and Overexcavation: In April 1992, the station was demolished and three 10,000-gallon, fiberglass gasoline USTs, two dispenser islands, and associated piping were removed from the site. No cracks or holes were observed in any of the tanks. During tank removal activities, approximately 25,000 gallons of impacted groundwater was pumped from the excavation and disposed offsite. Nine confirmation soil samples were collected from the bottom (10 feet bgs) and sidewalls (5 feet bgs) of the UST

excavation and analyzed for TPHg and BTEX. Concentrations of TPHg (up to 130 mg/kg) and BTEX (benzene up to 0.2 mg/kg, ethylbenzene up to 0.17 mg/kg, and xylenes up to 1.4 mg/kg) were detected in several of the samples. Three soil samples were also collected beneath the dispensers and one soil sample was collected beneath the product piping at depths of 5 or 6 feet bgs and analyzed for TPHg, BTEX, and TOG. TPHg and benzene were detected in the four samples at concentrations ranging from 7.8 to 2,100 mg/kg and 0.019 to 11 mg/kg, respectively. TOG was also detected in the four samples at concentrations ranging from 30 to 6,900 mg/kg. Approximately 540 cubic yards of impacted pea gravel was disposed offsite. Clean, imported fill material was then used to backfill the excavation. This work was documented in HLA's *Underground Storage Tank Removal* report dated June 8, 1992.

In May 1992, additional excavation was performed in the area of the former dispenser islands. The excavation was approximately 55 feet wide, 60 feet long, and 7 to 9 feet deep. Nine soil samples (BE-1, BE-2, and BE-4 through BE-10) were collected from the bottom of the excavation at depths of 4.5 to 9 feet bgs and analyzed for TPHg and BTEX. TPHg was only detected in one of the samples (1.1 mg/kg), and toluene, ethylbenzene, and xylenes generally were not detected in any of the samples with the exception of ethylbenzene in one sample (0.058 mg/kg). Concentrations of benzene (up to 0.043 mg/kg) were detected in several of the samples. Four soil samples (WS-2 through WS-5) were also collected at depths of 5 or 7.5 feet bgs from the western and southern sidewalls of the excavation. TPHg and BTEX were not detected in the sample (WS-3) collected from the western sidewall. TPHg (ranging from 72 to 1,000 mg/kg) and BTEX (benzene ranging from 1.1 to 22 mg/kg) were detected in the three samples collected from the southern sidewall. The excavation could not be extended further to the south without undermining the Grand Avenue sidewalk. A small area was also excavated under a former service bay near a former hydraulic hoist and sump. Soil samples were collected from the bottom (BE-3 at 4 feet bgs) and the western sidewall (WS-1 at 3 feet bgs) of this excavation; TPHg and BTEX were not detected in either of the samples. Approximately 1,100 cubic yards of soil were removed and disposed offsite. Clean, imported fill material was then used to backfill the excavations. This work was documented in HLA's *Quarterly Technical Report-Second Quarter of 1992* dated September 10, 1992.

August 1992 Well Destructions: In August 1992, onsite wells MW-8A and MW-8E were decommissioned by over-drilling. This work was documented in a HLA *Well Destruction Reports* letter dated August 14, 1992.

January 1993 Additional Over-Excavation: In January 1993, Converse Environmental West (Converse) supervised the removal of additional soil from the northern portion of the site. Ten soil samples (B-1 through B-10) were collected from the bottom of the excavation, and seven soil samples (SW-1 through SW-7) were collected from the western, northern, and eastern sidewalls of the excavation and analyzed for TPHg and BTEX; which were not detected in any of the soil samples. Approximately 828 cubic yards of impacted soil were removed, and approximately 6,300 gallons of water were pumped from the excavation and disposed offsite during the work. Clean, imported fill was used to backfill the excavation. This work was documented in Converse's *Soil Excavation and Soil Sampling Report* dated March 26, 1993.

April 1993 Well Destructions: In April 1993, onsite wells MW-8B and MW-8C were decommissioned by over-drilling. This work was documented in a letter by Pacific Environmental Group, Inc. (PEG) dated May 6, 1993.

May 1993 Well Installations: In May 1993, PEG installed two wells onsite (MW-8K and MW-8L) to 18 feet bgs. Well MW-8K was installed adjacent to former well MW-8E which historically contained the highest concentrations. No soil samples were collected for laboratory analysis from the well borings; however, organic vapor concentrations greater than 100 parts per million by volume (ppmv) were not observed. This work was documented in PEG's untitled letter report dated July 30, 1993.

1996-2000 Groundwater Oxygenation: In December 1996, socks containing ORC were placed in wells MW-8F, MW-8G, and MW-8I in an attempt to enhance biodegradation of petroleum hydrocarbons in groundwater. The socks were periodically replaced and were permanently removed from the wells in March 2000.

2001 Well Survey: In early 2001, KHM requested information from the Alameda County Public Works Agency (ACPWA) regarding the presence of wells within ½ mile of the site. No wells were identified within the search radius and no visual evidence of wells was observed within 1,000 feet of the site. The two nearest water supply wells identified were irrigation wells located approximately 3,500 feet west (crossgradient) and southwest (crossgradient) of the site.

November 2006 Subsurface Investigation: In November 2006, Cambria Environmental Technology, Inc. (Cambria [now CRA]) advanced borings S-1 through S-3 to approximately 4 feet bgs along the southern edge of the site. Boring S-3 was advanced into the excavation backfill. A soil sample was collected from each boring at 4 feet bgs and analyzed for TPHg, BTEX, TPHd, and TOG. TPHg was detected in the soil samples collected from borings S-1 and S-2 at concentrations of 390 mg/kg and 3,800 mg/kg, respectively. Benzene was only detected in the soil

sample collected from boring S-2 (0.41 mg/kg) immediately adjacent to the Grand Avenue sidewalk. Toluene, ethylbenzene, and xylenes (up to 170 mg/kg) were also detected in the soil samples collected from borings S-1 and S-2. TPHd was detected in the soil samples collected from borings S-1, S-2, and S-3 at 15 mg/kg, 580 mg/kg, and 11 mg/kg, respectively. TOG was not detected in any of the soil samples.

Soil vapor samples (SV-1 and SV-2) were also collected adjacent to the borings and analyzed for TPHg and BTEX. An additional sample (SV-3) was not analyzed due to inadequate sample volume. TPHg was detected in samples SV-1 and SV-2 at concentrations of 60,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and $2 \times 10^6 \mu\text{g}/\text{m}^3$, respectively. Benzene was detected in samples SV-1 and SV-2 at concentrations of 3,400 $\mu\text{g}/\text{m}^3$ and 34,000 $\mu\text{g}/\text{m}^3$, respectively. Toluene (330 $\mu\text{g}/\text{m}^3$ and 160,000 $\mu\text{g}/\text{m}^3$, respectively), ethylbenzene (2,600 $\mu\text{g}/\text{m}^3$ and 64,000 $\mu\text{g}/\text{m}^3$, respectively), and xylenes (380 $\mu\text{g}/\text{m}^3$ and 280,000 $\mu\text{g}/\text{m}^3$, respectively) were also detected in samples SV-1 and SV-2. A field duplicate sample collected from SV-2 contained lower concentrations of TPHg (720,000 $\mu\text{g}/\text{m}^3$), benzene (14,000 $\mu\text{g}/\text{m}^3$), toluene (69,000 $\mu\text{g}/\text{m}^3$), ethylbenzene (27,000 $\mu\text{g}/\text{m}^3$), and xylenes (110,000 $\mu\text{g}/\text{m}^3$). This work was documented in Cambria's *Subsurface Investigation Report* dated February 28, 2007.

March 2008 Subsurface Investigation: In March 2008, CRA advanced five borings (SV-4 through SV-8) to depths of 3 to 6 feet bgs along the southern and eastern sides of the site. Groundwater was encountered in the borings at depths of 2 to 6 feet bgs. Borings SV-4 through SV-6 were advanced into the excavation backfill. One or two soil samples were collected at depths of 2 or 5 feet bgs from borings SV-5, SV-7, and SV-8 and analyzed for TPHg, BTEX, and methyl tertiary butyl ether (MTBE). TPHg was detected in the soil samples collected at 2 feet bgs (16 mg/kg) and 5 feet bgs (1,400 mg/kg) from boring SV-7; BTEX (benzene up to 0.11 mg/kg, ethylbenzene up to 15, and xylenes up to 19 mg/kg) were also detected in these two samples. MTBE was not detected in any of the soil samples. A grab groundwater sample was also collected from each of the five borings and analyzed for TPHg, BTEX, and MTBE. TPHg (6,200 $\mu\text{g}/\text{L}$) and benzene (200 $\mu\text{g}/\text{L}$) were detected in the groundwater sample collected from boring SV-7 in close proximity to the retaining wall on the east side of the site. Concentrations of MTBE were detected in the groundwater samples collected from borings SV-4 (1 $\mu\text{g}/\text{L}$), SV-7 (0.7 $\mu\text{g}/\text{L}$), and SV-8 (2 $\mu\text{g}/\text{L}$). The borings were intended to be completed as soil vapor wells; however, due to the shallow groundwater encountered, the wells were not installed. This work was documented in CRA's *Subsurface Investigation Report* dated August 14, 2008.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
<p>Site Management Requirements:</p> <p>Case closure for this fuel leak site is granted for the commercial land use only. If a change in land use to any residential or other conservative land use scenario occurs at this site, ACEH must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans.</p> <p>Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.</p> <p>This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.</p>		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? No		Date Recorded: ----
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 6
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

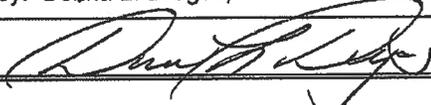
V. ADDITIONAL COMMENTS, DATA, ETC.

<p>Considerations and/or Variances:</p> <ul style="list-style-type: none"> • Disposal destinations for all USTs, piping, soil, limited free phase, and groundwater are not fully reported. • Residual petroleum hydrocarbon pollution in soil, groundwater, and soil vapor remains in place at this site. The extent of removal excavations was limited to south by sidewalk and utilities, and to east by the foundation of the retaining wall; residually contaminated soil with elevated concentrations remains in place along those perimeters (in soil up to 3,800 mg/kg TPHg, up to 580 mg/kg TPHd, and up to 22 mg/kg benzene remain). The extent of elevated concentrations in soil extends at least to the location of well MW-8J in Grand Avenue. Residual concentrations do not appear to significantly impact groundwater; however, elevated soil vapor is present but does not appear to have a receptor as currently developed. Upon redevelopment this data and current conclusions are to be revisited. • Only MTBE has been analyzed for at the site; the maximum detected concentration was 4.0 µg/l and reduced to 1.0 µg/l. MTBE was not detected in soil. TBA, TAME, ETBE, DIPE, EtOH, EDB, and EDC all were not analyzed at the site. • Grab groundwater samples collected at SV-4, SV-5, and SV-6 (non-detectable for TPHg, BTEX, and up to 1.0 µg/l MTBE) were used to confirm and validate non-detectable (for these analytes) groundwater results from generally submerged wells MW-8K and MW-8L.

Conclusion:

Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the a commercial land use scenario based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case is necessary unless a change in land use to any residential or other conservative land use scenario; or construction or excavation activities occurs at the site. ACEH staff recommend case closure for this fuel leak site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

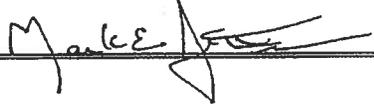
Prepared by: Mark Detterman	Title: Hazardous Materials Specialist
Signature: 	Date: 3/3/11
Approved by: Dolina L. Drogos, P.E.	Title: Division Chief
Signature: 	Date: 03/04/11

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Notification Date: 3/11/11	

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: 4/27/11	Date of Well Decommissioning Report: 9/6/11	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 0	Number Retained: 0
Reason Wells Retained: None Retained		
Additional requirements for submittal of groundwater data from retained wells:	None	
ACEH Concurrence - Signature: 	Date: 9/21/11	

Attachments:

1. Site Vicinity Map (1 pp)
2. Site Plans (4 pp)
3. Soil Analytical Data (7 pp)
4. Grab Groundwater Analytical Data (1 pp)
5. Soil Vapor Analytical Data (2 pp)
6. Groundwater Analytical Data (15 pp)
7. Boring Logs (34 pp)
8. Cross Sections (3 pp)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

Detterman, Mark, Env. Health

From: Cherie MCcaulou [CMccaulou@waterboards.ca.gov]
Sent: Tuesday, March 29, 2011 10:36 AM
To: Detterman, Mark, Env. Health
Cc: Drogos, Donna, Env. Health
Subject: Re: RO0000391; Closure Summary for Chevron #21-1173

Mark - Thanks for the notification. We have no objection to ACEH's recommendation for case closure of RO0000391, for the UST releases at 500 Grand Avenue, Oakland.

Sincerely,

Cherie McCaulou
Engineering Geologist
San Francisco Bay Regional Water Quality Control Board
cmccaulou@waterboards.ca.gov
510-622-2342

>>> "Detterman, Mark, Env. Health" <Mark.Detterman@acgov.org> 3/11/2011 4:31 PM >>>
Hi Cherie,

Attached is a closure summary for RO0000391; Chevron #21-1173, located at 500 Grand in Oakland, in order to comply with the RWQCB's 30-day review period. If no comments from the RWQCB are received within the 30-day review period, ACEH's will proceed with case closure.

This is an older site with an extensive history. Residual contamination will be left in place and the site will be placed in the Oakland permit tracking system. Twelve wells are installed; well destruction is pending RWQCB concurrence.

Should you have questions, please let me know.
Best,

Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
Direct: 510.567.6876
Fax: 510.337.9335
Email: mark.detterman@acgov.org

PDF copies of case files can be downloaded at:

<http://www.acgov.org/aceh/lop/ust.htm>

APPENDIX B
PERMITS

Alameda County Public Works Agency - Water Resources Well Permit



Public Works Agency
Alameda County

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

Application Approved on: 04/12/2016 By jamesy

Permit Numbers: W2016-0266
Permits Valid from 04/15/2016 to 04/16/2016

Application Id: 1460401659128
Site Location: 500 Grand Avenue

City of Project Site:Oakland

Project Start Date: 04/15/2016

Completion Date:04/16/2016

Assigned Inspector: Contact Lindsay Furuyama at (925) 956-2311 or Lfuruyama@groundzonees.com

Applicant: Apex Compaines, LLC - Paisha Jorgensen
3478 Buskirk Ave, Suite 100, Pleasant Hill, CA 94523

Phone: 925-944-2856

Property Owner: Bradford Howard
516 Grand Avenue, Oakland, CA 94610

Phone: --

Client: Patrick Ellwood
1345 Grand Avenue, Oakland, CA 94610

Phone: --

Contact: Bob Robitaille

Phone: --
Cell: --

Receipt Number: WR2016-0180 Total Due: \$265.00
Payer Name : Paisha Jorgensen Total Amount Paid: \$265.00
Paid By: VISA PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 10 Boreholes
Driller: Cascade Drilling, LP - Lic #: 938110 - Method: DP

Work Total: \$265.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2016-0266	04/12/2016	07/14/2016	10	2.00 in.	12.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the

Alameda County Public Works Agency - Water Resources Well Permit

permits and requirements have been approved or obtained.

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

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

7. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

8. NOTE:

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

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

10. Weekend work approved. Applicant shall within 5 working days from the completion of drilling work the following: Email to well@acpwa.org stating that all the work permitted was completed or not, including any changes made (include a final site map if need be) and photos of each boreholes being grouted and including photos of the finished backfilled holes of each boreholes.

Failure to notify by email within 5 working days shall be a violation of these permit conditions and a fine of \$500 dollars may be imposed or future permit not being permitted.

APPENDIX C
DPT BORING LOGS



BOREHOLE LOG

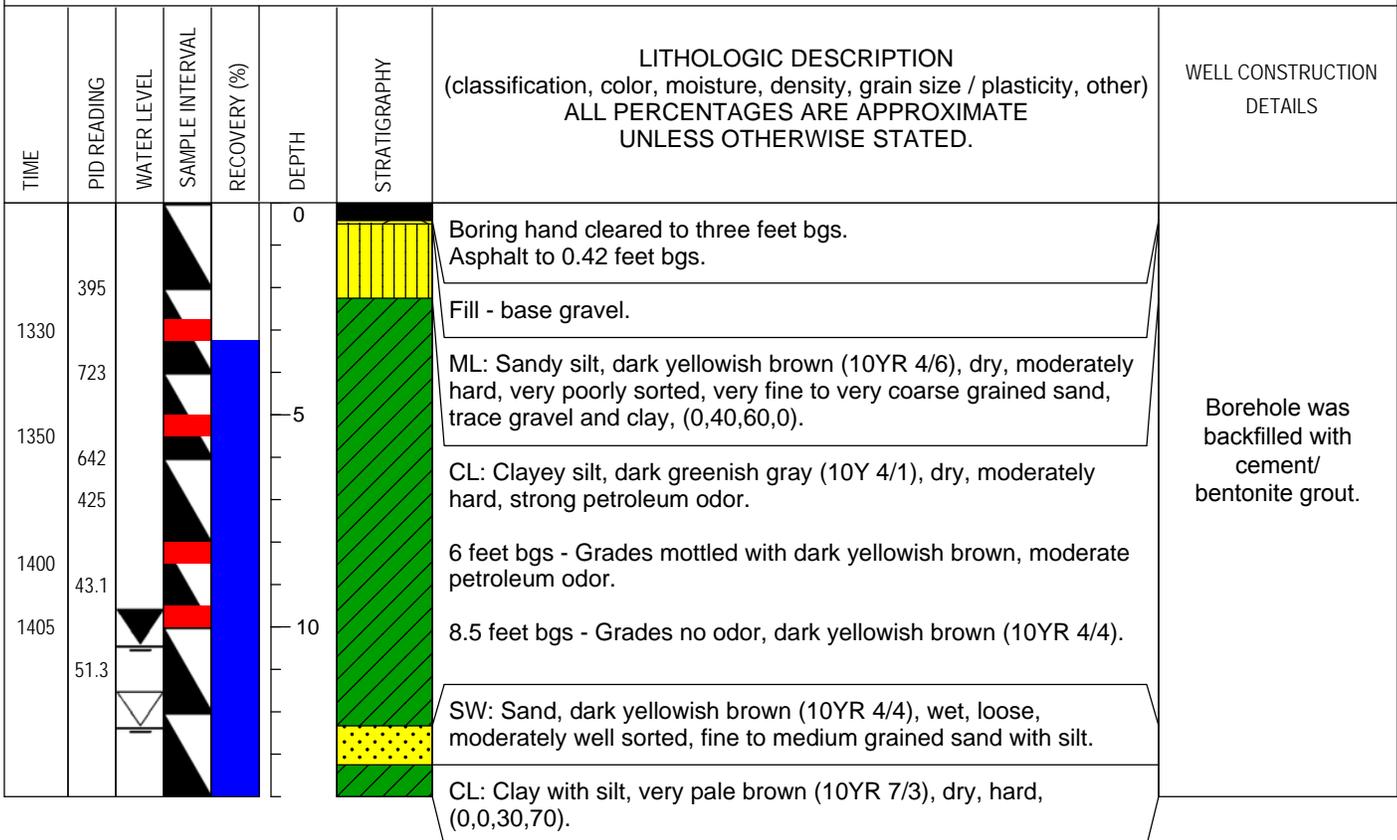
BORING / WELL ID: **SB-1**
 TOTAL DEPTH: **14'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**

BORING LOCATION / DESCRIPTION: **Southern property border, approximately 10 feet west of former SB-5**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (1320)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (1405)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis





BOREHOLE LOG

BORING / WELL ID: **SB-2**
 TOTAL DEPTH: **12'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **Centerline of southern property border**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (1415)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (1445)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis

TIME	PID READING	WATER LEVEL	SAMPLE INTERVAL	RECOVERY (%)	DEPTH	STRATIGRAPHY	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size / plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED.	WELL CONSTRUCTION DETAILS
					0		Boring hand cleared to 0.75 feet bgs. Asphalt to 0.6 feet bgs.	
1420	52 180						CL: Clayey silt, yellowish brown (10YR 4/4), dry, moderately hard.	
					5		CL: Clayey silt, dark gray (10Y 4/1), dry, moderately hard, strong petroleum odor. Grades mottled with yellowish brown (10YR 4/4).	
1425	380						SM: Silty sand, dark gray (10Y 4/1), wet, loose, strong petroleum odor.	
1430	104						SC: Clayey sand, dark grayish brown (10YR 4/2), wet, moderately dense, fine to medium grained sand, (0,70,10,20).	
1440	1.0						CL: Clay, very pale brown (10YR 8/2), moist, moderately hard, abundant caliche.	
1445	0.0				10			



BOREHOLE LOG

BORING / WELL ID: **SB-3**
 TOTAL DEPTH: **13'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **Southeast corner of former UST pit**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (1540)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (1610)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis

TIME	PID READING	WATER LEVEL	SAMPLE INTERVAL	RECOVERY (%)	DEPTH	STRATIGRAPHY	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size / plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED.	WELL CONSTRUCTION DETAILS
	60				0		Asphalt to 0.25 feet bgs. Fill - base gravel.	Borehole was backfilled with cement/bentonite grout.
	340						CL: Silty clay, yellowish brown (10YR 5/6), gray mottled, dry, hard, (0,10,40,50).	
1545					5		CL: Clay, very pale brown (10YR 8/2), moist, hard, abundant caliche.	
	175						6.75 feet bgs - Grades mottled yellowish brown.	
1550	175						8.1 feet bgs - Dry, grades with gravel to 0.75" diameter.	
	160				10		9 feet bgs - No gravel.	
	53						11 feet bgs - Grades predominately light yellowish brown (10YR 5/4), with pale brown and yellowish brown mottling.	
1610	60							



BOREHOLE LOG

BORING / WELL ID: **SB-4**
 TOTAL DEPTH: **15'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **Former UST pit**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (1505)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (1530)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis

TIME	PID READING	WATER LEVEL	SAMPLE INTERVAL	RECOVERY (%)	DEPTH	STRATIGRAPHY	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size / plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED.	WELL CONSTRUCTION DETAILS
1510	1.0				0		Asphalt to 0.25 feet bgs.	Borehole was backfilled with cement/bentonite grout.
1525	2.0				5		Fill - GM: Silty gravel, very dark grayish brown (10YR 3/2), dry, dense, poorly sorted, gravel to 1" diameter, angular, low plasticity, (50,10,30,10).	
1530	2.0				15		CL: Silty clay, dark yellowish brown (10YR 4/4), gray mottled, moist, moderately hard, low plasticity, trace caliche nodules. Grades with sand, dark grayish brown (2.5Y 4/2).	



BOREHOLE LOG

BORING / WELL ID: **SB-5**
 TOTAL DEPTH: **14'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **Former UST pit**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (1120)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (1310)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis

TIME	PID READING	WATER LEVEL	SAMPLE INTERVAL	RECOVERY (%)	DEPTH	STRATIGRAPHY	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size / plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED.	WELL CONSTRUCTION DETAILS
					0		Asphalt to 0.25 feet bgs.	
1125					5		Fill - GM: Silty gravel, very dark grayish brown (10YR 3/2), dry, dense, poorly sorted, gravel to 1" diameter, angular, low plasticity, (50,10,30,10).	Borehole was backfilled with cement/ bentonite grout.
1130				10				
1310							CL: Clayey silt, dark yellowish brown (10YR 5/4), dry, moderately hard.	



BOREHOLE LOG

BORING / WELL ID: **SB-6**
 TOTAL DEPTH: **10'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **Proposed elevator shaft**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (0800)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (0845)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis

TIME	PID READING	WATER LEVEL	SAMPLE INTERVAL	RECOVERY (%)	DEPTH	STRATIGRAPHY	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size / plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED.	WELL CONSTRUCTION DETAILS
					0		Asphalt to 0.25 feet bgs.	
	0.5						Fill - GM: Silty gravel, very dark grayish brown (10YR 3/2), dry, dense, poorly sorted, gravel to 1" diameter, angular, low plasticity, (50,10,30,10).	
0830	0.1				5		CL: Clayey silt, light olive brown (2.5Y 5/4), dry, moderately hard, trace fine grained sand, low plasticity, (0,0,70,30).	Borehole was backfilled with cement/ bentonite grout.
0830	0.1					7.5 feet bgs - Grades increasing clay, moist, dark yellowish brown (10YR 4/4).		
					10		8.5 feet bgs - Grades decreasing clay.	
0845	0.1							



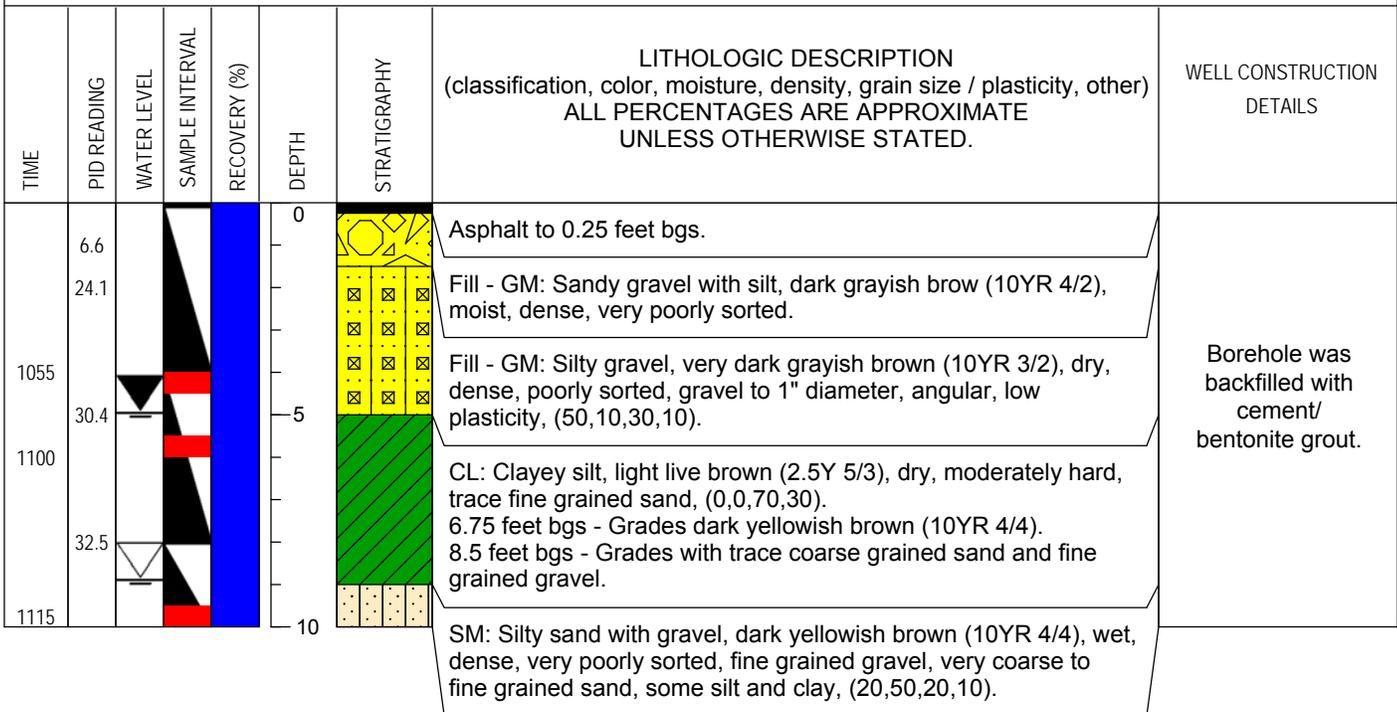
BOREHOLE LOG

BORING / WELL ID: **SB-7**
 TOTAL DEPTH: **10'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **North to south centerline, ~25 feet from southern property line**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (1050)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (1115)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis





BOREHOLE LOG

BORING / WELL ID: **SB-8**
 TOTAL DEPTH: **10'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **Former waste oil UST**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (1135)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (1150)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis

TIME	PID READING	WATER LEVEL	SAMPLE INTERVAL	RECOVERY (%)	DEPTH	STRATIGRAPHY	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size / plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED.	WELL CONSTRUCTION DETAILS
					0		Asphalt to 0.25 feet bgs.	
1140	37.1						Fill - GM: Silty gravel, very dark grayish brown (10YR 3/2), dry, dense, poorly sorted, gravel to 1" diameter, angular, low plasticity, (50,10,30,10).	
	14.7				5		Fill - GP: Gravel with sand, wet, loose, fine grained gravel to coarse grained sand.	
1150	17.9						CL: Clayey silt, light olive brown (2.5Y 5/4), wet, moderately hard, low plasticity, (0,0,70,30). 7.8 feet bgs - Grades yellowish brown (10YR 5/4). 8.5 feet bgs - Grades with fine grained sand.	
					10		SM: Silty sand, dark yellowish brown (10YR 4/4), wet, moderately dense, predominately fine to very fine grained sand, trace clay, (0,75,20,5).	



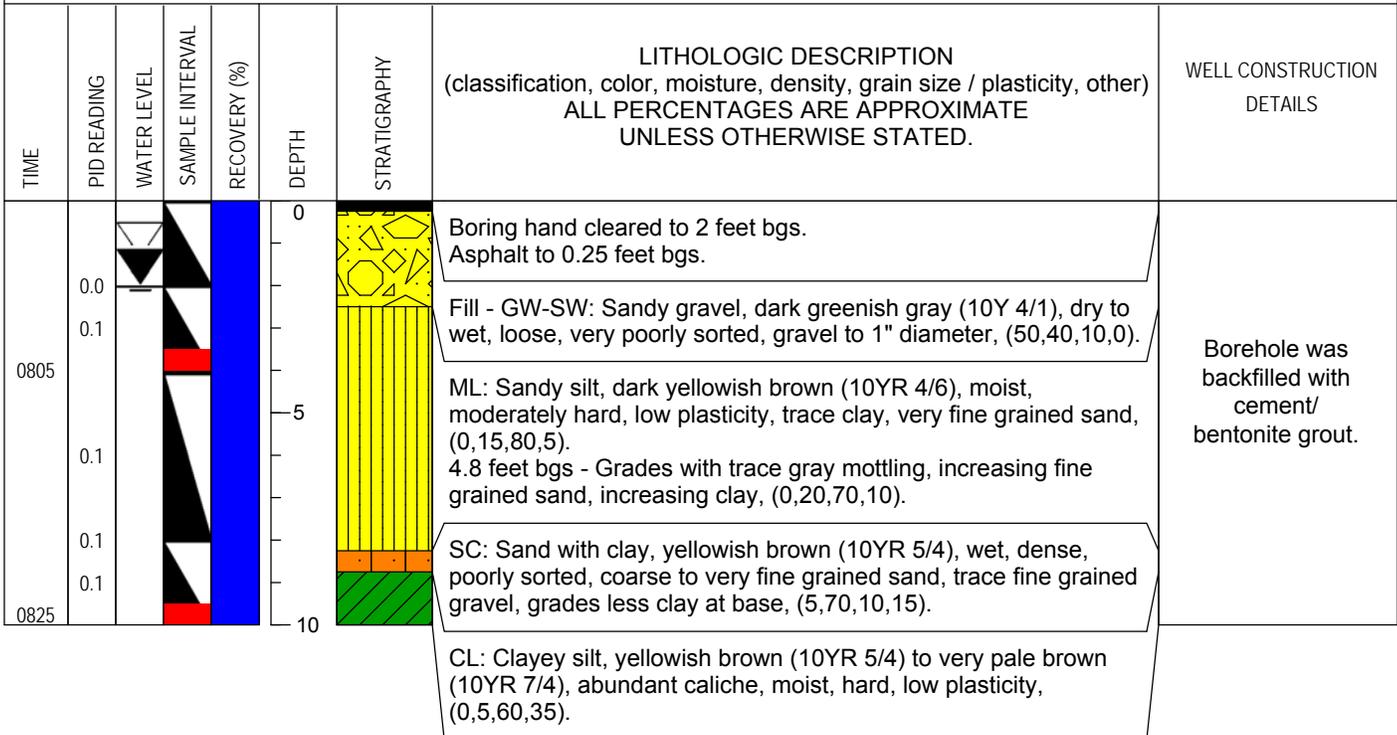
BOREHOLE LOG

BORING / WELL ID: **SB-9**
 TOTAL DEPTH: **10'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **Upgradient - center of north wall**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (0745)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (0830)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis





BOREHOLE LOG

BORING / WELL ID: **SB-10**
 TOTAL DEPTH: **10'**

PROJECT NAME AND SITE ADDRESS: **500 Grand Avenue, Oakland, California**
 BORING LOCATION / DESCRIPTION: **Near former well MW-8B**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT NO.:	01-ECR-001:3B	SUBCONTRACTOR:	Cascade Drilling
PERMIT NO.:	W2016-0266	EQUIPMENT:	GeoProbe 8040DT
LOGGED BY:	R. Robitaille	SAMPLING METHOD:	Direct Push 1.85" Core
REVIEWED BY:		MONITORING DEVICE:	MiniRae 2000 PID
SURFACE ELEVATION:		BORING DIAMETER (IN):	3.5 inches
CASING TOP ELEVATION:		ANNULUS MATERIAL:	NA
START DATE (TIME):	04/16/16 (0920)	BORING ANGLE:	Vertical CASING DIAMETER: NA
FINISH DATE (TIME):	04/16/16 (0950)	SCREEN INTERVAL:	NA

First Water Encountered
 Stabilized Water Level
 Sample Packaged for Analysis

TIME	PID READING	WATER LEVEL	SAMPLE INTERVAL	RECOVERY (%)	DEPTH	STRATIGRAPHY	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size / plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED.	WELL CONSTRUCTION DETAILS
0925					0 5		Boring hand cleared to 2 feet bgs. Asphalt to 0.25 feet bgs. Fill - GM: Silty gravel, very dark grayish brown (10YR 3/2), dry, dense, poorly sorted, gravel to 1" diameter, angular, low plasticity, (50,10,30,10). Grades wet at 5 feet bgs.	
0935					10		CL: Clayey silt, light olive brown (2.5Y 5/4), dry/moderately dense, low plasticity, trace fine grained sand, (0,0,70,30). Grades dark yellowish brown (10YR 4/4). Found water April 21, 2016, 0720 hours.	
0950								

APPENDIX D

SOIL SAMPLE LABORATORY ANALYTICAL REPORTS



Curtis & Tompkins, Ltd.

Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 276231
ANALYTICAL REPORT**

The Source Group, Inc. 3478 Buskirk Ave Pleasant Hill, CA 94523	Project : 01-ECR-001 Location : Ellwood Commercial Real Estate Level : II
---	---

<u>Sample ID</u>	<u>Lab ID</u>
SGI-SB-11-2.5	276231-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/27/2016

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 276231
Client: The Source Group, Inc.
Project: 01-ECR-001
Location: Ellwood Commercial Real Estate
Request Date: 04/22/16
Samples Received: 04/22/16

This data package contains sample and QC results for one soil sample, requested for the above referenced project on 04/22/16. The sample was received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

SGI-SB-11-2.5 (lab # 276231-001) was diluted due to high hydrocarbons. No other analytical problems were encountered.

Semivolatile Organics by GC/MS (EPA 8270C):

Matrix spikes QC832935, QC832936 (batch 234430) were not reported because the parent sample required a dilution that would have diluted out the spikes. Low surrogate recovery was observed for terphenyl-d14 in SGI-SB-11-2.5 (lab # 276231-001). SGI-SB-11-2.5 (lab # 276231-001) was diluted due to high non-target analytes. No other analytical problems were encountered.

COOLER RECEIPT CHECKLIST



Login # 27623 Date Received 4/22/16 Number of coolers 1
Client The Source Group Project 01-ECR-001

Date Opened 4/22 By (print) SJ (sign) [Signature]
Date Logged in 4 By (print) CWN (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 4.9

Temperature blank(s) included? Thermometer# IR Gun# B

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? (pH strip lot#) YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Detections Summary for 276231

Results for any subcontracted analyses are not included in this summary.

Client : The Source Group, Inc.
 Project : 01-ECR-001
 Location : Ellwood Commercial Real Estate

Client Sample ID : SGI-SB-11-2.5 Laboratory Sample ID : 276231-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	27	Y	5.0	mg/Kg	As Recd	25.00	EPA 8015B	EPA 5030B
Diesel C10-C24	30	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	32		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
2-Methylnaphthalene	230		130	ug/Kg	As Recd	2.000	EPA 8270C	EPA 3550B

Y = Sample exhibits chromatographic pattern which does not resemble standard

Total Volatile Hydrocarbons		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Field ID:	SGI-SB-11-2.5	Batch#: 234406
Matrix:	Soil	Sampled: 04/22/16
Units:	mg/Kg	Received: 04/22/16
Basis:	as received	Analyzed: 04/25/16

Type: SAMPLE Diln Fac: 25.00
 Lab ID: 276231-001

Analyte	Result	RL
Gasoline C7-C12	27 Y	5.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	78-138

Type: BLANK Diln Fac: 1.000
 Lab ID: QC832841

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	78-138

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Volatile Hydrocarbons		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832840	Batch#: 234406
Matrix:	Soil	Analyzed: 04/25/16
Units:	mg/Kg	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	0.9521	95	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	78-138

Batch QC Report

Total Volatile Hydrocarbons					
Lab #:	276231	Location:	Ellwood Commercial Real Estate		
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000		
MSS Lab ID:	276248-001	Batch#:	234406		
Matrix:	Soil	Sampled:	04/22/16		
Units:	mg/Kg	Received:	04/22/16		
Basis:	as received	Analyzed:	04/25/16		

Type: MS Lab ID: QC832842

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1267	9.804	7.173	72	50-120

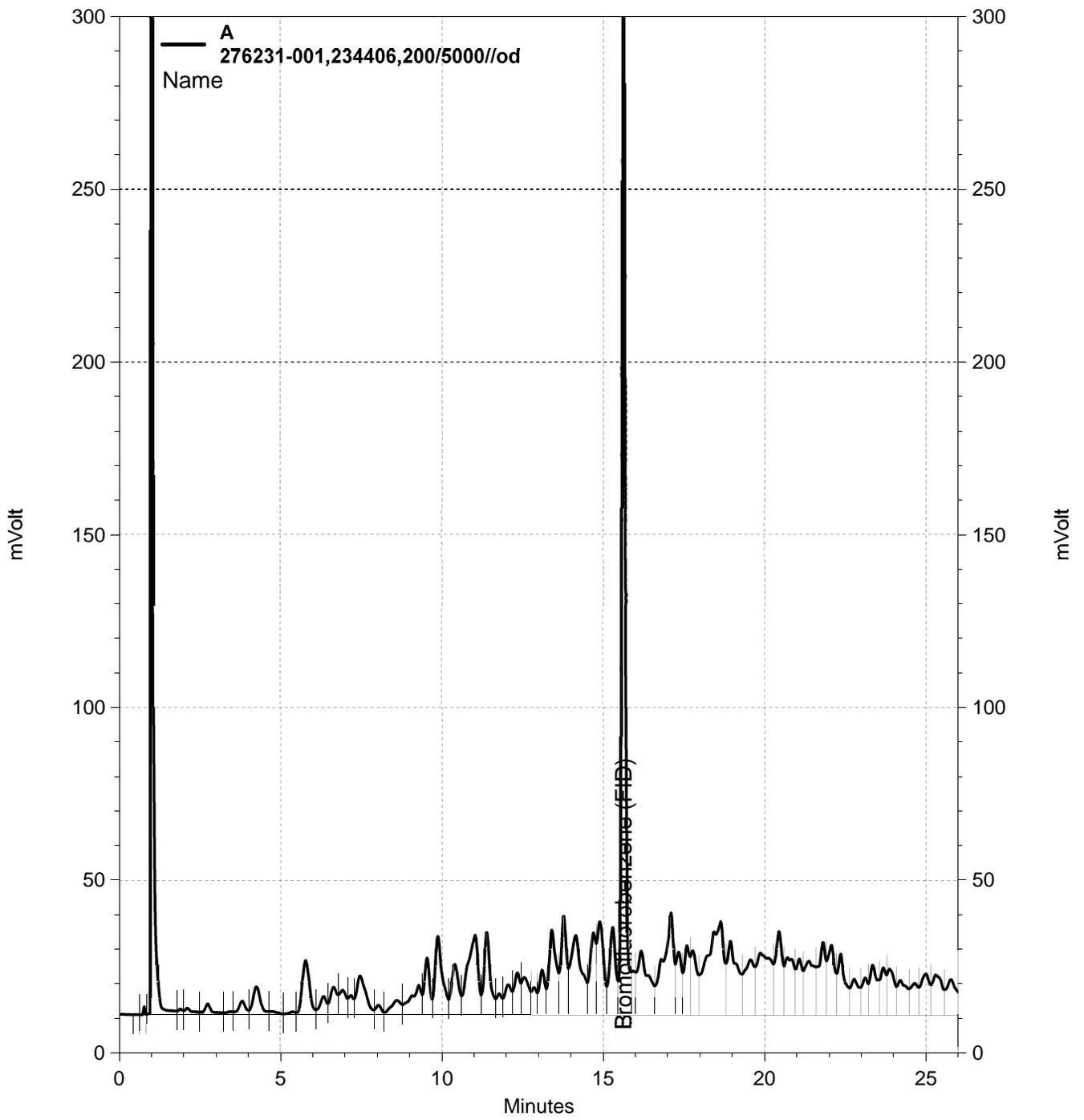
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	101	78-138

Type: MSD Lab ID: QC832843

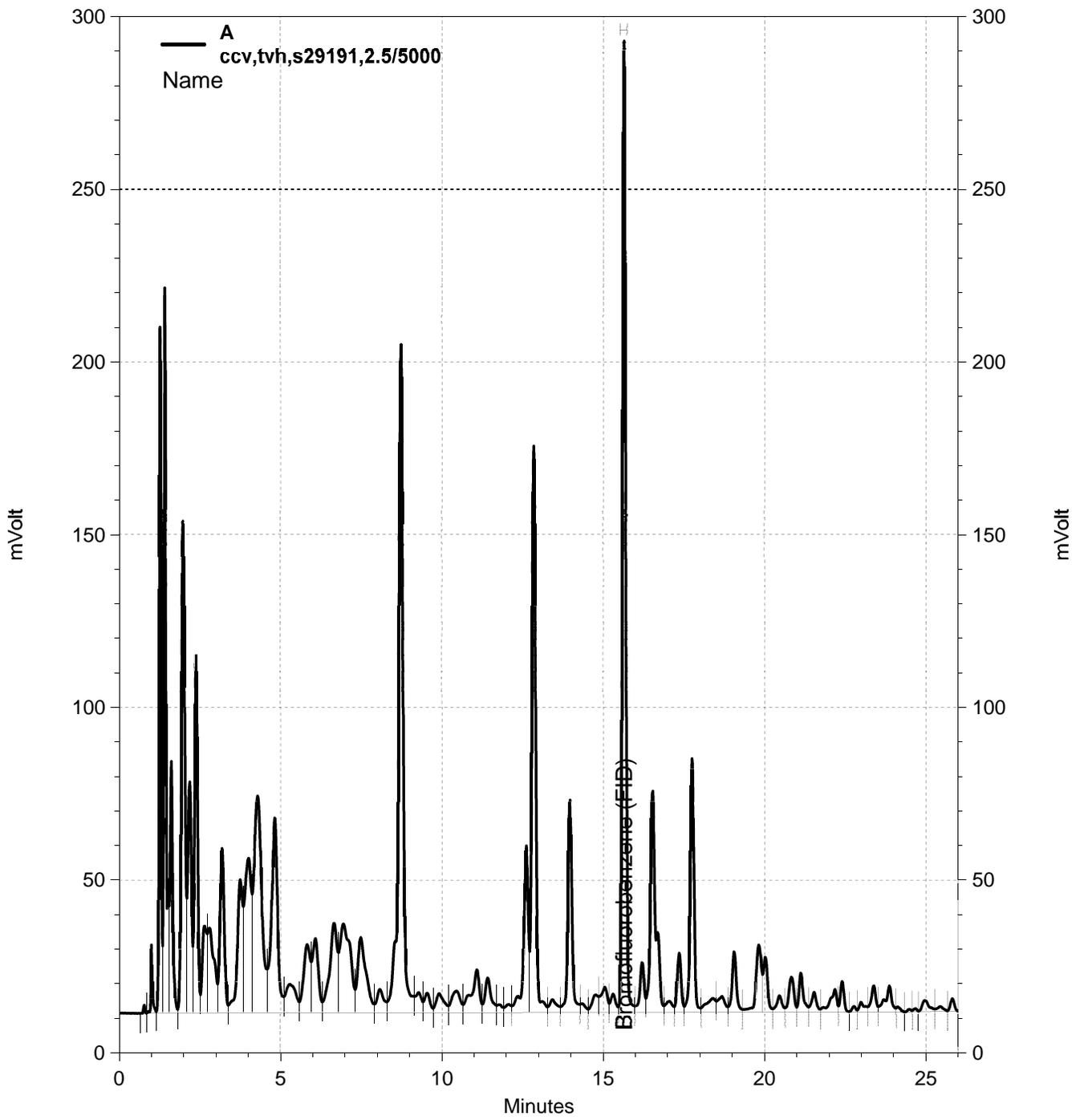
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.804	5.943	59	50-120	19	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	78-138

RPD= Relative Percent Difference



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Total Extractable Hydrocarbons		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8015B
Field ID:	SGI-SB-11-2.5	Batch#: 234478
Matrix:	Soil	Sampled: 04/22/16
Units:	mg/Kg	Received: 04/22/16
Basis:	as received	Prepared: 04/26/16
Diln Fac:	1.000	Analyzed: 04/27/16

Type: SAMPLE Lab ID: 276231-001

Analyte	Result	RL
Diesel C10-C24	30 Y	1.0
Motor Oil C24-C36	32	5.0

Surrogate	%REC	Limits
o-Terphenyl	125	59-140

Type: BLANK Lab ID: QC833122

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	140	59-140

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Extractable Hydrocarbons		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC833123	Batch#: 234478
Matrix:	Soil	Prepared: 04/26/16
Units:	mg/Kg	Analyzed: 04/27/16

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.08	58.47	117	58-137

Surrogate	%REC	Limits
o-Terphenyl	126	59-140

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	276231	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	234478
MSS Lab ID:	276295-001	Sampled:	04/26/16
Matrix:	Soil	Received:	04/26/16
Units:	mg/Kg	Prepared:	04/26/16
Basis:	as received	Analyzed:	04/27/16
Diln Fac:	1.000		

Type: MS Lab ID: QC833124

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	0.8644	49.93	58.39	115	46-154

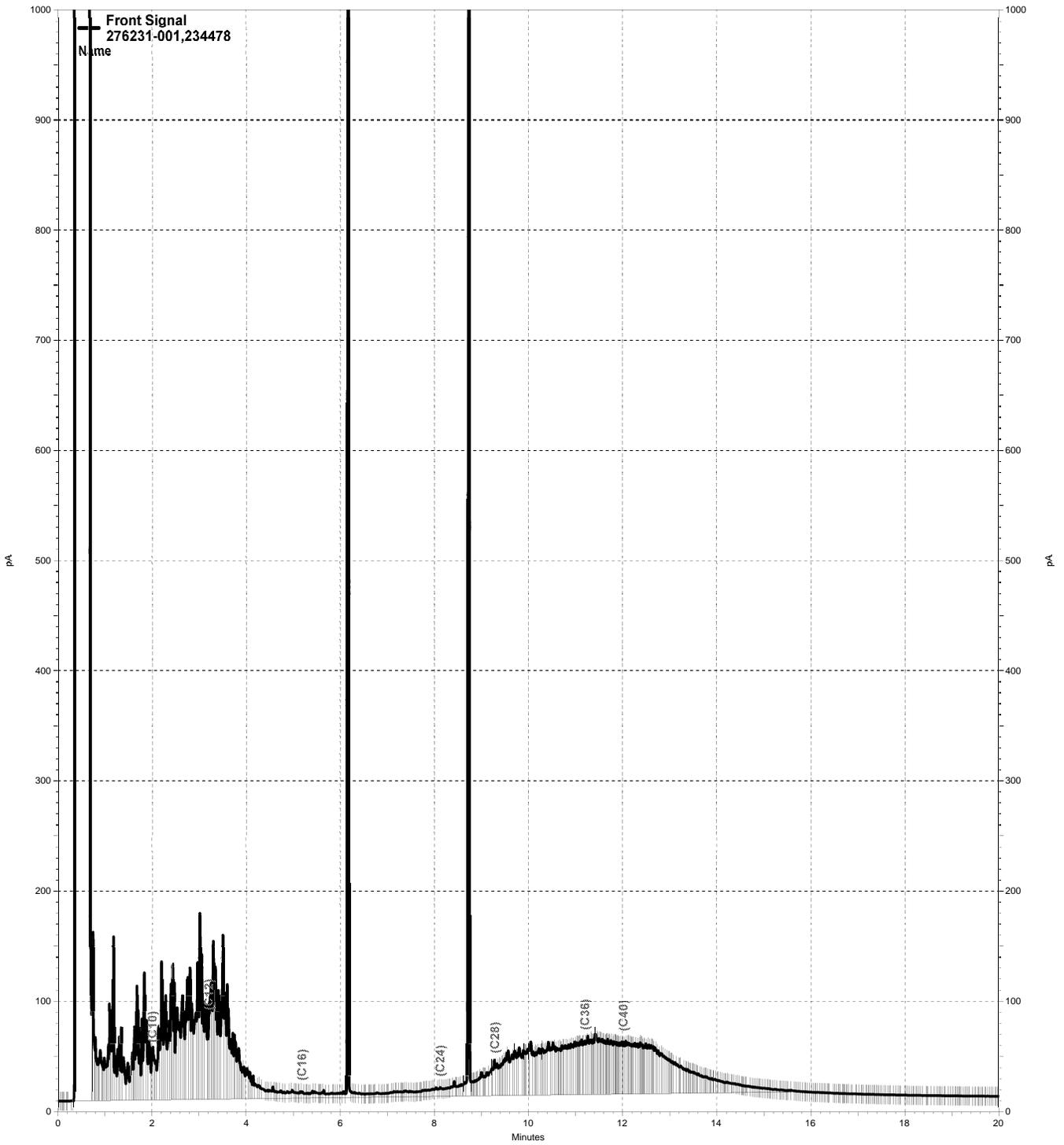
Surrogate	%REC	Limits
o-Terphenyl	132	59-140

Type: MSD Lab ID: QC833125

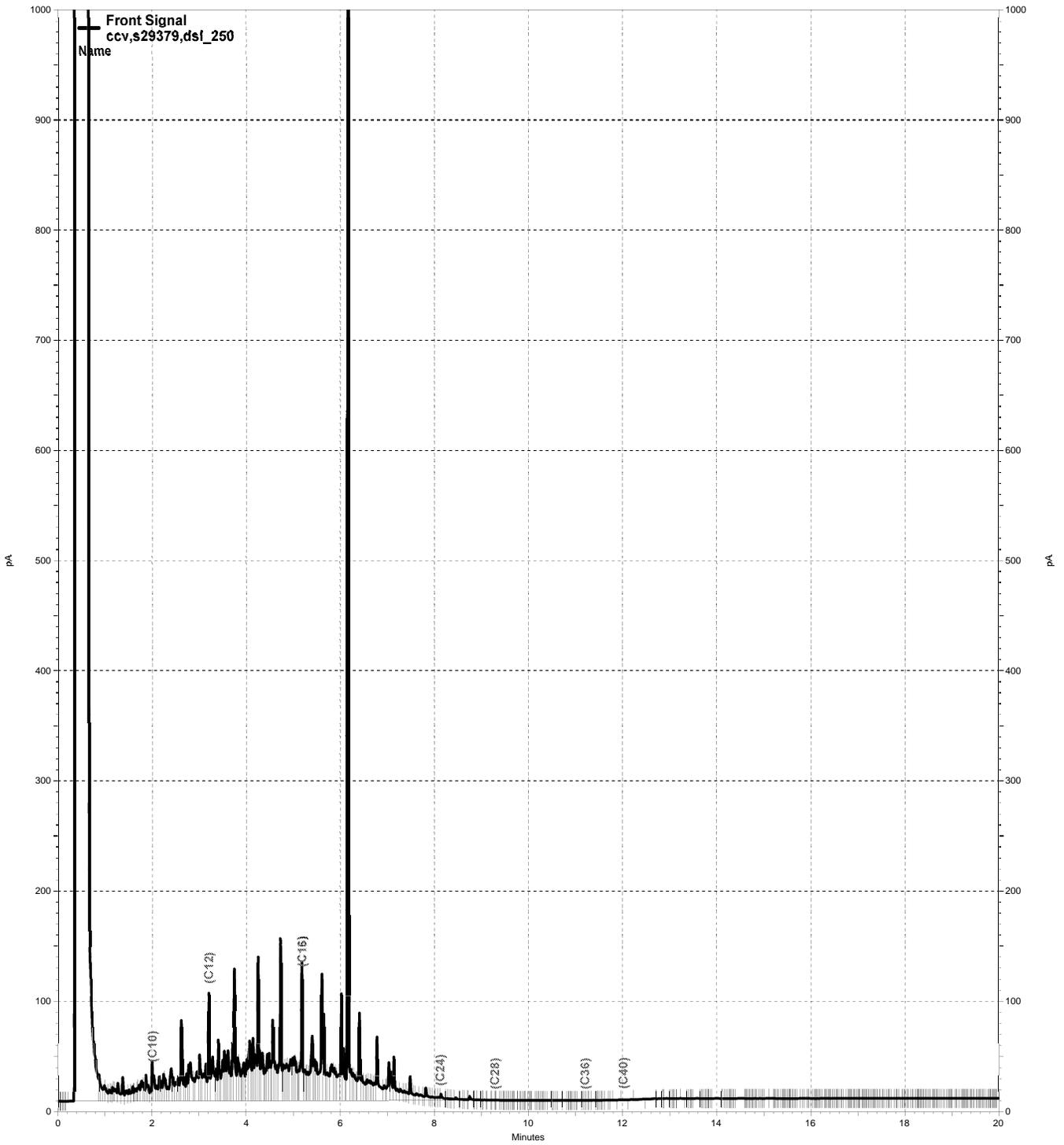
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.12	56.80	112	46-154	3	50

Surrogate	%REC	Limits
o-Terphenyl	126	59-140

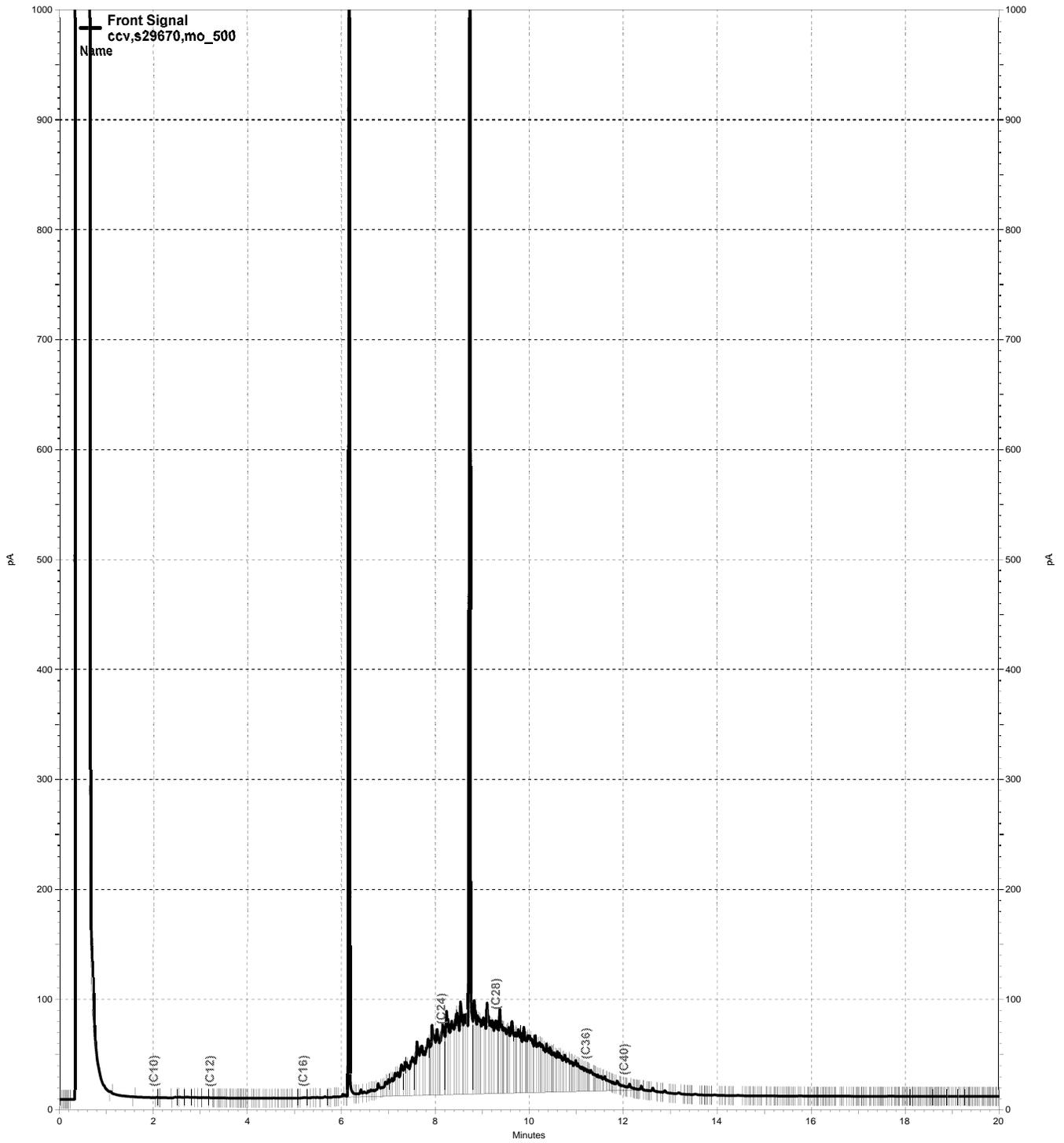
RPD= Relative Percent Difference



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Purgeable Organics by GC/MS

Lab #:	276231	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-11-2.5	Diln Fac:	2.049
Lab ID:	276231-001	Batch#:	234458
Matrix:	Soil	Sampled:	04/22/16
Units:	ug/Kg	Received:	04/22/16
Basis:	as received	Analyzed:	04/26/16

Analyte	Result	RL
Freon 12	ND	20
Chloromethane	ND	20
Vinyl Chloride	ND	20
Bromomethane	ND	20
Chloroethane	ND	20
Trichlorofluoromethane	ND	10
Acetone	ND	41
Freon 113	ND	10
1,1-Dichloroethene	ND	10
Methylene Chloride	ND	41
Carbon Disulfide	ND	10
MTBE	ND	10
trans-1,2-Dichloroethene	ND	10
Vinyl Acetate	ND	100
1,1-Dichloroethane	ND	10
2-Butanone	ND	20
cis-1,2-Dichloroethene	ND	10
2,2-Dichloropropane	ND	10
Chloroform	ND	10
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	10
1,1-Dichloropropene	ND	10
Carbon Tetrachloride	ND	10
1,2-Dichloroethane	ND	10
Benzene	ND	10
Trichloroethene	ND	10
1,2-Dichloropropane	ND	10
Bromodichloromethane	ND	10
Dibromomethane	ND	10
4-Methyl-2-Pentanone	ND	20
cis-1,3-Dichloropropene	ND	10
Toluene	ND	10
trans-1,3-Dichloropropene	ND	10
1,1,2-Trichloroethane	ND	10
2-Hexanone	ND	20
1,3-Dichloropropane	ND	10
Tetrachloroethene	ND	10

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276231	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-11-2.5	Diln Fac:	2.049
Lab ID:	276231-001	Batch#:	234458
Matrix:	Soil	Sampled:	04/22/16
Units:	ug/Kg	Received:	04/22/16
Basis:	as received	Analyzed:	04/26/16

Analyte	Result	RL
Dibromochloromethane	ND	10
1,2-Dibromoethane	ND	10
Chlorobenzene	ND	10
1,1,1,2-Tetrachloroethane	ND	10
Ethylbenzene	ND	10
m,p-Xylenes	ND	10
o-Xylene	ND	10
Styrene	ND	10
Bromoform	ND	10
Isopropylbenzene	ND	10
1,1,2,2-Tetrachloroethane	ND	10
1,2,3-Trichloropropane	ND	10
Propylbenzene	ND	10
Bromobenzene	ND	10
1,3,5-Trimethylbenzene	ND	10
2-Chlorotoluene	ND	10
4-Chlorotoluene	ND	10
tert-Butylbenzene	ND	10
1,2,4-Trimethylbenzene	ND	10
sec-Butylbenzene	ND	10
para-Isopropyl Toluene	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
n-Butylbenzene	ND	10
1,2-Dichlorobenzene	ND	10
1,2-Dibromo-3-Chloropropane	ND	10
1,2,4-Trichlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Naphthalene	ND	10
1,2,3-Trichlorobenzene	ND	10

Surrogate	%REC	Limits
Dibromofluoromethane	96	78-134
1,2-Dichloroethane-d4	107	80-138
Toluene-d8	106	80-120
Bromofluorobenzene	105	78-123

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC833035	Batch#: 234458
Matrix:	Soil	Analyzed: 04/26/16
Units:	ug/Kg	

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	21.10	84	70-134
Benzene	25.00	23.98	96	80-123
Trichloroethene	25.00	24.03	96	80-128
Toluene	25.00	25.50	102	80-120
Chlorobenzene	25.00	25.45	102	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	104	80-138
Toluene-d8	105	80-120
Bromofluorobenzene	100	78-123

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC833036	Batch#: 234458
Matrix:	Soil	Analyzed: 04/26/16
Units:	ug/Kg	

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC833036	Batch#: 234458
Matrix:	Soil	Analyzed: 04/26/16
Units:	ug/Kg	

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	106	78-134
1,2-Dichloroethane-d4	113	80-138
Toluene-d8	104	80-120
Bromofluorobenzene	101	78-123

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS					
Lab #:	276231	Location: Ellwood Commercial Real Estate			
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8260B		
Field ID:	ZZZZZZZZZZ	Batch#:	234458		
MSS Lab ID:	276295-001	Sampled:	04/26/16		
Matrix:	Soil	Received:	04/26/16		
Units:	ug/Kg	Analyzed:	04/26/16		
Basis:	as received				

Type: MS Diln Fac: 0.9921
 Lab ID: QC833100

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.4191	49.60	45.81	92	56-133
Benzene	<0.4155	49.60	49.64	100	57-120
Trichloroethene	<0.3992	49.60	50.41	102	49-145
Toluene	<0.3018	49.60	52.52	106	51-120
Chlorobenzene	<0.3764	49.60	51.92	105	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-134
1,2-Dichloroethane-d4	111	80-138
Toluene-d8	103	80-120
Bromofluorobenzene	100	78-123

Type: MSD Diln Fac: 0.9766
 Lab ID: QC833101

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	48.83	47.71	98	56-133	6	46
Benzene	48.83	52.24	107	57-120	7	44
Trichloroethene	48.83	52.57	108	49-145	6	46
Toluene	48.83	55.57	114	51-120	7	47
Chlorobenzene	48.83	54.93	112	47-120	7	50

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	108	80-138
Toluene-d8	105	80-120
Bromofluorobenzene	103	78-123

RPD= Relative Percent Difference

Semivolatile Organics by GC/MS			
Lab #:	276231	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-11-2.5	Batch#:	234430
Lab ID:	276231-001	Sampled:	04/22/16
Matrix:	Soil	Received:	04/22/16
Units:	ug/Kg	Prepared:	04/25/16
Basis:	as received	Analyzed:	04/26/16
Diln Fac:	2.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	670
Phenol	ND	670
bis(2-Chloroethyl)ether	ND	670
2-Chlorophenol	ND	670
1,3-Dichlorobenzene	ND	670
1,4-Dichlorobenzene	ND	670
Benzyl alcohol	ND	670
1,2-Dichlorobenzene	ND	670
2-Methylphenol	ND	670
bis(2-Chloroisopropyl) ether	ND	670
4-Methylphenol	ND	670
N-Nitroso-di-n-propylamine	ND	670
Hexachloroethane	ND	670
Nitrobenzene	ND	670
Isophorone	ND	670
2-Nitrophenol	ND	1,300
2,4-Dimethylphenol	ND	670
Benzoic acid	ND	3,400
bis(2-Chloroethoxy)methane	ND	670
2,4-Dichlorophenol	ND	670
1,2,4-Trichlorobenzene	ND	670
Naphthalene	ND	130
4-Chloroaniline	ND	670
Hexachlorobutadiene	ND	670
4-Chloro-3-methylphenol	ND	670
2-Methylnaphthalene	230	130
Hexachlorocyclopentadiene	ND	1,300
2,4,6-Trichlorophenol	ND	670
2,4,5-Trichlorophenol	ND	670
2-Chloronaphthalene	ND	670
2-Nitroaniline	ND	1,300
Dimethylphthalate	ND	670
Acenaphthylene	ND	130
2,6-Dinitrotoluene	ND	670
3-Nitroaniline	ND	1,300
Acenaphthene	ND	130
2,4-Dinitrophenol	ND	1,300
4-Nitrophenol	ND	1,300
Dibenzofuran	ND	670
2,4-Dinitrotoluene	ND	670
Diethylphthalate	ND	670
Fluorene	ND	130
4-Chlorophenyl-phenylether	ND	670
4-Nitroaniline	ND	1,300
4,6-Dinitro-2-methylphenol	ND	1,300
N-Nitrosodiphenylamine	ND	670
Azobenzene	ND	670
4-Bromophenyl-phenylether	ND	670
Hexachlorobenzene	ND	670
Pentachlorophenol	ND	1,300
Phenanthrene	ND	130
Anthracene	ND	130

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-11-2.5	Batch#: 234430
Lab ID:	276231-001	Sampled: 04/22/16
Matrix:	Soil	Received: 04/22/16
Units:	ug/Kg	Prepared: 04/25/16
Basis:	as received	Analyzed: 04/26/16
Diln Fac:	2.000	

Analyte	Result	RL
Di-n-butylphthalate	ND	670
Fluoranthene	ND	130
Pyrene	ND	130
Butylbenzylphthalate	ND	670
3,3'-Dichlorobenzidine	ND	1,300
Benzo(a)anthracene	ND	130
Chrysene	ND	130
bis(2-Ethylhexyl)phthalate	ND	670
Di-n-octylphthalate	ND	670
Benzo(b)fluoranthene	ND	130
Benzo(k)fluoranthene	ND	130
Benzo(a)pyrene	ND	130
Indeno(1,2,3-cd)pyrene	ND	130
Dibenz(a,h)anthracene	ND	130
Benzo(g,h,i)perylene	ND	130

Surrogate	%REC	Limits
2-Fluorophenol	53	25-120
Phenol-d5	46	36-120
2,4,6-Tribromophenol	75	27-120
Nitrobenzene-d5	49	44-120
2-Fluorobiphenyl	55	47-120
Terphenyl-d14	48 *	49-120

*= Value outside of QC limits; see narrative
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832933	Batch#: 234430
Matrix:	Soil	Prepared: 04/25/16
Units:	ug/Kg	Analyzed: 04/26/16

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,600
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330
Fluoranthene	ND	66

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832933	Batch#: 234430
Matrix:	Soil	Prepared: 04/25/16
Units:	ug/Kg	Analyzed: 04/26/16

Analyte	Result	RL
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	77	25-120
Phenol-d5	71	36-120
2,4,6-Tribromophenol	88	27-120
Nitrobenzene-d5	70	44-120
2-Fluorobiphenyl	85	47-120
Terphenyl-d14	81	49-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276231	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832934	Batch#: 234430
Matrix:	Soil	Prepared: 04/25/16
Units:	ug/Kg	Analyzed: 04/25/16

Analyte	Spiked	Result	%REC	Limits
Phenol	2,636	2,156	82	42-120
2-Chlorophenol	2,636	2,213	84	45-120
1,4-Dichlorobenzene	2,636	2,085	79	48-120
N-Nitroso-di-n-propylamine	2,636	2,205	84	27-123
1,2,4-Trichlorobenzene	2,636	2,249	85	50-120
4-Chloro-3-methylphenol	2,636	2,846	108	59-120
Acenaphthene	988.5	742.1	75	53-120
4-Nitrophenol	2,636	2,150	82	47-120
2,4-Dinitrotoluene	2,636	2,233	85	55-120
Pentachlorophenol	2,636	1,176	45	32-120
Pyrene	988.5	927.0	94	52-120

Surrogate	%REC	Limits
2-Fluorophenol	79	25-120
Phenol-d5	78	36-120
2,4,6-Tribromophenol	70	27-120
Nitrobenzene-d5	67	44-120
2-Fluorobiphenyl	59	47-120
Terphenyl-d14	70	49-120



Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878





Laboratory Job Number 276098
ANALYTICAL REPORT

The Source Group, Inc. Project : 01-ECR-001
3478 Buskirk Ave Location : Ellwood Commercial Real Estate
Pleasant Hill, CA 94523 Level : II

Table with 4 columns: Sample ID, Lab ID, Sample ID, Lab ID. Lists various sample and lab identifiers such as SGI-SB-01-3, 276098-001, etc.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Mike Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/26/2016

CASE NARRATIVE

Laboratory number: 276098
Client: The Source Group, Inc.
Project: 01-ECR-001
Location: Ellwood Commercial Real Estate
Request Date: 04/18/16
Samples Received: 04/18/16

This data package contains sample and QC results for twenty soil samples, requested for the above referenced project on 04/18/16. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

High surrogate recoveries were observed for bromofluorobenzene (FID) in SGI-SB-01-3 (lab # 276098-001) and SGI-SB-02-2 (lab # 276098-005). No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

High recoveries were observed for diesel C10-C24 in the MS/MSD of SGI-SB-02-5 (lab # 276098-006); the LCS was within limits, and the associated RPD was within limits. SGI-SB-01-3 (lab # 276098-001) and SGI-SB-02-2 (lab # 276098-005) were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

Matrix spikes were not performed for this analysis in batch 234322 due to insufficient sample amount. No other analytical problems were encountered.

Semivolatile Organics by GC/MS (EPA 8270C):

Matrix spikes QC832038, QC832039 (batch 234208) were not reported because the parent sample required a dilution that would have diluted out the spikes. SGI-SB-01-3 (lab # 276098-001) and SGI-SB-02-5 (lab # 276098-006) were diluted due to high non-target analytes. No other analytical problems were encountered.

CHAIN OF CUSTODY



Chain of Custody # _____

2323 Fifth Street
 Berkeley, CA 94710

Phone (510) 486-0900
 Fax (510) 486-0532

C&T LOGIN # 276098

Project No: 01-ECR-001 Sampler: BOB ROBITAILLE
 Project Name: ELLWOOD COMMERCIAL REAL ESTATE Report To: GLEN SMITH
 Project P. O. No: 01-ECR-001 Company: THE SOURCE GROUP
 EDD Format: Report Level II III IV Telephone: 925-944-2856
 Turnaround Time: RUSH Standard Email: GLEN.SMITH@APEXCS.COM

ANALYTICAL REQUEST																				
Lab No.	Sample ID.	SAMPLING		MATRIX			# of Containers	CHEMICAL PRESERVATIVE												
		Date Collected	Time Collected	Water	Solid			HCl	H2SO4	HNO3	NaOH	None								
1	SGI-SB-01-3	04/16/16	1330	X			1													
2	SGI-SB-01-5.5		1350	X			1													
3	SGI-SB-01-8.5		1400	X			1													
4	SGI-SB-01-10		1405	X			1													
5	SGI-SB-02-2		1420	X			1													
6	SGI-SB-02-5		1425	X			1													
7	SGI-SB-02-7.5		1430	X			1													
8	SGI-SB-02-8.5		1440	X			1													
9	SGI-SB-02-11.5		1445	X			1													
10	SGI-SB-03-5		1545	X			1													
11	SGI-SB-03-9		1550	X			1													
12	SGI-SB-03-13		1610	X			1													
12	SGI-SB-04-4.5		1510	X			1													

TPH-g/d/mo (8015)
 FULL LIST CVOCS (82600B)
 SVOCs (8270)

Expedite
 Hold

Notes:

SAMPLE RECEIPT

Intact
 Cold
 On Ice
 Ambient

RELINQUISHED BY:

DATE: 4/18/16 TIME: 0915

DATE: 4/18/16 TIME: 1012

DATE: _____ TIME: _____

RECEIVED BY:

DATE: 4/18/16 TIME: 915

DATE: 4/18/16 TIME: 1012

DATE: _____ TIME: _____

CHAIN OF CUSTODY

ct Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
In Business Since 1878

Chain of Custody # _____

2323 Fifth Street
 Berkeley, CA 94710

Phone (510) 486-0900
 Fax (510) 486-0532

C&T LOGIN # 276098

Project No: 01-ECR-001 Sampler: BUR ROBITAILLE
 Project Name: ELLWOOD COMMERCIAL REAL ESTATE Report To: GLEN SMITH
 Project P. O. No: 01-ECR-001 Company: THE SOURCE GROUP
 EDD Format: Report Level II III IV Telephone: 925-944-2856
 Turnaround Time: RUSH Standard Email: GLEN.SMITH@APEXCO3.COM

ANALYTICAL REQUEST																
Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid	# of Containers	HCl	H2SO4	HNO3	NaOH	None	TPH-g/d ms (8015)	FULL LIST CVOCS (8260B)	SVOCS (8270)	Expedite	Hold
14	SGI-SB-04-4.5D	04/16/16	1510	X		1					X	X				
15	SGI-SB-04-12.5		1525	X		1					X	X				
16	SGI-SB-04-15		1530	X		1					X	X			X	
17	SGI-SB-05-4		1125	X		1					X	X				
18	SGI-SB-05-10		1130	X		1					X	X			X	
19	SGI-SB-05-11.5		1310	X		1					X	X			X	
20	SGI-SB-06-4.5		0850	X		1					X	X				
21	SGI-SB-06-10		0845	X		1					X	X				
22	SGI-SB-07-4.5		1055	X		1					X	X				
23	SGI-SB-07-6		1100	X		1					X	X			X	
24	SGI-SB-07-10		1115	X		1					X	X			X	
25	SGI-SB-08-3		1140	X		1					X	X				
26	SGI-SB-08-7		1150	X		1					X	X				

Notes: _____

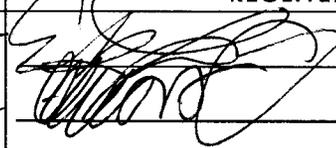
SAMPLE RECEIPT

Intact
 Cold
 On Ice
 Ambient

RELINQUISHED BY:


 DATE: 4-18/16 TIME: 09:15
 DATE: 4/18/16 TIME: 1012
 DATE: _____ TIME: _____

RECEIVED BY:


 DATE: 4/18/16 TIME: 915
 DATE: 4/16/16 TIME: 1012
 DATE: _____ TIME: _____

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 276098 Date Received 4/18/16 Number of coolers 1
Client EC Real estate Project ELLWOOD Commercial 01-ECR-001
Date Opened 4/18 By (print) CB (sign) [Signature]
Date Logged in 6 By (print) CJN (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 3.5

Temperature blank(s) included? Thermometer# IR Gun# A

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? (pH strip lot#) YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Fwd: Revised COC - Add 24 TAT to one sample

Please add 24 TAT for all analyses on sample SB-8-3 (11:40). Revised COC attached.

Thank you!

	<p>Bob Robitaille Senior Geologist The Source Group, Inc. 3478 Buskirk Avenue, Suite 100 Pleasant Hill, CA 94523 O) 925.951.6413 M) 925.917.0156</p>
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Detections Summary for 276098

Results for any subcontracted analyses are not included in this summary.

Client : The Source Group, Inc.
 Project : 01-ECR-001
 Location : Ellwood Commercial Real Estate

Client Sample ID : SGI-SB-01-3 Laboratory Sample ID : 276098-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	590	Y	67	mg/Kg	As Recd	333.3	EPA 8015B	EPA 5030B
Diesel C10-C24	2,100		9.9	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550B
Isopropylbenzene	660		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Propylbenzene	3,600		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
sec-Butylbenzene	980		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
para-Isopropyl Toluene	300		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
n-Butylbenzene	4,800		500	ug/Kg	As Recd	100.0	EPA 8260B	EPA 5030B
Naphthalene	2,600		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Naphthalene	2,300		670	ug/Kg	As Recd	10.00	EPA 8270C	EPA 3550B
2-Methylnaphthalene	5,500		670	ug/Kg	As Recd	10.00	EPA 8270C	EPA 3550B
Phenanthrene	760		670	ug/Kg	As Recd	10.00	EPA 8270C	EPA 3550B

Client Sample ID : SGI-SB-01-5.5 Laboratory Sample ID : 276098-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	230		40	mg/Kg	As Recd	200.0	EPA 8015B	EPA 5030B
Diesel C10-C24	60	Y	0.99	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Ethylbenzene	2,300		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
m,p-Xylenes	5,300		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
o-Xylene	410		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Isopropylbenzene	290		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Propylbenzene	1,300		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	2,300		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	7,500		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
n-Butylbenzene	810		500	ug/Kg	As Recd	100.0	EPA 8260B	EPA 5030B
Naphthalene	1,800		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Naphthalene	1,500		66	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B
2-Methylnaphthalene	1,200		66	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B

Client Sample ID : SGI-SB-01-8.5 Laboratory Sample ID : 276098-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	1.4	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	1.1	Y	0.99	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Acetone	36		20	ug/Kg	As Recd	0.9921	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	6.9		5.0	ug/Kg	As Recd	0.9921	EPA 8260B	EPA 5030B
Naphthalene	6.6		5.0	ug/Kg	As Recd	0.9921	EPA 8260B	EPA 5030B

Client Sample ID : SGI-SB-01-10

Laboratory Sample ID :

276098-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	2.0	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-02-2

Laboratory Sample ID :

276098-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	510	Y	20	mg/Kg	As Recd	100.0	EPA 8015B	EPA 5030B
Diesel C10-C24	610	Y	5.0	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	77		25	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550B
Ethylbenzene	410		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
m,p-Xylenes	310		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Isopropylbenzene	520		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Propylbenzene	2,400		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
sec-Butylbenzene	670		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
n-Butylbenzene	4,200		500	ug/Kg	As Recd	100.0	EPA 8260B	EPA 5030B
Naphthalene	3,600		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Naphthalene	1,100		66	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B
2-Methylnaphthalene	1,300		66	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B

Client Sample ID : SGI-SB-02-5

Laboratory Sample ID :

276098-006

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	550		50	mg/Kg	As Recd	250.0	EPA 8015B	EPA 5030B
Diesel C10-C24	150	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Ethylbenzene	4,300		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
m,p-Xylenes	5,900		250	ug/Kg	As Recd	50.00	EPA 8260B	EPA 5030B
Isopropylbenzene	700	J	710	ug/Kg	As Recd	142.9	EPA 8260B	EPA 5030B
Propylbenzene	2,000		710	ug/Kg	As Recd	142.9	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	3,700		710	ug/Kg	As Recd	142.9	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	15,000		710	ug/Kg	As Recd	142.9	EPA 8260B	EPA 5030B
sec-Butylbenzene	620	J	710	ug/Kg	As Recd	142.9	EPA 8260B	EPA 5030B
para-Isopropyl Toluene	1,100		710	ug/Kg	As Recd	142.9	EPA 8260B	EPA 5030B
n-Butylbenzene	2,100		710	ug/Kg	As Recd	142.9	EPA 8260B	EPA 5030B
Naphthalene	3,900		710	ug/Kg	As Recd	142.9	EPA 8260B	EPA 5030B
Naphthalene	3,200		660	ug/Kg	As Recd	10.00	EPA 8270C	EPA 3550B
2-Methylnaphthalene	1,300		660	ug/Kg	As Recd	10.00	EPA 8270C	EPA 3550B

Client Sample ID : SGI-SB-02-8.5

Laboratory Sample ID :

276098-008

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	3.2	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	6.1	Y	0.99	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Acetone	31		20	ug/Kg	As Recd	0.9843	EPA 8260B	EPA 5030B

Client Sample ID : SGI-SB-02-11.5

Laboratory Sample ID : 276098-009

No Detections

Client Sample ID : SGI-SB-03-5

Laboratory Sample ID : 276098-010

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	2.7	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Acetone	83		19	ug/Kg	As Recd	0.9416	EPA 8260B	EPA 5030B
2-Butanone	37		9.4	ug/Kg	As Recd	0.9416	EPA 8260B	EPA 5030B
Naphthalene	4.8		4.7	ug/Kg	As Recd	0.9416	EPA 8260B	EPA 5030B
Naphthalene	100		66	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B
2-Methylnaphthalene	100		66	ug/Kg	As Recd	1.000	EPA 8270C	EPA 3550B

Client Sample ID : SGI-SB-03-13

Laboratory Sample ID : 276098-012

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	1.8	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-04-4.5

Laboratory Sample ID : 276098-013

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	23	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	71		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-04-4.5D

Laboratory Sample ID : 276098-014

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	31	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	100		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-04-12.5

Laboratory Sample ID : 276098-015

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	2.3	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-05-4

Laboratory Sample ID : 276098-017

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	16	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	51		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-06-4.5

Laboratory Sample ID :

276098-020

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	34	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	91		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-06-10

Laboratory Sample ID :

276098-021

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	2.3	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-07-4.5

Laboratory Sample ID :

276098-022

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	24	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	86		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-08-3

Laboratory Sample ID :

276098-025

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	2.7	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	26		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-08-7

Laboratory Sample ID :

276098-026

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	31	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	130		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

Client Sample ID : SGI-SB-10-4

Laboratory Sample ID :

276098-029

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	11	Y	1.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	88		5.0	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B

J = Estimated value

Y = Sample exhibits chromatographic pattern which does not resemble standard

Total Volatile Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Soil	Sampled: 04/16/16
Units:	mg/Kg	Received: 04/18/16
Basis:	as received	

Field ID: SGI-SB-01-3 Diln Fac: 333.3
 Type: SAMPLE Batch#: 234269
 Lab ID: 276098-001 Analyzed: 04/20/16

Analyte	Result	RL
Gasoline C7-C12	590 Y	67

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	150 *	78-138

Field ID: SGI-SB-01-5.5 Diln Fac: 200.0
 Type: SAMPLE Batch#: 234205
 Lab ID: 276098-002 Analyzed: 04/19/16

Analyte	Result	RL
Gasoline C7-C12	230	40

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	78-138

Field ID: SGI-SB-01-8.5 Diln Fac: 1.000
 Type: SAMPLE Batch#: 234223
 Lab ID: 276098-003 Analyzed: 04/19/16

Analyte	Result	RL
Gasoline C7-C12	1.4 Y	1.0

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	122	78-138

Field ID: SGI-SB-01-10 Diln Fac: 1.000
 Type: SAMPLE Batch#: 234269
 Lab ID: 276098-004 Analyzed: 04/20/16

Analyte	Result	RL
Gasoline C7-C12	ND	0.94

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	115	78-138

*= Value outside of QC limits; see narrative
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Total Volatile Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Soil	Sampled: 04/16/16
Units:	mg/Kg	Received: 04/18/16
Basis:	as received	

Field ID:	SGI-SB-02-2	Diln Fac:	100.0
Type:	SAMPLE	Batch#:	234269
Lab ID:	276098-005	Analyzed:	04/20/16

Analyte	Result	RL
Gasoline C7-C12	510 Y	20
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	169 *	78-138

Field ID:	SGI-SB-02-5	Diln Fac:	250.0
Type:	SAMPLE	Batch#:	234205
Lab ID:	276098-006	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	550	50
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	78-138

Field ID:	SGI-SB-02-8.5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234223
Lab ID:	276098-008	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	3.2 Y	1.0
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	124	78-138

Field ID:	SGI-SB-02-11.5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234223
Lab ID:	276098-009	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	0.98
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	115	78-138

*= Value outside of QC limits; see narrative
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Total Volatile Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Soil	Sampled: 04/16/16
Units:	mg/Kg	Received: 04/18/16
Basis:	as received	

Field ID:	SGI-SB-03-5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234205
Lab ID:	276098-010	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	78-138

Field ID:	SGI-SB-03-13	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-012	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	0.97
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	117	78-138

Field ID:	SGI-SB-04-4.5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-013	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.0
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	78-138

Field ID:	SGI-SB-04-4.5D	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-014	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	78-138

*= Value outside of QC limits; see narrative
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Total Volatile Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Soil	Sampled: 04/16/16
Units:	mg/Kg	Received: 04/18/16
Basis:	as received	

Field ID:	SGI-SB-04-12.5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-015	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	78-138

Field ID:	SGI-SB-05-4	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-017	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.0
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	78-138

Field ID:	SGI-SB-06-4.5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-020	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	0.97
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	78-138

Field ID:	SGI-SB-06-10	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-021	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	0.96
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	78-138

*= Value outside of QC limits; see narrative
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Total Volatile Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Soil	Sampled: 04/16/16
Units:	mg/Kg	Received: 04/18/16
Basis:	as received	

Field ID:	SGI-SB-07-4.5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-022	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	78-138

Field ID:	SGI-SB-08-3	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234205
Lab ID:	276098-025	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	0.94
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	78-138

Field ID:	SGI-SB-08-7	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234222
Lab ID:	276098-026	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	0.99
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	111	78-138

Field ID:	SGI-SB-10-4	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234205
Lab ID:	276098-029	Analyzed:	04/19/16

Analyte	Result	RL
Gasoline C7-C12	ND	1.1
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	78-138

*= Value outside of QC limits; see narrative
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Volatile Hydrocarbons					
Lab #:	276098	Location:	Ellwood Commercial Real Estate		
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000		
MSS Lab ID:	276062-001	Batch#:	234205		
Matrix:	Soil	Sampled:	04/14/16		
Units:	mg/Kg	Received:	04/14/16		
Basis:	as received	Analyzed:	04/18/16		

Type: MS Lab ID: QC832014

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1008	9.524	9.138	95	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	78-138

Type: MSD Lab ID: QC832015

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.434	8.541	89	50-120	6	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	78-138

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832087	Batch#: 234222
Matrix:	Soil	Analyzed: 04/19/16
Units:	mg/Kg	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.022	102	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	119	78-138

Batch QC Report

Total Volatile Hydrocarbons					
Lab #:	276098	Location:	Ellwood Commercial Real Estate		
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8015B		
Field ID:	SGI-SB-06-10	Diln Fac:	1.000		
MSS Lab ID:	276098-021	Batch#:	234222		
Matrix:	Soil	Sampled:	04/16/16		
Units:	mg/Kg	Received:	04/18/16		
Basis:	as received	Analyzed:	04/19/16		

Type: MS Lab ID: QC832089

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1371	9.901	9.793	98	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	124	78-138

Type: MSD Lab ID: QC832090

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.64	10.29	95	50-120	2	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	121	78-138

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons				
Lab #:	276098	Location:	Ellwood Commercial Real Estate	
Client:	The Source Group, Inc.	Prep:	EPA 5030B	
Project#:	01-ECR-001	Analysis:	EPA 8015B	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC832091	Batch#:	234223	
Matrix:	Soil	Analyzed:	04/19/16	
Units:	mg/Kg			

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.074	107	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	78-138

Batch QC Report

Total Volatile Hydrocarbons					
Lab #:	276098	Location:	Ellwood Commercial Real Estate		
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000		
MSS Lab ID:	276109-001	Batch#:	234223		
Matrix:	Soil	Sampled:	04/18/16		
Units:	mg/Kg	Received:	04/18/16		
Basis:	as received	Analyzed:	04/19/16		

Type: MS Lab ID: QC832093

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.5248	10.10	6.514	59	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	78-138

Type: MSD Lab ID: QC832094

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.10	6.722	61	50-120	3	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	112	78-138

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832171	Batch#: 234205
Matrix:	Soil	Analyzed: 04/18/16
Units:	mg/Kg	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2.000	1.982	99	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	78-138

Batch QC Report

Total Volatile Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832358	Batch#: 234269
Matrix:	Soil	Analyzed: 04/20/16
Units:	mg/Kg	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.014	101	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	114	78-138

Batch QC Report

Total Volatile Hydrocarbons					
Lab #:	276098	Location:	Ellwood Commercial Real Estate		
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8015B		
Field ID:	SGI-SB-01-10	Diln Fac:	1.000		
MSS Lab ID:	276098-004	Batch#:	234269		
Matrix:	Soil	Sampled:	04/16/16		
Units:	mg/Kg	Received:	04/18/16		
Basis:	as received	Analyzed:	04/20/16		

Type: MS Lab ID: QC832363

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1138	10.20	9.854	95	50-120

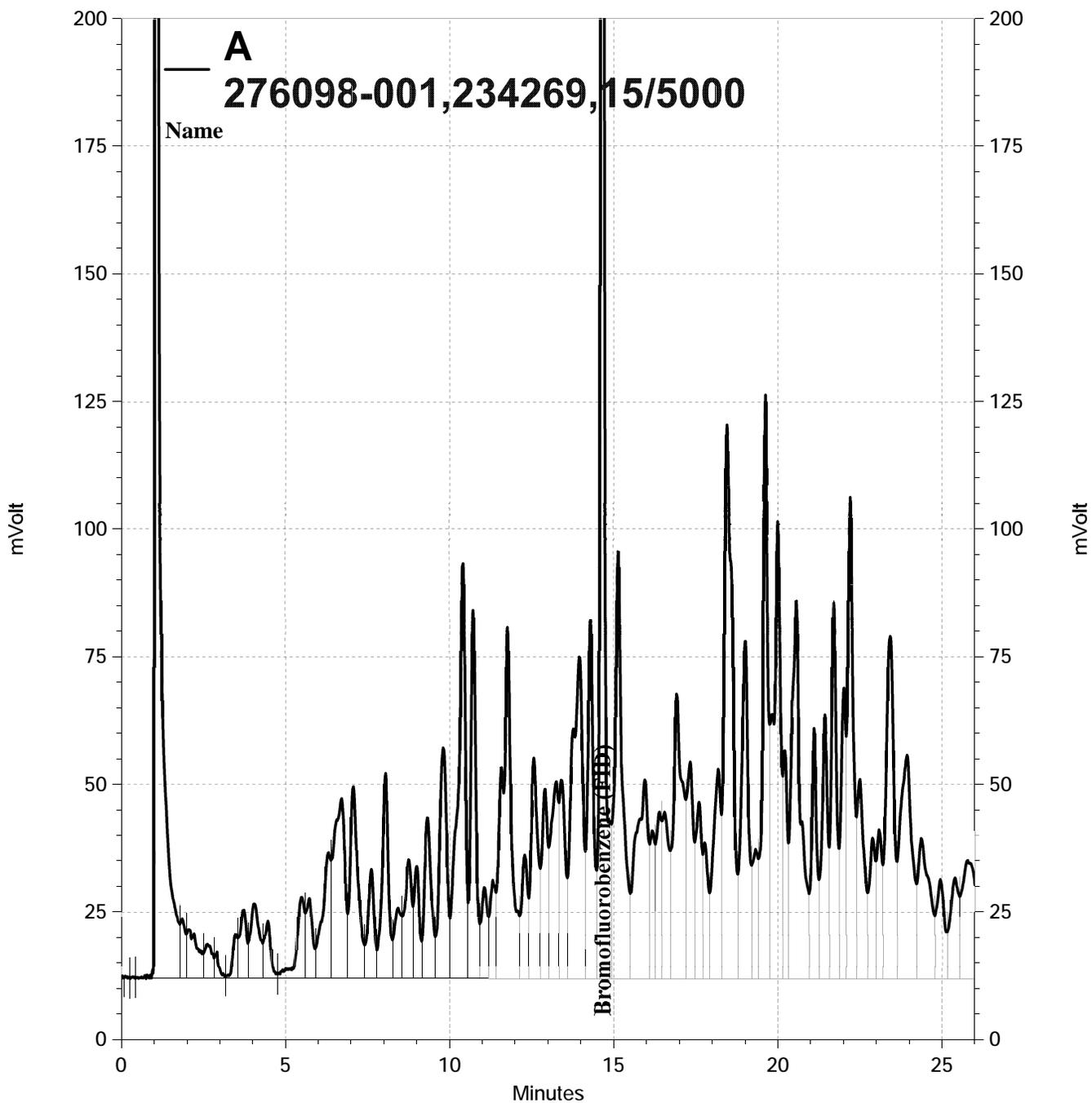
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	124	78-138

Type: MSD Lab ID: QC832364

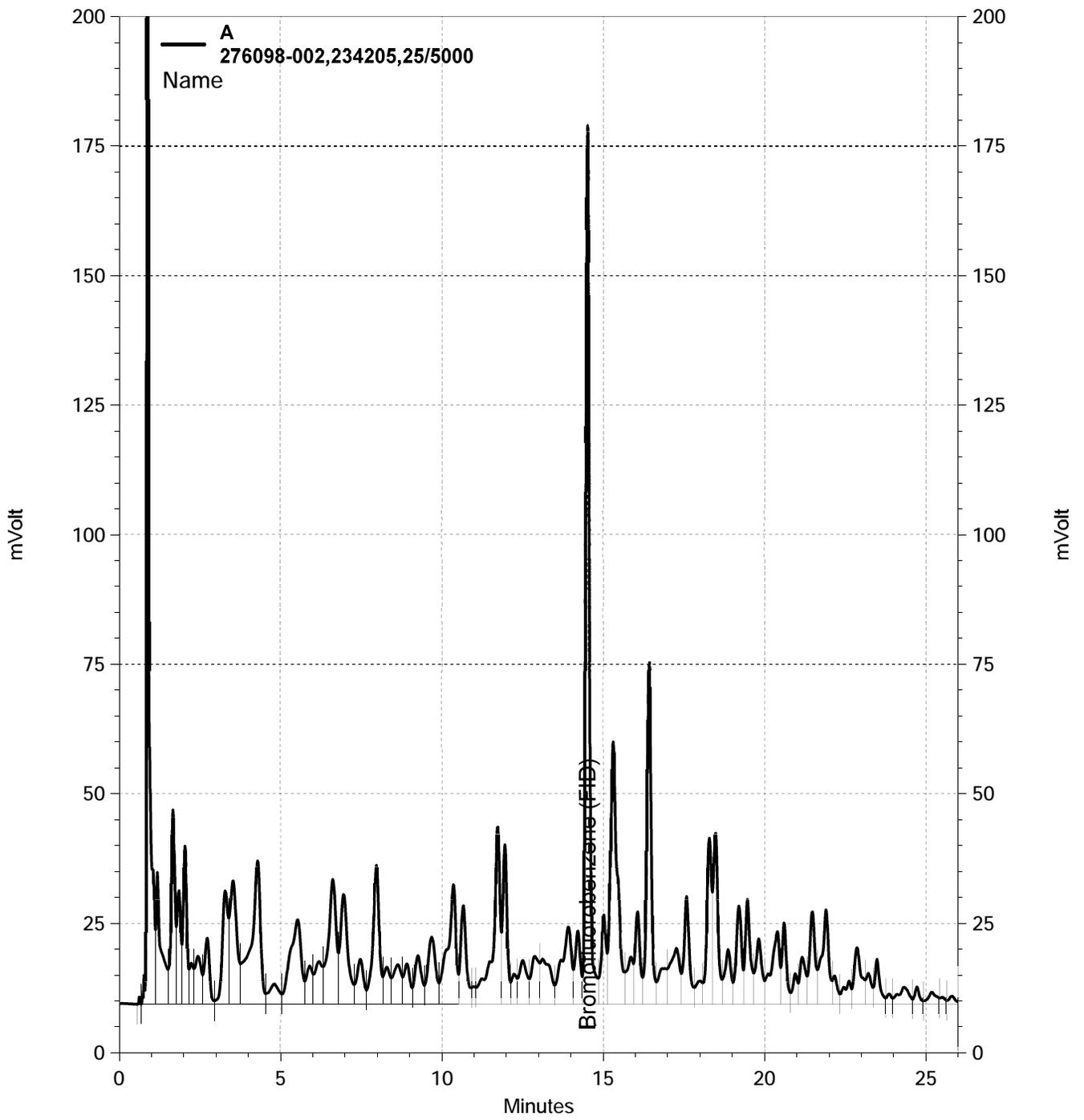
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.42	9.612	91	50-120	5	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	124	78-138

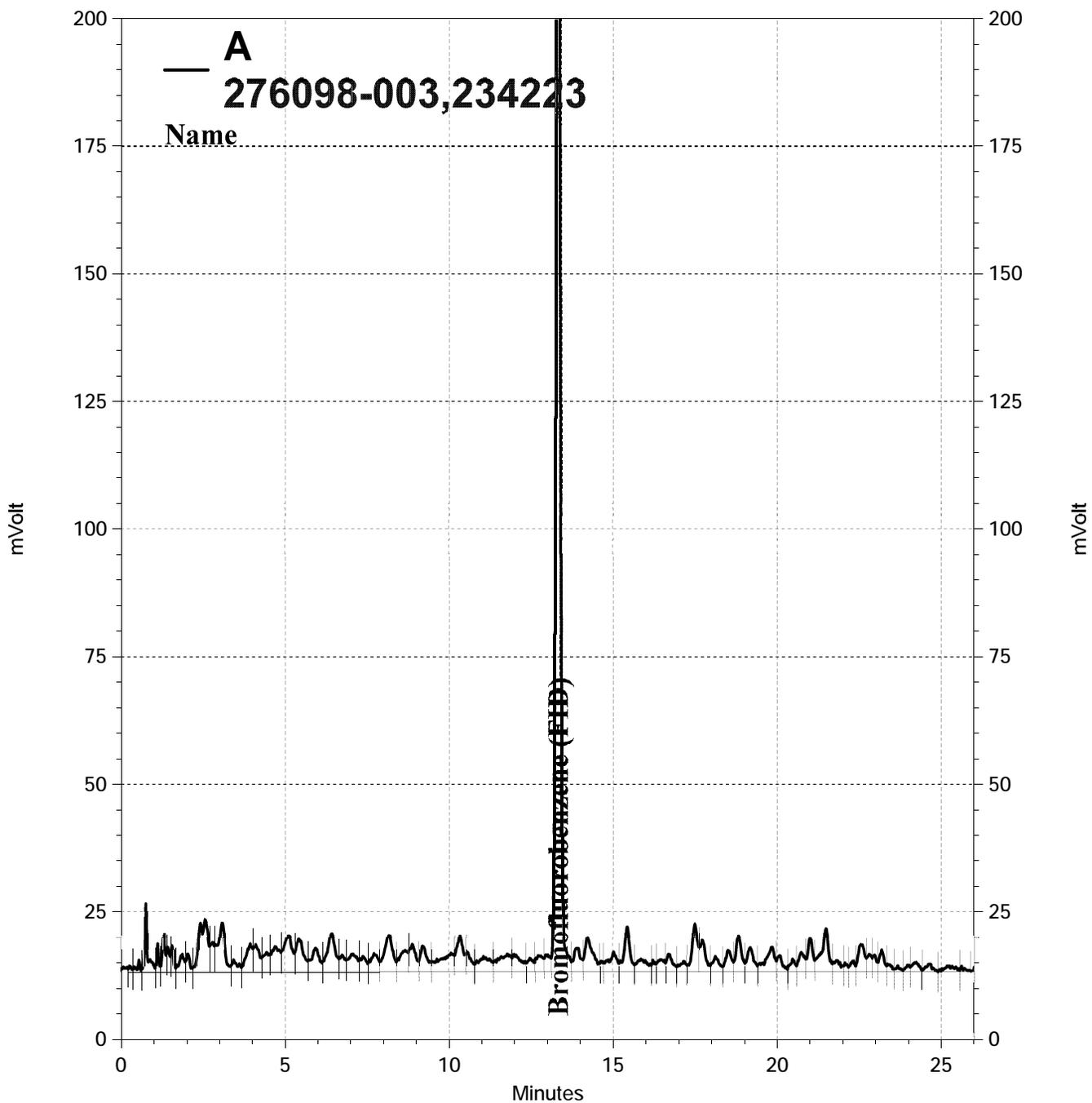
RPD= Relative Percent Difference



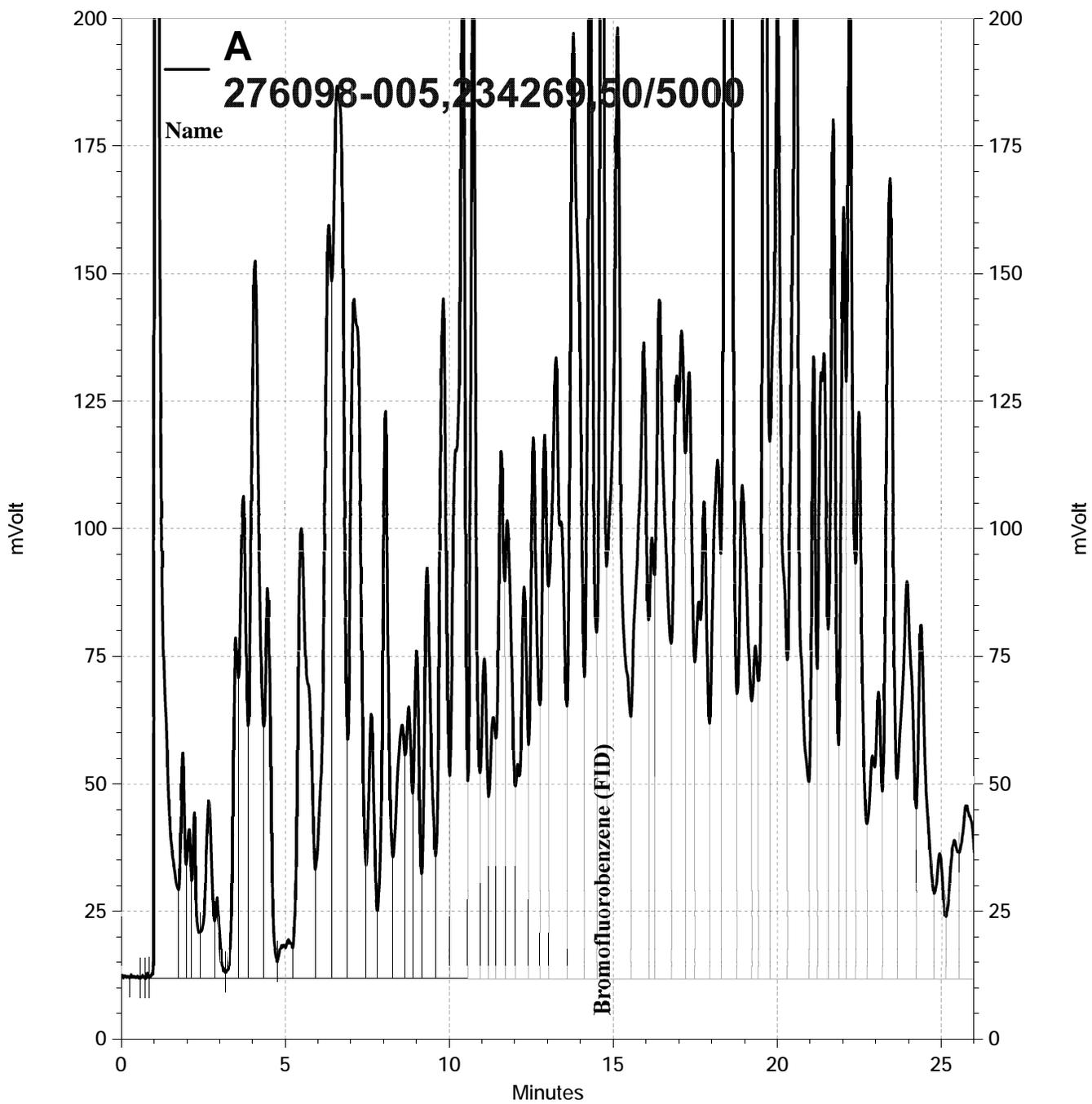
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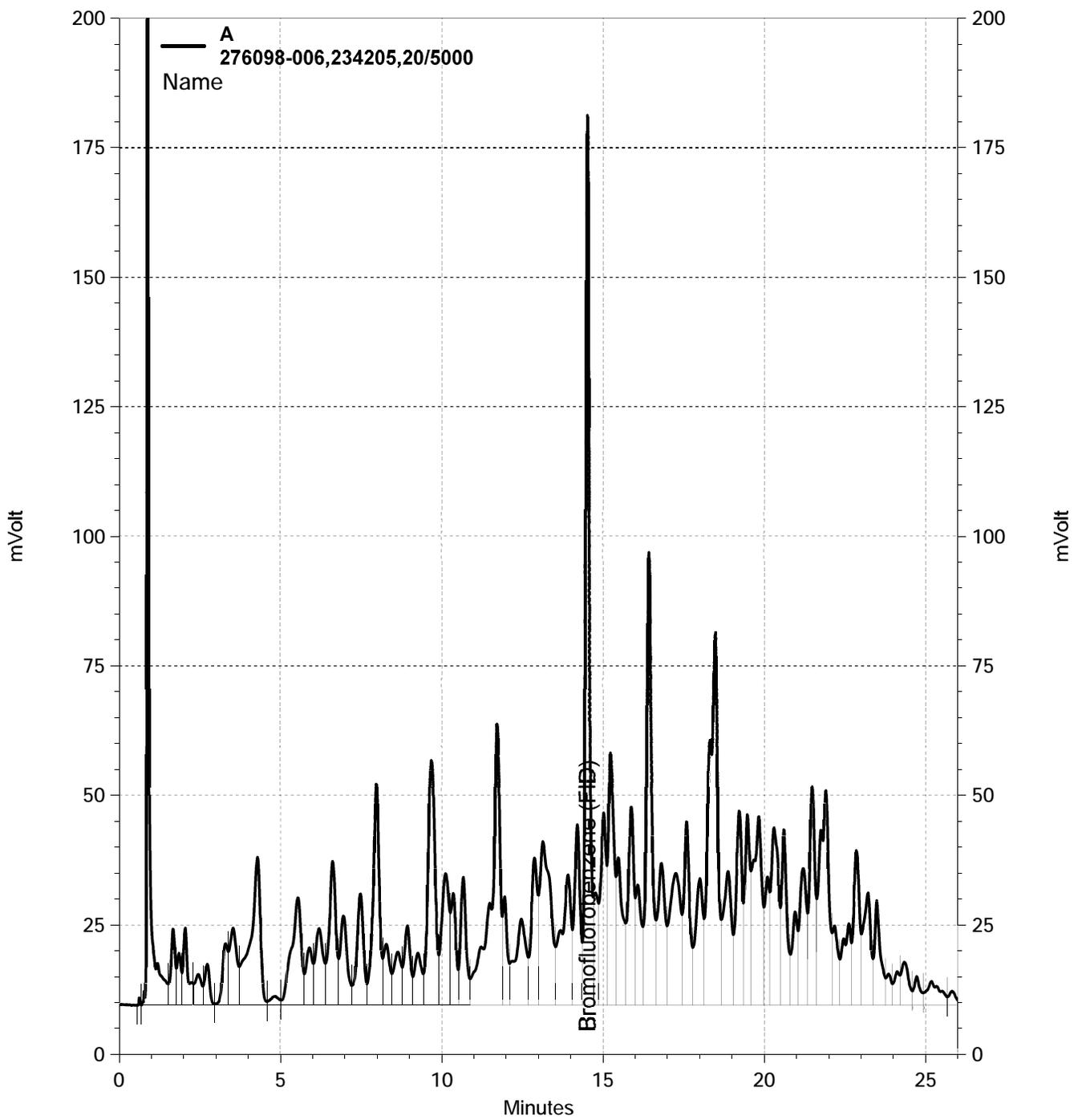
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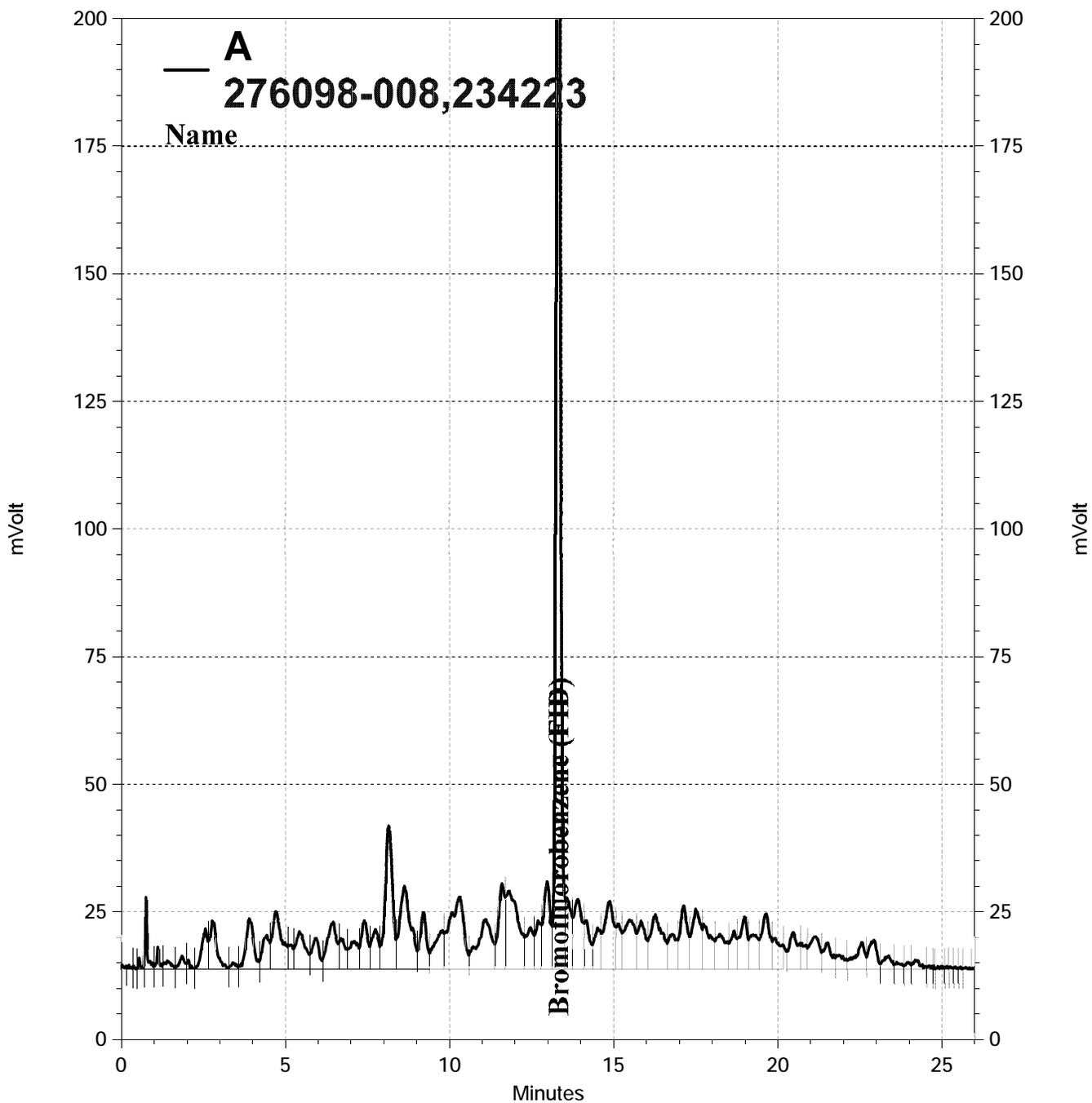
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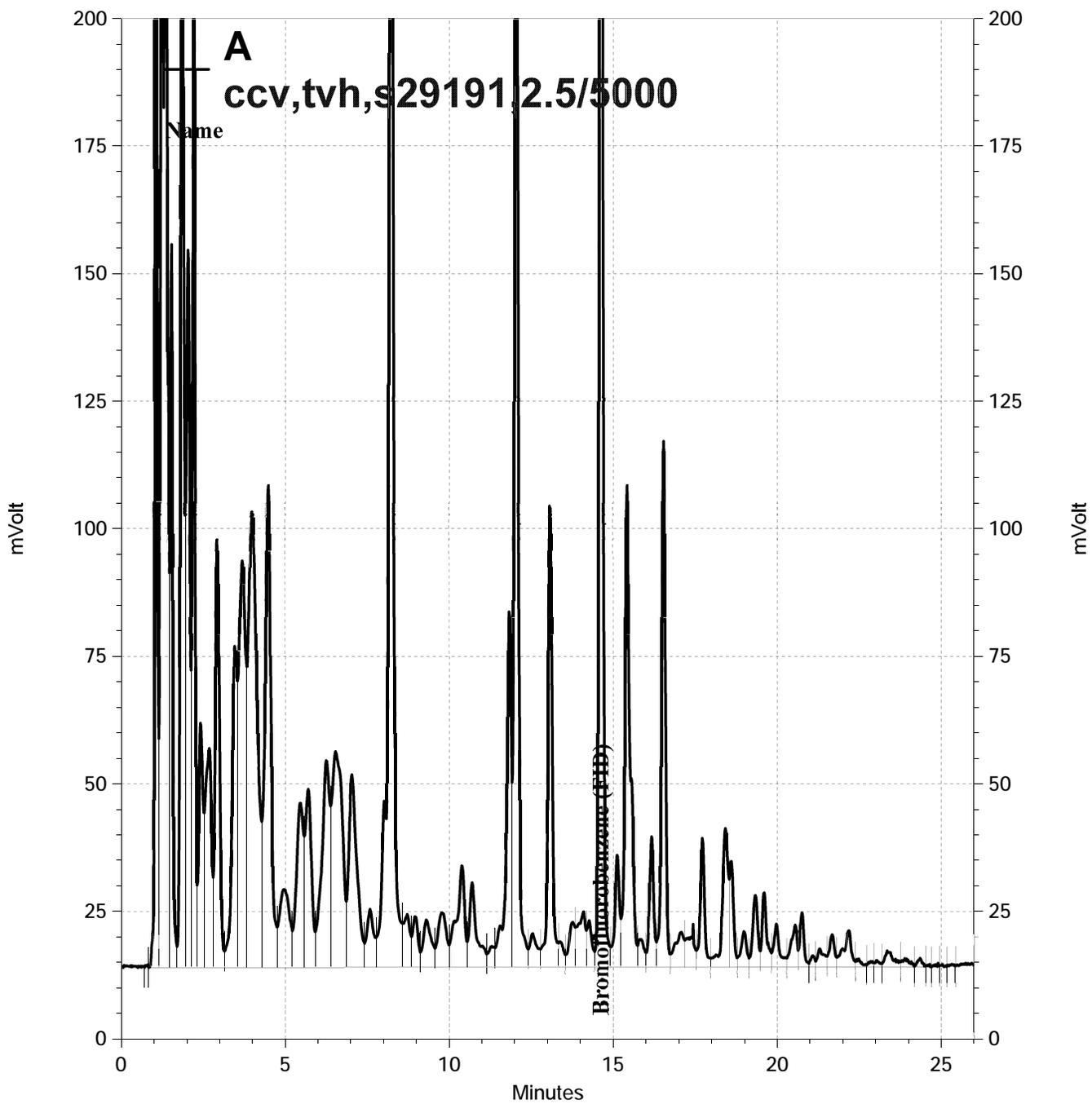
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Total Extractable Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Soil	Sampled: 04/16/16
Units:	mg/Kg	Received: 04/18/16
Basis:	as received	

Field ID: SGI-SB-01-3 Batch#: 234295
 Type: SAMPLE Prepared: 04/20/16
 Lab ID: 276098-001 Analyzed: 04/23/16
 Diln Fac: 10.00

Analyte	Result	RL
Diesel C10-C24	2,100	9.9
Motor Oil C24-C36	ND	50

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

Field ID: SGI-SB-01-5.5 Batch#: 234198
 Type: SAMPLE Prepared: 04/18/16
 Lab ID: 276098-002 Analyzed: 04/19/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	60 Y	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	81	59-140

Field ID: SGI-SB-01-8.5 Batch#: 234295
 Type: SAMPLE Prepared: 04/20/16
 Lab ID: 276098-003 Analyzed: 04/22/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	1.1 Y	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	96	59-140

Field ID: SGI-SB-01-10 Batch#: 234306
 Type: SAMPLE Prepared: 04/21/16
 Lab ID: 276098-004 Analyzed: 04/25/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	2.0 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	91	59-140

Y= Sample exhibits chromatographic pattern which does not resemble standard
 DO= Diluted Out
 ND= Not Detected
 RL= Reporting Limit

Total Extractable Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Soil	Sampled: 04/16/16
Units:	mg/Kg	Received: 04/18/16
Basis:	as received	

Field ID: SGI-SB-04-12.5 Batch#: 234295
 Type: SAMPLE Prepared: 04/20/16
 Lab ID: 276098-015 Analyzed: 04/22/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	2.3 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	108	59-140

Field ID: SGI-SB-05-4 Batch#: 234295
 Type: SAMPLE Prepared: 04/20/16
 Lab ID: 276098-017 Analyzed: 04/22/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	16 Y	1.0
Motor Oil C24-C36	51	5.0

Surrogate	%REC	Limits
o-Terphenyl	107	59-140

Field ID: SGI-SB-06-4.5 Batch#: 234295
 Type: SAMPLE Prepared: 04/20/16
 Lab ID: 276098-020 Analyzed: 04/23/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	34 Y	1.0
Motor Oil C24-C36	91	5.0

Surrogate	%REC	Limits
o-Terphenyl	106	59-140

Field ID: SGI-SB-06-10 Batch#: 234295
 Type: SAMPLE Prepared: 04/20/16
 Lab ID: 276098-021 Analyzed: 04/23/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	2.3 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
o-Terphenyl	106	59-140

Y= Sample exhibits chromatographic pattern which does not resemble standard
 DO= Diluted Out
 ND= Not Detected
 RL= Reporting Limit

Total Extractable Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Soil	Sampled: 04/16/16
Units:	mg/Kg	Received: 04/18/16
Basis:	as received	

Field ID: SGI-SB-07-4.5 Batch#: 234295
 Type: SAMPLE Prepared: 04/20/16
 Lab ID: 276098-022 Analyzed: 04/23/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	24 Y	1.0
Motor Oil C24-C36	86	5.0

Surrogate	%REC	Limits
o-Terphenyl	105	59-140

Field ID: SGI-SB-08-3 Batch#: 234198
 Type: SAMPLE Prepared: 04/18/16
 Lab ID: 276098-025 Analyzed: 04/19/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	2.7 Y	1.0
Motor Oil C24-C36	26	5.0

Surrogate	%REC	Limits
o-Terphenyl	112	59-140

Field ID: SGI-SB-08-7 Batch#: 234306
 Type: SAMPLE Prepared: 04/21/16
 Lab ID: 276098-026 Analyzed: 04/25/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	31 Y	1.0
Motor Oil C24-C36	130	5.0

Surrogate	%REC	Limits
o-Terphenyl	102	59-140

Field ID: SGI-SB-10-4 Batch#: 234198
 Type: SAMPLE Prepared: 04/18/16
 Lab ID: 276098-029 Analyzed: 04/19/16
 Diln Fac: 1.000

Analyte	Result	RL
Diesel C10-C24	11 Y	1.0
Motor Oil C24-C36	88	5.0

Surrogate	%REC	Limits
o-Terphenyl	127	59-140

Y= Sample exhibits chromatographic pattern which does not resemble standard
 DO= Diluted Out
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Extractable Hydrocarbons				
Lab #:	276098	Location:	Ellwood Commercial Real Estate	
Client:	The Source Group, Inc.	Prep:	EPA 3550B	
Project#:	01-ECR-001	Analysis:	EPA 8015B	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC831984	Batch#:	234198	
Matrix:	Soil	Prepared:	04/18/16	
Units:	mg/Kg	Analyzed:	04/19/16	

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.64	45.73	92	58-137

Surrogate	%REC	Limits
o-Terphenyl	99	59-140

Batch QC Report

Total Extractable Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832399	Batch#: 234295
Matrix:	Soil	Prepared: 04/20/16
Units:	mg/Kg	Analyzed: 04/22/16

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.56	58.34	118	58-137

Surrogate	%REC	Limits
o-Terphenyl	113	59-140

Batch QC Report

Total Extractable Hydrocarbons		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832526	Batch#: 234306
Matrix:	Soil	Prepared: 04/21/16
Units:	mg/Kg	Analyzed: 04/25/16

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.94	36.72	74	58-137

Surrogate	%REC	Limits
o-Terphenyl	93	59-140

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	234306
MSS Lab ID:	276123-001	Sampled:	04/19/16
Matrix:	Soil	Received:	04/19/16
Units:	mg/Kg	Prepared:	04/21/16
Basis:	as received	Analyzed:	04/25/16
Diln Fac:	1.000		

Type: MS Lab ID: QC832527

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<0.3057	49.87	50.69	102	46-154

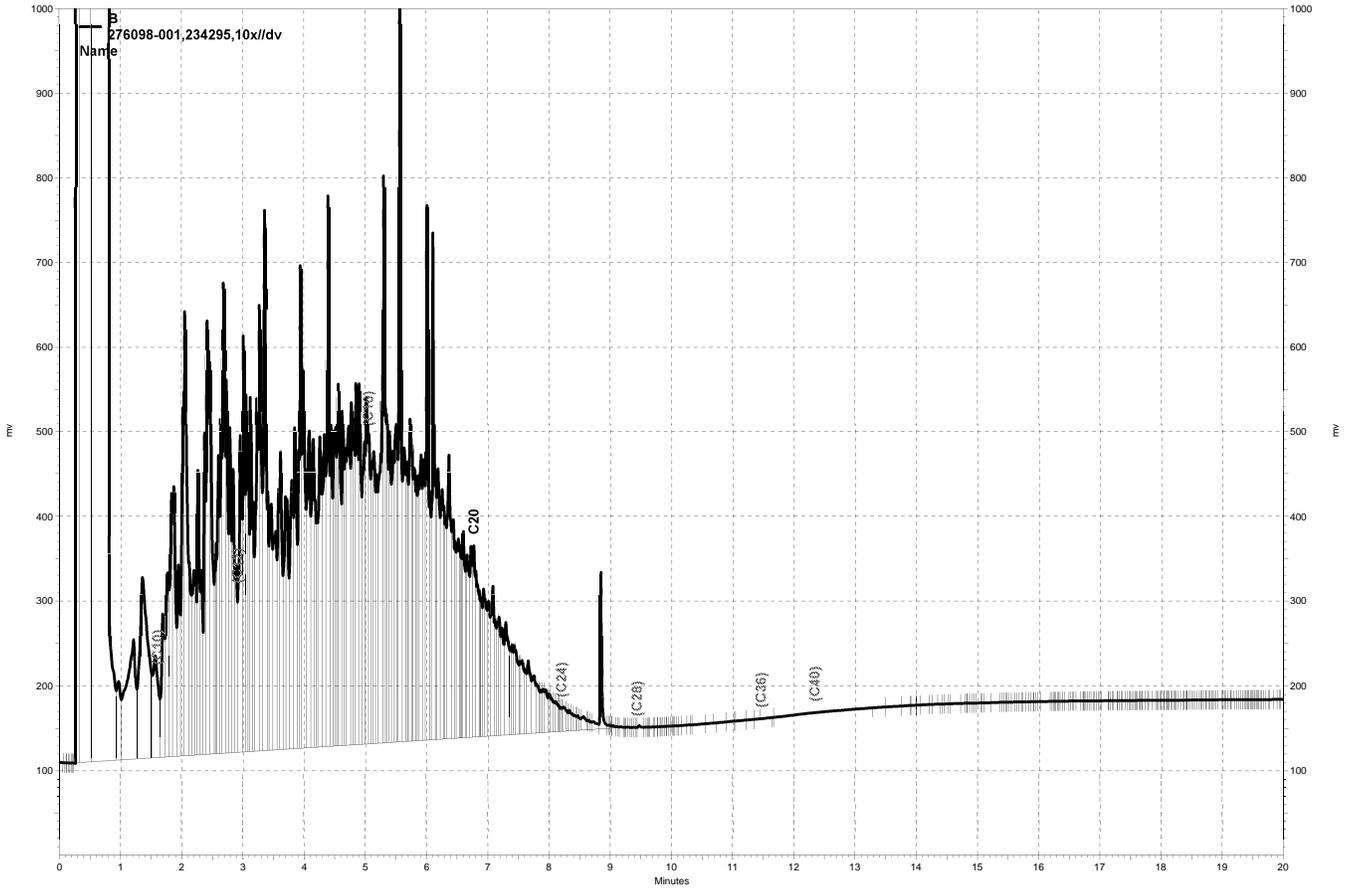
Surrogate	%REC	Limits
o-Terphenyl	109	59-140

Type: MSD Lab ID: QC832528

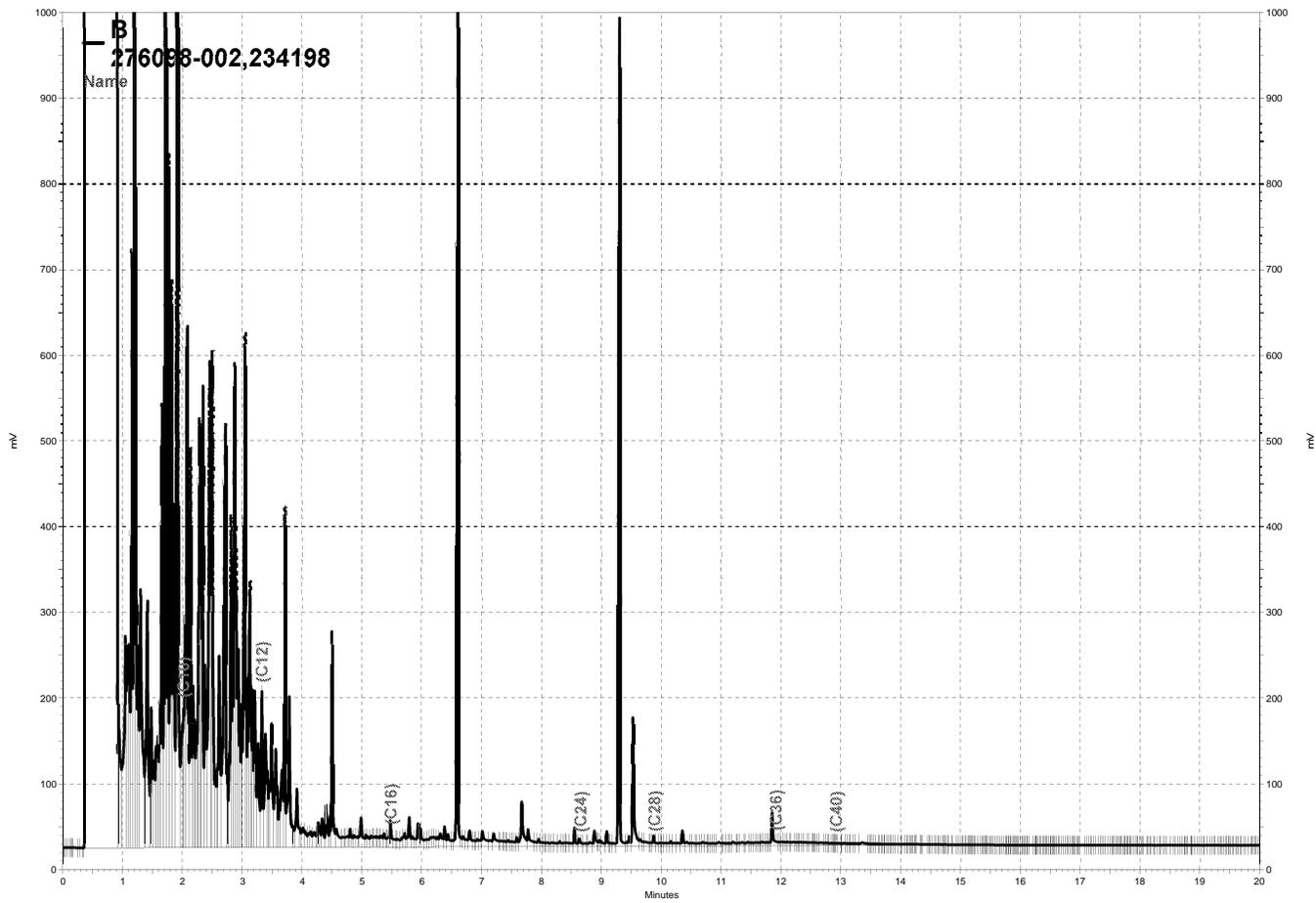
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.90	47.48	95	46-154	7	50

Surrogate	%REC	Limits
o-Terphenyl	102	59-140

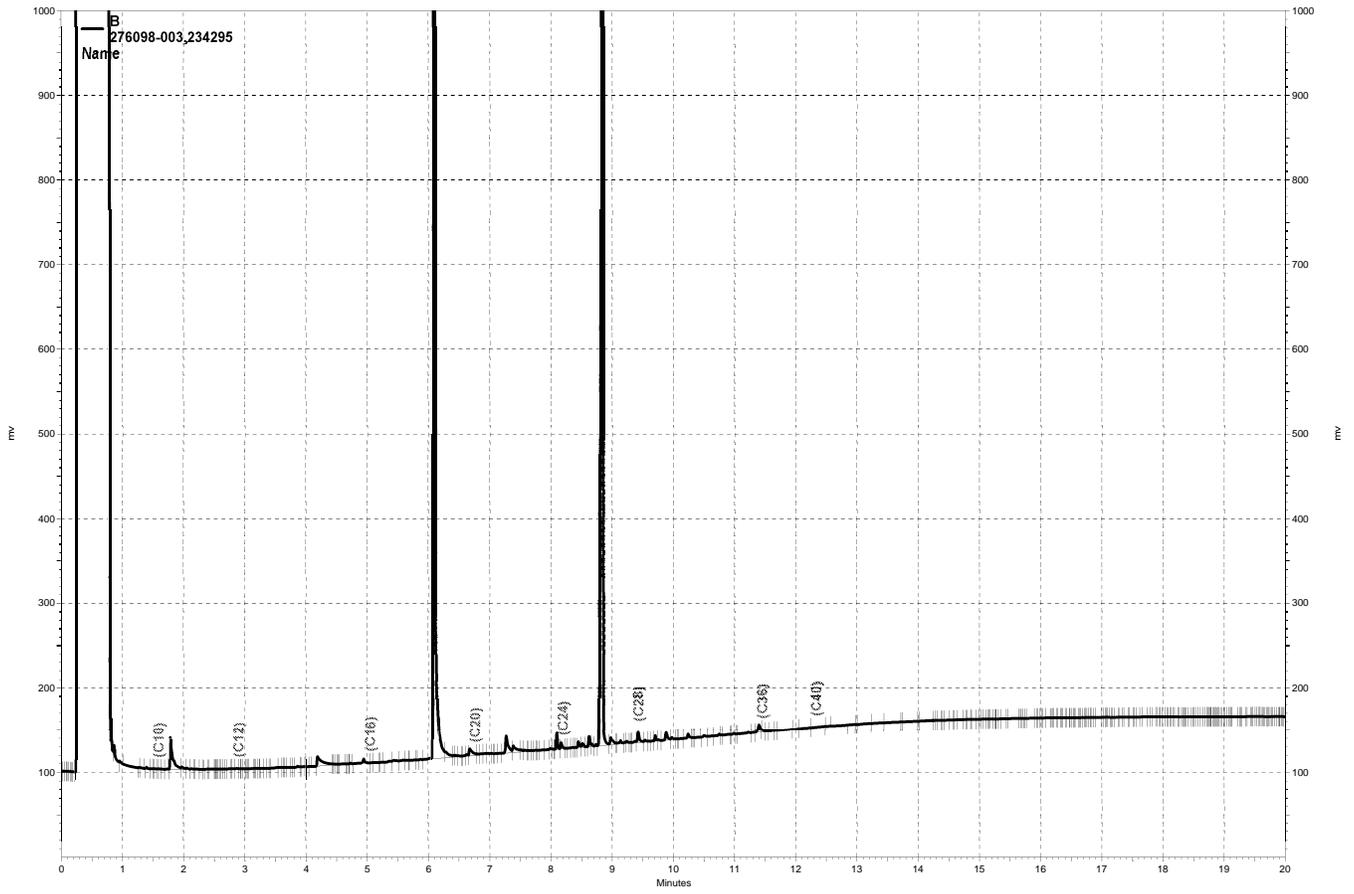
RPD= Relative Percent Difference



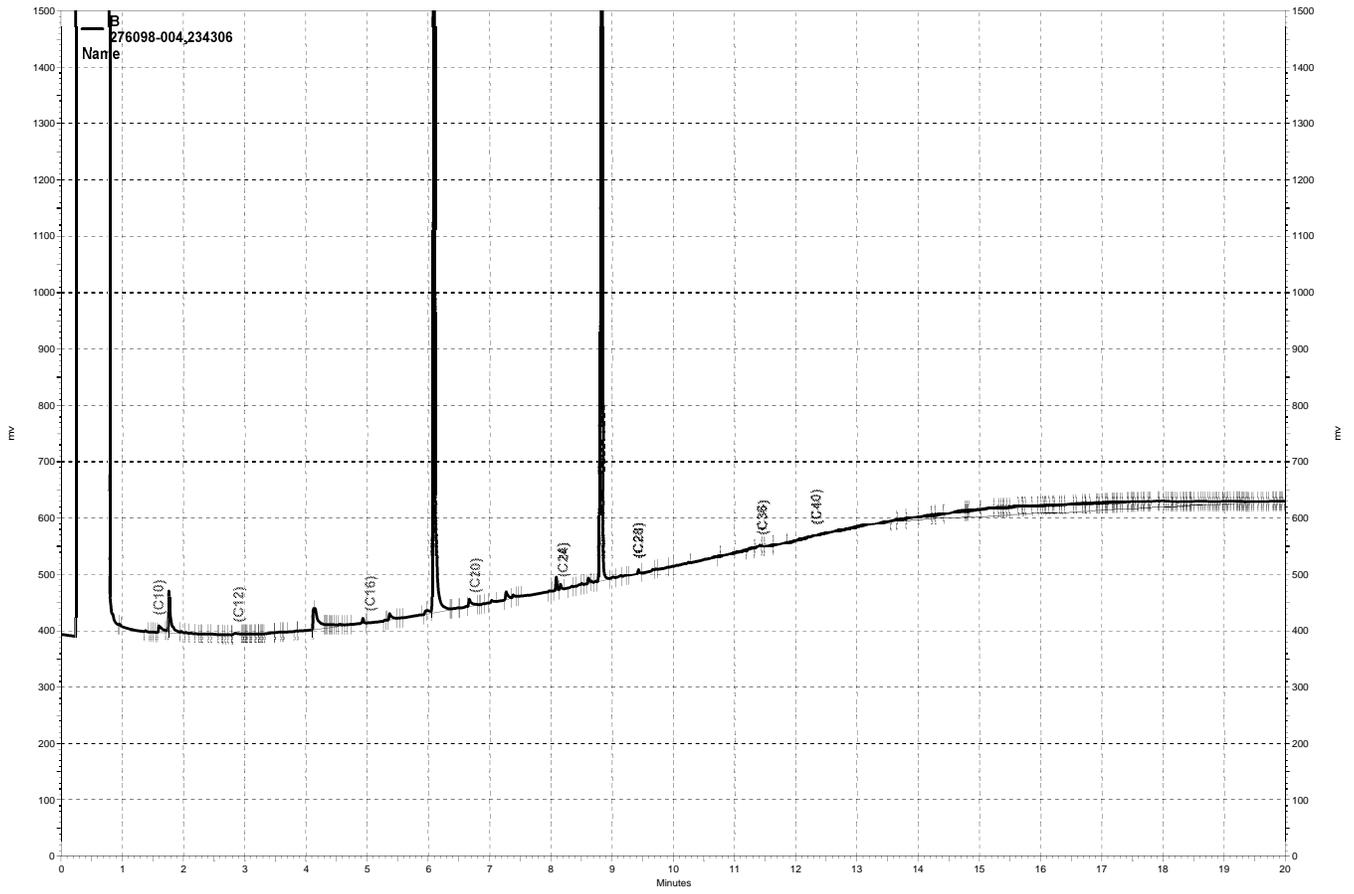
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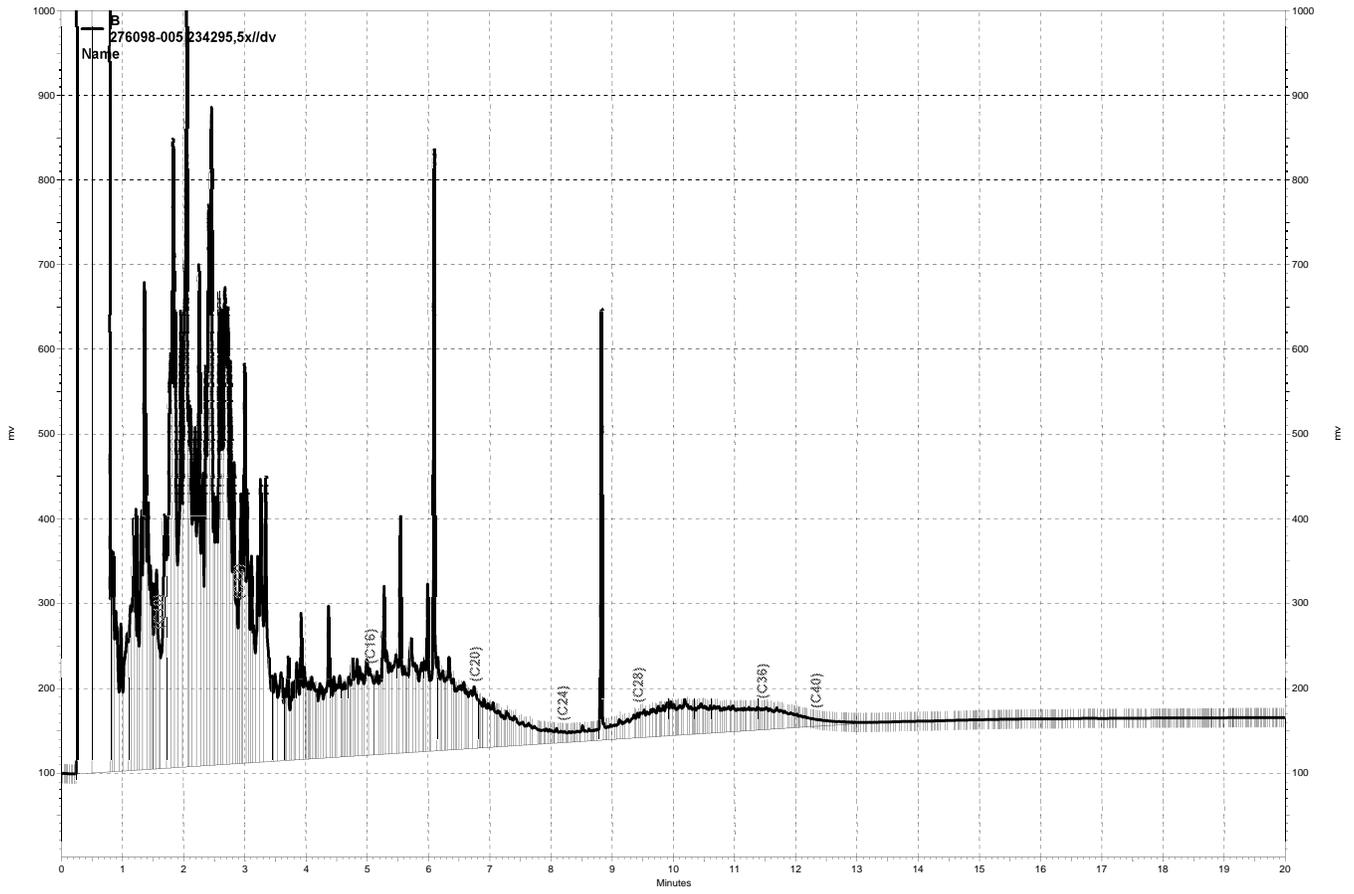
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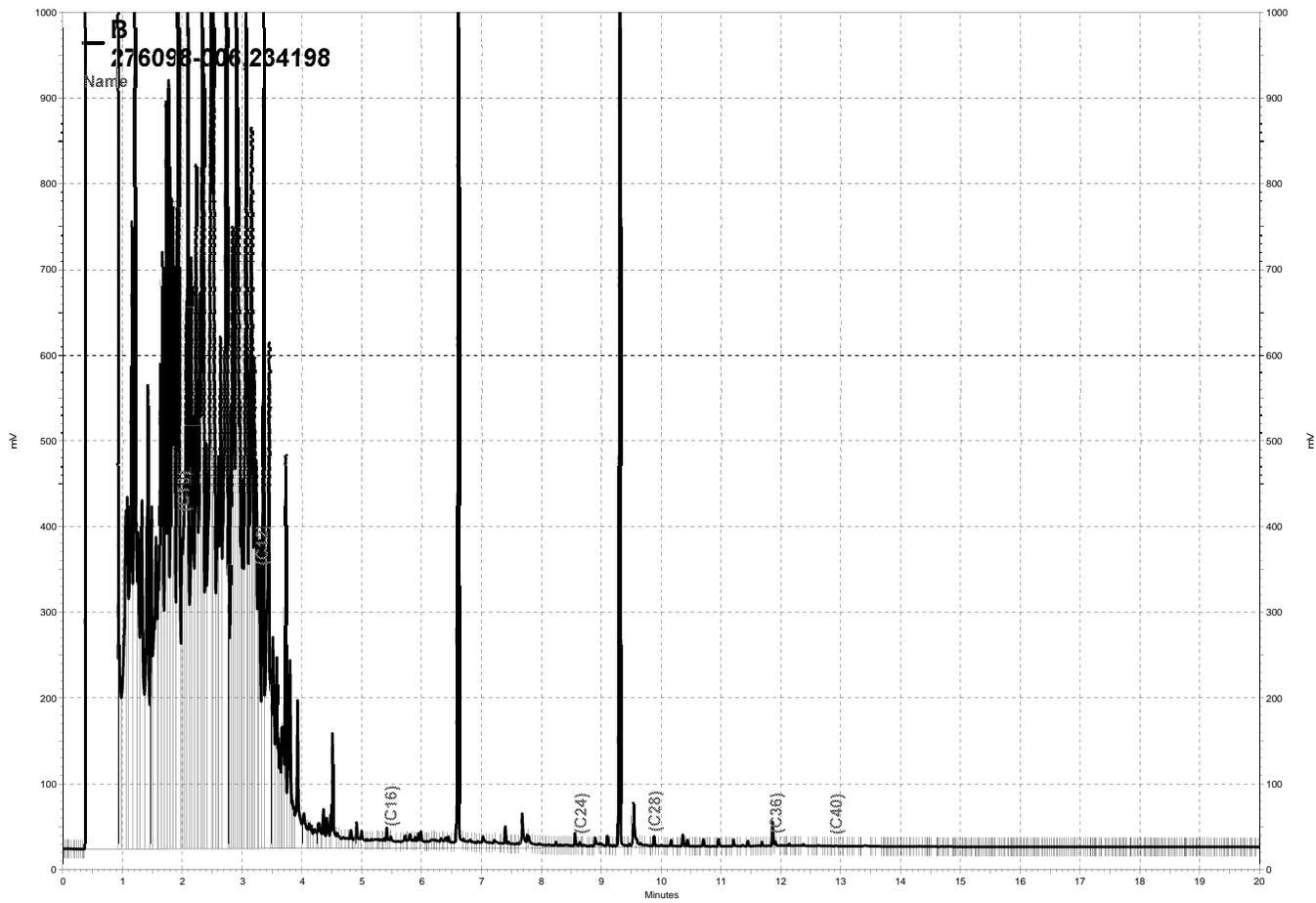
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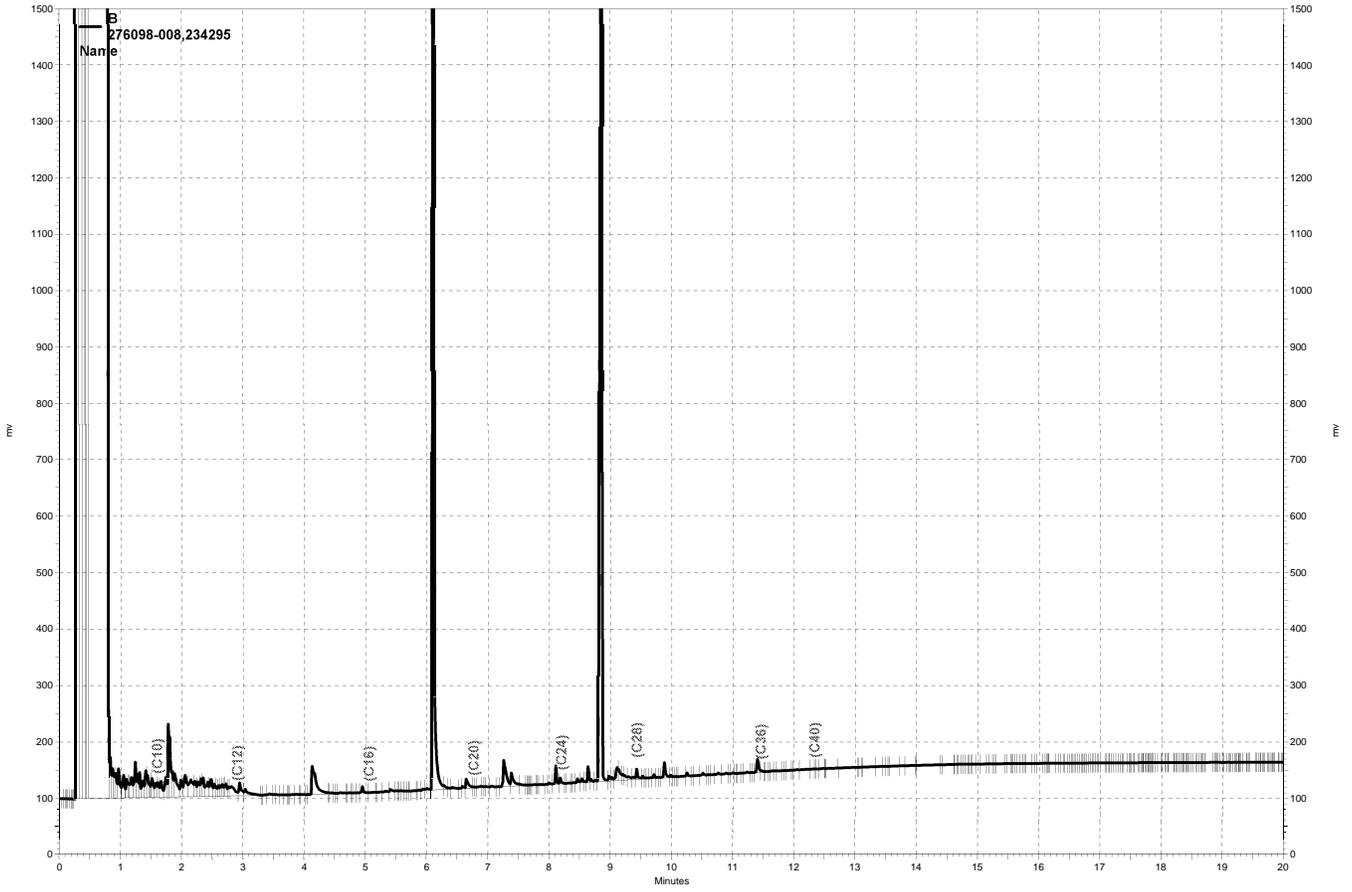
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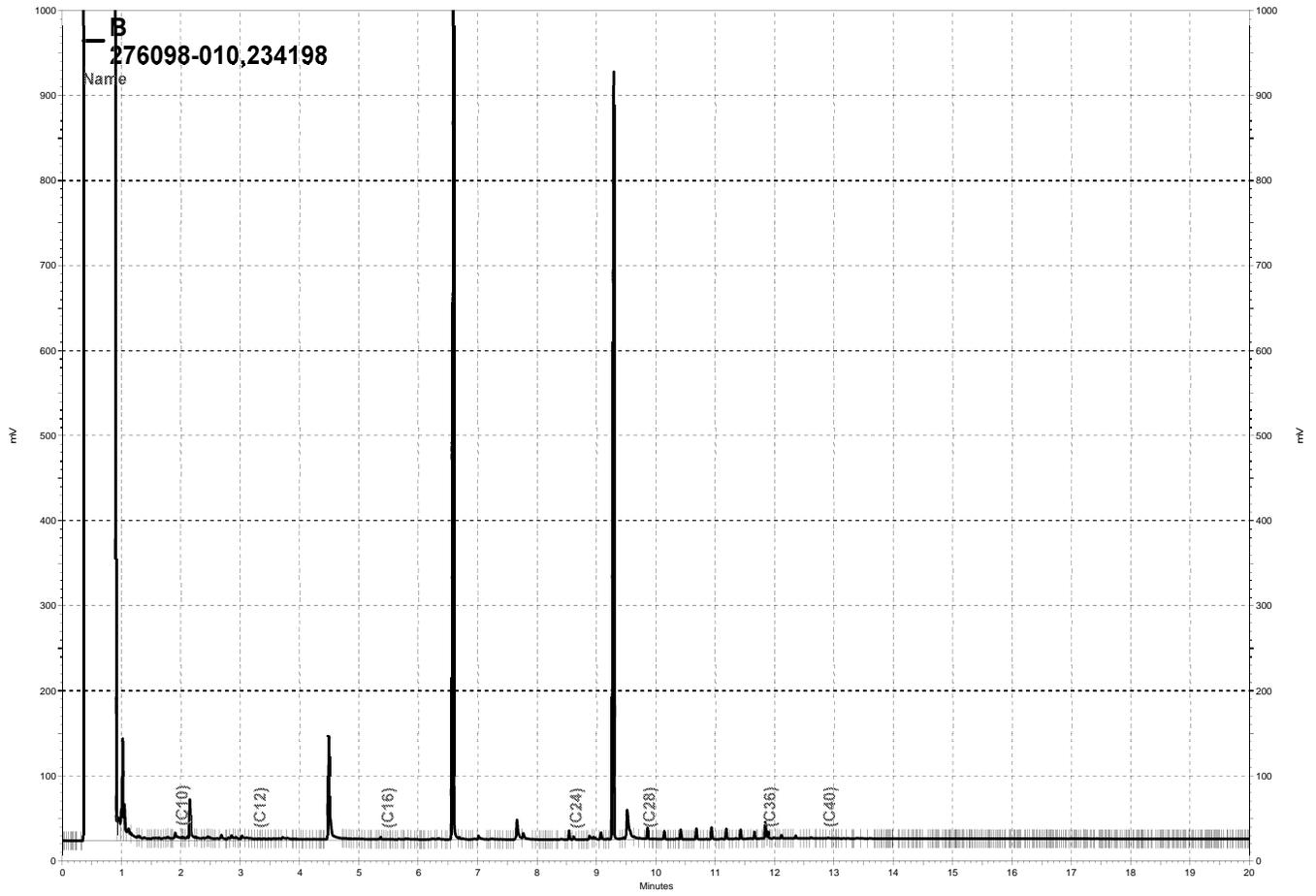
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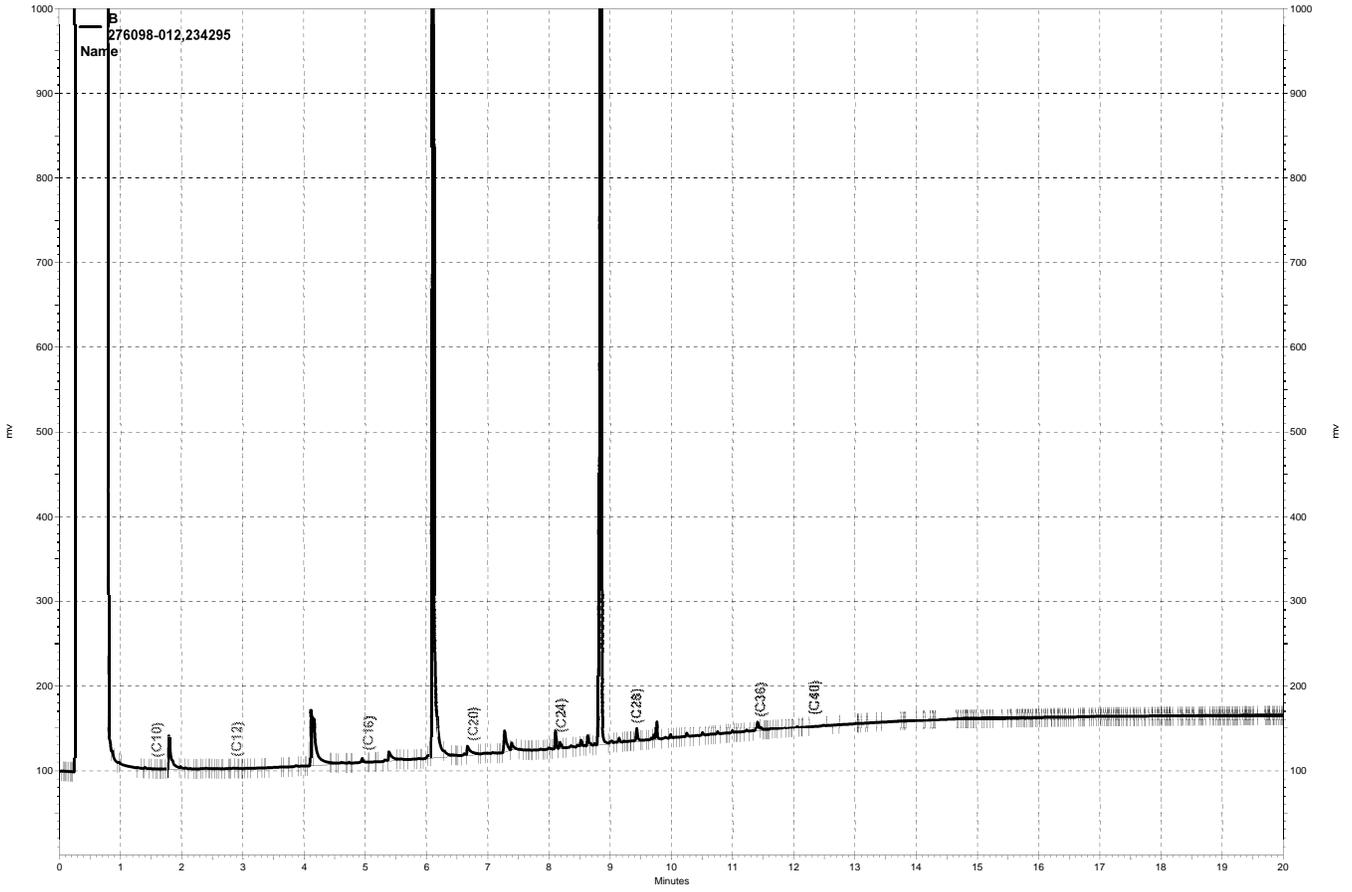
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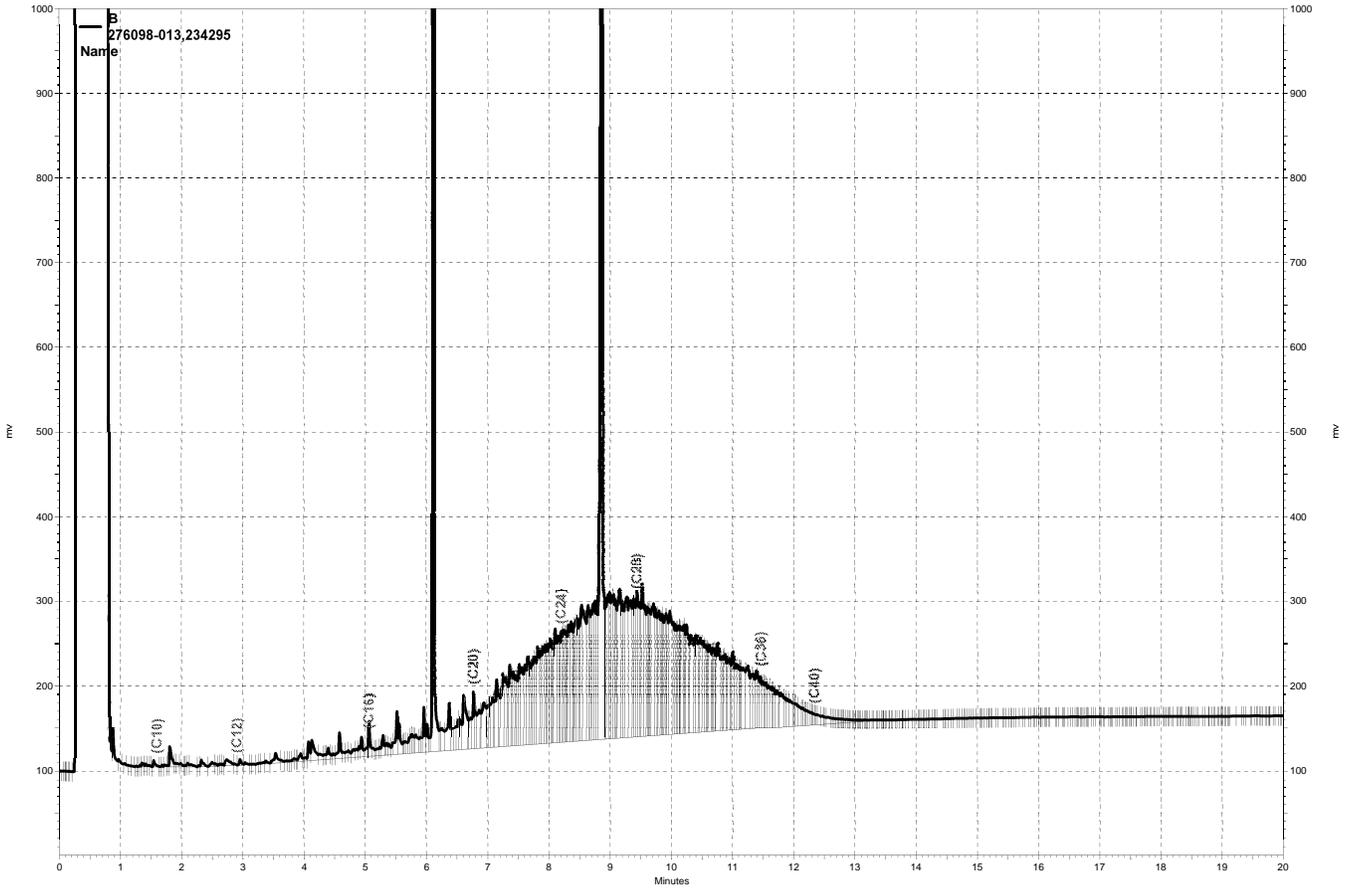
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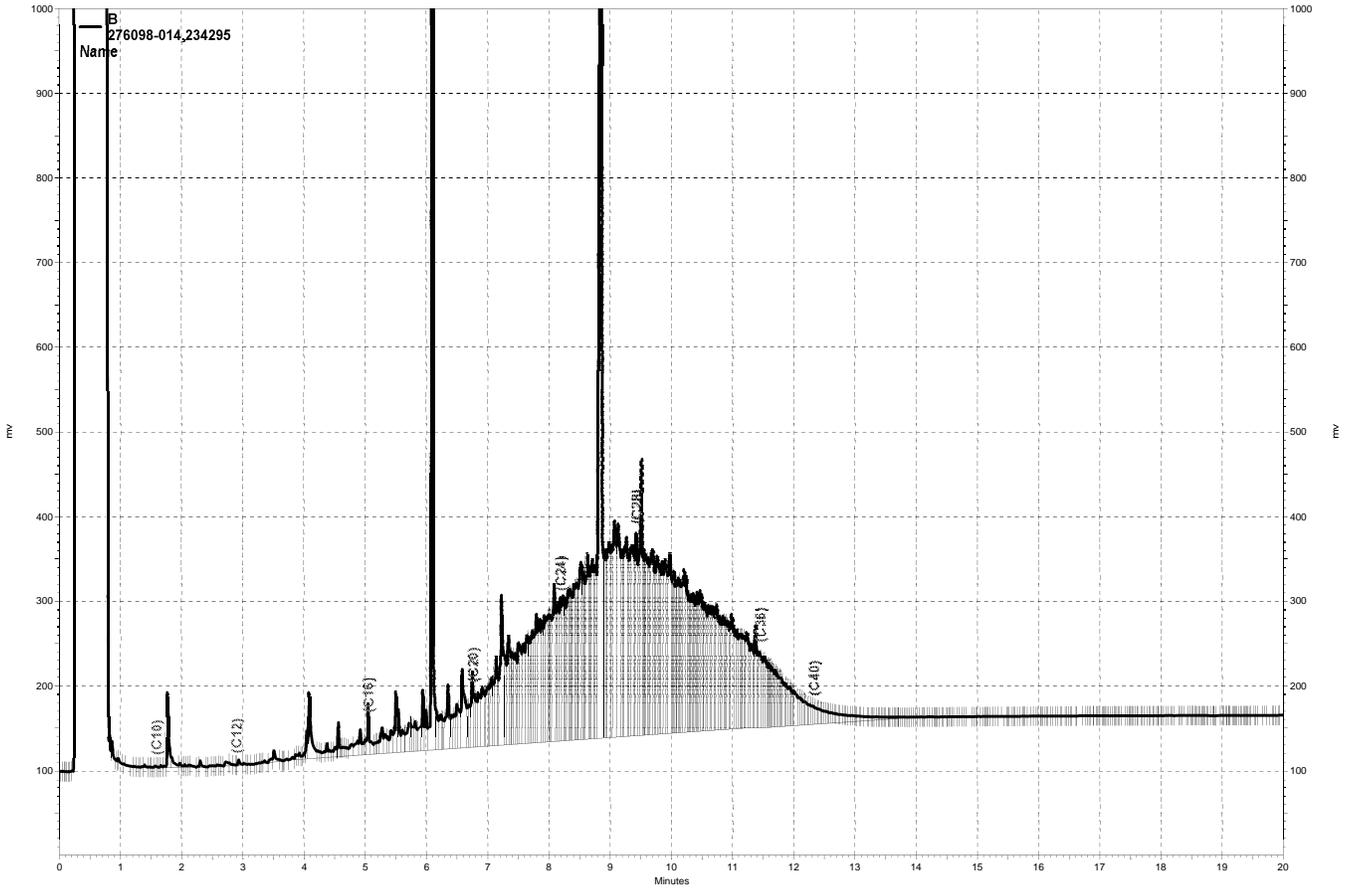
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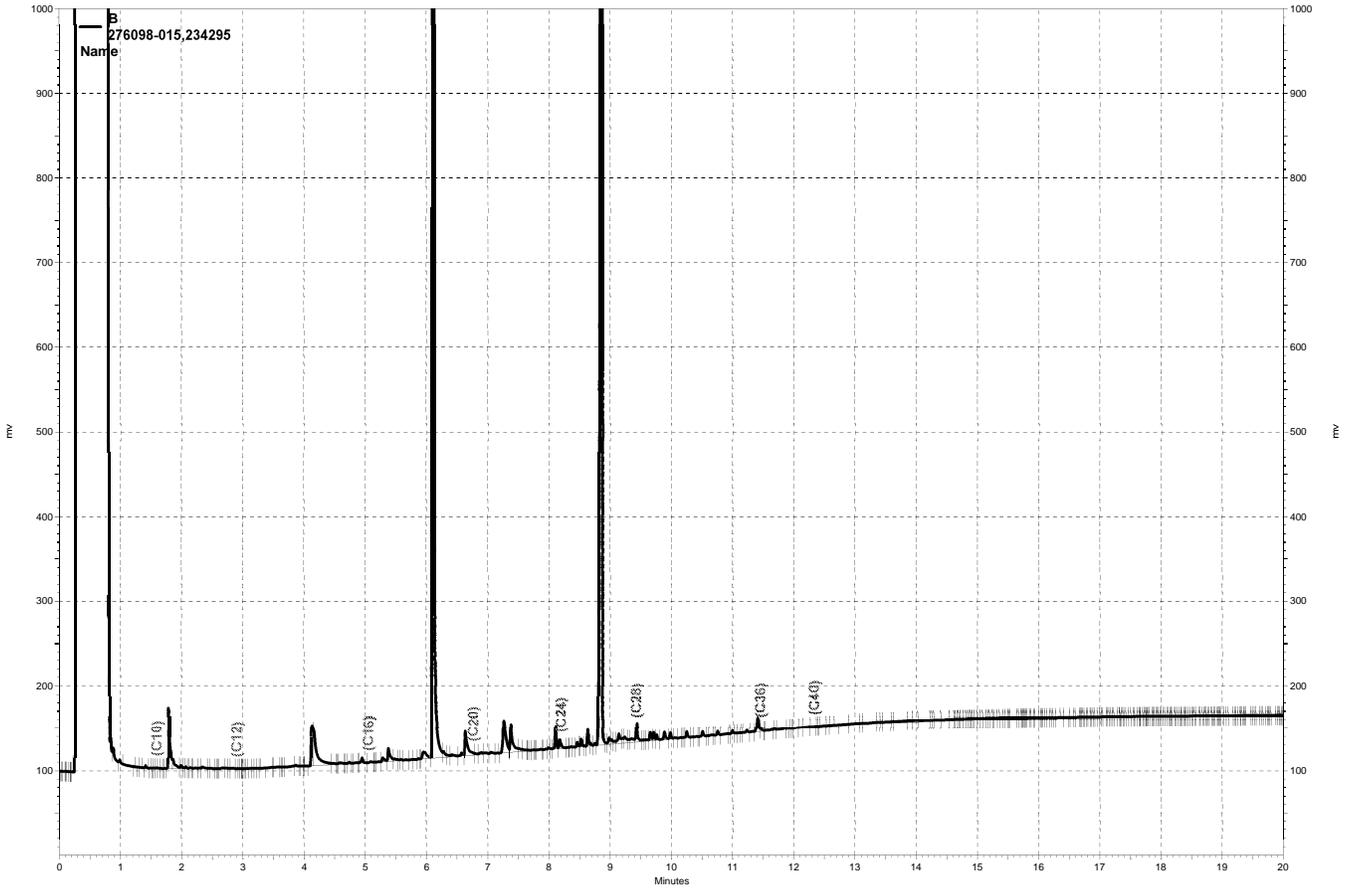
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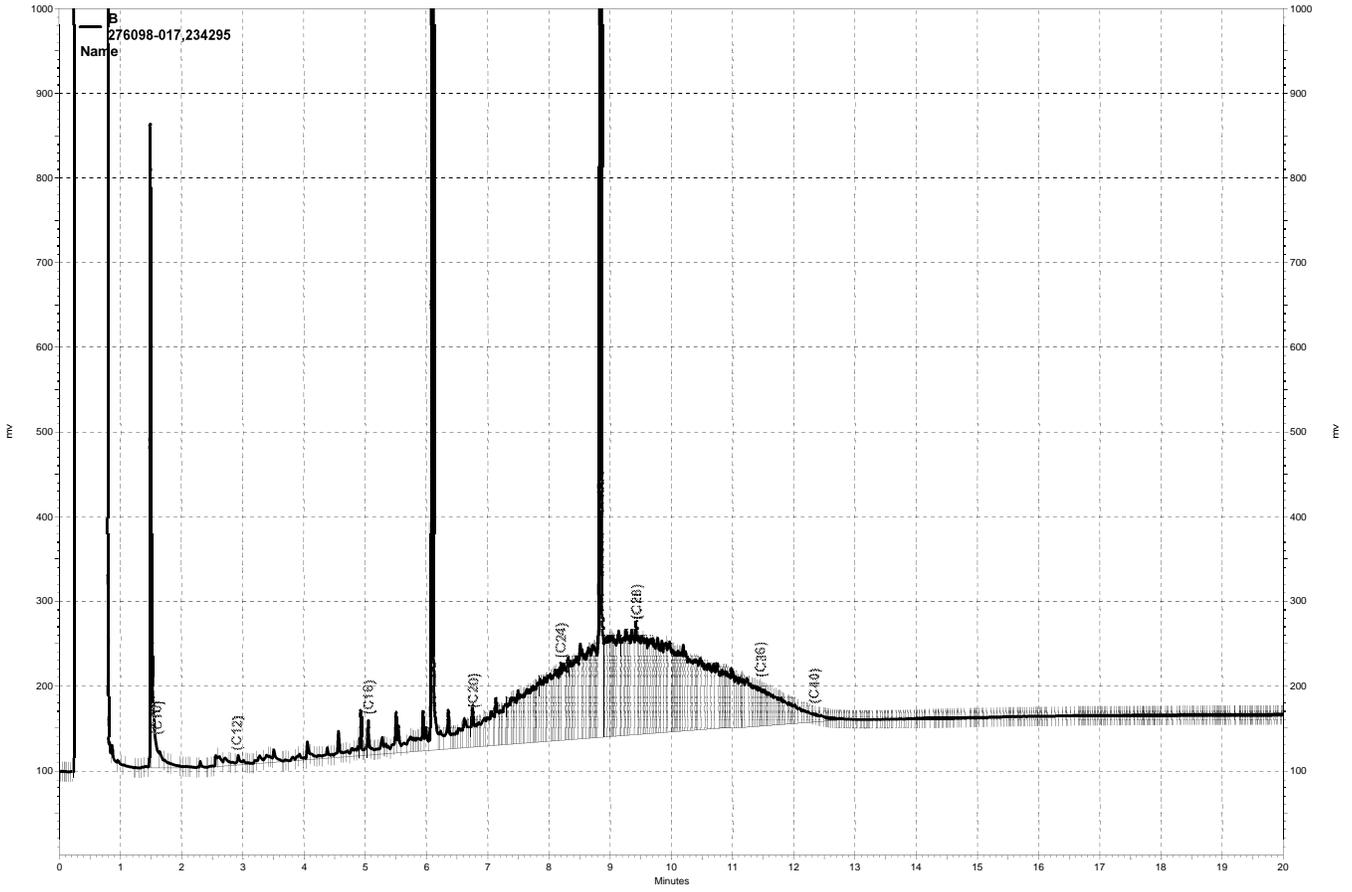
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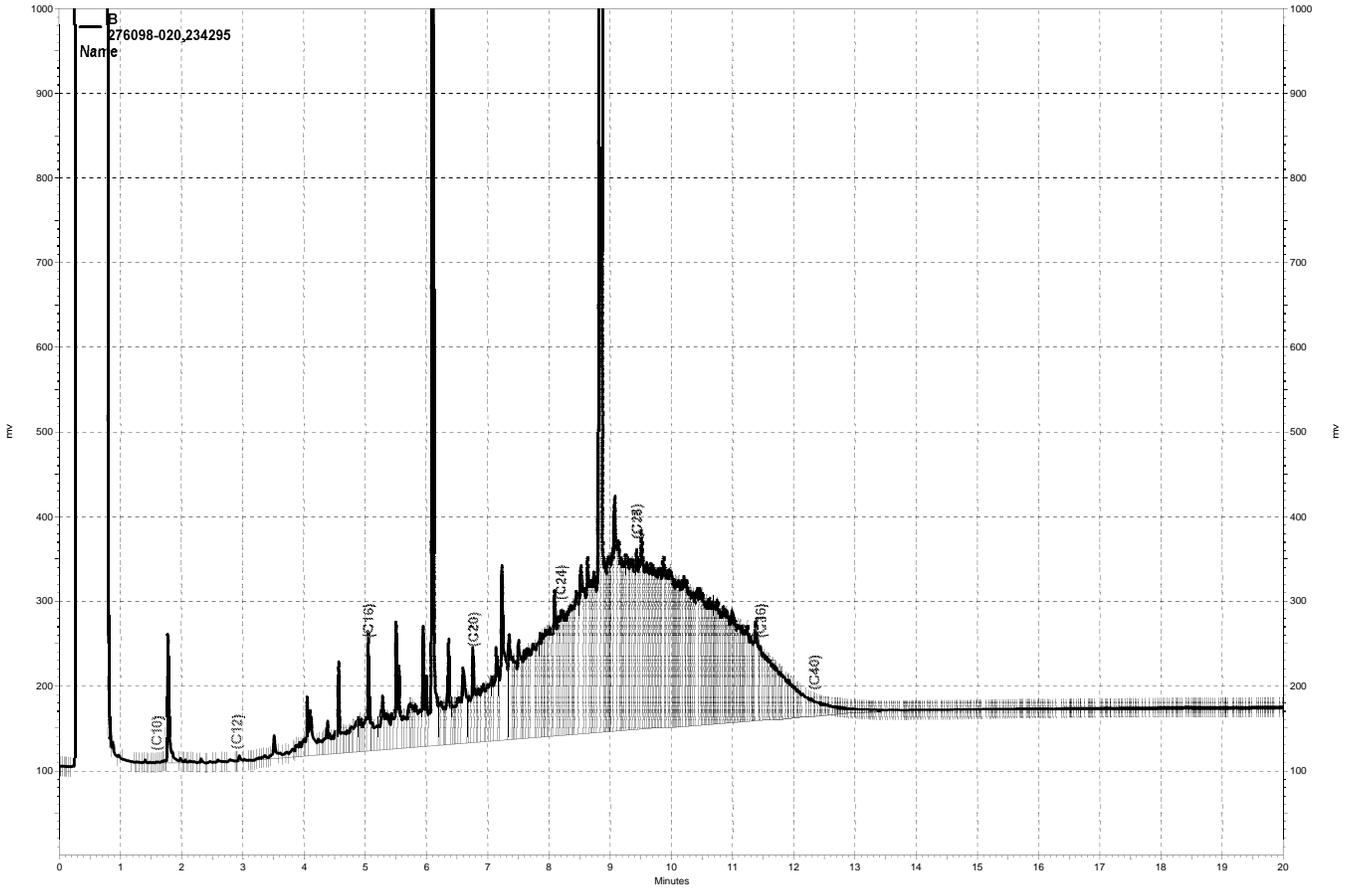
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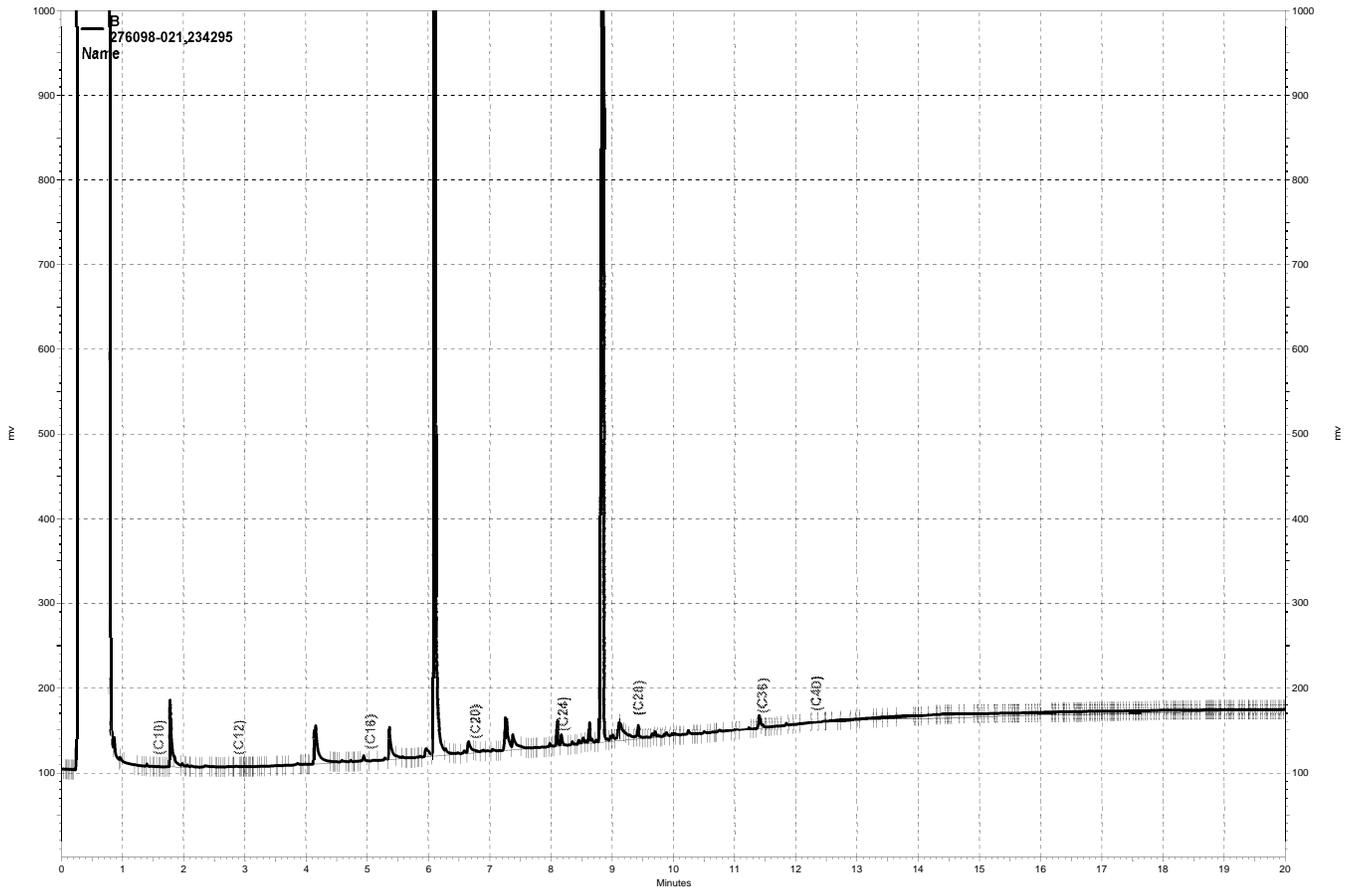
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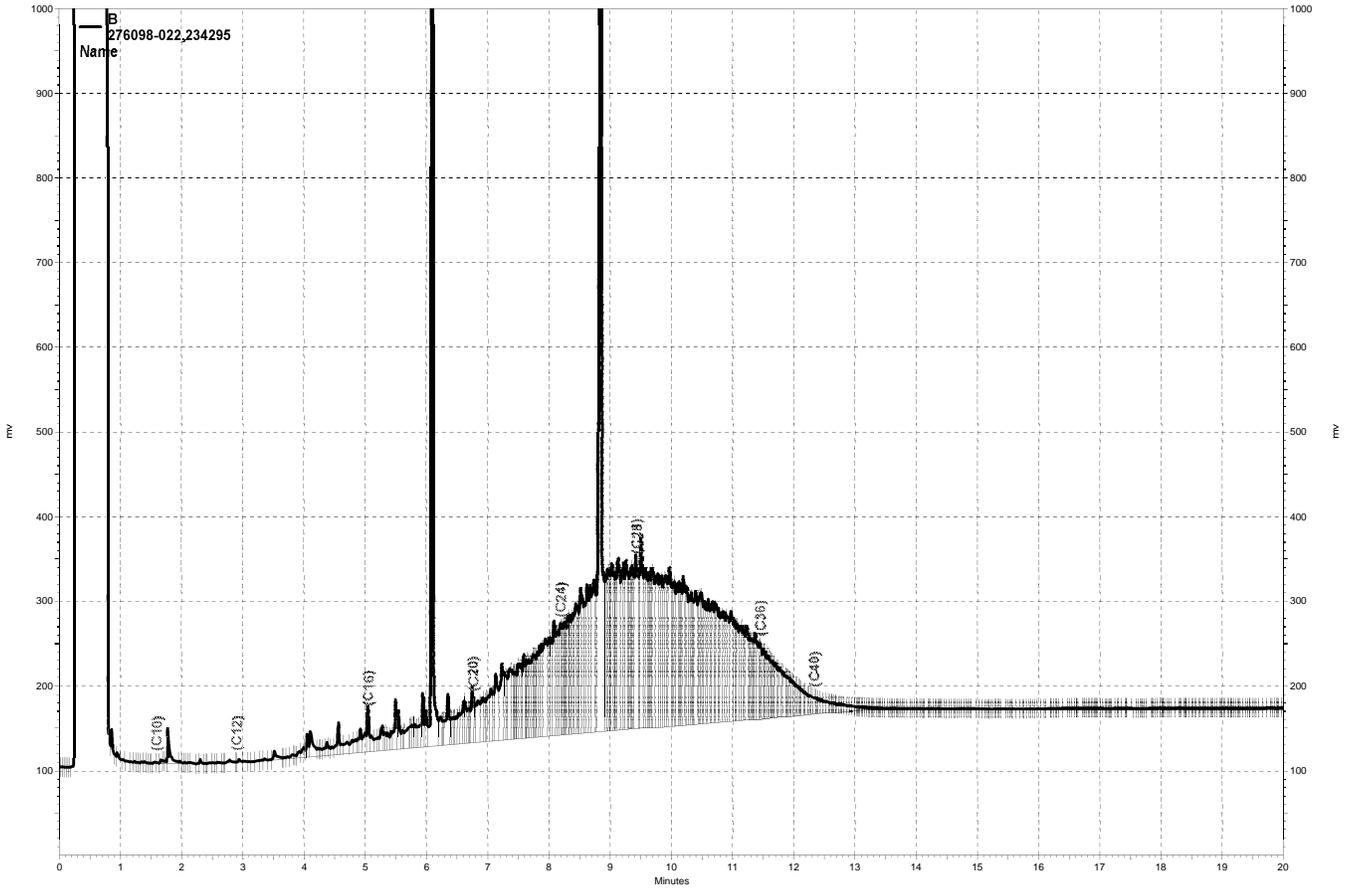
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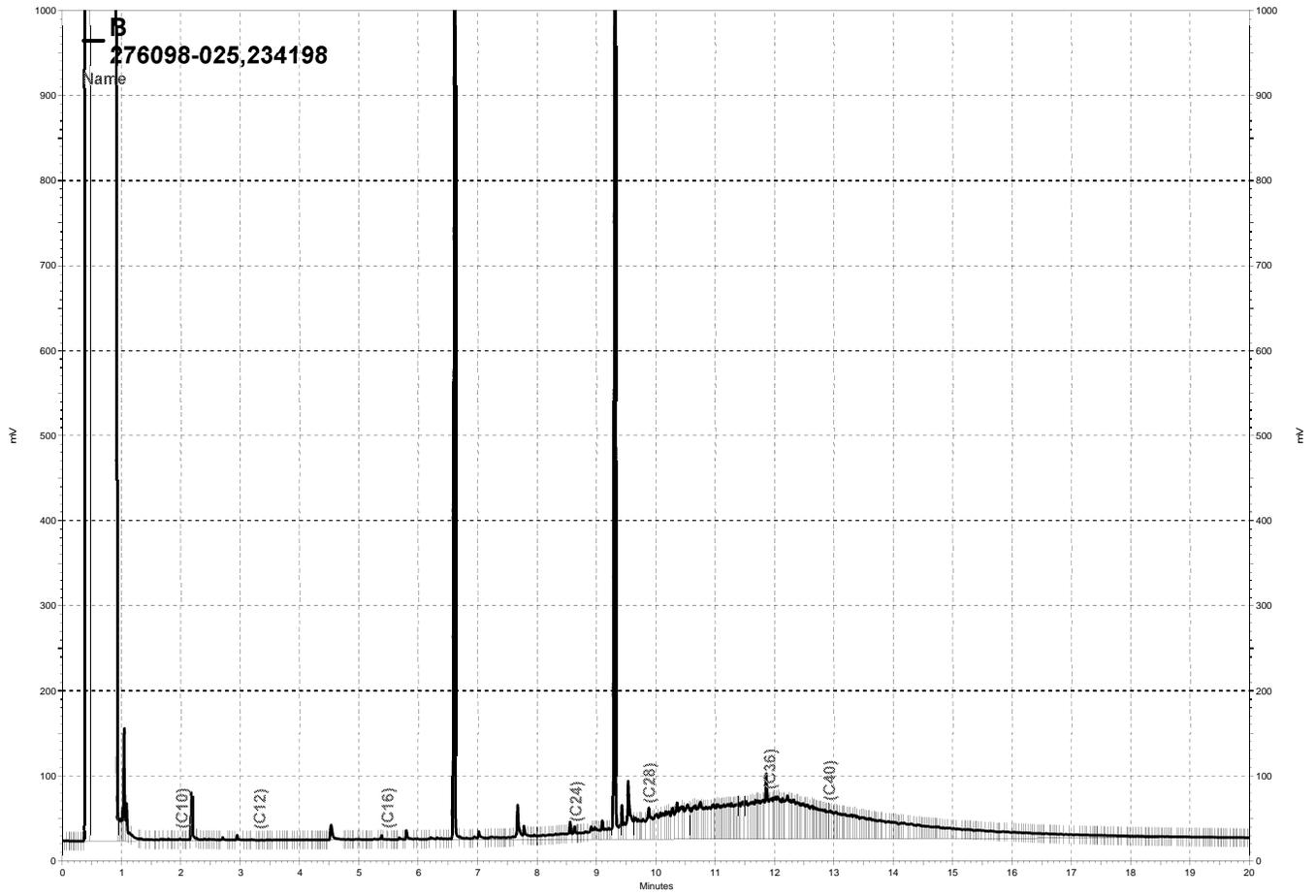
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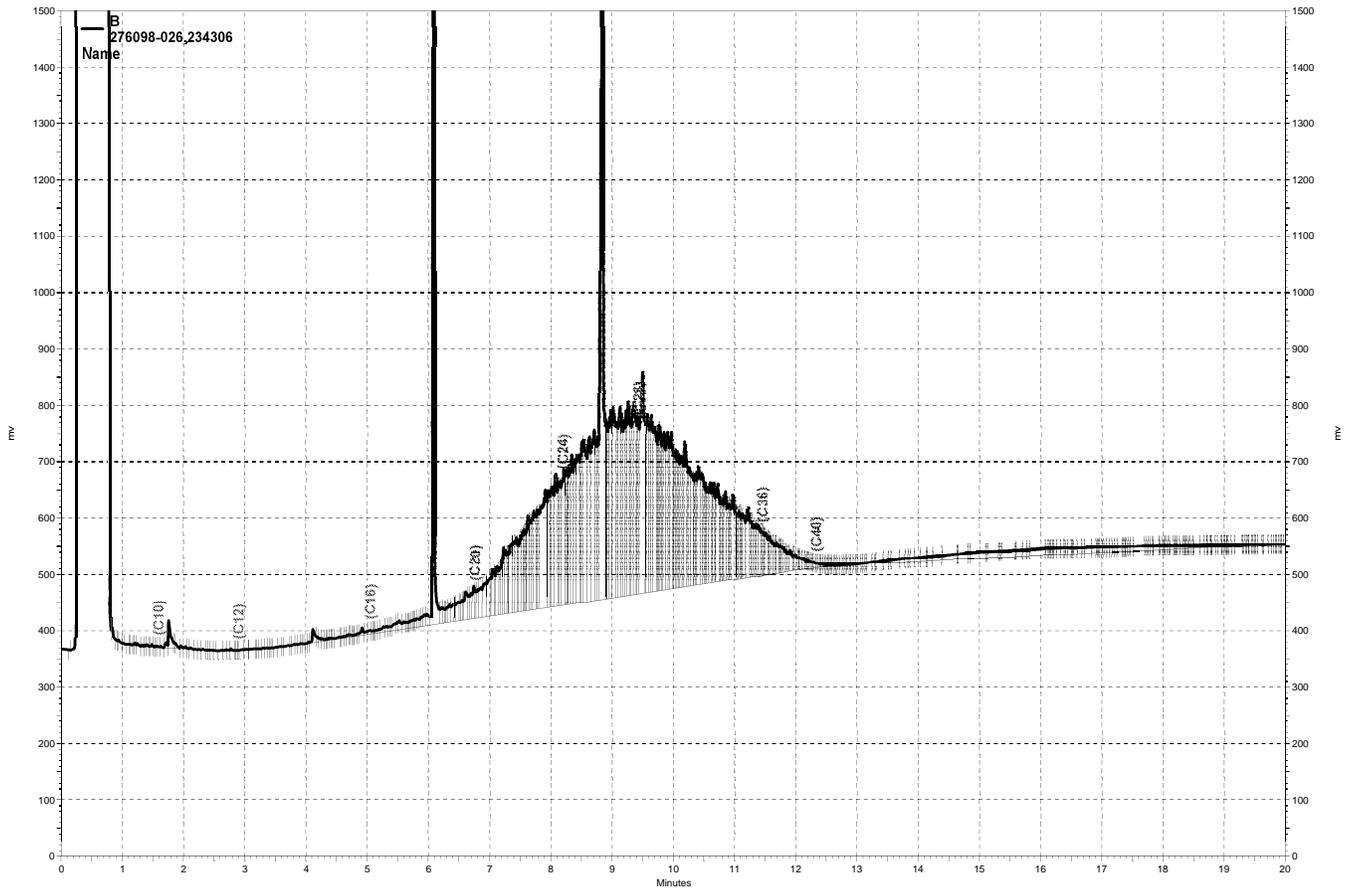
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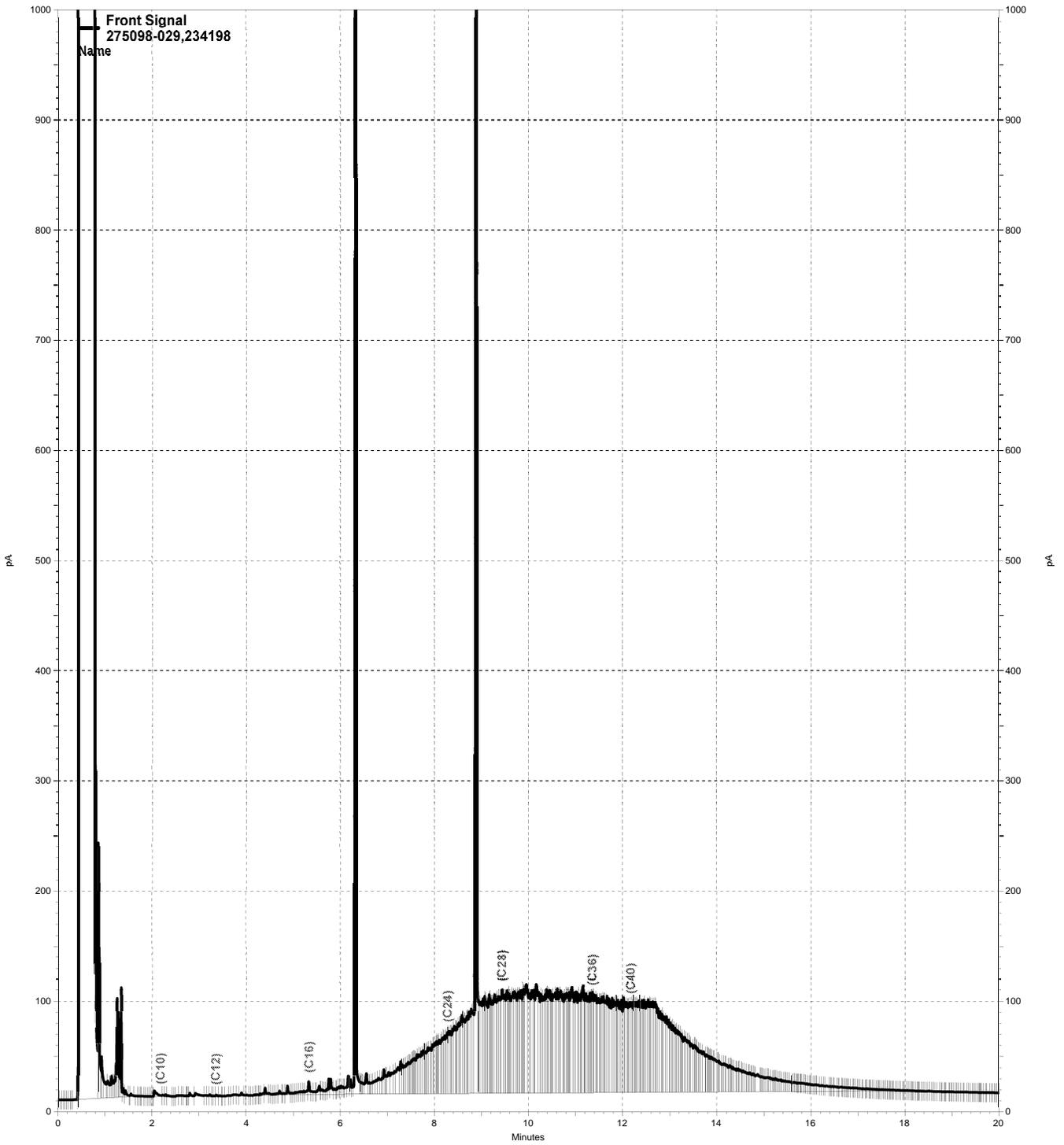
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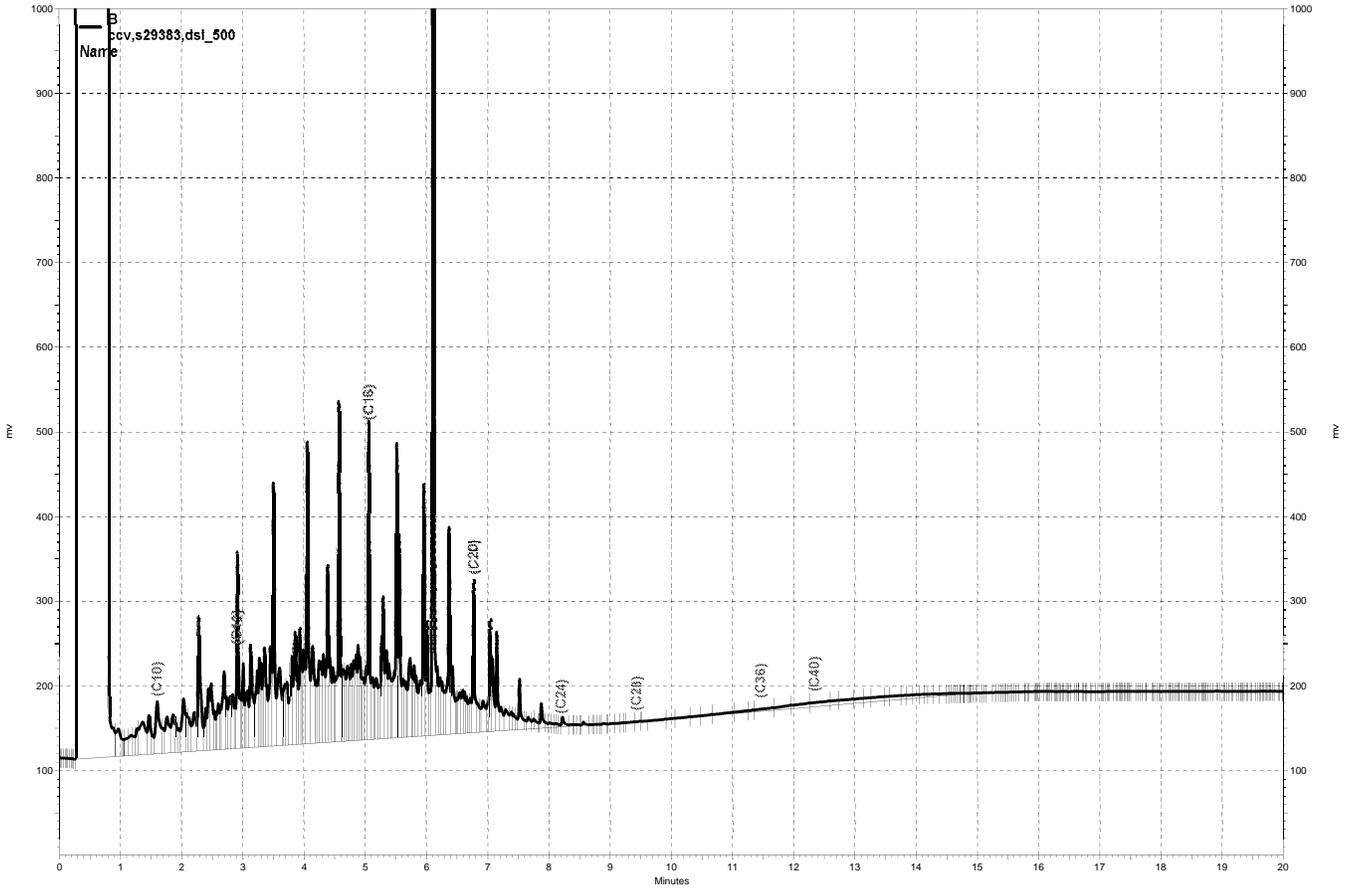
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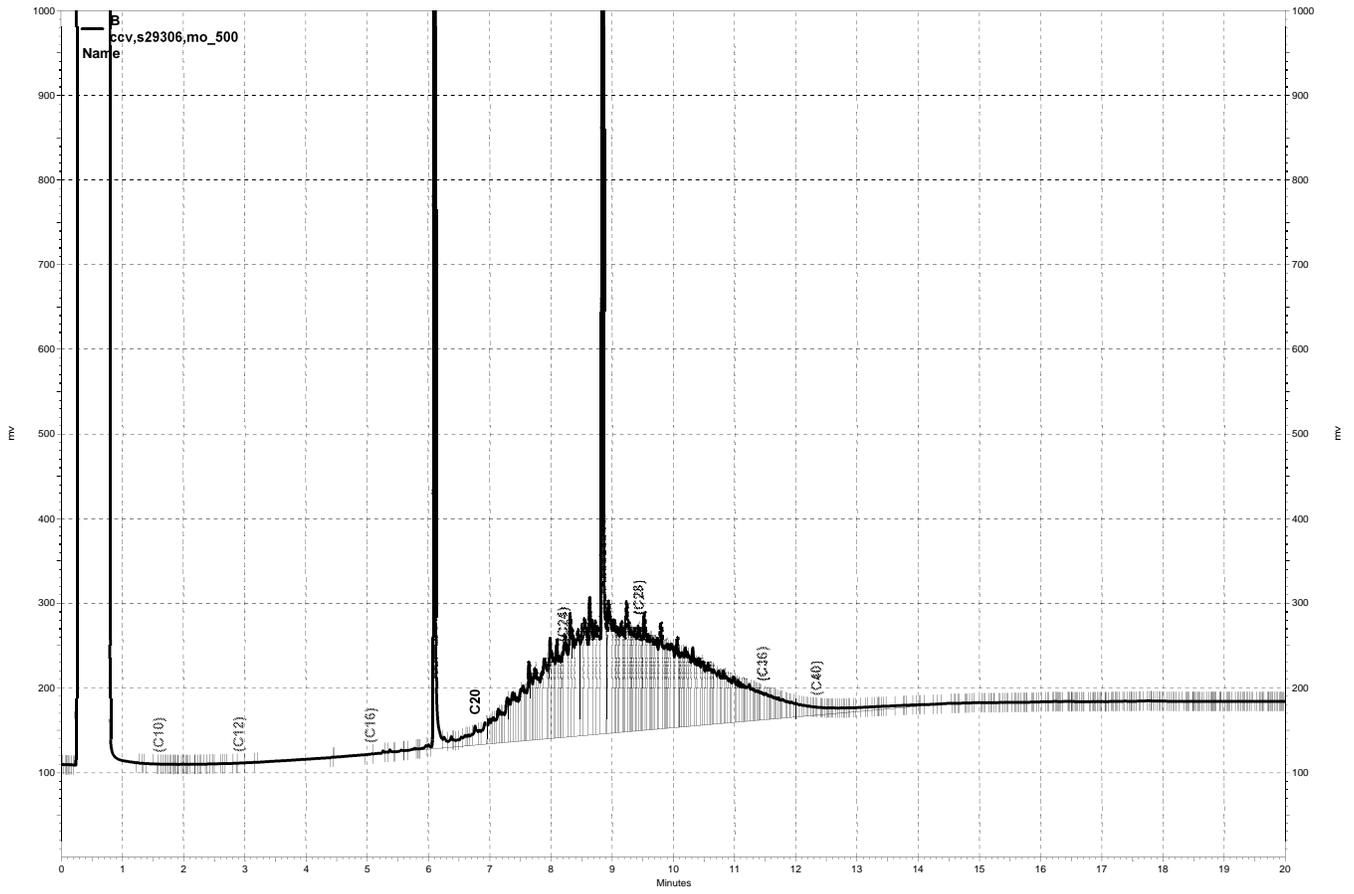
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Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-01-3	Basis:	as received
Lab ID:	276098-001	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	500	50.00	234280	04/20/16
Chloromethane	ND	500	50.00	234280	04/20/16
Vinyl Chloride	ND	500	50.00	234280	04/20/16
Bromomethane	ND	500	50.00	234280	04/20/16
Chloroethane	ND	500	50.00	234280	04/20/16
Trichlorofluoromethane	ND	250	50.00	234280	04/20/16
Acetone	ND	1,000	50.00	234280	04/20/16
Freon 113	ND	250	50.00	234280	04/20/16
1,1-Dichloroethene	ND	250	50.00	234280	04/20/16
Methylene Chloride	ND	1,000	50.00	234280	04/20/16
Carbon Disulfide	ND	250	50.00	234280	04/20/16
MTBE	ND	250	50.00	234280	04/20/16
trans-1,2-Dichloroethene	ND	250	50.00	234280	04/20/16
Vinyl Acetate	ND	2,500	50.00	234280	04/20/16
1,1-Dichloroethane	ND	250	50.00	234280	04/20/16
2-Butanone	ND	500	50.00	234280	04/20/16
cis-1,2-Dichloroethene	ND	250	50.00	234280	04/20/16
2,2-Dichloropropane	ND	250	50.00	234280	04/20/16
Chloroform	ND	250	50.00	234280	04/20/16
Bromochloromethane	ND	250	50.00	234280	04/20/16
1,1,1-Trichloroethane	ND	250	50.00	234280	04/20/16
1,1-Dichloropropene	ND	250	50.00	234280	04/20/16
Carbon Tetrachloride	ND	250	50.00	234280	04/20/16
1,2-Dichloroethane	ND	250	50.00	234280	04/20/16
Benzene	ND	250	50.00	234280	04/20/16
Trichloroethene	ND	250	50.00	234280	04/20/16
1,2-Dichloropropane	ND	250	50.00	234280	04/20/16
Bromodichloromethane	ND	250	50.00	234280	04/20/16
Dibromomethane	ND	250	50.00	234280	04/20/16
4-Methyl-2-Pentanone	ND	500	50.00	234280	04/20/16
cis-1,3-Dichloropropene	ND	250	50.00	234280	04/20/16
Toluene	ND	250	50.00	234280	04/20/16
trans-1,3-Dichloropropene	ND	250	50.00	234280	04/20/16
1,1,2-Trichloroethane	ND	250	50.00	234280	04/20/16
2-Hexanone	ND	500	50.00	234280	04/20/16
1,3-Dichloropropane	ND	250	50.00	234280	04/20/16
Tetrachloroethene	ND	250	50.00	234280	04/20/16
Dibromochloromethane	ND	250	50.00	234280	04/20/16

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-01-3	Basis:	as received
Lab ID:	276098-001	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,2-Dibromoethane	ND	250	50.00	234280	04/20/16
Chlorobenzene	ND	250	50.00	234280	04/20/16
1,1,1,2-Tetrachloroethane	ND	250	50.00	234280	04/20/16
Ethylbenzene	ND	250	50.00	234280	04/20/16
m,p-Xylenes	ND	250	50.00	234280	04/20/16
o-Xylene	ND	250	50.00	234280	04/20/16
Styrene	ND	250	50.00	234280	04/20/16
Bromoform	ND	250	50.00	234280	04/20/16
Isopropylbenzene	660	250	50.00	234280	04/20/16
1,1,2,2-Tetrachloroethane	ND	250	50.00	234280	04/20/16
1,2,3-Trichloropropane	ND	250	50.00	234280	04/20/16
Propylbenzene	3,600	250	50.00	234280	04/20/16
Bromobenzene	ND	250	50.00	234280	04/20/16
1,3,5-Trimethylbenzene	ND	250	50.00	234280	04/20/16
2-Chlorotoluene	ND	250	50.00	234280	04/20/16
4-Chlorotoluene	ND	250	50.00	234280	04/20/16
tert-Butylbenzene	ND	250	50.00	234280	04/20/16
1,2,4-Trimethylbenzene	ND	250	50.00	234280	04/20/16
sec-Butylbenzene	980	250	50.00	234280	04/20/16
para-Isopropyl Toluene	300	250	50.00	234280	04/20/16
1,3-Dichlorobenzene	ND	250	50.00	234280	04/20/16
1,4-Dichlorobenzene	ND	250	50.00	234280	04/20/16
n-Butylbenzene	4,800	500	100.0	234322	04/21/16
1,2-Dichlorobenzene	ND	250	50.00	234280	04/20/16
1,2-Dibromo-3-Chloropropane	ND	250	50.00	234280	04/20/16
1,2,4-Trichlorobenzene	ND	250	50.00	234280	04/20/16
Hexachlorobutadiene	ND	250	50.00	234280	04/20/16
Naphthalene	2,600	250	50.00	234280	04/20/16
1,2,3-Trichlorobenzene	ND	250	50.00	234280	04/20/16

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	95	78-134	50.00	234280	04/20/16
1,2-Dichloroethane-d4	120	80-138	50.00	234280	04/20/16
Toluene-d8	92	80-120	50.00	234280	04/20/16
Bromofluorobenzene	117	78-123	50.00	234280	04/20/16
Trifluorotoluene (MeOH)	114	52-147	50.00	234280	04/20/16

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-01-5.5	Basis:	as received
Lab ID:	276098-002	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	500	50.00	234191	04/18/16
Chloromethane	ND	500	50.00	234191	04/18/16
Vinyl Chloride	ND	500	50.00	234191	04/18/16
Bromomethane	ND	500	50.00	234191	04/18/16
Chloroethane	ND	500	50.00	234191	04/18/16
Trichlorofluoromethane	ND	250	50.00	234191	04/18/16
Acetone	ND	1,000	50.00	234191	04/18/16
Freon 113	ND	250	50.00	234191	04/18/16
1,1-Dichloroethene	ND	250	50.00	234191	04/18/16
Methylene Chloride	ND	1,000	50.00	234191	04/18/16
Carbon Disulfide	ND	250	50.00	234191	04/18/16
MTBE	ND	250	50.00	234191	04/18/16
trans-1,2-Dichloroethene	ND	250	50.00	234191	04/18/16
Vinyl Acetate	ND	2,500	50.00	234191	04/18/16
1,1-Dichloroethane	ND	250	50.00	234191	04/18/16
2-Butanone	ND	500	50.00	234191	04/18/16
cis-1,2-Dichloroethene	ND	250	50.00	234191	04/18/16
2,2-Dichloropropane	ND	250	50.00	234191	04/18/16
Chloroform	ND	250	50.00	234191	04/18/16
Bromochloromethane	ND	250	50.00	234191	04/18/16
1,1,1-Trichloroethane	ND	250	50.00	234191	04/18/16
1,1-Dichloropropene	ND	250	50.00	234191	04/18/16
Carbon Tetrachloride	ND	250	50.00	234191	04/18/16
1,2-Dichloroethane	ND	250	50.00	234191	04/18/16
Benzene	ND	250	50.00	234191	04/18/16
Trichloroethene	ND	250	50.00	234191	04/18/16
1,2-Dichloropropane	ND	250	50.00	234191	04/18/16
Bromodichloromethane	ND	250	50.00	234191	04/18/16
Dibromomethane	ND	250	50.00	234191	04/18/16
4-Methyl-2-Pentanone	ND	500	50.00	234191	04/18/16
cis-1,3-Dichloropropene	ND	250	50.00	234191	04/18/16
Toluene	ND	250	50.00	234191	04/18/16
trans-1,3-Dichloropropene	ND	250	50.00	234191	04/18/16
1,1,2-Trichloroethane	ND	250	50.00	234191	04/18/16
2-Hexanone	ND	500	50.00	234191	04/18/16
1,3-Dichloropropane	ND	250	50.00	234191	04/18/16
Tetrachloroethene	ND	250	50.00	234191	04/18/16
Dibromochloromethane	ND	250	50.00	234191	04/18/16

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-01-5.5	Basis:	as received
Lab ID:	276098-002	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,2-Dibromoethane	ND	250	50.00	234191	04/18/16
Chlorobenzene	ND	250	50.00	234191	04/18/16
1,1,1,2-Tetrachloroethane	ND	250	50.00	234191	04/18/16
Ethylbenzene	2,300	250	50.00	234191	04/18/16
m,p-Xylenes	5,300	250	50.00	234191	04/18/16
o-Xylene	410	250	50.00	234191	04/18/16
Styrene	ND	250	50.00	234191	04/18/16
Bromoform	ND	250	50.00	234191	04/18/16
Isopropylbenzene	290	250	50.00	234191	04/18/16
1,1,2,2-Tetrachloroethane	ND	250	50.00	234191	04/18/16
1,2,3-Trichloropropane	ND	250	50.00	234191	04/18/16
Propylbenzene	1,300	250	50.00	234191	04/18/16
Bromobenzene	ND	250	50.00	234191	04/18/16
1,3,5-Trimethylbenzene	2,300	250	50.00	234191	04/18/16
2-Chlorotoluene	ND	250	50.00	234191	04/18/16
4-Chlorotoluene	ND	250	50.00	234191	04/18/16
tert-Butylbenzene	ND	250	50.00	234191	04/18/16
1,2,4-Trimethylbenzene	7,500	250	50.00	234191	04/18/16
sec-Butylbenzene	ND	250	50.00	234191	04/18/16
para-Isopropyl Toluene	ND	250	50.00	234191	04/18/16
1,3-Dichlorobenzene	ND	250	50.00	234191	04/18/16
1,4-Dichlorobenzene	ND	250	50.00	234191	04/18/16
n-Butylbenzene	810	500	100.0	234237	04/19/16
1,2-Dichlorobenzene	ND	250	50.00	234191	04/18/16
1,2-Dibromo-3-Chloropropane	ND	250	50.00	234191	04/18/16
1,2,4-Trichlorobenzene	ND	250	50.00	234191	04/18/16
Hexachlorobutadiene	ND	250	50.00	234191	04/18/16
Naphthalene	1,800	250	50.00	234191	04/18/16
1,2,3-Trichlorobenzene	ND	250	50.00	234191	04/18/16

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	97	78-134	50.00	234191	04/18/16
1,2-Dichloroethane-d4	115	80-138	50.00	234191	04/18/16
Toluene-d8	94	80-120	50.00	234191	04/18/16
Bromofluorobenzene	96	78-123	50.00	234191	04/18/16
Trifluorotoluene (MeOH)	122	52-147	50.00	234191	04/18/16

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-01-8.5	Diln Fac:	0.9921
Lab ID:	276098-003	Batch#:	234237
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	5.0
Acetone	36	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-01-8.5	Diln Fac:	0.9921
Lab ID:	276098-003	Batch#:	234237
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	6.9	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	6.6	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	93	78-134
1,2-Dichloroethane-d4	124	80-138
Toluene-d8	92	80-120
Bromofluorobenzene	95	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-01-10	Diln Fac:	0.8850
Lab ID:	276098-004	Batch#:	234280
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/20/16

Analyte	Result	RL
Freon 12	ND	8.8
Chloromethane	ND	8.8
Vinyl Chloride	ND	8.8
Bromomethane	ND	8.8
Chloroethane	ND	8.8
Trichlorofluoromethane	ND	4.4
Acetone	ND	18
Freon 113	ND	4.4
1,1-Dichloroethene	ND	4.4
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.4
MTBE	ND	4.4
trans-1,2-Dichloroethene	ND	4.4
Vinyl Acetate	ND	44
1,1-Dichloroethane	ND	4.4
2-Butanone	ND	8.8
cis-1,2-Dichloroethene	ND	4.4
2,2-Dichloropropane	ND	4.4
Chloroform	ND	4.4
Bromochloromethane	ND	4.4
1,1,1-Trichloroethane	ND	4.4
1,1-Dichloropropene	ND	4.4
Carbon Tetrachloride	ND	4.4
1,2-Dichloroethane	ND	4.4
Benzene	ND	4.4
Trichloroethene	ND	4.4
1,2-Dichloropropane	ND	4.4
Bromodichloromethane	ND	4.4
Dibromomethane	ND	4.4
4-Methyl-2-Pentanone	ND	8.8
cis-1,3-Dichloropropene	ND	4.4
Toluene	ND	4.4
trans-1,3-Dichloropropene	ND	4.4
1,1,2-Trichloroethane	ND	4.4
2-Hexanone	ND	8.8
1,3-Dichloropropane	ND	4.4
Tetrachloroethene	ND	4.4

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-01-10	Diln Fac:	0.8850
Lab ID:	276098-004	Batch#:	234280
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/20/16

Analyte	Result	RL
Dibromochloromethane	ND	4.4
1,2-Dibromoethane	ND	4.4
Chlorobenzene	ND	4.4
1,1,1,2-Tetrachloroethane	ND	4.4
Ethylbenzene	ND	4.4
m,p-Xylenes	ND	4.4
o-Xylene	ND	4.4
Styrene	ND	4.4
Bromoform	ND	4.4
Isopropylbenzene	ND	4.4
1,1,2,2-Tetrachloroethane	ND	4.4
1,2,3-Trichloropropane	ND	4.4
Propylbenzene	ND	4.4
Bromobenzene	ND	4.4
1,3,5-Trimethylbenzene	ND	4.4
2-Chlorotoluene	ND	4.4
4-Chlorotoluene	ND	4.4
tert-Butylbenzene	ND	4.4
1,2,4-Trimethylbenzene	ND	4.4
sec-Butylbenzene	ND	4.4
para-Isopropyl Toluene	ND	4.4
1,3-Dichlorobenzene	ND	4.4
1,4-Dichlorobenzene	ND	4.4
n-Butylbenzene	ND	4.4
1,2-Dichlorobenzene	ND	4.4
1,2-Dibromo-3-Chloropropane	ND	4.4
1,2,4-Trichlorobenzene	ND	4.4
Hexachlorobutadiene	ND	4.4
Naphthalene	ND	4.4
1,2,3-Trichlorobenzene	ND	4.4

Surrogate	%REC	Limits
Dibromofluoromethane	103	78-134
1,2-Dichloroethane-d4	113	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	102	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-02-2	Basis:	as received
Lab ID:	276098-005	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	500	50.00	234280	04/20/16
Chloromethane	ND	500	50.00	234280	04/20/16
Vinyl Chloride	ND	500	50.00	234280	04/20/16
Bromomethane	ND	500	50.00	234280	04/20/16
Chloroethane	ND	500	50.00	234280	04/20/16
Trichlorofluoromethane	ND	250	50.00	234280	04/20/16
Acetone	ND	1,000	50.00	234280	04/20/16
Freon 113	ND	250	50.00	234280	04/20/16
1,1-Dichloroethene	ND	250	50.00	234280	04/20/16
Methylene Chloride	ND	1,000	50.00	234280	04/20/16
Carbon Disulfide	ND	250	50.00	234280	04/20/16
MTBE	ND	250	50.00	234280	04/20/16
trans-1,2-Dichloroethene	ND	250	50.00	234280	04/20/16
Vinyl Acetate	ND	2,500	50.00	234280	04/20/16
1,1-Dichloroethane	ND	250	50.00	234280	04/20/16
2-Butanone	ND	500	50.00	234280	04/20/16
cis-1,2-Dichloroethene	ND	250	50.00	234280	04/20/16
2,2-Dichloropropane	ND	250	50.00	234280	04/20/16
Chloroform	ND	250	50.00	234280	04/20/16
Bromochloromethane	ND	250	50.00	234280	04/20/16
1,1,1-Trichloroethane	ND	250	50.00	234280	04/20/16
1,1-Dichloropropene	ND	250	50.00	234280	04/20/16
Carbon Tetrachloride	ND	250	50.00	234280	04/20/16
1,2-Dichloroethane	ND	250	50.00	234280	04/20/16
Benzene	ND	250	50.00	234280	04/20/16
Trichloroethene	ND	250	50.00	234280	04/20/16
1,2-Dichloropropane	ND	250	50.00	234280	04/20/16
Bromodichloromethane	ND	250	50.00	234280	04/20/16
Dibromomethane	ND	250	50.00	234280	04/20/16
4-Methyl-2-Pentanone	ND	500	50.00	234280	04/20/16
cis-1,3-Dichloropropene	ND	250	50.00	234280	04/20/16
Toluene	ND	250	50.00	234280	04/20/16
trans-1,3-Dichloropropene	ND	250	50.00	234280	04/20/16
1,1,2-Trichloroethane	ND	250	50.00	234280	04/20/16
2-Hexanone	ND	500	50.00	234280	04/20/16
1,3-Dichloropropane	ND	250	50.00	234280	04/20/16
Tetrachloroethene	ND	250	50.00	234280	04/20/16
Dibromochloromethane	ND	250	50.00	234280	04/20/16

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-02-2	Basis:	as received
Lab ID:	276098-005	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,2-Dibromoethane	ND	250	50.00	234280	04/20/16
Chlorobenzene	ND	250	50.00	234280	04/20/16
1,1,1,2-Tetrachloroethane	ND	250	50.00	234280	04/20/16
Ethylbenzene	410	250	50.00	234280	04/20/16
m,p-Xylenes	310	250	50.00	234280	04/20/16
o-Xylene	ND	250	50.00	234280	04/20/16
Styrene	ND	250	50.00	234280	04/20/16
Bromoform	ND	250	50.00	234280	04/20/16
Isopropylbenzene	520	250	50.00	234280	04/20/16
1,1,2,2-Tetrachloroethane	ND	250	50.00	234280	04/20/16
1,2,3-Trichloropropane	ND	250	50.00	234280	04/20/16
Propylbenzene	2,400	250	50.00	234280	04/20/16
Bromobenzene	ND	250	50.00	234280	04/20/16
1,3,5-Trimethylbenzene	ND	250	50.00	234280	04/20/16
2-Chlorotoluene	ND	250	50.00	234280	04/20/16
4-Chlorotoluene	ND	250	50.00	234280	04/20/16
tert-Butylbenzene	ND	250	50.00	234280	04/20/16
1,2,4-Trimethylbenzene	ND	250	50.00	234280	04/20/16
sec-Butylbenzene	670	250	50.00	234280	04/20/16
para-Isopropyl Toluene	ND	250	50.00	234280	04/20/16
1,3-Dichlorobenzene	ND	250	50.00	234280	04/20/16
1,4-Dichlorobenzene	ND	250	50.00	234280	04/20/16
n-Butylbenzene	4,200	500	100.0	234322	04/21/16
1,2-Dichlorobenzene	ND	250	50.00	234280	04/20/16
1,2-Dibromo-3-Chloropropane	ND	250	50.00	234280	04/20/16
1,2,4-Trichlorobenzene	ND	250	50.00	234280	04/20/16
Hexachlorobutadiene	ND	250	50.00	234280	04/20/16
Naphthalene	3,600	250	50.00	234280	04/20/16
1,2,3-Trichlorobenzene	ND	250	50.00	234280	04/20/16

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	95	78-134	50.00	234280	04/20/16
1,2-Dichloroethane-d4	101	80-138	50.00	234280	04/20/16
Toluene-d8	98	80-120	50.00	234280	04/20/16
Bromofluorobenzene	114	78-123	50.00	234280	04/20/16
Trifluorotoluene (MeOH)	102	52-147	50.00	234280	04/20/16

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-02-5	Basis:	as received
Lab ID:	276098-006	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
Freon 12	ND	500		50.00	234191	04/18/16
Chloromethane	ND	500		50.00	234191	04/18/16
Vinyl Chloride	ND	500		50.00	234191	04/18/16
Bromomethane	ND	500		50.00	234191	04/18/16
Chloroethane	ND	500		50.00	234191	04/18/16
Trichlorofluoromethane	ND	250		50.00	234191	04/18/16
Acetone	ND	1,000		50.00	234191	04/18/16
Freon 113	ND	250		50.00	234191	04/18/16
1,1-Dichloroethene	ND	250		50.00	234191	04/18/16
Methylene Chloride	ND	1,000		50.00	234191	04/18/16
Carbon Disulfide	ND	250		50.00	234191	04/18/16
MTBE	ND	250		50.00	234191	04/18/16
trans-1,2-Dichloroethene	ND	250		50.00	234191	04/18/16
Vinyl Acetate	ND	2,500		50.00	234191	04/18/16
1,1-Dichloroethane	ND	250		50.00	234191	04/18/16
2-Butanone	ND	500		50.00	234191	04/18/16
cis-1,2-Dichloroethene	ND	250		50.00	234191	04/18/16
2,2-Dichloropropane	ND	250		50.00	234191	04/18/16
Chloroform	ND	250		50.00	234191	04/18/16
Bromochloromethane	ND	250		50.00	234191	04/18/16
1,1,1-Trichloroethane	ND	250		50.00	234191	04/18/16
1,1-Dichloropropene	ND	250		50.00	234191	04/18/16
Carbon Tetrachloride	ND	250		50.00	234191	04/18/16
1,2-Dichloroethane	ND	250		50.00	234191	04/18/16
Benzene	ND	250		50.00	234191	04/18/16
Trichloroethene	ND	250		50.00	234191	04/18/16
1,2-Dichloropropane	ND	250		50.00	234191	04/18/16
Bromodichloromethane	ND	250		50.00	234191	04/18/16
Dibromomethane	ND	250		50.00	234191	04/18/16
4-Methyl-2-Pentanone	ND	500		50.00	234191	04/18/16
cis-1,3-Dichloropropene	ND	250		50.00	234191	04/18/16
Toluene	ND	250		50.00	234191	04/18/16
trans-1,3-Dichloropropene	ND	250		50.00	234191	04/18/16
1,1,2-Trichloroethane	ND	250		50.00	234191	04/18/16
2-Hexanone	ND	500		50.00	234191	04/18/16
1,3-Dichloropropane	ND	250		50.00	234191	04/18/16
Tetrachloroethene	ND	250		50.00	234191	04/18/16
Dibromochloromethane	ND	250		50.00	234191	04/18/16
1,2-Dibromoethane	ND	250		50.00	234191	04/18/16
Chlorobenzene	ND	250		50.00	234191	04/18/16
1,1,1,2-Tetrachloroethane	ND	250		50.00	234191	04/18/16
Ethylbenzene	4,300	250		50.00	234191	04/18/16
m,p-Xylenes	5,900	250		50.00	234191	04/18/16
o-Xylene	ND	250		50.00	234191	04/18/16
Styrene	ND	250		50.00	234191	04/18/16
Bromoform	ND	250		50.00	234191	04/18/16
Isopropylbenzene	700 J	710	20	142.9	234237	04/19/16
1,1,2,2-Tetrachloroethane	ND	250		50.00	234191	04/18/16
1,2,3-Trichloropropane	ND	250		50.00	234191	04/18/16
Propylbenzene	2,000	710		142.9	234237	04/19/16
Bromobenzene	ND	250		50.00	234191	04/18/16
1,3,5-Trimethylbenzene	3,700	710		142.9	234237	04/19/16
2-Chlorotoluene	ND	250		50.00	234191	04/18/16

J= Estimated value
 ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-02-5	Basis:	as received
Lab ID:	276098-006	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
4-Chlorotoluene	ND	250		50.00	234191	04/18/16
tert-Butylbenzene	ND	250		50.00	234191	04/18/16
1,2,4-Trimethylbenzene	15,000	710		142.9	234237	04/19/16
sec-Butylbenzene	620 J	710	22	142.9	234237	04/19/16
para-Isopropyl Toluene	1,100	710		142.9	234237	04/19/16
1,3-Dichlorobenzene	ND	250		50.00	234191	04/18/16
1,4-Dichlorobenzene	ND	250		50.00	234191	04/18/16
n-Butylbenzene	2,100	710		142.9	234237	04/19/16
1,2-Dichlorobenzene	ND	250		50.00	234191	04/18/16
1,2-Dibromo-3-Chloropropane	ND	250		50.00	234191	04/18/16
1,2,4-Trichlorobenzene	ND	250		50.00	234191	04/18/16
Hexachlorobutadiene	ND	250		50.00	234191	04/18/16
Naphthalene	3,900	710		142.9	234237	04/19/16
1,2,3-Trichlorobenzene	ND	250		50.00	234191	04/18/16

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	94	78-134	50.00	234191	04/18/16
1,2-Dichloroethane-d4	105	80-138	50.00	234191	04/18/16
Toluene-d8	95	80-120	50.00	234191	04/18/16
Bromofluorobenzene	85	78-123	142.9	234237	04/19/16
Trifluorotoluene (MeOH)	124	52-147	50.00	234191	04/18/16

J= Estimated value
 ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-02-8.5	Diln Fac:	0.9843
Lab ID:	276098-008	Batch#:	234237
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.8
Chloromethane	ND	9.8
Vinyl Chloride	ND	9.8
Bromomethane	ND	9.8
Chloroethane	ND	9.8
Trichlorofluoromethane	ND	4.9
Acetone	31	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.8
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.8
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.8
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-02-8.5	Diln Fac:	0.9843
Lab ID:	276098-008	Batch#:	234237
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	93	78-134
1,2-Dichloroethane-d4	110	80-138
Toluene-d8	89	80-120
Bromofluorobenzene	95	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-02-11.5	Diln Fac:	0.9960
Lab ID:	276098-009	Batch#:	234280
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/20/16

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-02-11.5	Diln Fac:	0.9960
Lab ID:	276098-009	Batch#:	234280
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/20/16

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	112	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	101	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-03-5	Diln Fac:	0.9416
Lab ID:	276098-010	Batch#:	234237
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.4
Chloromethane	ND	9.4
Vinyl Chloride	ND	9.4
Bromomethane	ND	9.4
Chloroethane	ND	9.4
Trichlorofluoromethane	ND	4.7
Acetone	83	19
Freon 113	ND	4.7
1,1-Dichloroethene	ND	4.7
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.7
MTBE	ND	4.7
trans-1,2-Dichloroethene	ND	4.7
Vinyl Acetate	ND	47
1,1-Dichloroethane	ND	4.7
2-Butanone	37	9.4
cis-1,2-Dichloroethene	ND	4.7
2,2-Dichloropropane	ND	4.7
Chloroform	ND	4.7
Bromochloromethane	ND	4.7
1,1,1-Trichloroethane	ND	4.7
1,1-Dichloropropene	ND	4.7
Carbon Tetrachloride	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Trichloroethene	ND	4.7
1,2-Dichloropropane	ND	4.7
Bromodichloromethane	ND	4.7
Dibromomethane	ND	4.7
4-Methyl-2-Pentanone	ND	9.4
cis-1,3-Dichloropropene	ND	4.7
Toluene	ND	4.7
trans-1,3-Dichloropropene	ND	4.7
1,1,2-Trichloroethane	ND	4.7
2-Hexanone	ND	9.4
1,3-Dichloropropane	ND	4.7
Tetrachloroethene	ND	4.7

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-03-5	Diln Fac:	0.9416
Lab ID:	276098-010	Batch#:	234237
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Chlorobenzene	ND	4.7
1,1,1,2-Tetrachloroethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Styrene	ND	4.7
Bromoform	ND	4.7
Isopropylbenzene	ND	4.7
1,1,2,2-Tetrachloroethane	ND	4.7
1,2,3-Trichloropropane	ND	4.7
Propylbenzene	ND	4.7
Bromobenzene	ND	4.7
1,3,5-Trimethylbenzene	ND	4.7
2-Chlorotoluene	ND	4.7
4-Chlorotoluene	ND	4.7
tert-Butylbenzene	ND	4.7
1,2,4-Trimethylbenzene	ND	4.7
sec-Butylbenzene	ND	4.7
para-Isopropyl Toluene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
n-Butylbenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7
1,2-Dibromo-3-Chloropropane	ND	4.7
1,2,4-Trichlorobenzene	ND	4.7
Hexachlorobutadiene	ND	4.7
Naphthalene	4.8	4.7
1,2,3-Trichlorobenzene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	96	78-134
1,2-Dichloroethane-d4	113	80-138
Toluene-d8	92	80-120
Bromofluorobenzene	96	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-03-13	Diln Fac:	0.9634
Lab ID:	276098-012	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.6
Chloromethane	ND	9.6
Vinyl Chloride	ND	9.6
Bromomethane	ND	9.6
Chloroethane	ND	9.6
Trichlorofluoromethane	ND	4.8
Acetone	ND	19
Freon 113	ND	4.8
1,1-Dichloroethene	ND	4.8
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.8
MTBE	ND	4.8
trans-1,2-Dichloroethene	ND	4.8
Vinyl Acetate	ND	48
1,1-Dichloroethane	ND	4.8
2-Butanone	ND	9.6
cis-1,2-Dichloroethene	ND	4.8
2,2-Dichloropropane	ND	4.8
Chloroform	ND	4.8
Bromochloromethane	ND	4.8
1,1,1-Trichloroethane	ND	4.8
1,1-Dichloropropene	ND	4.8
Carbon Tetrachloride	ND	4.8
1,2-Dichloroethane	ND	4.8
Benzene	ND	4.8
Trichloroethene	ND	4.8
1,2-Dichloropropane	ND	4.8
Bromodichloromethane	ND	4.8
Dibromomethane	ND	4.8
4-Methyl-2-Pentanone	ND	9.6
cis-1,3-Dichloropropene	ND	4.8
Toluene	ND	4.8
trans-1,3-Dichloropropene	ND	4.8
1,1,2-Trichloroethane	ND	4.8
2-Hexanone	ND	9.6
1,3-Dichloropropane	ND	4.8
Tetrachloroethene	ND	4.8

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-03-13	Diln Fac:	0.9634
Lab ID:	276098-012	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.8
1,2-Dibromoethane	ND	4.8
Chlorobenzene	ND	4.8
1,1,1,2-Tetrachloroethane	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
Styrene	ND	4.8
Bromoform	ND	4.8
Isopropylbenzene	ND	4.8
1,1,2,2-Tetrachloroethane	ND	4.8
1,2,3-Trichloropropane	ND	4.8
Propylbenzene	ND	4.8
Bromobenzene	ND	4.8
1,3,5-Trimethylbenzene	ND	4.8
2-Chlorotoluene	ND	4.8
4-Chlorotoluene	ND	4.8
tert-Butylbenzene	ND	4.8
1,2,4-Trimethylbenzene	ND	4.8
sec-Butylbenzene	ND	4.8
para-Isopropyl Toluene	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
n-Butylbenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8
1,2-Dibromo-3-Chloropropane	ND	4.8
1,2,4-Trichlorobenzene	ND	4.8
Hexachlorobutadiene	ND	4.8
Naphthalene	ND	4.8
1,2,3-Trichlorobenzene	ND	4.8

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	98	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	107	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-04-4.5	Diln Fac:	0.9709
Lab ID:	276098-013	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.7
Chloromethane	ND	9.7
Vinyl Chloride	ND	9.7
Bromomethane	ND	9.7
Chloroethane	ND	9.7
Trichlorofluoromethane	ND	4.9
Acetone	ND	19
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.7
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.7
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.7
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-04-4.5	Diln Fac:	0.9709
Lab ID:	276098-013	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	97	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	107	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-04-4.5D	Diln Fac:	0.9276
Lab ID:	276098-014	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.3
Chloromethane	ND	9.3
Vinyl Chloride	ND	9.3
Bromomethane	ND	9.3
Chloroethane	ND	9.3
Trichlorofluoromethane	ND	4.6
Acetone	ND	19
Freon 113	ND	4.6
1,1-Dichloroethene	ND	4.6
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.6
MTBE	ND	4.6
trans-1,2-Dichloroethene	ND	4.6
Vinyl Acetate	ND	46
1,1-Dichloroethane	ND	4.6
2-Butanone	ND	9.3
cis-1,2-Dichloroethene	ND	4.6
2,2-Dichloropropane	ND	4.6
Chloroform	ND	4.6
Bromochloromethane	ND	4.6
1,1,1-Trichloroethane	ND	4.6
1,1-Dichloropropene	ND	4.6
Carbon Tetrachloride	ND	4.6
1,2-Dichloroethane	ND	4.6
Benzene	ND	4.6
Trichloroethene	ND	4.6
1,2-Dichloropropane	ND	4.6
Bromodichloromethane	ND	4.6
Dibromomethane	ND	4.6
4-Methyl-2-Pentanone	ND	9.3
cis-1,3-Dichloropropene	ND	4.6
Toluene	ND	4.6
trans-1,3-Dichloropropene	ND	4.6
1,1,2-Trichloroethane	ND	4.6
2-Hexanone	ND	9.3
1,3-Dichloropropane	ND	4.6
Tetrachloroethene	ND	4.6

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-04-4.5D	Diln Fac:	0.9276
Lab ID:	276098-014	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Chlorobenzene	ND	4.6
1,1,1,2-Tetrachloroethane	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	ND	4.6
Styrene	ND	4.6
Bromoform	ND	4.6
Isopropylbenzene	ND	4.6
1,1,2,2-Tetrachloroethane	ND	4.6
1,2,3-Trichloropropane	ND	4.6
Propylbenzene	ND	4.6
Bromobenzene	ND	4.6
1,3,5-Trimethylbenzene	ND	4.6
2-Chlorotoluene	ND	4.6
4-Chlorotoluene	ND	4.6
tert-Butylbenzene	ND	4.6
1,2,4-Trimethylbenzene	ND	4.6
sec-Butylbenzene	ND	4.6
para-Isopropyl Toluene	ND	4.6
1,3-Dichlorobenzene	ND	4.6
1,4-Dichlorobenzene	ND	4.6
n-Butylbenzene	ND	4.6
1,2-Dichlorobenzene	ND	4.6
1,2-Dibromo-3-Chloropropane	ND	4.6
1,2,4-Trichlorobenzene	ND	4.6
Hexachlorobutadiene	ND	4.6
Naphthalene	ND	4.6
1,2,3-Trichlorobenzene	ND	4.6

Surrogate	%REC	Limits
Dibromofluoromethane	103	78-134
1,2-Dichloroethane-d4	98	80-138
Toluene-d8	100	80-120
Bromofluorobenzene	110	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-04-12.5	Diln Fac:	0.9728
Lab ID:	276098-015	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.7
Chloromethane	ND	9.7
Vinyl Chloride	ND	9.7
Bromomethane	ND	9.7
Chloroethane	ND	9.7
Trichlorofluoromethane	ND	4.9
Acetone	ND	19
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.7
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.7
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.7
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-04-12.5	Diln Fac:	0.9728
Lab ID:	276098-015	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	96	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	108	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-05-4	Diln Fac:	0.9843
Lab ID:	276098-017	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.8
Chloromethane	ND	9.8
Vinyl Chloride	ND	9.8
Bromomethane	ND	9.8
Chloroethane	ND	9.8
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.8
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.8
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.8
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-05-4	Diln Fac:	0.9843
Lab ID:	276098-017	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	97	78-134
1,2-Dichloroethane-d4	90	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	108	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-06-4.5	Diln Fac:	0.9901
Lab ID:	276098-020	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-06-4.5	Diln Fac:	0.9901
Lab ID:	276098-020	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	99	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	109	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-06-10	Diln Fac:	0.9785
Lab ID:	276098-021	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.8
Chloromethane	ND	9.8
Vinyl Chloride	ND	9.8
Bromomethane	ND	9.8
Chloroethane	ND	9.8
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.8
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.8
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.8
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-06-10	Diln Fac:	0.9785
Lab ID:	276098-021	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	99	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	109	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-07-4.5	Diln Fac:	0.9747
Lab ID:	276098-022	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.7
Chloromethane	ND	9.7
Vinyl Chloride	ND	9.7
Bromomethane	ND	9.7
Chloroethane	ND	9.7
Trichlorofluoromethane	ND	4.9
Acetone	ND	19
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.7
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.7
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.7
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-07-4.5	Diln Fac:	0.9747
Lab ID:	276098-022	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	103	78-134
1,2-Dichloroethane-d4	100	80-138
Toluene-d8	100	80-120
Bromofluorobenzene	107	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-08-3	Diln Fac:	0.9823
Lab ID:	276098-025	Batch#:	234191
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/18/16

Analyte	Result	RL
Freon 12	ND	9.8
Chloromethane	ND	9.8
Vinyl Chloride	ND	9.8
Bromomethane	ND	9.8
Chloroethane	ND	9.8
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.8
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.8
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.8
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-08-3	Diln Fac:	0.9823
Lab ID:	276098-025	Batch#:	234191
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/18/16

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	98	78-134
1,2-Dichloroethane-d4	97	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	99	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-08-7	Diln Fac:	0.9225
Lab ID:	276098-026	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Freon 12	ND	9.2
Chloromethane	ND	9.2
Vinyl Chloride	ND	9.2
Bromomethane	ND	9.2
Chloroethane	ND	9.2
Trichlorofluoromethane	ND	4.6
Acetone	ND	18
Freon 113	ND	4.6
1,1-Dichloroethene	ND	4.6
Methylene Chloride	ND	18
Carbon Disulfide	ND	4.6
MTBE	ND	4.6
trans-1,2-Dichloroethene	ND	4.6
Vinyl Acetate	ND	46
1,1-Dichloroethane	ND	4.6
2-Butanone	ND	9.2
cis-1,2-Dichloroethene	ND	4.6
2,2-Dichloropropane	ND	4.6
Chloroform	ND	4.6
Bromochloromethane	ND	4.6
1,1,1-Trichloroethane	ND	4.6
1,1-Dichloropropene	ND	4.6
Carbon Tetrachloride	ND	4.6
1,2-Dichloroethane	ND	4.6
Benzene	ND	4.6
Trichloroethene	ND	4.6
1,2-Dichloropropane	ND	4.6
Bromodichloromethane	ND	4.6
Dibromomethane	ND	4.6
4-Methyl-2-Pentanone	ND	9.2
cis-1,3-Dichloropropene	ND	4.6
Toluene	ND	4.6
trans-1,3-Dichloropropene	ND	4.6
1,1,2-Trichloroethane	ND	4.6
2-Hexanone	ND	9.2
1,3-Dichloropropane	ND	4.6
Tetrachloroethene	ND	4.6

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-08-7	Diln Fac:	0.9225
Lab ID:	276098-026	Batch#:	234241
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/19/16

Analyte	Result	RL
Dibromochloromethane	ND	4.6
1,2-Dibromoethane	ND	4.6
Chlorobenzene	ND	4.6
1,1,1,2-Tetrachloroethane	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	ND	4.6
Styrene	ND	4.6
Bromoform	ND	4.6
Isopropylbenzene	ND	4.6
1,1,2,2-Tetrachloroethane	ND	4.6
1,2,3-Trichloropropane	ND	4.6
Propylbenzene	ND	4.6
Bromobenzene	ND	4.6
1,3,5-Trimethylbenzene	ND	4.6
2-Chlorotoluene	ND	4.6
4-Chlorotoluene	ND	4.6
tert-Butylbenzene	ND	4.6
1,2,4-Trimethylbenzene	ND	4.6
sec-Butylbenzene	ND	4.6
para-Isopropyl Toluene	ND	4.6
1,3-Dichlorobenzene	ND	4.6
1,4-Dichlorobenzene	ND	4.6
n-Butylbenzene	ND	4.6
1,2-Dichlorobenzene	ND	4.6
1,2-Dibromo-3-Chloropropane	ND	4.6
1,2,4-Trichlorobenzene	ND	4.6
Hexachlorobutadiene	ND	4.6
Naphthalene	ND	4.6
1,2,3-Trichlorobenzene	ND	4.6

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	100	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	108	78-123

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-10-4	Diln Fac:	0.9881
Lab ID:	276098-029	Batch#:	234191
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/18/16

Analyte	Result	RL
Freon 12	ND	9.9
Chloromethane	ND	9.9
Vinyl Chloride	ND	9.9
Bromomethane	ND	9.9
Chloroethane	ND	9.9
Trichlorofluoromethane	ND	4.9
Acetone	ND	20
Freon 113	ND	4.9
1,1-Dichloroethene	ND	4.9
Methylene Chloride	ND	20
Carbon Disulfide	ND	4.9
MTBE	ND	4.9
trans-1,2-Dichloroethene	ND	4.9
Vinyl Acetate	ND	49
1,1-Dichloroethane	ND	4.9
2-Butanone	ND	9.9
cis-1,2-Dichloroethene	ND	4.9
2,2-Dichloropropane	ND	4.9
Chloroform	ND	4.9
Bromochloromethane	ND	4.9
1,1,1-Trichloroethane	ND	4.9
1,1-Dichloropropene	ND	4.9
Carbon Tetrachloride	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Trichloroethene	ND	4.9
1,2-Dichloropropane	ND	4.9
Bromodichloromethane	ND	4.9
Dibromomethane	ND	4.9
4-Methyl-2-Pentanone	ND	9.9
cis-1,3-Dichloropropene	ND	4.9
Toluene	ND	4.9
trans-1,3-Dichloropropene	ND	4.9
1,1,2-Trichloroethane	ND	4.9
2-Hexanone	ND	9.9
1,3-Dichloropropane	ND	4.9
Tetrachloroethene	ND	4.9

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-SB-10-4	Diln Fac:	0.9881
Lab ID:	276098-029	Batch#:	234191
Matrix:	Soil	Sampled:	04/16/16
Units:	ug/Kg	Received:	04/18/16
Basis:	as received	Analyzed:	04/18/16

Analyte	Result	RL
Dibromochloromethane	ND	4.9
1,2-Dibromoethane	ND	4.9
Chlorobenzene	ND	4.9
1,1,1,2-Tetrachloroethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
Styrene	ND	4.9
Bromoform	ND	4.9
Isopropylbenzene	ND	4.9
1,1,2,2-Tetrachloroethane	ND	4.9
1,2,3-Trichloropropane	ND	4.9
Propylbenzene	ND	4.9
Bromobenzene	ND	4.9
1,3,5-Trimethylbenzene	ND	4.9
2-Chlorotoluene	ND	4.9
4-Chlorotoluene	ND	4.9
tert-Butylbenzene	ND	4.9
1,2,4-Trimethylbenzene	ND	4.9
sec-Butylbenzene	ND	4.9
para-Isopropyl Toluene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
n-Butylbenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9
1,2-Dibromo-3-Chloropropane	ND	4.9
1,2,4-Trichlorobenzene	ND	4.9
Hexachlorobutadiene	ND	4.9
Naphthalene	ND	4.9
1,2,3-Trichlorobenzene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	116	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	102	78-123

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC831957	Batch#: 234191
Matrix:	Soil	Analyzed: 04/18/16
Units:	ug/Kg	

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	27.44	110	70-134
Benzene	25.00	29.58	118	80-123
Trichloroethene	25.00	26.91	108	80-128
Toluene	25.00	26.22	105	80-120
Chlorobenzene	25.00	26.43	106	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	112	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	93	78-123

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC831958	Batch#: 234191
Matrix:	Soil	Analyzed: 04/18/16
Units:	ug/Kg	

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC831958	Batch#: 234191
Matrix:	Soil	Analyzed: 04/18/16
Units:	ug/Kg	

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	109	80-138
Toluene-d8	100	80-120
Bromofluorobenzene	102	78-123

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS					
Lab #:	276098	Location:	Ellwood Commercial Real Estate		
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8260B		
Field ID:	SGI-SB-08-3	Batch#:	234191		
MSS Lab ID:	276098-025	Sampled:	04/16/16		
Matrix:	Soil	Received:	04/18/16		
Units:	ug/Kg	Analyzed:	04/18/16		
Basis:	as received				

Type: MS Diln Fac: 0.9634
 Lab ID: QC832032

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.9230	48.17	54.60	113	56-133
Benzene	<0.8863	48.17	57.17	119	57-120
Trichloroethene	<0.8204	48.17	57.19	119	49-145
Toluene	<0.6987	48.17	51.94	108	51-120
Chlorobenzene	<0.6740	48.17	51.91	108	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	96	78-134
1,2-Dichloroethane-d4	99	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	93	78-123

Type: MSD Diln Fac: 0.9615
 Lab ID: QC832033

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	48.08	56.44	117	56-133	4	46
Benzene	48.08	57.79	120	57-120	1	44
Trichloroethene	48.08	56.95	118	49-145	0	46
Toluene	48.08	51.65	107	51-120	0	47
Chlorobenzene	48.08	50.75	106	47-120	2	50

Surrogate	%REC	Limits
Dibromofluoromethane	96	78-134
1,2-Dichloroethane-d4	99	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	92	78-123

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832152	Batch#: 234237
Matrix:	Soil	Analyzed: 04/19/16
Units:	ug/Kg	

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	28.99	116	70-134
Benzene	25.00	27.74	111	80-123
Trichloroethene	25.00	28.19	113	80-128
Toluene	25.00	24.53	98	80-120
Chlorobenzene	25.00	25.38	102	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	92	78-134
1,2-Dichloroethane-d4	108	80-138
Toluene-d8	92	80-120
Bromofluorobenzene	90	78-123

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832153	Batch#: 234237
Matrix:	Soil	Analyzed: 04/19/16
Units:	ug/Kg	

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832153	Batch#: 234237
Matrix:	Soil	Analyzed: 04/19/16
Units:	ug/Kg	

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	94	78-134
1,2-Dichloroethane-d4	108	80-138
Toluene-d8	94	80-120
Bromofluorobenzene	97	78-123

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832161	Batch#: 234241
Matrix:	Soil	Analyzed: 04/19/16
Units:	ug/Kg	

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.14	93	70-134
Benzene	25.00	23.55	94	80-123
Trichloroethene	25.00	24.58	98	80-128
Toluene	25.00	23.95	96	80-120
Chlorobenzene	25.00	25.74	103	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	97	78-134
1,2-Dichloroethane-d4	93	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	99	78-123

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832162	Batch#: 234241
Matrix:	Soil	Analyzed: 04/19/16
Units:	ug/Kg	

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832162	Batch#: 234241
Matrix:	Soil	Analyzed: 04/19/16
Units:	ug/Kg	

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	98	78-134
1,2-Dichloroethane-d4	97	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	104	78-123

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS					
Lab #:	276098	Location:	Ellwood Commercial Real Estate		
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8260B		
Field ID:	ZZZZZZZZZZ	Batch#:	234237		
MSS Lab ID:	276109-002	Sampled:	04/18/16		
Matrix:	Soil	Received:	04/18/16		
Units:	ug/Kg	Analyzed:	04/19/16		
Basis:	as received				

Type: MS Diln Fac: 0.9843
 Lab ID: QC832169

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5616	49.21	53.43	109	56-133
Benzene	<0.6543	49.21	50.04	102	57-120
Trichloroethene	<0.6815	49.21	52.11	106	49-145
Toluene	<0.7167	49.21	40.80	83	51-120
Chlorobenzene	<0.5875	49.21	40.44	82	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	91	78-134
1,2-Dichloroethane-d4	110	80-138
Toluene-d8	90	80-120
Bromofluorobenzene	90	78-123

Type: MSD Diln Fac: 0.9728
 Lab ID: QC832170

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	48.64	54.13	111	56-133	2	46
Benzene	48.64	50.57	104	57-120	2	44
Trichloroethene	48.64	56.60	116	49-145	9	46
Toluene	48.64	42.31	87	51-120	5	47
Chlorobenzene	48.64	42.16	87	47-120	5	50

Surrogate	%REC	Limits
Dibromofluoromethane	92	78-134
1,2-Dichloroethane-d4	110	80-138
Toluene-d8	89	80-120
Bromofluorobenzene	89	78-123

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS					
Lab #:	276098	Location: Ellwood Commercial Real Estate			
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8260B		
Field ID:	SGI-SB-03-13	Batch#:	234241		
MSS Lab ID:	276098-012	Sampled:	04/16/16		
Matrix:	Soil	Received:	04/18/16		
Units:	ug/Kg	Analyzed:	04/20/16		
Basis:	as received				

Type: MS Diln Fac: 0.9804
 Lab ID: QC832202

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.4444	49.02	43.00	88	56-133
Benzene	<0.4945	49.02	41.53	85	57-120
Trichloroethene	<0.4921	49.02	45.52	93	49-145
Toluene	<0.4070	49.02	40.73	83	51-120
Chlorobenzene	<0.6998	49.02	42.05	86	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	99	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	101	78-123

Type: MSD Diln Fac: 1.000
 Lab ID: QC832203

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	50.00	46.86	94	56-133	7	46
Benzene	50.00	47.15	94	57-120	11	44
Trichloroethene	50.00	50.46	101	49-145	8	46
Toluene	50.00	47.32	95	51-120	13	47
Chlorobenzene	50.00	50.51	101	47-120	16	50

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-134
1,2-Dichloroethane-d4	97	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	99	78-123

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832334	Batch#: 234280
Matrix:	Soil	Analyzed: 04/20/16
Units:	ug/Kg	

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	23.59	94	70-134
Benzene	25.00	28.27	113	80-123
Trichloroethene	25.00	25.10	100	80-128
Toluene	25.00	25.34	101	80-120
Chlorobenzene	25.00	25.53	102	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	94	78-134
1,2-Dichloroethane-d4	106	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	93	78-123

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832336	Batch#: 234280
Matrix:	Soil	Analyzed: 04/20/16
Units:	ug/Kg	

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832336	Batch#: 234280
Matrix:	Soil	Analyzed: 04/20/16
Units:	ug/Kg	

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	103	78-134
1,2-Dichloroethane-d4	109	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	100	78-123

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS					
Lab #:	276098	Location:	Ellwood Commercial Real Estate		
Client:	The Source Group, Inc.	Prep:	EPA 5030B		
Project#:	01-ECR-001	Analysis:	EPA 8260B		
Field ID:	SGI-SB-02-11.5	Batch#:	234280		
MSS Lab ID:	276098-009	Sampled:	04/16/16		
Matrix:	Soil	Received:	04/18/16		
Units:	ug/Kg	Analyzed:	04/20/16		
Basis:	as received				

Type: MS Diln Fac: 0.9747
 Lab ID: QC832373

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.9359	48.73	51.42	106	56-133
Benzene	<0.8987	48.73	57.08	117	57-120
Trichloroethene	<0.8318	48.73	53.01	109	49-145
Toluene	<0.7085	48.73	50.13	103	51-120
Chlorobenzene	<0.6834	48.73	49.74	102	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	114	80-138
Toluene-d8	97	80-120
Bromofluorobenzene	92	78-123

Type: MSD Diln Fac: 1.000
 Lab ID: QC832374

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	50.00	56.10	112	56-133	6	46
Benzene	50.00	58.03	116	57-120	1	44
Trichloroethene	50.00	54.22	108	49-145	0	46
Toluene	50.00	52.27	105	51-120	2	47
Chlorobenzene	50.00	51.37	103	47-120	1	50

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	109	80-138
Toluene-d8	96	80-120
Bromofluorobenzene	95	78-123

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Matrix:	Soil	Batch#: 234322
Units:	ug/Kg	Analyzed: 04/21/16
Diln Fac:	1.000	

Type: BS Lab ID: QC832499

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	22.05	88	70-134
Benzene	25.00	25.36	101	80-123
Trichloroethene	25.00	22.32	89	80-128
Toluene	25.00	22.96	92	80-120
Chlorobenzene	25.00	23.31	93	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-134
1,2-Dichloroethane-d4	98	80-138
Toluene-d8	101	80-120
Bromofluorobenzene	95	78-123

Type: BSD Lab ID: QC832500

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	19.86	79	70-134	10	22
Benzene	25.00	23.17	93	80-123	9	21
Trichloroethene	25.00	20.74	83	80-128	7	23
Toluene	25.00	20.07	80	80-120	13	20
Chlorobenzene	25.00	20.59	82	80-123	12	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	105	80-138
Toluene-d8	99	80-120
Bromofluorobenzene	92	78-123

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832501	Batch#: 234322
Matrix:	Soil	Analyzed: 04/21/16
Units:	ug/Kg	

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832501	Batch#: 234322
Matrix:	Soil	Analyzed: 04/21/16
Units:	ug/Kg	

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	106	80-138
Toluene-d8	98	80-120
Bromofluorobenzene	103	78-123

ND= Not Detected

RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-01-3	Batch#:	234249
Lab ID:	276098-001	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/19/16
Basis:	as received	Analyzed:	04/25/16
Diln Fac:	10.00		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	3,300
Phenol	ND	3,300
bis(2-Chloroethyl)ether	ND	3,300
2-Chlorophenol	ND	3,300
1,3-Dichlorobenzene	ND	3,300
1,4-Dichlorobenzene	ND	3,300
Benzyl alcohol	ND	3,300
1,2-Dichlorobenzene	ND	3,300
2-Methylphenol	ND	3,300
bis(2-Chloroisopropyl) ether	ND	3,300
4-Methylphenol	ND	3,300
N-Nitroso-di-n-propylamine	ND	3,300
Hexachloroethane	ND	3,300
Nitrobenzene	ND	3,300
Isophorone	ND	3,300
2-Nitrophenol	ND	6,700
2,4-Dimethylphenol	ND	3,300
Benzoic acid	ND	17,000
bis(2-Chloroethoxy)methane	ND	3,300
2,4-Dichlorophenol	ND	3,300
1,2,4-Trichlorobenzene	ND	3,300
Naphthalene	2,300	670
4-Chloroaniline	ND	3,300
Hexachlorobutadiene	ND	3,300
4-Chloro-3-methylphenol	ND	3,300
2-Methylnaphthalene	5,500	670
Hexachlorocyclopentadiene	ND	6,700
2,4,6-Trichlorophenol	ND	3,300
2,4,5-Trichlorophenol	ND	3,300
2-Chloronaphthalene	ND	3,300
2-Nitroaniline	ND	6,700
Dimethylphthalate	ND	3,300
Acenaphthylene	ND	670
2,6-Dinitrotoluene	ND	3,300
3-Nitroaniline	ND	6,700
Acenaphthene	ND	670
2,4-Dinitrophenol	ND	6,700
4-Nitrophenol	ND	6,700
Dibenzofuran	ND	3,300
2,4-Dinitrotoluene	ND	3,300
Diethylphthalate	ND	3,300
Fluorene	ND	670
4-Chlorophenyl-phenylether	ND	3,300
4-Nitroaniline	ND	6,700
4,6-Dinitro-2-methylphenol	ND	6,700
N-Nitrosodiphenylamine	ND	3,300
Azobenzene	ND	3,300
4-Bromophenyl-phenylether	ND	3,300
Hexachlorobenzene	ND	3,300
Pentachlorophenol	ND	6,700
Phenanthrene	760	670
Anthracene	ND	670

DO= Diluted Out
 ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-01-3	Batch#: 234249
Lab ID:	276098-001	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/19/16
Basis:	as received	Analyzed: 04/25/16
Diln Fac:	10.00	

Analyte	Result	RL
Di-n-butylphthalate	ND	3,300
Fluoranthene	ND	670
Pyrene	ND	670
Butylbenzylphthalate	ND	3,300
3,3'-Dichlorobenzidine	ND	6,700
Benzo(a)anthracene	ND	670
Chrysene	ND	670
bis(2-Ethylhexyl)phthalate	ND	3,300
Di-n-octylphthalate	ND	3,300
Benzo(b)fluoranthene	ND	670
Benzo(k)fluoranthene	ND	670
Benzo(a)pyrene	ND	670
Indeno(1,2,3-cd)pyrene	ND	670
Dibenz(a,h)anthracene	ND	670
Benzo(g,h,i)perylene	ND	670

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
 ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-01-5.5	Batch#:	234208
Lab ID:	276098-002	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/18/16
Basis:	as received	Analyzed:	04/19/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	1,500	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	1,200	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-01-5.5	Batch#: 234208
Lab ID:	276098-002	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/18/16
Basis:	as received	Analyzed: 04/19/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	66
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	92	25-120
Phenol-d5	89	36-120
2,4,6-Tribromophenol	93	27-120
Nitrobenzene-d5	78	44-120
2-Fluorobiphenyl	64	47-120
Terphenyl-d14	66	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-01-8.5	Batch#:	234249
Lab ID:	276098-003	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/19/16
Basis:	as received	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-01-8.5	Batch#: 234249
Lab ID:	276098-003	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/19/16
Basis:	as received	Analyzed: 04/22/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	66
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	62	25-120
Phenol-d5	60	36-120
2,4,6-Tribromophenol	91	27-120
Nitrobenzene-d5	52	44-120
2-Fluorobiphenyl	60	47-120
Terphenyl-d14	64	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SIG-SB-01-10	Batch#:	234289
Lab ID:	276098-004	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/21/16
Basis:	as received	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	340
Phenol	ND	340
bis(2-Chloroethyl)ether	ND	340
2-Chlorophenol	ND	340
1,3-Dichlorobenzene	ND	340
1,4-Dichlorobenzene	ND	340
Benzyl alcohol	ND	340
1,2-Dichlorobenzene	ND	340
2-Methylphenol	ND	340
bis(2-Chloroisopropyl) ether	ND	340
4-Methylphenol	ND	340
N-Nitroso-di-n-propylamine	ND	340
Hexachloroethane	ND	340
Nitrobenzene	ND	340
Isophorone	ND	340
2-Nitrophenol	ND	670
2,4-Dimethylphenol	ND	340
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	340
2,4-Dichlorophenol	ND	340
1,2,4-Trichlorobenzene	ND	340
Naphthalene	ND	67
4-Chloroaniline	ND	340
Hexachlorobutadiene	ND	340
4-Chloro-3-methylphenol	ND	340
2-Methylnaphthalene	ND	67
Hexachlorocyclopentadiene	ND	670
2,4,6-Trichlorophenol	ND	340
2,4,5-Trichlorophenol	ND	340
2-Chloronaphthalene	ND	340
2-Nitroaniline	ND	670
Dimethylphthalate	ND	340
Acenaphthylene	ND	67
2,6-Dinitrotoluene	ND	340
3-Nitroaniline	ND	670
Acenaphthene	ND	67
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
Dibenzofuran	ND	340
2,4-Dinitrotoluene	ND	340
Diethylphthalate	ND	340
Fluorene	ND	67
4-Chlorophenyl-phenylether	ND	340
4-Nitroaniline	ND	670
4,6-Dinitro-2-methylphenol	ND	670
N-Nitrosodiphenylamine	ND	340
Azobenzene	ND	340
4-Bromophenyl-phenylether	ND	340
Hexachlorobenzene	ND	340
Pentachlorophenol	ND	670
Phenanthrene	ND	67
Anthracene	ND	67
Di-n-butylphthalate	ND	340

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-01-10	Batch#: 234289
Lab ID:	276098-004	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/21/16
Basis:	as received	Analyzed: 04/22/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	67
Pyrene	ND	67
Butylbenzylphthalate	ND	340
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	67
Chrysene	ND	67
bis(2-Ethylhexyl)phthalate	ND	340
Di-n-octylphthalate	ND	340
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67
Benzo(g,h,i)perylene	ND	67

Surrogate	%REC	Limits
2-Fluorophenol	71	25-120
Phenol-d5	69	36-120
2,4,6-Tribromophenol	91	27-120
Nitrobenzene-d5	62	44-120
2-Fluorobiphenyl	75	47-120
Terphenyl-d14	72	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-02-2	Batch#:	234249
Lab ID:	276098-005	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/19/16
Basis:	as received	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	1,100	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	1,300	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-02-2	Batch#: 234249
Lab ID:	276098-005	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/19/16
Basis:	as received	Analyzed: 04/22/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	66
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	72	25-120
Phenol-d5	60	36-120
2,4,6-Tribromophenol	92	27-120
Nitrobenzene-d5	57	44-120
2-Fluorobiphenyl	69	47-120
Terphenyl-d14	62	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-02-5	Batch#:	234289
Lab ID:	276098-006	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/21/16
Basis:	as received	Analyzed:	04/22/16
Diln Fac:	10.00		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	3,300
Phenol	ND	3,300
bis(2-Chloroethyl)ether	ND	3,300
2-Chlorophenol	ND	3,300
1,3-Dichlorobenzene	ND	3,300
1,4-Dichlorobenzene	ND	3,300
Benzyl alcohol	ND	3,300
1,2-Dichlorobenzene	ND	3,300
2-Methylphenol	ND	3,300
bis(2-Chloroisopropyl) ether	ND	3,300
4-Methylphenol	ND	3,300
N-Nitroso-di-n-propylamine	ND	3,300
Hexachloroethane	ND	3,300
Nitrobenzene	ND	3,300
Isophorone	ND	3,300
2-Nitrophenol	ND	6,600
2,4-Dimethylphenol	ND	3,300
Benzoic acid	ND	17,000
bis(2-Chloroethoxy)methane	ND	3,300
2,4-Dichlorophenol	ND	3,300
1,2,4-Trichlorobenzene	ND	3,300
Naphthalene	3,200	660
4-Chloroaniline	ND	3,300
Hexachlorobutadiene	ND	3,300
4-Chloro-3-methylphenol	ND	3,300
2-Methylnaphthalene	1,300	660
Hexachlorocyclopentadiene	ND	6,600
2,4,6-Trichlorophenol	ND	3,300
2,4,5-Trichlorophenol	ND	3,300
2-Chloronaphthalene	ND	3,300
2-Nitroaniline	ND	6,600
Dimethylphthalate	ND	3,300
Acenaphthylene	ND	660
2,6-Dinitrotoluene	ND	3,300
3-Nitroaniline	ND	6,600
Acenaphthene	ND	660
2,4-Dinitrophenol	ND	6,600
4-Nitrophenol	ND	6,600
Dibenzofuran	ND	3,300
2,4-Dinitrotoluene	ND	3,300
Diethylphthalate	ND	3,300
Fluorene	ND	660
4-Chlorophenyl-phenylether	ND	3,300
4-Nitroaniline	ND	6,600
4,6-Dinitro-2-methylphenol	ND	6,600
N-Nitrosodiphenylamine	ND	3,300
Azobenzene	ND	3,300
4-Bromophenyl-phenylether	ND	3,300
Hexachlorobenzene	ND	3,300
Pentachlorophenol	ND	6,600
Phenanthrene	ND	660
Anthracene	ND	660

DO= Diluted Out
 ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-02-5	Batch#: 234289
Lab ID:	276098-006	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/21/16
Basis:	as received	Analyzed: 04/22/16
Diln Fac:	10.00	

Analyte	Result	RL
Di-n-butylphthalate	ND	3,300
Fluoranthene	ND	660
Pyrene	ND	660
Butylbenzylphthalate	ND	3,300
3,3'-Dichlorobenzidine	ND	6,600
Benzo(a)anthracene	ND	660
Chrysene	ND	660
bis(2-Ethylhexyl)phthalate	ND	3,300
Di-n-octylphthalate	ND	3,300
Benzo(b)fluoranthene	ND	660
Benzo(k)fluoranthene	ND	660
Benzo(a)pyrene	ND	660
Indeno(1,2,3-cd)pyrene	ND	660
Dibenz(a,h)anthracene	ND	660
Benzo(g,h,i)perylene	ND	660

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
 ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-02-8.5	Batch#:	234249
Lab ID:	276098-008	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/19/16
Basis:	as received	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	340
Phenol	ND	340
bis(2-Chloroethyl)ether	ND	340
2-Chlorophenol	ND	340
1,3-Dichlorobenzene	ND	340
1,4-Dichlorobenzene	ND	340
Benzyl alcohol	ND	340
1,2-Dichlorobenzene	ND	340
2-Methylphenol	ND	340
bis(2-Chloroisopropyl) ether	ND	340
4-Methylphenol	ND	340
N-Nitroso-di-n-propylamine	ND	340
Hexachloroethane	ND	340
Nitrobenzene	ND	340
Isophorone	ND	340
2-Nitrophenol	ND	670
2,4-Dimethylphenol	ND	340
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	340
2,4-Dichlorophenol	ND	340
1,2,4-Trichlorobenzene	ND	340
Naphthalene	ND	67
4-Chloroaniline	ND	340
Hexachlorobutadiene	ND	340
4-Chloro-3-methylphenol	ND	340
2-Methylnaphthalene	ND	67
Hexachlorocyclopentadiene	ND	670
2,4,6-Trichlorophenol	ND	340
2,4,5-Trichlorophenol	ND	340
2-Chloronaphthalene	ND	340
2-Nitroaniline	ND	670
Dimethylphthalate	ND	340
Acenaphthylene	ND	67
2,6-Dinitrotoluene	ND	340
3-Nitroaniline	ND	670
Acenaphthene	ND	67
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
Dibenzofuran	ND	340
2,4-Dinitrotoluene	ND	340
Diethylphthalate	ND	340
Fluorene	ND	67
4-Chlorophenyl-phenylether	ND	340
4-Nitroaniline	ND	670
4,6-Dinitro-2-methylphenol	ND	670
N-Nitrosodiphenylamine	ND	340
Azobenzene	ND	340
4-Bromophenyl-phenylether	ND	340
Hexachlorobenzene	ND	340
Pentachlorophenol	ND	670
Phenanthrene	ND	67
Anthracene	ND	67
Di-n-butylphthalate	ND	340

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-02-8.5	Batch#: 234249
Lab ID:	276098-008	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/19/16
Basis:	as received	Analyzed: 04/22/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	67
Pyrene	ND	67
Butylbenzylphthalate	ND	340
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	67
Chrysene	ND	67
bis(2-Ethylhexyl)phthalate	ND	340
Di-n-octylphthalate	ND	340
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67
Benzo(g,h,i)perylene	ND	67

Surrogate	%REC	Limits
2-Fluorophenol	63	25-120
Phenol-d5	59	36-120
2,4,6-Tribromophenol	89	27-120
Nitrobenzene-d5	52	44-120
2-Fluorobiphenyl	60	47-120
Terphenyl-d14	66	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SIG-SB-02-11.5	Batch#:	234249
Lab ID:	276098-009	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/19/16
Basis:	as received	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-02-11.5	Batch#: 234249
Lab ID:	276098-009	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/19/16
Basis:	as received	Analyzed: 04/22/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	66
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	64	25-120
Phenol-d5	64	36-120
2,4,6-Tribromophenol	83	27-120
Nitrobenzene-d5	54	44-120
2-Fluorobiphenyl	50	47-120
Terphenyl-d14	68	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-03-5	Batch#:	234208
Lab ID:	276098-010	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/18/16
Basis:	as received	Analyzed:	04/19/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,600
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	100	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	100	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-03-5	Batch#: 234208
Lab ID:	276098-010	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/18/16
Basis:	as received	Analyzed: 04/19/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	66
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	92	25-120
Phenol-d5	88	36-120
2,4,6-Tribromophenol	93	27-120
Nitrobenzene-d5	77	44-120
2-Fluorobiphenyl	59	47-120
Terphenyl-d14	69	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SIG-SB-03-13	Batch#:	234249
Lab ID:	276098-012	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/19/16
Basis:	as received	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	670
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	67
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	67
Hexachlorocyclopentadiene	ND	670
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	670
Dimethylphthalate	ND	330
Acenaphthylene	ND	67
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	670
Acenaphthene	ND	67
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	67
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	670
4,6-Dinitro-2-methylphenol	ND	670
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	670
Phenanthrene	ND	67
Anthracene	ND	67
Di-n-butylphthalate	ND	330

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-03-13	Batch#: 234249
Lab ID:	276098-012	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/19/16
Basis:	as received	Analyzed: 04/22/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	67
Pyrene	ND	67
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	67
Chrysene	ND	67
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67
Benzo(g,h,i)perylene	ND	67

Surrogate	%REC	Limits
2-Fluorophenol	70	25-120
Phenol-d5	69	36-120
2,4,6-Tribromophenol	88	27-120
Nitrobenzene-d5	63	44-120
2-Fluorobiphenyl	74	47-120
Terphenyl-d14	74	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-08-3	Batch#:	234208
Lab ID:	276098-025	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/18/16
Basis:	as received	Analyzed:	04/19/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,600
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-08-3	Batch#: 234208
Lab ID:	276098-025	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/18/16
Basis:	as received	Analyzed: 04/19/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	66
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	97	25-120
Phenol-d5	93	36-120
2,4,6-Tribromophenol	94	27-120
Nitrobenzene-d5	81	44-120
2-Fluorobiphenyl	70	47-120
Terphenyl-d14	69	49-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-SB-08-7	Batch#:	234249
Lab ID:	276098-026	Sampled:	04/16/16
Matrix:	Soil	Received:	04/18/16
Units:	ug/Kg	Prepared:	04/19/16
Basis:	as received	Analyzed:	04/23/16
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	340
Phenol	ND	340
bis(2-Chloroethyl)ether	ND	340
2-Chlorophenol	ND	340
1,3-Dichlorobenzene	ND	340
1,4-Dichlorobenzene	ND	340
Benzyl alcohol	ND	340
1,2-Dichlorobenzene	ND	340
2-Methylphenol	ND	340
bis(2-Chloroisopropyl) ether	ND	340
4-Methylphenol	ND	340
N-Nitroso-di-n-propylamine	ND	340
Hexachloroethane	ND	340
Nitrobenzene	ND	340
Isophorone	ND	340
2-Nitrophenol	ND	670
2,4-Dimethylphenol	ND	340
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	340
2,4-Dichlorophenol	ND	340
1,2,4-Trichlorobenzene	ND	340
Naphthalene	ND	67
4-Chloroaniline	ND	340
Hexachlorobutadiene	ND	340
4-Chloro-3-methylphenol	ND	340
2-Methylnaphthalene	ND	67
Hexachlorocyclopentadiene	ND	670
2,4,6-Trichlorophenol	ND	340
2,4,5-Trichlorophenol	ND	340
2-Chloronaphthalene	ND	340
2-Nitroaniline	ND	670
Dimethylphthalate	ND	340
Acenaphthylene	ND	67
2,6-Dinitrotoluene	ND	340
3-Nitroaniline	ND	670
Acenaphthene	ND	67
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
Dibenzofuran	ND	340
2,4-Dinitrotoluene	ND	340
Diethylphthalate	ND	340
Fluorene	ND	67
4-Chlorophenyl-phenylether	ND	340
4-Nitroaniline	ND	670
4,6-Dinitro-2-methylphenol	ND	670
N-Nitrosodiphenylamine	ND	340
Azobenzene	ND	340
4-Bromophenyl-phenylether	ND	340
Hexachlorobenzene	ND	340
Pentachlorophenol	ND	670
Phenanthrene	ND	67
Anthracene	ND	67
Di-n-butylphthalate	ND	340

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-SB-08-7	Batch#: 234249
Lab ID:	276098-026	Sampled: 04/16/16
Matrix:	Soil	Received: 04/18/16
Units:	ug/Kg	Prepared: 04/19/16
Basis:	as received	Analyzed: 04/23/16
Diln Fac:	1.000	

Analyte	Result	RL
Fluoranthene	ND	67
Pyrene	ND	67
Butylbenzylphthalate	ND	340
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	67
Chrysene	ND	67
bis(2-Ethylhexyl)phthalate	ND	340
Di-n-octylphthalate	ND	340
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67
Benzo(g,h,i)perylene	ND	67

Surrogate	%REC	Limits
2-Fluorophenol	63	25-120
Phenol-d5	62	36-120
2,4,6-Tribromophenol	88	27-120
Nitrobenzene-d5	51	44-120
2-Fluorobiphenyl	62	47-120
Terphenyl-d14	67	49-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	276098	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3550B
Project#:	01-ECR-001	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC832036	Batch#:	234208
Matrix:	Soil	Prepared:	04/18/16
Units:	ug/Kg	Analyzed:	04/19/16

Analyte	Result	RL
N-Nitrosodimethylamine	ND	340
Phenol	ND	340
bis(2-Chloroethyl)ether	ND	340
2-Chlorophenol	ND	340
1,3-Dichlorobenzene	ND	340
1,4-Dichlorobenzene	ND	340
Benzyl alcohol	ND	340
1,2-Dichlorobenzene	ND	340
2-Methylphenol	ND	340
bis(2-Chloroisopropyl) ether	ND	340
4-Methylphenol	ND	340
N-Nitroso-di-n-propylamine	ND	340
Hexachloroethane	ND	340
Nitrobenzene	ND	340
Isophorone	ND	340
2-Nitrophenol	ND	670
2,4-Dimethylphenol	ND	340
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	340
2,4-Dichlorophenol	ND	340
1,2,4-Trichlorobenzene	ND	340
Naphthalene	ND	67
4-Chloroaniline	ND	340
Hexachlorobutadiene	ND	340
4-Chloro-3-methylphenol	ND	340
2-Methylnaphthalene	ND	67
Hexachlorocyclopentadiene	ND	670
2,4,6-Trichlorophenol	ND	340
2,4,5-Trichlorophenol	ND	340
2-Chloronaphthalene	ND	340
2-Nitroaniline	ND	670
Dimethylphthalate	ND	340
Acenaphthylene	ND	67
2,6-Dinitrotoluene	ND	340
3-Nitroaniline	ND	670
Acenaphthene	ND	67
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
Dibenzofuran	ND	340
2,4-Dinitrotoluene	ND	340
Diethylphthalate	ND	340
Fluorene	ND	67
4-Chlorophenyl-phenylether	ND	340
4-Nitroaniline	ND	670
4,6-Dinitro-2-methylphenol	ND	670
N-Nitrosodiphenylamine	ND	340
Azobenzene	ND	340
4-Bromophenyl-phenylether	ND	340
Hexachlorobenzene	ND	340
Pentachlorophenol	ND	670
Phenanthrene	ND	67
Anthracene	ND	67
Di-n-butylphthalate	ND	340
Fluoranthene	ND	67

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832036	Batch#: 234208
Matrix:	Soil	Prepared: 04/18/16
Units:	ug/Kg	Analyzed: 04/19/16

Analyte	Result	RL
Pyrene	ND	67
Butylbenzylphthalate	ND	340
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	67
Chrysene	ND	67
bis(2-Ethylhexyl)phthalate	ND	340
Di-n-octylphthalate	ND	340
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67
Benzo(g,h,i)perylene	ND	67

Surrogate	%REC	Limits
2-Fluorophenol	77	25-120
Phenol-d5	74	36-120
2,4,6-Tribromophenol	41	27-120
Nitrobenzene-d5	54	44-120
2-Fluorobiphenyl	57	47-120
Terphenyl-d14	56	49-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832037	Batch#: 234208
Matrix:	Soil	Prepared: 04/18/16
Units:	ug/Kg	Analyzed: 04/19/16

Analyte	Spiked	Result	%REC	Limits
Phenol	2,700	1,596	59	42-120
2-Chlorophenol	2,700	1,934	72	45-120
1,4-Dichlorobenzene	2,700	2,083	77	48-120
N-Nitroso-di-n-propylamine	2,700	1,588	59	27-123
1,2,4-Trichlorobenzene	2,700	2,331	86	50-120
4-Chloro-3-methylphenol	2,700	2,520	93	59-120
Acenaphthene	1,012	736.0	73	53-120
4-Nitrophenol	2,700	2,040	76	47-120
2,4-Dinitrotoluene	2,700	2,211	82	55-120
Pentachlorophenol	2,700	924.3	34	32-120
Pyrene	1,012	919.6	91	52-120

Surrogate	%REC	Limits
2-Fluorophenol	68	25-120
Phenol-d5	54	36-120
2,4,6-Tribromophenol	68	27-120
Nitrobenzene-d5	62	44-120
2-Fluorobiphenyl	56	47-120
Terphenyl-d14	71	49-120

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832195	Batch#: 234249
Matrix:	Soil	Prepared: 04/19/16
Units:	ug/Kg	Analyzed: 04/22/16

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	670
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	67
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	67
Hexachlorocyclopentadiene	ND	670
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	670
Dimethylphthalate	ND	330
Acenaphthylene	ND	67
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	670
Acenaphthene	ND	67
2,4-Dinitrophenol	ND	670
4-Nitrophenol	ND	670
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	67
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	670
4,6-Dinitro-2-methylphenol	ND	670
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	670
Phenanthrene	ND	67
Anthracene	ND	67
Di-n-butylphthalate	ND	330
Fluoranthene	ND	67

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832195	Batch#: 234249
Matrix:	Soil	Prepared: 04/19/16
Units:	ug/Kg	Analyzed: 04/22/16

Analyte	Result	RL
Pyrene	ND	67
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	670
Benzo(a)anthracene	ND	67
Chrysene	ND	67
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	67
Benzo(k)fluoranthene	ND	67
Benzo(a)pyrene	ND	67
Indeno(1,2,3-cd)pyrene	ND	67
Dibenz(a,h)anthracene	ND	67
Benzo(g,h,i)perylene	ND	67

Surrogate	%REC	Limits
2-Fluorophenol	60	25-120
Phenol-d5	58	36-120
2,4,6-Tribromophenol	51	27-120
Nitrobenzene-d5	56	44-120
2-Fluorobiphenyl	69	47-120
Terphenyl-d14	68	49-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832196	Batch#: 234249
Matrix:	Soil	Prepared: 04/19/16
Units:	ug/Kg	Analyzed: 04/25/16

Analyte	Spiked	Result	%REC	Limits
Phenol	2,638	1,961	74	42-120
2-Chlorophenol	2,638	2,086	79	45-120
1,4-Dichlorobenzene	2,638	2,078	79	48-120
N-Nitroso-di-n-propylamine	2,638	1,930	73	27-123
1,2,4-Trichlorobenzene	2,638	2,133	81	50-120
4-Chloro-3-methylphenol	2,638	2,594	98	59-120
Acenaphthene	989.1	681.5	69	53-120
4-Nitrophenol	2,638	2,035	77	47-120
2,4-Dinitrotoluene	2,638	2,175	82	55-120
Pentachlorophenol	2,638	1,220	46	32-120
Pyrene	989.1	875.8	89	52-120

Surrogate	%REC	Limits
2-Fluorophenol	70	25-120
Phenol-d5	68	36-120
2,4,6-Tribromophenol	64	27-120
Nitrobenzene-d5	63	44-120
2-Fluorobiphenyl	54	47-120
Terphenyl-d14	65	49-120

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832368	Batch#: 234289
Matrix:	Soil	Prepared: 04/20/16
Units:	ug/Kg	Analyzed: 04/21/16

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	660
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,600
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	66
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	66
Hexachlorocyclopentadiene	ND	660
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	660
Dimethylphthalate	ND	330
Acenaphthylene	ND	66
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	660
Acenaphthene	ND	66
2,4-Dinitrophenol	ND	660
4-Nitrophenol	ND	660
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	66
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	660
4,6-Dinitro-2-methylphenol	ND	660
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	660
Phenanthrene	ND	66
Anthracene	ND	66
Di-n-butylphthalate	ND	330
Fluoranthene	ND	66

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832368	Batch#: 234289
Matrix:	Soil	Prepared: 04/20/16
Units:	ug/Kg	Analyzed: 04/21/16

Analyte	Result	RL
Pyrene	ND	66
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a)anthracene	ND	66
Chrysene	ND	66
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	66
Benzo(k)fluoranthene	ND	66
Benzo(a)pyrene	ND	66
Indeno(1,2,3-cd)pyrene	ND	66
Dibenz(a,h)anthracene	ND	66
Benzo(g,h,i)perylene	ND	66

Surrogate	%REC	Limits
2-Fluorophenol	85	25-120
Phenol-d5	81	36-120
2,4,6-Tribromophenol	90	27-120
Nitrobenzene-d5	78	44-120
2-Fluorobiphenyl	96	47-120
Terphenyl-d14	98	49-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	LCS	Diln Fac: 2.000
Lab ID:	QC832369	Batch#: 234289
Matrix:	Soil	Prepared: 04/20/16
Units:	ug/Kg	Analyzed: 04/21/16

Analyte	Spiked	Result	%REC	Limits
Phenol	2,655	2,094	79	42-120
2-Chlorophenol	2,655	2,273	86	45-120
1,4-Dichlorobenzene	2,655	2,167	82	48-120
N-Nitroso-di-n-propylamine	2,655	2,054	77	27-123
1,2,4-Trichlorobenzene	2,655	2,065	78	50-120
4-Chloro-3-methylphenol	2,655	2,016	76	59-120
Acenaphthene	995.7	777.8	78	53-120
4-Nitrophenol	2,655	1,274	48	47-120
2,4-Dinitrotoluene	2,655	2,137	80	55-120
Pentachlorophenol	2,655	1,268	48	32-120
Pyrene	995.7	830.7	83	52-120

Surrogate	%REC	Limits
2-Fluorophenol	74	25-120
Phenol-d5	73	36-120
2,4,6-Tribromophenol	88	27-120
Nitrobenzene-d5	59	44-120
2-Fluorobiphenyl	68	47-120
Terphenyl-d14	72	49-120

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276098	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3550B
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	ZZZZZZZZZZ	Batch#: 234289
MSS Lab ID:	275935-004	Sampled: 04/11/16
Matrix:	Soil	Received: 04/12/16
Units:	ug/Kg	Prepared: 04/20/16
Basis:	as received	Analyzed: 04/23/16
Diln Fac:	2.000	

Type: MS Lab ID: QC832370

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<17.44	2,655	2,387	90	47-120
2-Chlorophenol	<16.58	2,655	2,508	94	44-120
1,4-Dichlorobenzene	<10.19	2,655	2,194	83	49-120
N-Nitroso-di-n-propylamine	<33.28	2,655	2,013	76	42-120
1,2,4-Trichlorobenzene	<9.736	2,655	2,328	88	54-120
4-Chloro-3-methylphenol	<14.81	2,655	2,345	88	55-120
Acenaphthene	<12.10	995.7	777.7	78	51-120
4-Nitrophenol	<69.26	2,655	2,205	83	36-120
2,4-Dinitrotoluene	<9.761	2,655	2,358	89	52-120
Pentachlorophenol	<149.5	2,655	1,338	50	14-120
Pyrene	<9.431	995.7	1,018	102	46-124

Surrogate	%REC	Limits
2-Fluorophenol	84	25-120
Phenol-d5	84	36-120
2,4,6-Tribromophenol	71	27-120
Nitrobenzene-d5	69	44-120
2-Fluorobiphenyl	62	47-120
Terphenyl-d14	79	49-120

Type: MSD Lab ID: QC832371

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	2,691	2,527	94	47-120	4	39
2-Chlorophenol	2,691	2,673	99	44-120	5	38
1,4-Dichlorobenzene	2,691	2,427	90	49-120	9	45
N-Nitroso-di-n-propylamine	2,691	2,185	81	42-120	7	40
1,2,4-Trichlorobenzene	2,691	2,597	97	54-120	10	38
4-Chloro-3-methylphenol	2,691	2,706	101	55-120	13	41
Acenaphthene	1,009	872.8	86	51-120	10	47
4-Nitrophenol	2,691	2,422	90	36-120	8	41
2,4-Dinitrotoluene	2,691	2,719	101	52-120	13	40
Pentachlorophenol	2,691	1,400	52	14-120	3	53
Pyrene	1,009	1,158	115	46-124	12	50

Surrogate	%REC	Limits
2-Fluorophenol	87	25-120
Phenol-d5	87	36-120
2,4,6-Tribromophenol	78	27-120
Nitrobenzene-d5	75	44-120
2-Fluorobiphenyl	67	47-120
Terphenyl-d14	90	49-120

RPD= Relative Percent Difference

APPENDIX E

SOIL SAMPLE GEOTECHNICAL LABORATORY PHYSICAL PROPERTIES REPORT



8100 Secura Way • Santa Fe Springs, CA 90670
Telephone (562) 347-2500 • Fax (562) 907-3610

May 5, 2016

Glen Smith
The Source Group, Inc.
3478 Buskirk Ave, Ste 100
Pleasant Hill, CA 94523

Re: PTS File No: 46250
Physical Properties Data
Ellwood Commercial Real Estate; O1-ECR-001

Dear Mr. Smith:

Please find enclosed report for Physical Properties analyses conducted upon samples received from your Ellwood Commercial Real Estate; O1-ECR-001 project. All analyses were performed by applicable ASTM, EPA, or API methodologies. The samples are currently in storage and will be retained for thirty days past completion of testing at no charge. Please note that the samples will be disposed of at that time. You may contact me regarding storage, disposal, or return of the samples.

PTS Laboratories appreciates the opportunity to be of service. If you have any questions or require additional information, please give me a call at (562) 347-2502.

Sincerely,
PTS Laboratories, Inc.

Michael Mark Brady, P.G.
Laboratory Director

Encl.

Project Name: Ellwood Commercial Real Estate
Project Number: O1-ECR-001

PTS File No: 46250
Client: The Source Group, Inc.

TEST PROGRAM - 20160420

CORE ID	Depth ft.	Core Recovery ft.	CAL-EPA DTSC Vapor Intrusion						Comments
		Plugs:	Various						
Date Received: 20160420									
SB-6-4'	4.0	0.65	X						
SB-10-10	10.0	0.55	X						
TOTALS:	2 Cores	1.20	2						2

Laboratory Test Program Notes

Contaminant identification: _____

Standard TAT for basic analysis is 15 business days.

CAL-EPA DTSC Vapor Intrusion: Bulk & grain density, total porosity, moisture content, volumetric air & moisture, TOC/foc, and grain size distribution.

PTS File No: 46250
 Client: The Source Group, Inc.
 Report Date: 05/05/16

PHYSICAL PROPERTIES DATA - CAL-EPA DTSC Vapor Intrusion Package

Project Name: Ellwood Commercial Real Estate
 Project No: O1-ECR-001

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	ANALYSIS DATE	METHODS: API RP40/ASTM D2216		API RP 40		API RP 40		
				MOISTURE CONTENT,		DENSITY		POROSITY, (2)		
				% weight	cm ³ /cm ³	DRY BULK, g/cm ³	GRAIN, g/cm ³	TOTAL, cm ³ /cm ³	AIR-FILLED, cm ³ /cm ³	WATER-FILLED, cm ³ /cm ³
SB-6-4'	4.35	V	20160429	8.1	0.137	1.69	2.72	0.378	0.241	0.137
SB-10-10	10.5	V	20160429	19.9	0.326	1.63	2.65	0.383	0.057	0.326

(1) Sample Orientation: H = horizontal; V = vertical; R = remold

(2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.

Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: Ellwood Commercial Real Estate
PROJECT NO: O1-ECR-001

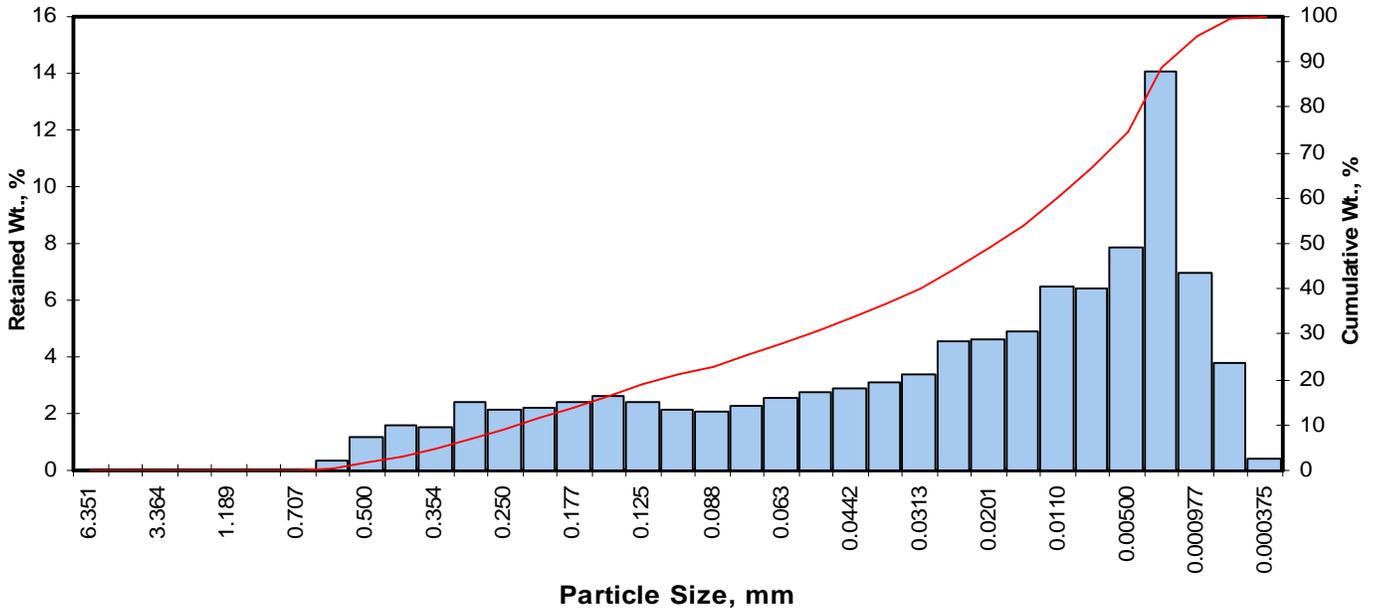
Sample ID	Depth, ft.	Mean Grain Size Description (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
SB-10-10	10.5	Silt	0.019	0.00	0.00	3.11	22.20	49.43	25.26	74.69

(1) Based on Mean from Trask

Client: The Source Group, Inc.
Project: Ellwood Commercial Real Estate
Project No: O1-ECR-001

PTS File No: 46250
Sample ID: SB-10-10
Depth, ft: 10.5

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.02	0.02	0.02
0.0234	0.595	0.75	30	0.34	0.34	0.36
0.0197	0.500	1.00	35	1.18	1.18	1.54
0.0166	0.420	1.25	40	1.57	1.57	3.11
0.0139	0.354	1.50	45	1.53	1.53	4.64
0.0117	0.297	1.75	50	2.42	2.42	7.06
0.0098	0.250	2.00	60	2.17	2.17	9.23
0.0083	0.210	2.25	70	2.20	2.20	11.43
0.0070	0.177	2.50	80	2.39	2.39	13.82
0.0059	0.149	2.75	100	2.59	2.59	16.41
0.0049	0.125	3.00	120	2.42	2.42	18.83
0.0041	0.105	3.25	140	2.12	2.12	20.95
0.0035	0.088	3.50	170	2.07	2.07	23.02
0.0029	0.074	3.75	200	2.29	2.29	25.31
0.0025	0.063	4.00	230	2.57	2.57	27.88
0.0021	0.053	4.25	270	2.74	2.74	30.62
0.00174	0.0442	4.50	325	2.90	2.90	33.53
0.00146	0.0372	4.75	400	3.10	3.10	36.63
0.00123	0.0313	5.00	450	3.35	3.35	39.98
0.000986	0.0250	5.32	500	4.54	4.54	44.52
0.000790	0.0201	5.64	635	4.60	4.60	49.12
0.000615	0.0156	6.00		4.87	4.87	53.99
0.000435	0.0110	6.50		6.48	6.48	60.47
0.000308	0.00781	7.00		6.38	6.38	66.85
0.000197	0.00500	7.65		7.89	7.89	74.74
0.000077	0.00195	9.00		14.10	14.10	88.85
0.000038	0.000977	10.00		6.93	6.93	95.78
0.000019	0.000488	11.00		3.82	3.82	99.60
0.000015	0.000375	11.38		0.40	0.40	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	1.54	0.0136	0.345
10	2.09	0.0093	0.235
16	2.71	0.0060	0.153
25	3.72	0.0030	0.076
40	5.00	0.0012	0.031
50	5.71	0.0008	0.019
60	6.46	0.0004	0.011
75	7.67	0.0002	0.005
84	8.53	0.0001	0.003
90	9.17	0.0001	0.002
95	9.89	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	5.71	5.71	5.71
Median, in.	0.0008	0.0008	0.0008
Median, mm	0.019	0.019	0.019
Mean, phi	4.63	5.62	5.65
Mean, in.	0.0016	0.0008	0.0008
Mean, mm	0.041	0.020	0.020
Sorting	3.936	2.912	2.721
Skewness	1.009	-0.028	-0.013
Kurtosis	0.152	0.434	0.866
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	3.11
Fine Sand	200	22.20
Silt	>0.005 mm	49.43
Clay	<0.005 mm	25.26
Total		100

PARTICLE SIZE SUMMARY
 (METHODOLOGY: ASTM D422M)

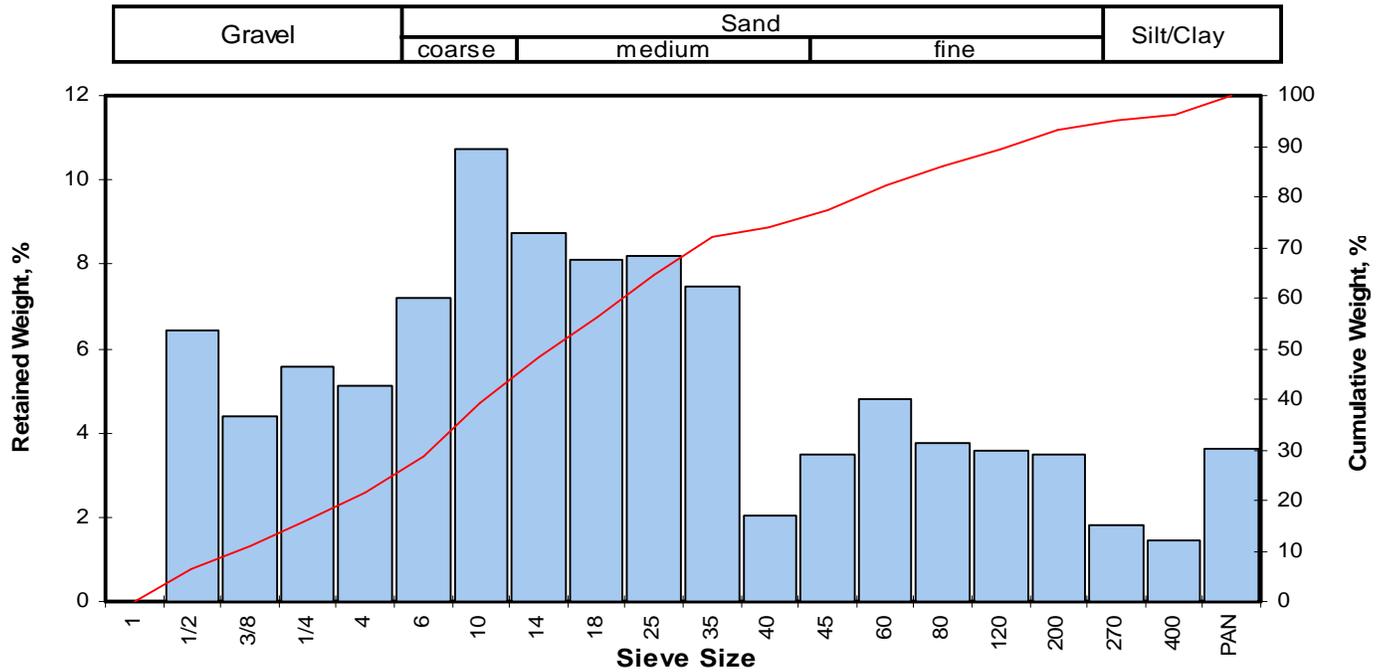
PROJECT NAME: Ellwood Commercial Real Estate
 PROJECT NO: O1-ECR-001

Sample ID	Depth, ft.	Mean Grain Size Description USCS/ASTM (1)	Median Grain Size, mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
SB-6-4'	4.35	Coarse sand	1.308	21.52	17.90	34.54	19.12	6.92

(1) Based on Mean from Trask

Client: The Source Group, Inc.
 Project: Ellwood Commercial Real Estate
 Project No: O1-ECR-001

PTS File No: 46250
 Sample ID: SB-6-4'
 Depth, ft: 4.35



Opening		Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.9844	25.002	-4.64	1	0.00	0.00	0.00
0.4922	12.501	-3.64	1/2	8.29	6.41	6.41
0.3740	9.500	-3.25	3/8	5.69	4.40	10.82
0.2500	6.351	-2.67	1/4	7.20	5.57	16.39
0.1873	4.757	-2.25	4	6.63	5.13	21.52
0.1324	3.364	-1.75	6	9.28	7.18	28.70
0.0787	2.000	-1.00	10	13.85	10.72	39.42
0.0557	1.414	-0.50	14	11.30	8.74	48.16
0.0394	1.000	0.00	18	10.50	8.13	56.29
0.0278	0.707	0.50	25	10.57	8.18	64.47
0.0197	0.500	1.00	35	9.65	7.47	71.93
0.0166	0.420	1.25	40	2.62	2.03	73.96
0.0139	0.354	1.50	45	4.49	3.47	77.44
0.0098	0.250	2.00	60	6.21	4.81	82.24
0.0070	0.177	2.50	80	4.85	3.75	85.99
0.0049	0.125	3.00	120	4.65	3.60	89.59
0.0029	0.074	3.75	200	4.51	3.49	93.08
0.0021	0.053	4.25	270	2.37	1.83	94.92
0.0015	0.037	4.75	400	1.89	1.46	96.38
			PAN	4.68	3.62	100.00
TOTALS				129.23	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.86	0.5735	14.566
10	-3.32	0.3936	9.997
16	-2.71	0.2572	6.532
25	-2.01	0.1583	4.021
40	-0.97	0.0769	1.954
50	-0.39	0.0515	1.308
60	0.23	0.0336	0.854
75	1.32	0.0157	0.399
84	2.23	0.0084	0.213
90	3.09	0.0046	0.118
95	4.28	0.0020	0.052

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.39	-0.39	-0.39
Median, in.	0.0515	0.0515	0.0515
Median, mm	1.308	1.308	1.308
Mean, phi	-1.14	-0.24	-0.29
Mean, in.	0.0870	0.0464	0.0480
Mean, mm	2.210	1.178	1.220
Sorting	3.174	2.471	2.469
Skewness	0.969	0.061	0.103
Kurtosis	0.183	0.648	1.001

Grain Size Description (ASTM-USCS Scale) Coarse sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	21.52
Coarse Sand	10	17.90
Medium Sand	40	34.54
Fine Sand	200	19.12
Silt/Clay	<200	6.92
Total		100

PTS File No: 46250
 Client: The Source Group, Inc.
 Report Date: 05/05/16

ORGANIC CARBON DATA - TOC (foc)

(Methodology: Walkley-Black)

Project Name: Ellwood Commercial Real Estate
 Project No: O1-ECR-001

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
SB-6-4'	4.55	20160504	0930	SOIL	3800	3.80E-03
SB-10-10	10.5	20160504	0930	SOIL	3850	3.85E-03

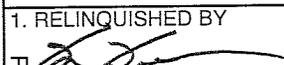
Blank	N/A	20160504	0930	BLANK	ND	ND
SRM D089-542	N/A	20160504	0930	SRM	5754	5.75E-03

Reporting Limit: 100 1.00E-04

QC DATA

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance	
				Acceptance Limits, mg/kg	
				Lower	Upper
SRM D089-542	103	75-125	5610	4208	7013

ND = Not Detected

COMPANY SGI-Apex				ANALYSIS REQUEST												PO#																
ADDRESS		CITY		ZIP CODE		NUMBER OF SAMPLES	SOIL PROPERTIES PACKAGE	HYDRAULIC CONDUCTIVITY PACKAGE	PORE FLUID SATURATIONS PACKAGE	TCEQ/TNRC PROPERTIES PACKAGE	CAPILLARITY PACKAGE	FLUID PROPERTIES PACKAGE	PHOTOLOG: CORE PHOTOGRAPHY	MOISTURE CONTENT, ASTM D2216	POROSITY: TOTAL, API RP40	POROSITY: EFFECTIVE, ASTM D425M	SPECIFIC GRAVITY, ASTM D854	BULK DENSITY (DRY), API RP40 or ASTM D2937	AIR PERMEABILITY, API RP40	HYDRAULIC CONDUCTIVITY, EPA9100, API RP40, D5084	GRAIN SIZE DISTRIBUTION, ASTM D422/4464M	TOC: WALKLEY-BLACK	ATTERBERG LIMITS, ASTM D4318	Cal EPA DTS: Vapor Intrusion Pkg	TURNAROUND TIME							
3478 Buskirk Ave, Ste 100, Pleasant Hill CA				94523																					24 HOURS <input type="checkbox"/>	48 HOURS <input type="checkbox"/>	72 HOURS <input type="checkbox"/>	5 DAYS <input type="checkbox"/>	NORMAL <input checked="" type="checkbox"/>	OTHER: _____		
PROJECT MANAGER Glen Smith (925) 951-6402				PHONE NUMBER 94523																					SAMPLE INTEGRITY (CHECK):		INTACT _____		ON ICE _____		PTS QUOTE NO.	
PROJECT NAME Ellwood Commercial Real Estate				FAX NUMBER																					PTS FILE:		46250		COMMENTS			
PROJECT NUMBER 01-ECR-001				SITE LOCATION 500 Grand Ave, Oakland, CA																					SAMPLER SIGNATURE 							
SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT																													
SB-6-4'	16 Apr 16	0830	4'																													
SB-10-10	16 Apr 16	0950	10'																													
1. RELINQUISHED BY 				2. RECEIVED BY 				3. RELINQUISHED BY				4. RECEIVED BY																				
COMPANY SGI-Apex				COMPANY PTS Labs, Inc				COMPANY				COMPANY																				
DATE 19 Apr 16		TIME 14:50		DATE 4/20/16		TIME 1126		DATE		TIME		DATE		TIME																		

APPENDIX F

GRAB GROUNDWATER SAMPLE LABORATORY ANALYTICAL REPORTS

Total Extractable Hydrocarbons		
Lab #:	276100	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8015B
Field ID:	SGI-GW-10	Sampled: 04/18/16
Matrix:	Water	Received: 04/18/16
Units:	ug/L	Prepared: 04/18/16
Diln Fac:	1.000	Analyzed: 04/19/16
Batch#:	234215	

Type: SAMPLE Lab ID: 276100-001

Analyte	Result	RL
Diesel C10-C24	260 Y q	35
Motor Oil C24-C36	740 q	210

Surrogate	%REC	Limits
o-Terphenyl	108 q	67-136

Type: BLANK Lab ID: QC832065

Analyte	Result	RL
Diesel C10-C24	ND q	50
Motor Oil C24-C36	ND q	300

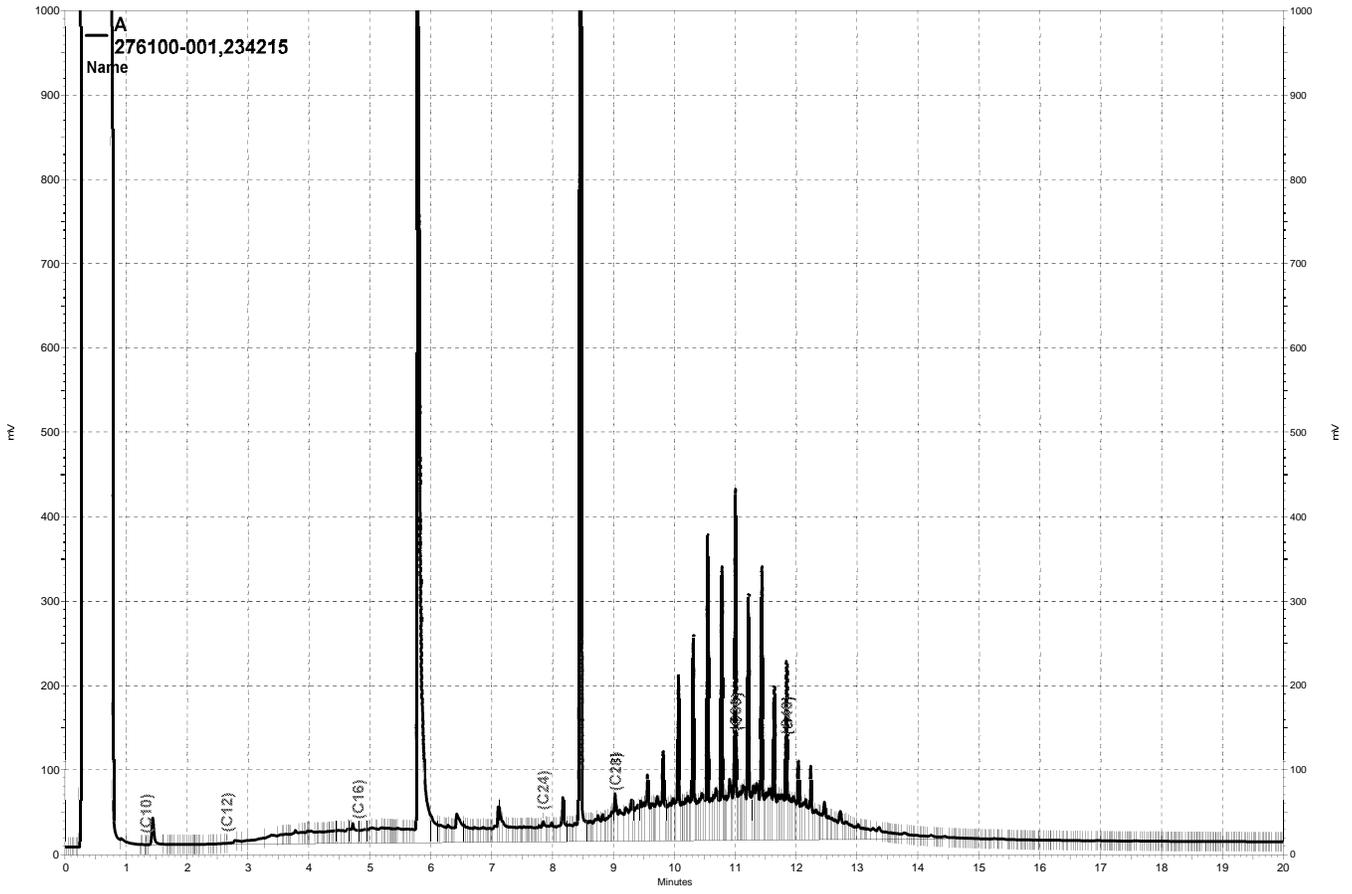
Surrogate	%REC	Limits
o-Terphenyl	87 q	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard

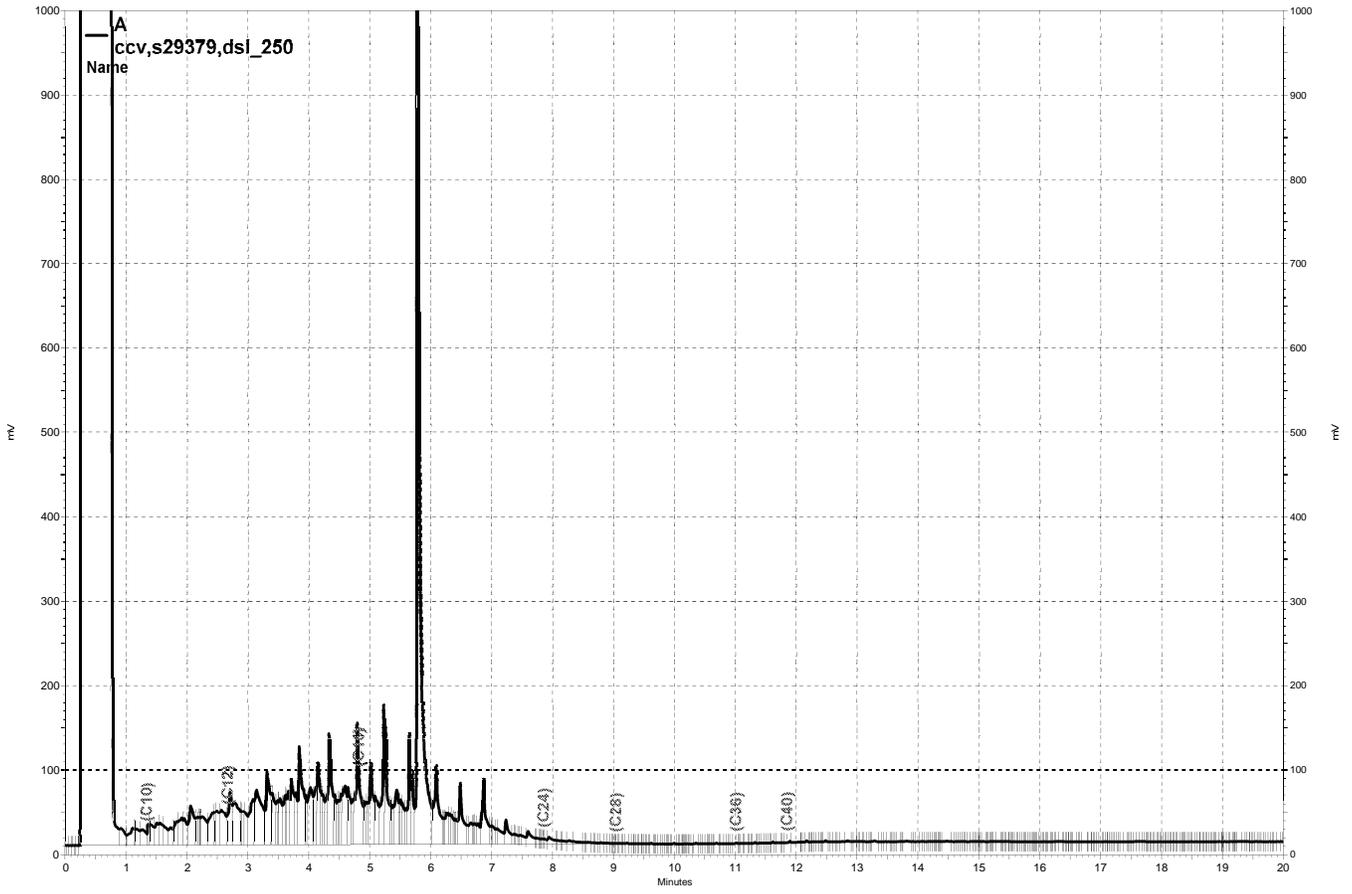
q= Draft result - ending instrument QC not yet analyzed

ND= Not Detected

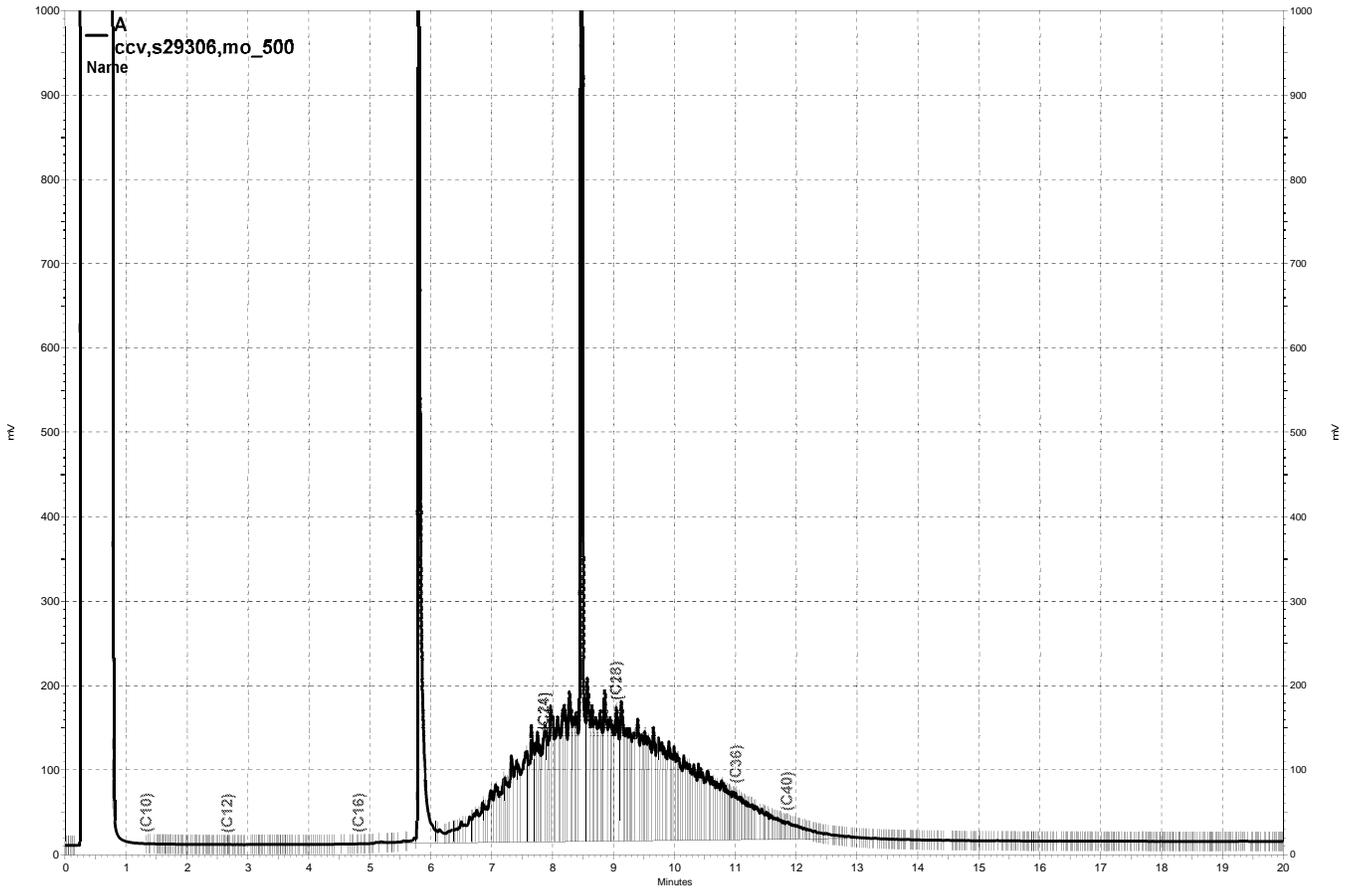
RL= Reporting Limit



\\Lims\gdrive\ezchrom\Projects\GC17A\Data\110a017, A



— \\Lims\gdrive\ezchrom\Projects\GC17A\Data\110a004, A



— \\Lims\gdrive\ezchrom\Projects\GC17A\Data\110a003, A

Purgeable Organics by GC/MS

Lab #:	276100	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-10	Batch#:	234192
Lab ID:	276100-001	Sampled:	04/18/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	1.1	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	3.1	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276100	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-10	Batch#:	234192
Lab ID:	276100-001	Sampled:	04/18/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-128
1,2-Dichloroethane-d4	135	75-139
Toluene-d8	114	80-120
Bromofluorobenzene	117	80-120

ND= Not Detected

RL= Reporting Limit



Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 276099
ANALYTICAL REPORT

The Source Group, Inc. Project : 01-ECR-001
3478 Buskirk Ave Location : Ellwood Commercial Real Estate
Pleasant Hill, CA 94523 Level : II

Table with 2 columns: Sample ID, Lab ID. Rows include SGI-GW-01 through SGI-GW-09-DUP.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Mike Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/26/2016

CASE NARRATIVE

Laboratory number: 276099
Client: The Source Group, Inc.
Project: 01-ECR-001
Location: Ellwood Commercial Real Estate
Request Date: 04/18/16
Samples Received: 04/18/16

This data package contains sample and QC results for eight water samples, requested for the above referenced project on 04/18/16. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

Low recoveries were observed for gasoline C7-C12 in the MS/MSD for batch 234177; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

High surrogate recoveries were observed for 1,2-dichloroethane-d4 in a number of samples. High surrogate recovery was observed for bromofluorobenzene in SGI-GW-05 (lab # 276099-004). No other analytical problems were encountered.

Semivolatile Organics by GC/MS (EPA 8270C):

SGI-GW-02 (lab # 276099-002) was diluted due to high non-target analytes. No other analytical problems were encountered.

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 276099 Date Received 4/18/16 Number of coolers 1
 Client EC Real estate Project ELLWOOD Commercial 01-ECR-001
 Date Opened 4/18 By (print) CB (sign) [Signature]
 Date Logged in 4 By (print) CJN (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
- Shipping info _____
- 2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____
- 2B. Were custody seals intact upon arrival? _____ YES NO N/A
3. Were custody papers dry and intact when received? _____ YES NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO
5. Is the project identifiable from custody papers? (If so fill out top of form) _____ YES NO
6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
 Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C
- Type of ice used: Wet Blue/Gel None Temp(°C) 3.5
- Temperature blank(s) included? Thermometer# _____ IR Gun# A
- Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ YES NO
10. Are there any missing / extra samples? _____ YES NO
11. Are samples in the appropriate containers for indicated tests? _____ YES NO
12. Are sample labels present, in good condition and complete? _____ YES NO
13. Do the sample labels agree with custody papers? _____ YES NO
14. Was sufficient amount of sample sent for tests requested? _____ YES NO
15. Are the samples appropriately preserved? _____ YES NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A
17. Did you document your preservative check? (pH strip lot# _____) YES NO N/A
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

20. 115 VOAs Received w/ bubble > 6mm for sample 4

Detections Summary for 276099

Results for any subcontracted analyses are not included in this summary.

Client : The Source Group, Inc.
 Project : 01-ECR-001
 Location : Ellwood Commercial Real Estate

Client Sample ID : SGI-GW-01 Laboratory Sample ID : 276099-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	89		50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	53	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	1.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	2.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
m,p-Xylenes	3.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Propylbenzene	0.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	0.8		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	3.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
n-Butylbenzene	0.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Naphthalene	2.0		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SGI-GW-02 Laboratory Sample ID : 276099-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	6,100		50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	3,000	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Benzene	55		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Toluene	4.5		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Ethylbenzene	130		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
m,p-Xylenes	140		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
o-Xylene	1.3		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Isopropylbenzene	18		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Propylbenzene	30		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	41		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	170		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
sec-Butylbenzene	5.8		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
para-Isopropyl Toluene	10		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
n-Butylbenzene	8.4		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Naphthalene	72		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Naphthalene	67		47	ug/L	As Recd	5.000	EPA 8270C	EPA 3520C

Client Sample ID : SGI-GW-04 Laboratory Sample ID : 276099-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	300	Y	47	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	460		280	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	0.6		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SGI-GW-05

Laboratory Sample ID :

276099-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	76	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	700	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	440		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	0.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SGI-GW-07

Laboratory Sample ID :

276099-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	70		50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Motor Oil C24-C36	480		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	5.9		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	0.5		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SGI-GW-08

Laboratory Sample ID :

276099-006

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
MTBE	1.7		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SGI-GW-09

Laboratory Sample ID :

276099-007

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Motor Oil C24-C36	350		300	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Client Sample ID : SGI-GW-09-DUP

Laboratory Sample ID :

276099-008

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	66	Y	47	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	800		280	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C

Y = Sample exhibits chromatographic pattern which does not resemble standard

Batch QC Report

Total Volatile Hydrocarbons		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC831896	Batch#: 234177
Matrix:	Water	Analyzed: 04/18/16
Units:	ug/L	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	899.1	90	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	80-132

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	234177
MSS Lab ID:	276067-001	Sampled:	04/15/16
Matrix:	Water	Received:	04/15/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Type: MS Lab ID: QC831898

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	326.8	2,000	1,661	67 *	76-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	80-132

Type: MSD Lab ID: QC831899

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,688	68 *	76-120	2	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	97	80-132

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832215	Batch#: 234253
Matrix:	Water	Analyzed: 04/19/16
Units:	ug/L	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	941.7	94	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	80-132

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8015B
Field ID:	SGI-GW-05	Batch#:	234253
MSS Lab ID:	276099-004	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/19/16
Diln Fac:	1.000		

Type: MS Lab ID: QC832216

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	76.34	2,000	2,072	100	76-120

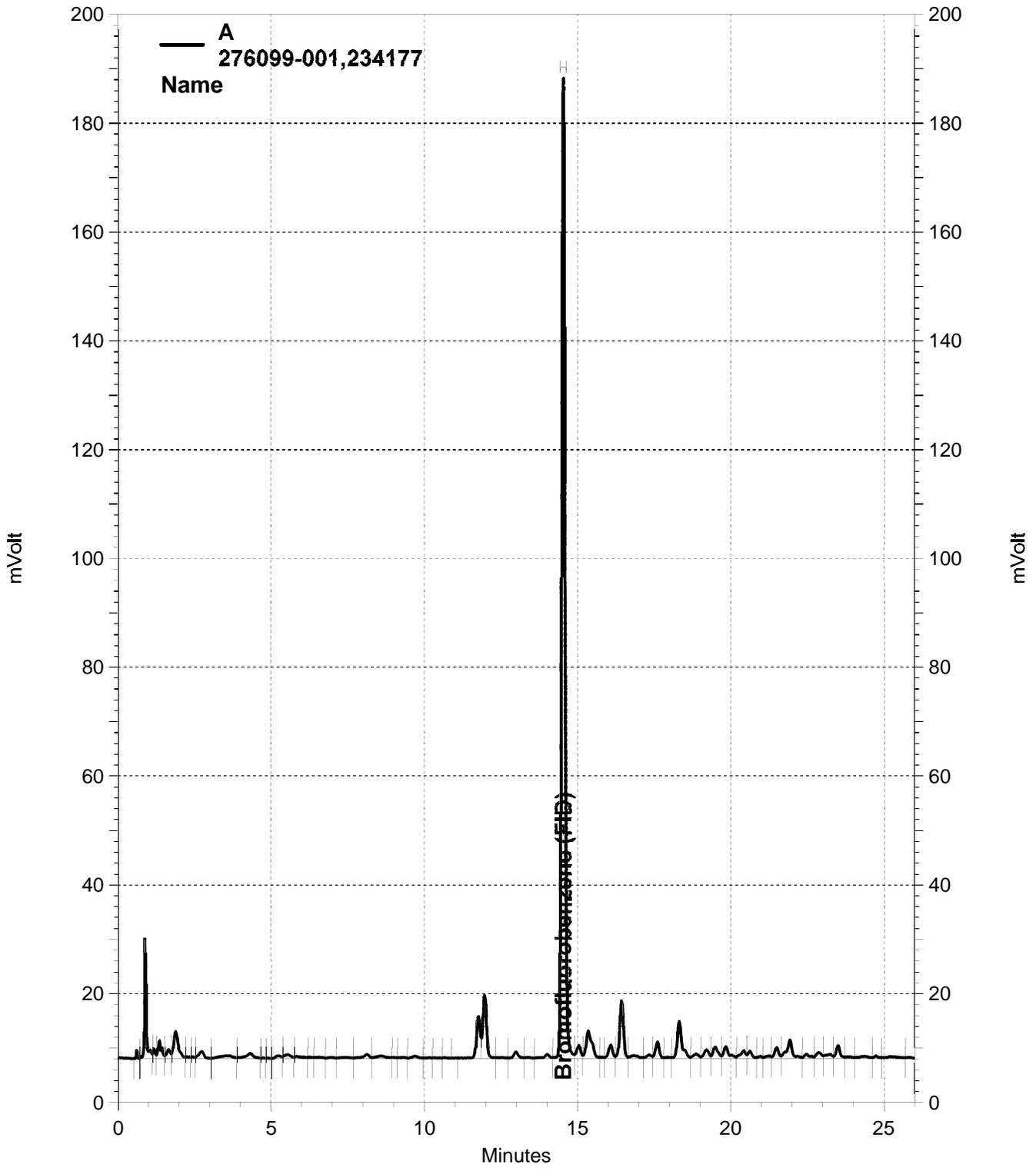
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	113	80-132

Type: MSD Lab ID: QC832217

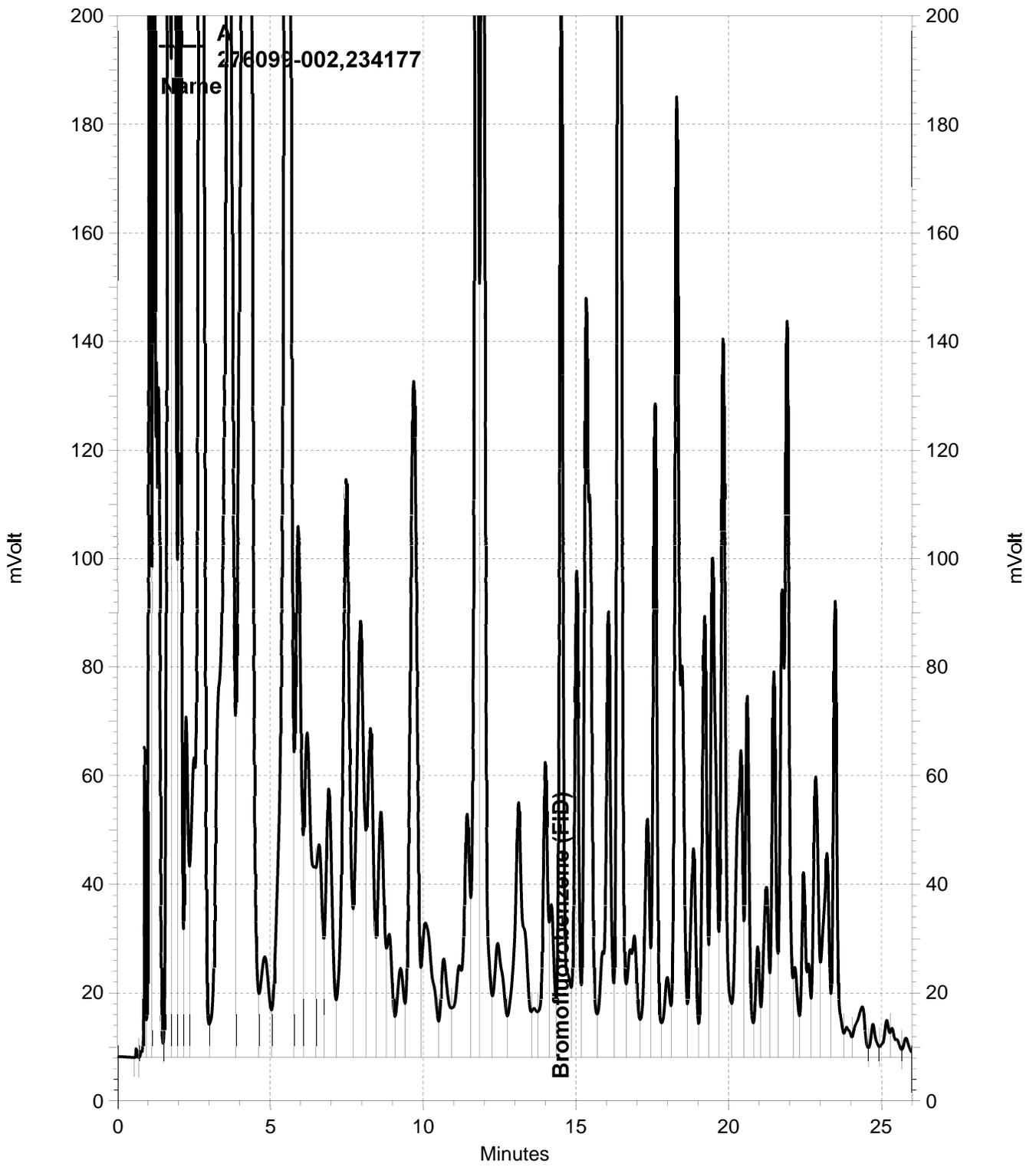
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,077	100	76-120	0	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	80-132

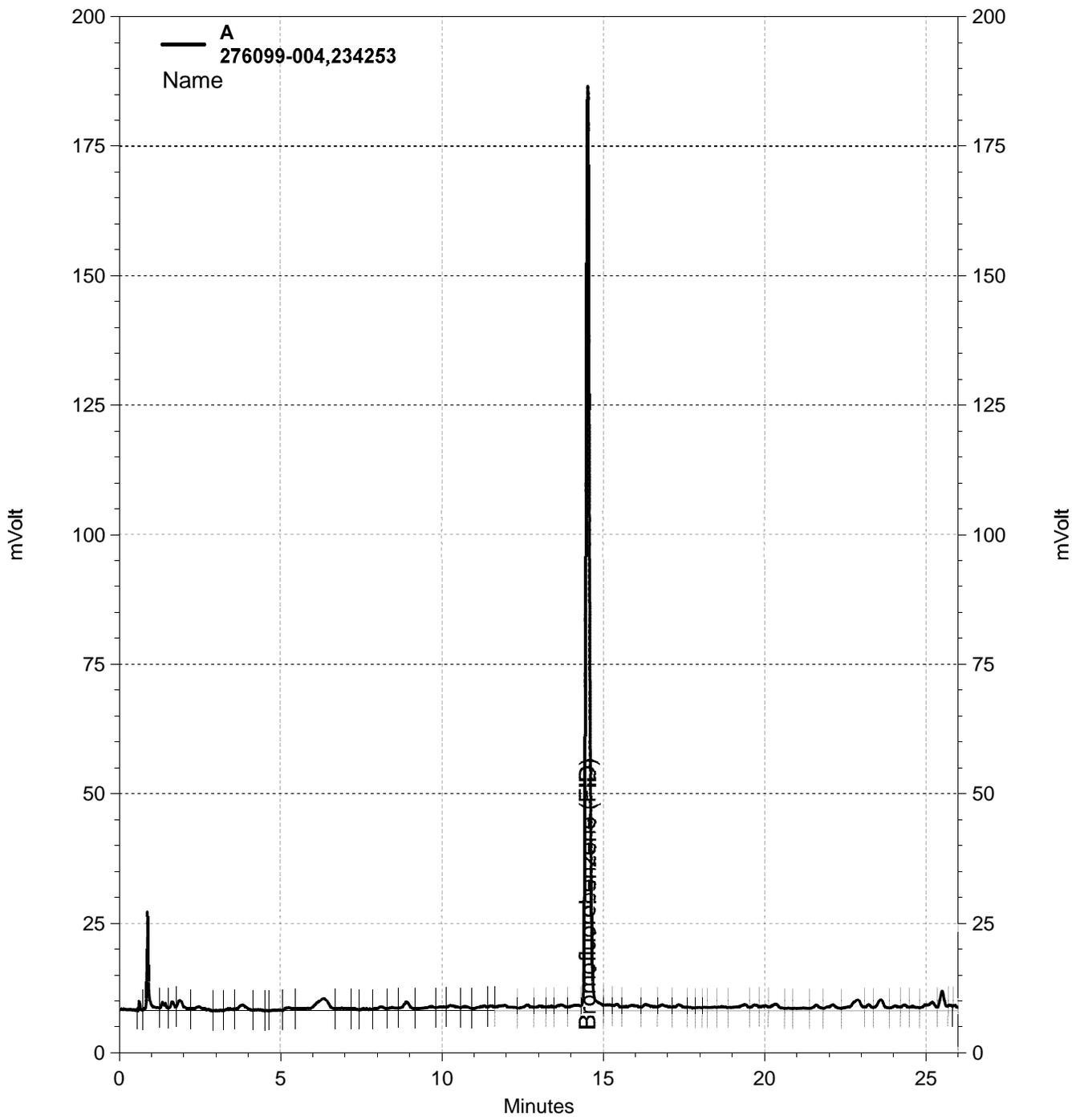
RPD= Relative Percent Difference



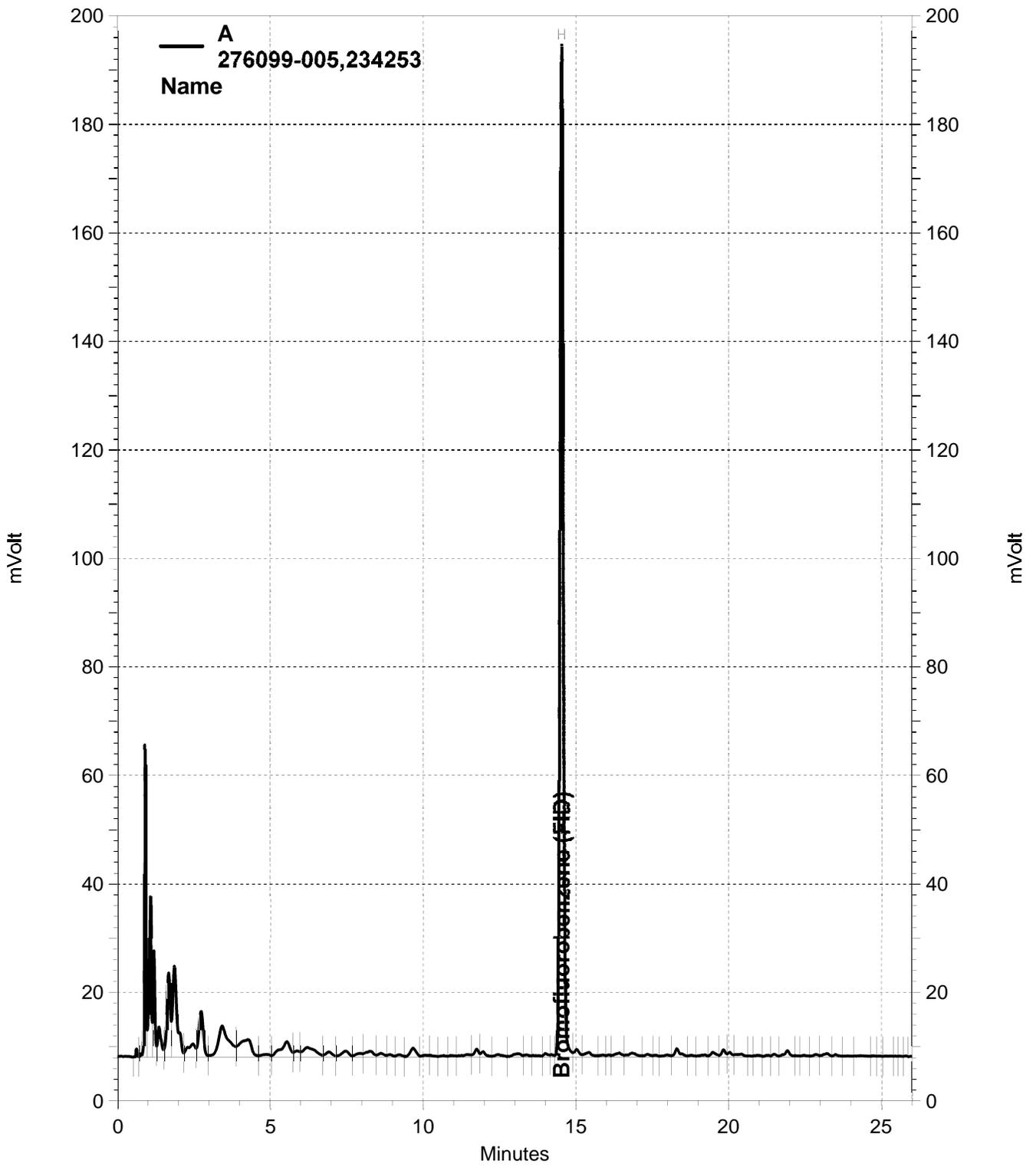
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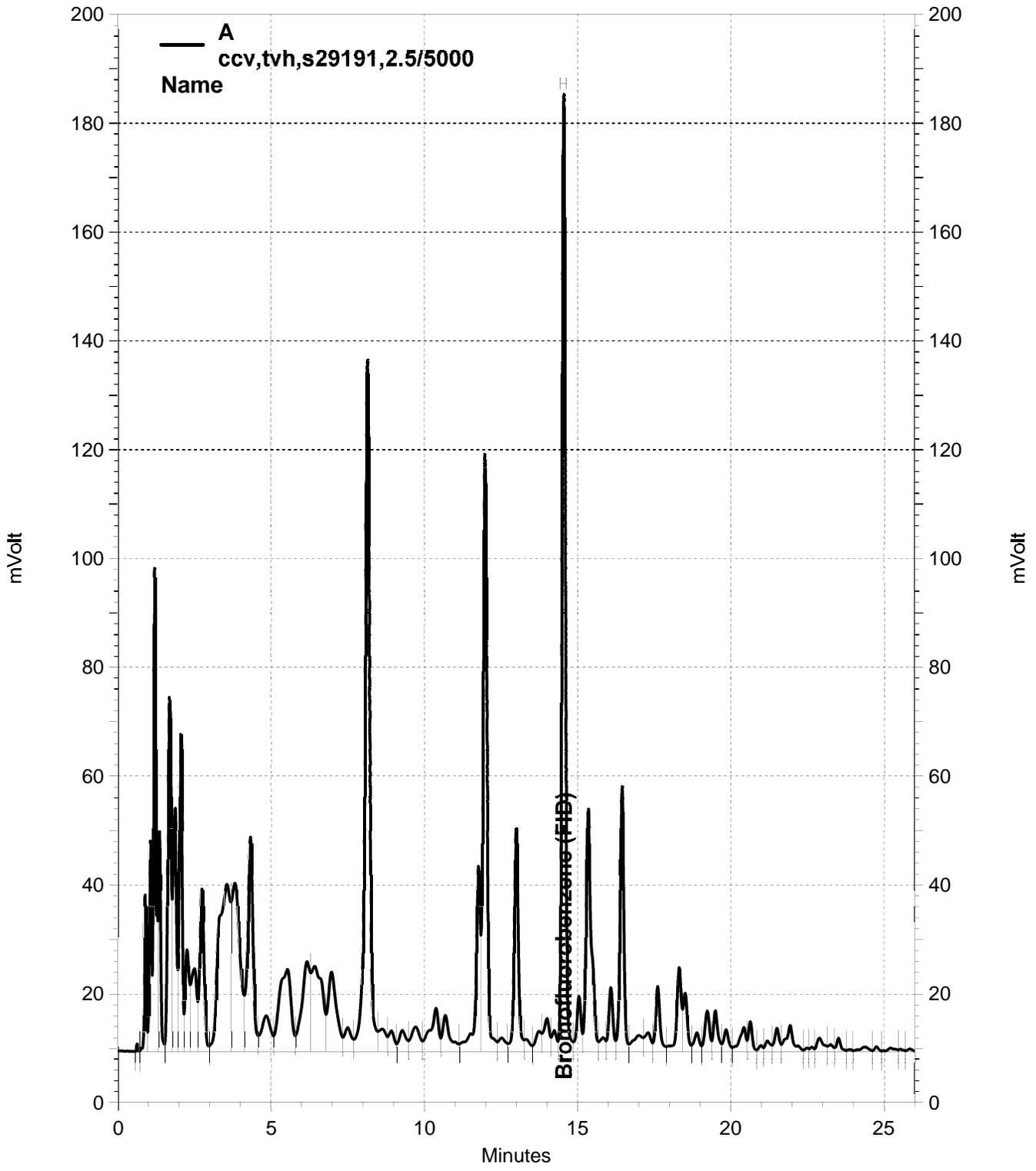
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Total Extractable Hydrocarbons		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Water	Sampled: 04/16/16
Units:	ug/L	Received: 04/18/16
Diln Fac:	1.000	

Field ID: SGI-GW-01 Batch#: 234215
 Type: SAMPLE Prepared: 04/18/16
 Lab ID: 276099-001 Analyzed: 04/19/16

Analyte	Result	RL
Diesel C10-C24	53 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	107	67-136

Field ID: SGI-GW-02 Batch#: 234215
 Type: SAMPLE Prepared: 04/18/16
 Lab ID: 276099-002 Analyzed: 04/19/16

Analyte	Result	RL
Diesel C10-C24	3,000 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	106	67-136

Field ID: SGI-GW-04 Batch#: 234215
 Type: SAMPLE Prepared: 04/18/16
 Lab ID: 276099-003 Analyzed: 04/19/16

Analyte	Result	RL
Diesel C10-C24	300 Y	47
Motor Oil C24-C36	460	280

Surrogate	%REC	Limits
o-Terphenyl	79	67-136

Field ID: SGI-GW-05 Batch#: 234299
 Type: SAMPLE Prepared: 04/20/16
 Lab ID: 276099-004 Analyzed: 04/23/16

Analyte	Result	RL
Diesel C10-C24	700 Y	50
Motor Oil C24-C36	440	300

Surrogate	%REC	Limits
o-Terphenyl	81	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Total Extractable Hydrocarbons		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Water	Sampled: 04/16/16
Units:	ug/L	Received: 04/18/16
Diln Fac:	1.000	

Type: BLANK Prepared: 04/18/16
 Lab ID: QC832065 Analyzed: 04/19/16
 Batch#: 234215

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	87	67-136

Type: BLANK Prepared: 04/20/16
 Lab ID: QC832418 Analyzed: 04/21/16
 Batch#: 234299

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	101	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3520C
Project#:	01-ECR-001	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	234215
Units:	ug/L	Prepared:	04/18/16
Diln Fac:	1.000	Analyzed:	04/19/16

Type: BS Lab ID: QC832066

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,057	82	60-121

Surrogate	%REC	Limits
o-Terphenyl	103	67-136

Type: BSD Lab ID: QC832067

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,265	91	60-121	10	32

Surrogate	%REC	Limits
o-Terphenyl	111	67-136

RPD= Relative Percent Difference

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3520C
Project#:	01-ECR-001	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	234215
MSS Lab ID:	275856-025	Sampled:	04/07/16
Matrix:	Water	Received:	04/08/16
Units:	ug/L	Prepared:	04/18/16
Diln Fac:	1.000	Analyzed:	04/22/16

Type: MS Lab ID: QC832227

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	162.5	2,500	2,508	94	55-122

Surrogate	%REC	Limits
o-Terphenyl	117	67-136

Type: MSD Lab ID: QC832228

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,693	101	55-122	7	53

Surrogate	%REC	Limits
o-Terphenyl	123	67-136

RPD= Relative Percent Difference

Batch QC Report

Total Extractable Hydrocarbons		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8015B
Matrix:	Water	Batch#: 234299
Units:	ug/L	Prepared: 04/20/16
Diln Fac:	1.000	Analyzed: 04/21/16

Type: BS Lab ID: QC832419

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,052	82	60-121

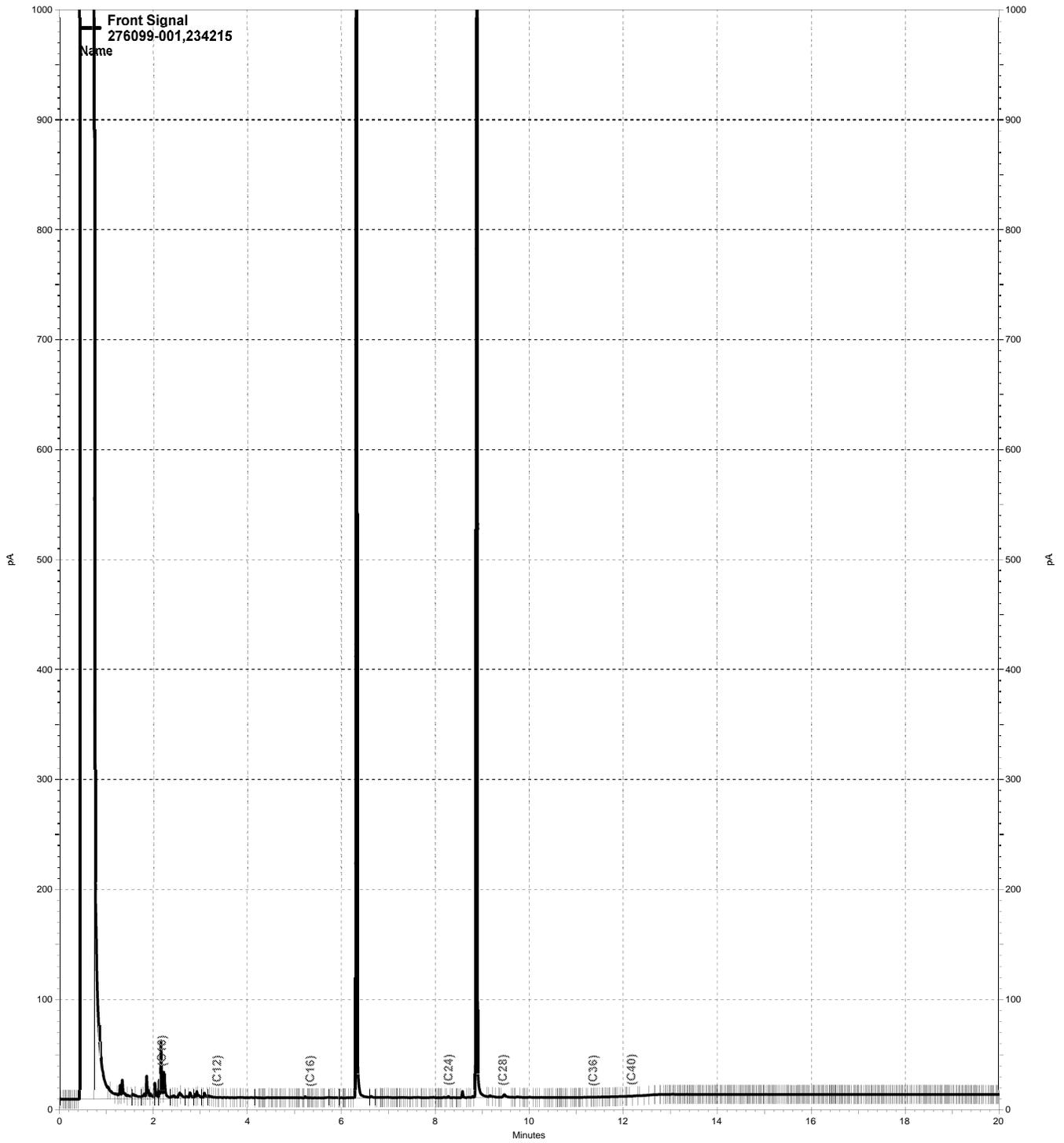
Surrogate	%REC	Limits
o-Terphenyl	91	67-136

Type: BSD Lab ID: QC832420

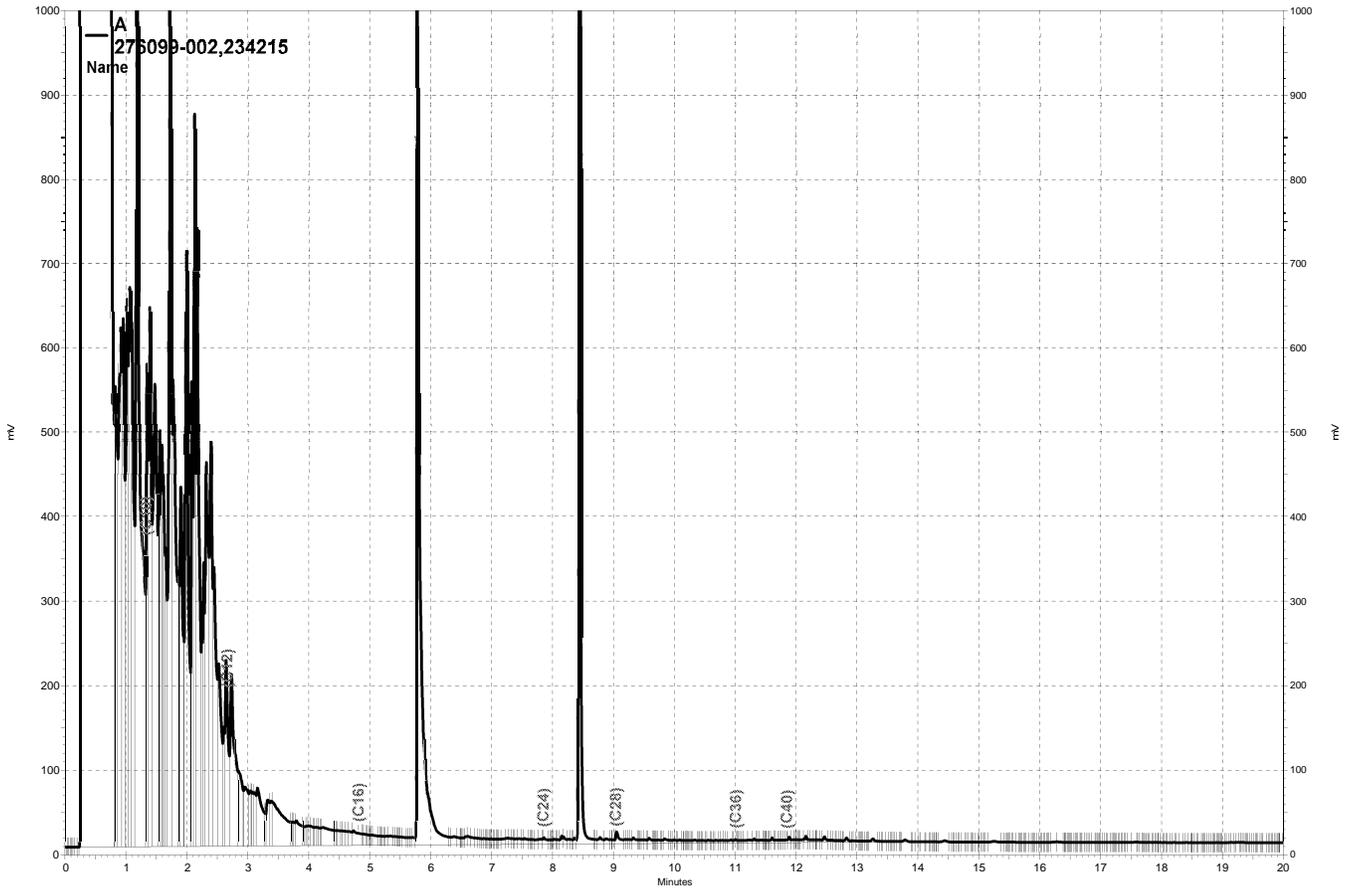
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,171	87	60-121	6	32

Surrogate	%REC	Limits
o-Terphenyl	93	67-136

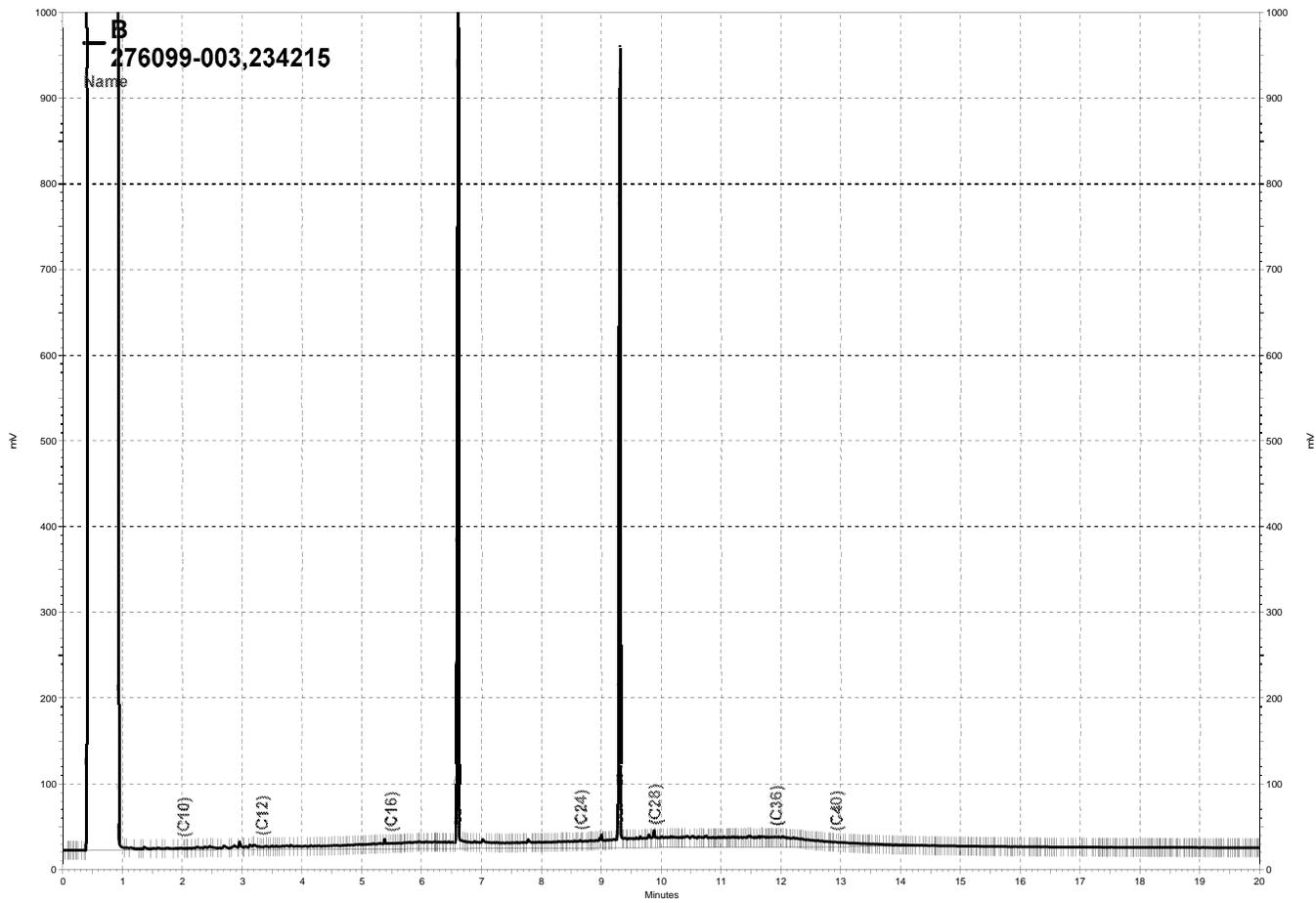
RPD= Relative Percent Difference



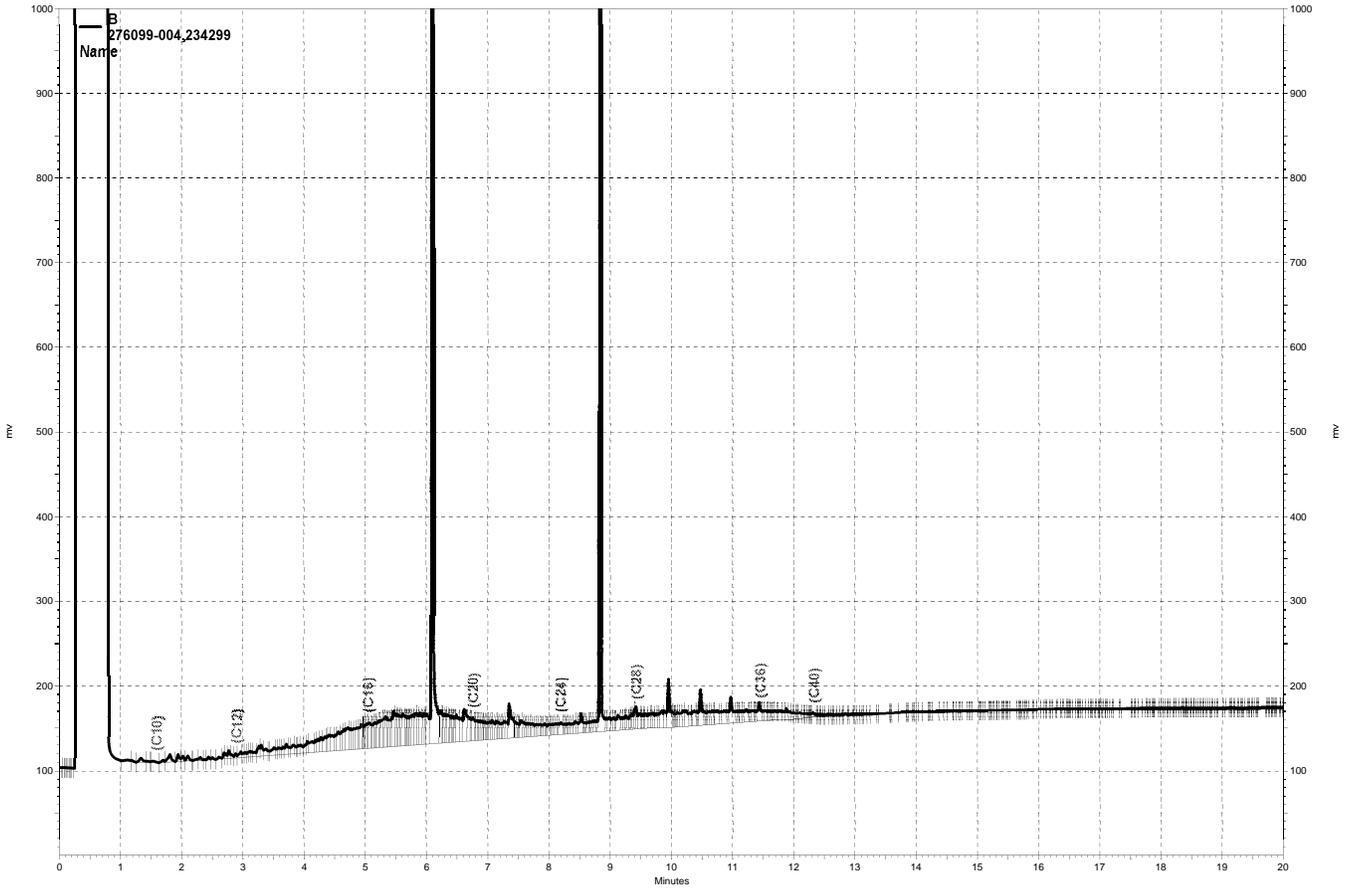
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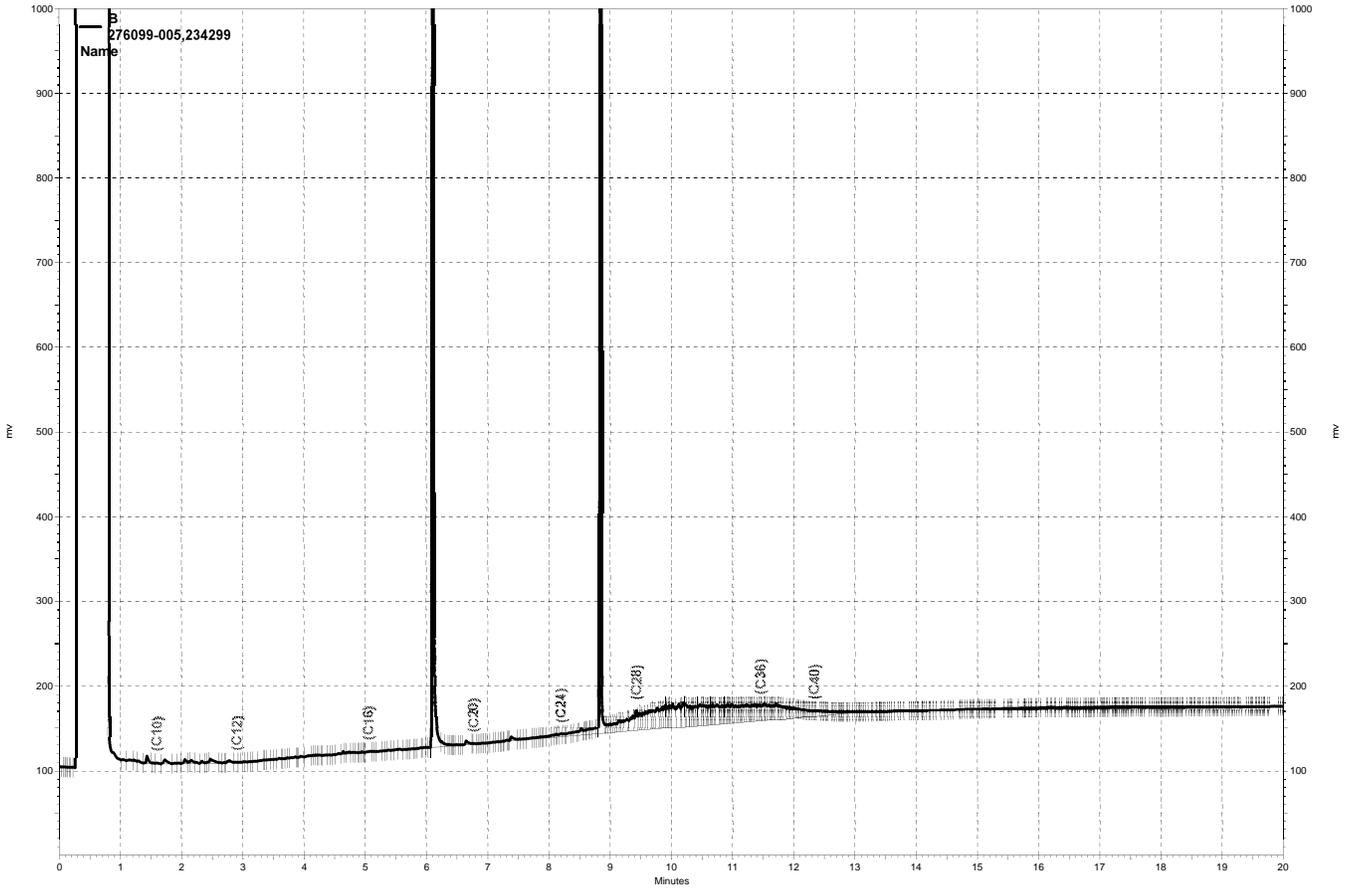
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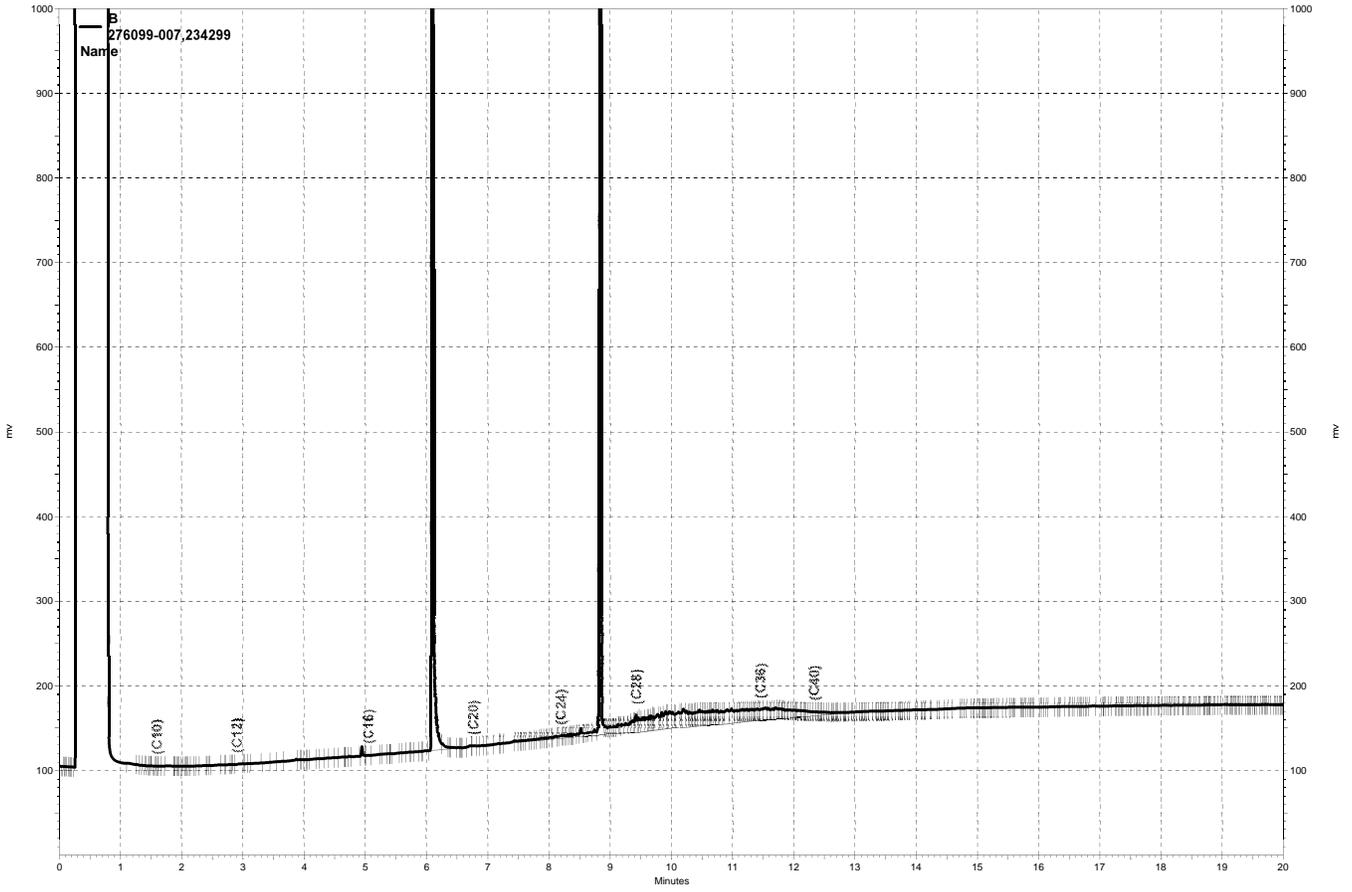
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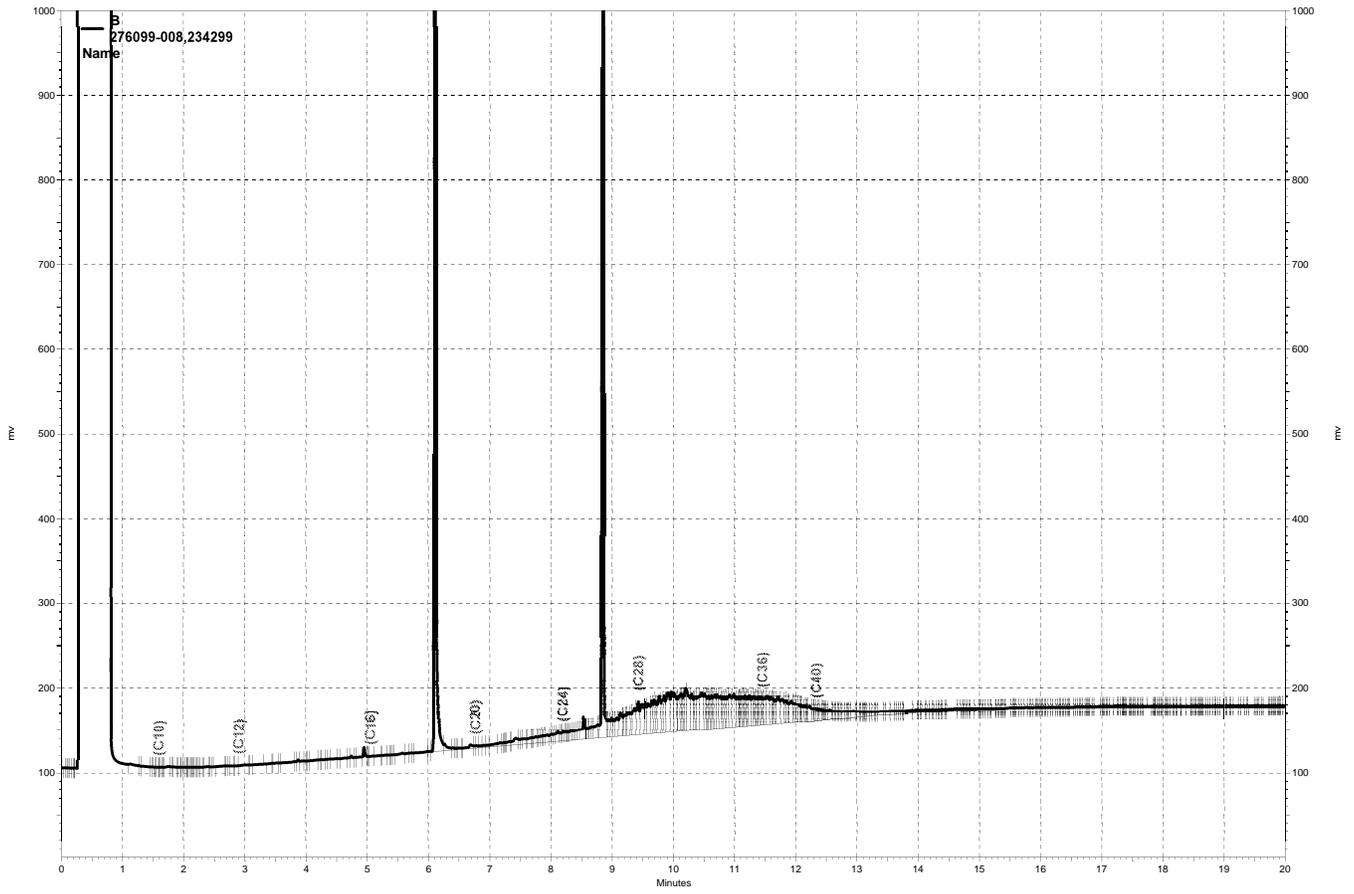
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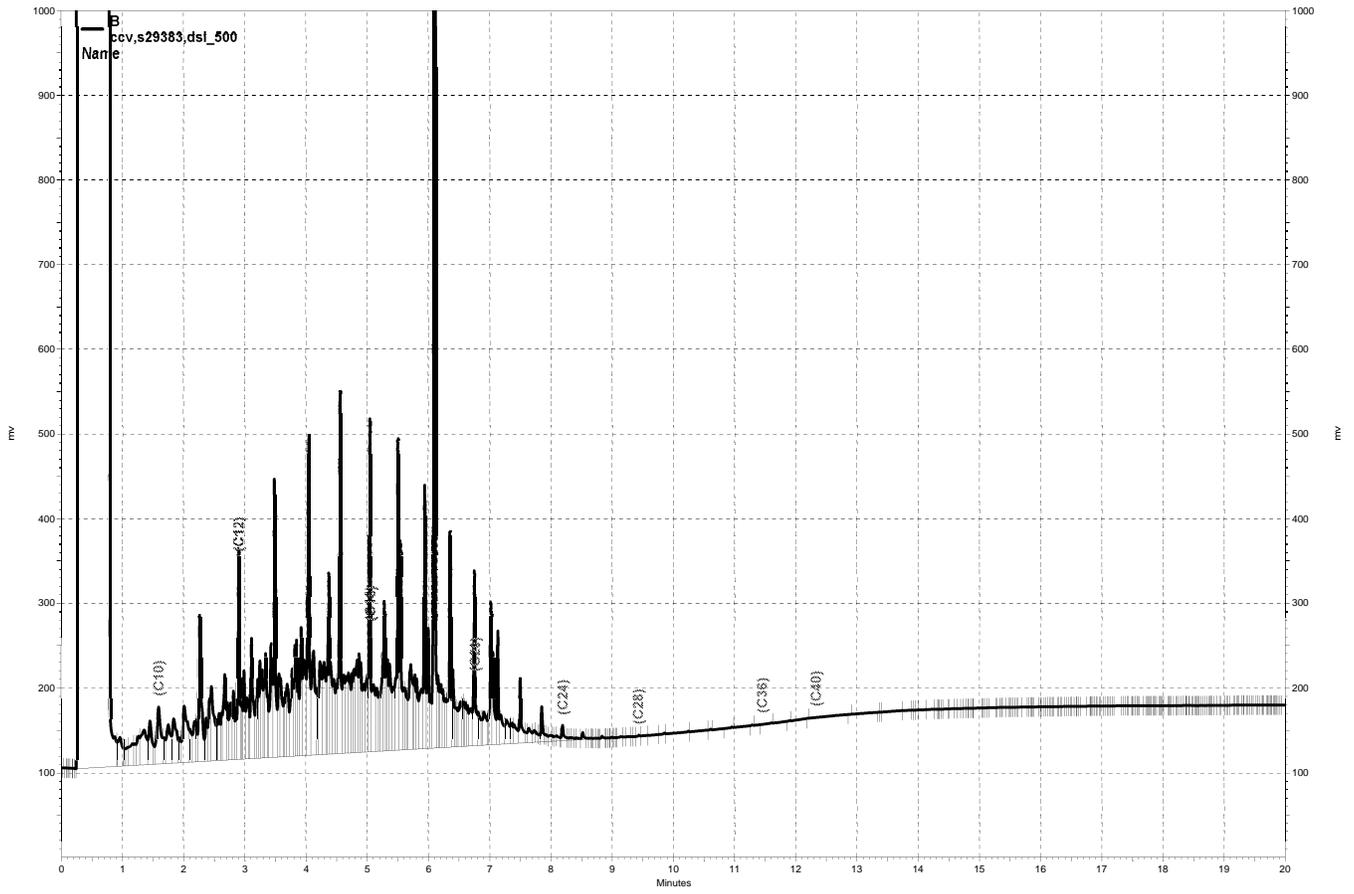
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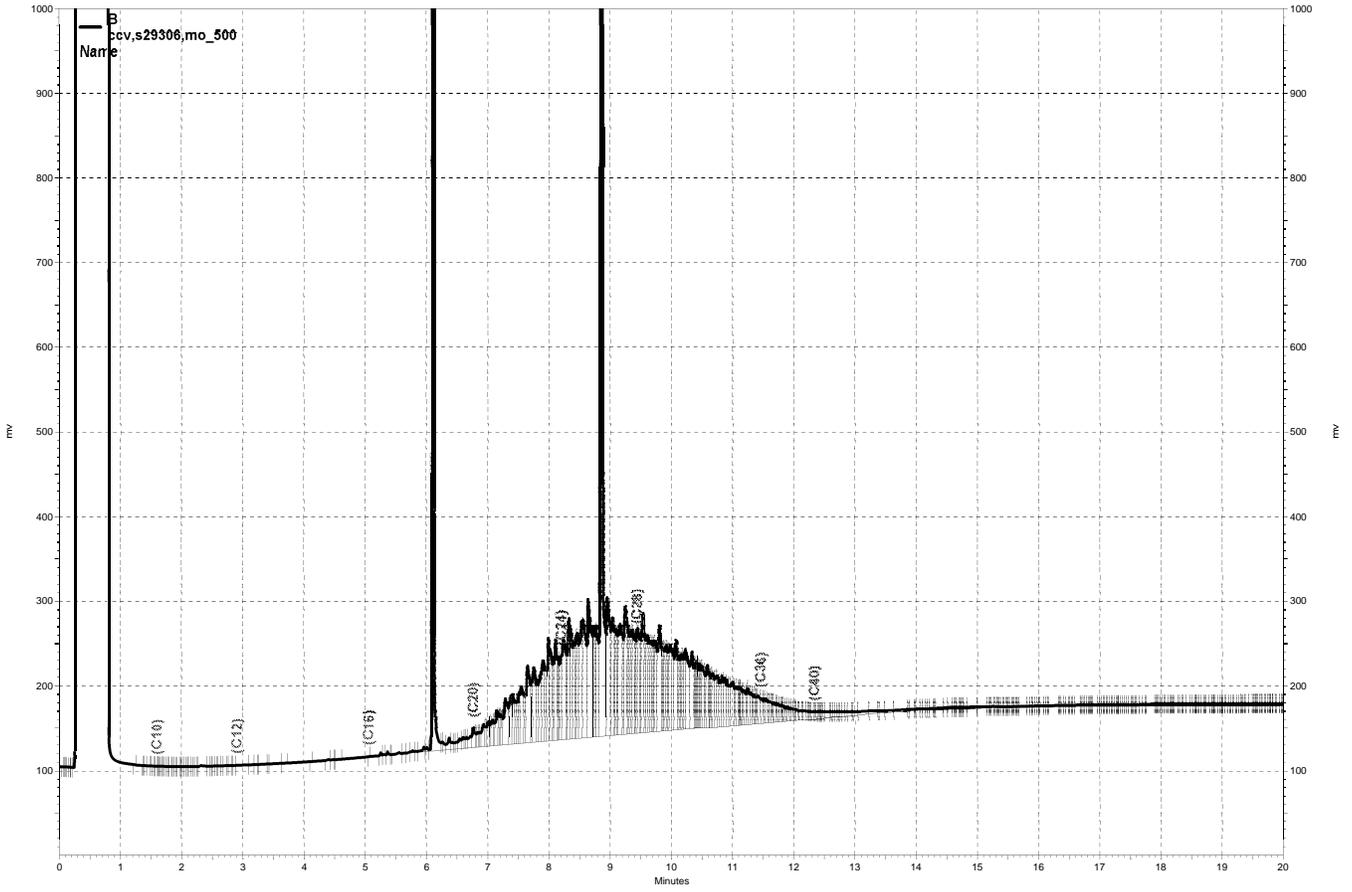
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Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-01	Batch#:	234192
Lab ID:	276099-001	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	1.8	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-01	Batch#:	234192
Lab ID:	276099-001	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	2.8	0.5
m,p-Xylenes	3.8	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	0.8	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	0.8	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	3.5	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	0.7	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	2.0	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-128
1,2-Dichloroethane-d4	135	75-139
Toluene-d8	110	80-120
Bromofluorobenzene	113	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-02	Batch#:	234239
Lab ID:	276099-002	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/19/16
Diln Fac:	2.000		

Analyte	Result	RL
Freon 12	ND	2.0
Chloromethane	ND	2.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	2.0
Chloroethane	ND	2.0
Trichlorofluoromethane	ND	2.0
Acetone	ND	20
Freon 113	ND	10
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	1.0
MTBE	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Vinyl Acetate	ND	20
1,1-Dichloroethane	ND	1.0
2-Butanone	ND	20
cis-1,2-Dichloroethene	ND	1.0
2,2-Dichloropropane	ND	1.0
Chloroform	ND	1.0
Bromochloromethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1-Dichloropropene	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Benzene	55	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
Dibromomethane	ND	1.0
4-Methyl-2-Pentanone	ND	20
cis-1,3-Dichloropropene	ND	1.0
Toluene	4.5	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
2-Hexanone	ND	20
1,3-Dichloropropane	ND	1.0
Tetrachloroethene	ND	1.0

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-02	Batch#:	234239
Lab ID:	276099-002	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/19/16
Diln Fac:	2.000		

Analyte	Result	RL
Dibromochloromethane	ND	1.0
1,2-Dibromoethane	ND	1.0
Chlorobenzene	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0
Ethylbenzene	130	1.0
m,p-Xylenes	140	1.0
o-Xylene	1.3	1.0
Styrene	ND	1.0
Bromoform	ND	2.0
Isopropylbenzene	18	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,2,3-Trichloropropane	ND	1.0
Propylbenzene	30	1.0
Bromobenzene	ND	1.0
1,3,5-Trimethylbenzene	41	1.0
2-Chlorotoluene	ND	1.0
4-Chlorotoluene	ND	1.0
tert-Butylbenzene	ND	1.0
1,2,4-Trimethylbenzene	170	1.0
sec-Butylbenzene	5.8	1.0
para-Isopropyl Toluene	10	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
n-Butylbenzene	8.4	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	1.0
Hexachlorobutadiene	ND	1.0
Naphthalene	72	1.0
1,2,3-Trichlorobenzene	ND	1.0

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-128
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-04	Batch#:	234192
Lab ID:	276099-003	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	0.6	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-04	Batch#:	234192
Lab ID:	276099-003	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-128
1,2-Dichloroethane-d4	135	75-139
Toluene-d8	107	80-120
Bromofluorobenzene	116	80-120

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-05	Batch#:	234282
Lab ID:	276099-004	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/20/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	0.9	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-05	Batch#:	234282
Lab ID:	276099-004	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/20/16
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	118	80-128
1,2-Dichloroethane-d4	151 *	75-139
Toluene-d8	113	80-120
Bromofluorobenzene	121 *	80-120

*= Value outside of QC limits; see narrative
 ND= Not Detected
 RL= Reporting Limit
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Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-07	Batch#:	234358
Lab ID:	276099-005	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	5.9	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-07	Batch#:	234358
Lab ID:	276099-005	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	0.5	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	103	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-08	Batch#:	234192
Lab ID:	276099-006	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	1.7	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-08	Batch#:	234192
Lab ID:	276099-006	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/18/16
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	112	80-128
1,2-Dichloroethane-d4	140 *	75-139
Toluene-d8	112	80-120
Bromofluorobenzene	117	80-120

*= Value outside of QC limits; see narrative
 ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-09	Batch#:	234282
Lab ID:	276099-007	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/20/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-09	Batch#:	234282
Lab ID:	276099-007	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/20/16
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	120	80-128
1,2-Dichloroethane-d4	146 *	75-139
Toluene-d8	111	80-120
Bromofluorobenzene	120	80-120

*= Value outside of QC limits; see narrative
 ND= Not Detected
 RL= Reporting Limit
 Page 2 of 2

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-09-DUP	Batch#:	234282
Lab ID:	276099-008	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/21/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-09-DUP	Batch#:	234282
Lab ID:	276099-008	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Analyzed:	04/21/16
Diln Fac:	1.000		

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	121	80-128
1,2-Dichloroethane-d4	158 *	75-139
Toluene-d8	108	80-120
Bromofluorobenzene	118	80-120

*= Value outside of QC limits; see narrative
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC831961	Batch#: 234192
Matrix:	Water	Analyzed: 04/18/16
Units:	ug/L	

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC831961	Batch#: 234192
Matrix:	Water	Analyzed: 04/18/16
Units:	ug/L	

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	134	75-139
Toluene-d8	111	80-120
Bromofluorobenzene	115	80-120

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Matrix:	Water	Batch#: 234239
Units:	ug/L	Analyzed: 04/19/16
Diln Fac:	1.000	

Type: BS Lab ID: QC832157

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	13.08	105	66-135
Benzene	12.50	12.93	103	80-123
Trichloroethene	12.50	12.27	98	80-123
Toluene	12.50	14.02	112	80-121
Chlorobenzene	12.50	12.72	102	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	90	80-128
1,2-Dichloroethane-d4	87	75-139
Toluene-d8	106	80-120
Bromofluorobenzene	92	80-120

Type: BSD Lab ID: QC832158

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	12.58	101	66-135	4	24
Benzene	12.50	12.77	102	80-123	1	20
Trichloroethene	12.50	12.29	98	80-123	0	20
Toluene	12.50	13.43	107	80-121	4	20
Chlorobenzene	12.50	13.99	112	80-123	10	20

Surrogate	%REC	Limits
Dibromofluoromethane	86	80-128
1,2-Dichloroethane-d4	87	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	95	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832159	Batch#: 234239
Matrix:	Water	Analyzed: 04/19/16
Units:	ug/L	

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832159	Batch#: 234239
Matrix:	Water	Analyzed: 04/19/16
Units:	ug/L	

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	90	80-128
1,2-Dichloroethane-d4	90	75-139
Toluene-d8	105	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Matrix:	Water	Batch#: 234282
Units:	ug/L	Analyzed: 04/20/16
Diln Fac:	1.000	

Type: BS Lab ID: QC832340

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	10.26	82	66-135
Benzene	12.50	11.72	94	80-123
Trichloroethene	12.50	10.61	85	80-123
Toluene	12.50	10.58	85	80-121
Chlorobenzene	12.50	10.37	83	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	115	80-128
1,2-Dichloroethane-d4	142 *	75-139
Toluene-d8	110	80-120
Bromofluorobenzene	112	80-120

Type: BSD Lab ID: QC832341

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.50	92	66-135	11	24
Benzene	12.50	12.04	96	80-123	3	20
Trichloroethene	12.50	11.25	90	80-123	6	20
Toluene	12.50	11.25	90	80-121	6	20
Chlorobenzene	12.50	10.77	86	80-123	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	114	80-128
1,2-Dichloroethane-d4	138	75-139
Toluene-d8	112	80-120
Bromofluorobenzene	114	80-120

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832342	Batch#: 234282
Matrix:	Water	Analyzed: 04/20/16
Units:	ug/L	

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832342	Batch#: 234282
Matrix:	Water	Analyzed: 04/20/16
Units:	ug/L	

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	115	80-128
1,2-Dichloroethane-d4	146 *	75-139
Toluene-d8	115	80-120
Bromofluorobenzene	119	80-120

*= Value outside of QC limits; see narrative
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Matrix:	Water	Batch#: 234358
Units:	ug/L	Analyzed: 04/22/16
Diln Fac:	1.000	

Type: BS Lab ID: QC832655

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.56	100	66-135
Benzene	12.50	13.10	105	80-123
Trichloroethene	12.50	12.59	101	80-123
Toluene	12.50	13.32	107	80-121
Chlorobenzene	12.50	13.36	107	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-120

Type: BSD Lab ID: QC832656

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	12.37	99	66-135	2	24
Benzene	12.50	12.97	104	80-123	1	20
Trichloroethene	12.50	12.42	99	80-123	1	20
Toluene	12.50	13.15	105	80-121	1	20
Chlorobenzene	12.50	13.16	105	80-123	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832657	Batch#: 234358
Matrix:	Water	Analyzed: 04/22/16
Units:	ug/L	

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832657	Batch#: 234358
Matrix:	Water	Analyzed: 04/22/16
Units:	ug/L	

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected

RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-GW-01	Batch#: 234209
Lab ID:	276099-001	Sampled: 04/16/16
Matrix:	Water	Received: 04/18/16
Units:	ug/L	Prepared: 04/18/16
Diln Fac:	1.000	Analyzed: 04/19/16

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.4
Phenol	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
2-Chlorophenol	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
Benzyl alcohol	ND	9.4
1,2-Dichlorobenzene	ND	9.4
2-Methylphenol	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
4-Methylphenol	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
bis(2-Chloroethoxy)methane	ND	9.4
2,4-Dichlorophenol	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	19
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	19
Acenaphthene	ND	9.4
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
Fluorene	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
4-Nitroaniline	ND	19
4,6-Dinitro-2-methylphenol	ND	19
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Pentachlorophenol	ND	19
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-GW-01	Batch#: 234209
Lab ID:	276099-001	Sampled: 04/16/16
Matrix:	Water	Received: 04/18/16
Units:	ug/L	Prepared: 04/18/16
Diln Fac:	1.000	Analyzed: 04/19/16

Analyte	Result	RL
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	19
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%REC	Limits
2-Fluorophenol	84	38-120
Phenol-d5	81	38-120
2,4,6-Tribromophenol	89	46-120
Nitrobenzene-d5	81	51-120
2-Fluorobiphenyl	69	54-120
Terphenyl-d14	61	21-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3520C
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-GW-02	Batch#:	234209
Lab ID:	276099-002	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Prepared:	04/18/16
Diln Fac:	5.000	Analyzed:	04/20/16

Analyte	Result	RL
N-Nitrosodimethylamine	ND	47
Phenol	ND	47
bis(2-Chloroethyl)ether	ND	47
2-Chlorophenol	ND	47
1,3-Dichlorobenzene	ND	47
1,4-Dichlorobenzene	ND	47
Benzyl alcohol	ND	47
1,2-Dichlorobenzene	ND	47
2-Methylphenol	ND	47
bis(2-Chloroisopropyl) ether	ND	47
4-Methylphenol	ND	47
N-Nitroso-di-n-propylamine	ND	47
Hexachloroethane	ND	47
Nitrobenzene	ND	47
Isophorone	ND	47
2-Nitrophenol	ND	94
2,4-Dimethylphenol	ND	47
Benzoic acid	ND	240
bis(2-Chloroethoxy)methane	ND	47
2,4-Dichlorophenol	ND	47
1,2,4-Trichlorobenzene	ND	47
Naphthalene	67	47
4-Chloroaniline	ND	47
Hexachlorobutadiene	ND	47
4-Chloro-3-methylphenol	ND	47
2-Methylnaphthalene	ND	47
Hexachlorocyclopentadiene	ND	94
2,4,6-Trichlorophenol	ND	47
2,4,5-Trichlorophenol	ND	47
2-Chloronaphthalene	ND	47
2-Nitroaniline	ND	94
Dimethylphthalate	ND	47
Acenaphthylene	ND	47
2,6-Dinitrotoluene	ND	47
3-Nitroaniline	ND	94
Acenaphthene	ND	47
2,4-Dinitrophenol	ND	94
4-Nitrophenol	ND	94
Dibenzofuran	ND	47
2,4-Dinitrotoluene	ND	47
Diethylphthalate	ND	47
Fluorene	ND	47
4-Chlorophenyl-phenylether	ND	47
4-Nitroaniline	ND	94
4,6-Dinitro-2-methylphenol	ND	94
N-Nitrosodiphenylamine	ND	47
Azobenzene	ND	47
4-Bromophenyl-phenylether	ND	47
Hexachlorobenzene	ND	47
Pentachlorophenol	ND	94
Phenanthrene	ND	47
Anthracene	ND	47
Di-n-butylphthalate	ND	47
Fluoranthene	ND	47

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-GW-02	Batch#: 234209
Lab ID:	276099-002	Sampled: 04/16/16
Matrix:	Water	Received: 04/18/16
Units:	ug/L	Prepared: 04/18/16
Diln Fac:	5.000	Analyzed: 04/20/16

Analyte	Result	RL
Pyrene	ND	47
Butylbenzylphthalate	ND	47
3,3'-Dichlorobenzidine	ND	94
Benzo(a)anthracene	ND	47
Chrysene	ND	47
bis(2-Ethylhexyl)phthalate	ND	47
Di-n-octylphthalate	ND	47
Benzo(b)fluoranthene	ND	47
Benzo(k)fluoranthene	ND	47
Benzo(a)pyrene	ND	47
Indeno(1,2,3-cd)pyrene	ND	47
Dibenz(a,h)anthracene	ND	47
Benzo(g,h,i)perylene	ND	47

Surrogate	%REC	Limits
2-Fluorophenol	91	38-120
Phenol-d5	83	38-120
2,4,6-Tribromophenol	94	46-120
Nitrobenzene-d5	89	51-120
2-Fluorobiphenyl	75	54-120
Terphenyl-d14	42	21-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS			
Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3520C
Project#:	01-ECR-001	Analysis:	EPA 8270C
Field ID:	SGI-GW-08	Batch#:	234209
Lab ID:	276099-006	Sampled:	04/16/16
Matrix:	Water	Received:	04/18/16
Units:	ug/L	Prepared:	04/18/16
Diln Fac:	1.000	Analyzed:	04/19/16

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.4
Phenol	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
2-Chlorophenol	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
Benzyl alcohol	ND	9.4
1,2-Dichlorobenzene	ND	9.4
2-Methylphenol	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
4-Methylphenol	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
bis(2-Chloroethoxy)methane	ND	9.4
2,4-Dichlorophenol	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	19
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	19
Acenaphthene	ND	9.4
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
Fluorene	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
4-Nitroaniline	ND	19
4,6-Dinitro-2-methylphenol	ND	19
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Pentachlorophenol	ND	19
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8270C
Field ID:	SGI-GW-08	Batch#: 234209
Lab ID:	276099-006	Sampled: 04/16/16
Matrix:	Water	Received: 04/18/16
Units:	ug/L	Prepared: 04/18/16
Diln Fac:	1.000	Analyzed: 04/19/16

Analyte	Result	RL
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	19
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%REC	Limits
2-Fluorophenol	84	38-120
Phenol-d5	87	38-120
2,4,6-Tribromophenol	104	46-120
Nitrobenzene-d5	82	51-120
2-Fluorobiphenyl	71	54-120
Terphenyl-d14	52	21-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832040	Batch#: 234209
Matrix:	Water	Prepared: 04/18/16
Units:	ug/L	Analyzed: 04/19/16

Analyte	Result	RL
N-Nitrosodimethylamine	ND	10
Phenol	ND	10
bis(2-Chloroethyl)ether	ND	10
2-Chlorophenol	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Benzyl alcohol	ND	10
1,2-Dichlorobenzene	ND	10
2-Methylphenol	ND	10
bis(2-Chloroisopropyl) ether	ND	10
4-Methylphenol	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
2-Nitrophenol	ND	20
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
bis(2-Chloroethoxy)methane	ND	10
2,4-Dichlorophenol	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
4-Chloro-3-methylphenol	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	20
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	20
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	20
Acenaphthene	ND	10
2,4-Dinitrophenol	ND	20
4-Nitrophenol	ND	20
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
Fluorene	ND	10
4-Chlorophenyl-phenylether	ND	10
4-Nitroaniline	ND	20
4,6-Dinitro-2-methylphenol	ND	20
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Pentachlorophenol	ND	20
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS		
Lab #:	276099	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 3520C
Project#:	01-ECR-001	Analysis: EPA 8270C
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832040	Batch#: 234209
Matrix:	Water	Prepared: 04/18/16
Units:	ug/L	Analyzed: 04/19/16

Analyte	Result	RL
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%REC	Limits
2-Fluorophenol	78	38-120
Phenol-d5	83	38-120
2,4,6-Tribromophenol	55	46-120
Nitrobenzene-d5	72	51-120
2-Fluorobiphenyl	71	54-120
Terphenyl-d14	77	21-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	276099	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 3520C
Project#:	01-ECR-001	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	234209
Units:	ug/L	Prepared:	04/18/16
Diln Fac:	1.000	Analyzed:	04/19/16

Type: BS Lab ID: QC832041

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	68.86	86	46-120
2-Chlorophenol	80.00	71.59	89	48-120
1,4-Dichlorobenzene	80.00	59.51	74	52-120
N-Nitroso-di-n-propylamine	80.00	64.50	81	46-120
1,2,4-Trichlorobenzene	80.00	60.32	75	53-120
4-Chloro-3-methylphenol	80.00	72.23	90	40-120
Acenaphthene	30.00	28.25	94	61-120
4-Nitrophenol	80.00	72.29	90	40-120
2,4-Dinitrotoluene	80.00	76.97	96	64-120
Pentachlorophenol	80.00	67.01	84	47-120
Pyrene	30.00	31.25	104	62-120

Surrogate	%REC	Limits
2-Fluorophenol	73	38-120
Phenol-d5	81	38-120
2,4,6-Tribromophenol	84	46-120
Nitrobenzene-d5	71	51-120
2-Fluorobiphenyl	75	54-120
Terphenyl-d14	83	21-120

Type: BSD Lab ID: QC832042

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	69.17	86	46-120	0	55
2-Chlorophenol	80.00	71.31	89	48-120	0	54
1,4-Dichlorobenzene	80.00	63.79	80	52-120	7	30
N-Nitroso-di-n-propylamine	80.00	65.89	82	46-120	2	25
1,2,4-Trichlorobenzene	80.00	64.23	80	53-120	6	26
4-Chloro-3-methylphenol	80.00	72.72	91	40-120	1	54
Acenaphthene	30.00	29.11	97	61-120	3	25
4-Nitrophenol	80.00	73.30	92	40-120	1	45
2,4-Dinitrotoluene	80.00	78.56	98	64-120	2	32
Pentachlorophenol	80.00	69.24	87	47-120	3	48
Pyrene	30.00	32.79	109	62-120	5	26

Surrogate	%REC	Limits
2-Fluorophenol	71	38-120
Phenol-d5	80	38-120
2,4,6-Tribromophenol	83	46-120
Nitrobenzene-d5	69	51-120
2-Fluorobiphenyl	75	54-120
Terphenyl-d14	84	21-120

RPD= Relative Percent Difference



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Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 276191
ANALYTICAL REPORT**

The Source Group, Inc. 3478 Buskirk Ave Pleasant Hill, CA 94523	Project : 01-ECR-001 Location : Ellwood Commercial Real Estate Level : II
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<u>Sample ID</u>	<u>Lab ID</u>
SGI-GW-03	276191-001
SGI-GW-06	276191-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/27/2016

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 276191
Client: The Source Group, Inc.
Project: 01-ECR-001
Location: Ellwood Commercial Real Estate
Request Date: 04/21/16
Samples Received: 04/21/16

This data package contains sample and QC results for two water samples, requested for the above referenced project on 04/21/16. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

High recovery was observed for gasoline C7-C12 in the MSD for batch 234407; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

No analytical problems were encountered.

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 276191 Date Received 4/21/16 Number of coolers 1
Client Squave Group Inc Project Ellwood Commercial

Date Opened 4/21 By (print) CB (sign) Charles R...
Date Logged in 4 By (print) SL (sign) SL

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 6.3

Temperature blank(s) included? Thermometer# IR Gun# B

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? (pH strip lot#) YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Detections Summary for 276191

Results for any subcontracted analyses are not included in this summary.

Client : The Source Group, Inc.
 Project : 01-ECR-001
 Location : Ellwood Commercial Real Estate

Client Sample ID : SGI-GW-03 Laboratory Sample ID : 276191-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	15,000		500	ug/L	As Recd	10.00	EPA 8015B	EPA 5030B
Acetone	240		200	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
Benzene	740		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
Toluene	110		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
Ethylbenzene	710		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
m,p-Xylenes	1,500		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
o-Xylene	220		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
Isopropylbenzene	28		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
Propylbenzene	86		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
1,3,5-Trimethylbenzene	160		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	560		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
n-Butylbenzene	42		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B
Naphthalene	150		10	ug/L	As Recd	20.00	EPA 8260B	EPA 5030B

Client Sample ID : SGI-GW-06 Laboratory Sample ID : 276191-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
MTBE	2.1		0.5	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Total Volatile Hydrocarbons

Lab #:	276191	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	04/21/16
Units:	ug/L	Received:	04/21/16

Field ID:	SGI-GW-03	Diln Fac:	10.00
Type:	SAMPLE	Batch#:	234407
Lab ID:	276191-001	Analyzed:	04/25/16

Analyte	Result	RL
Gasoline C7-C12	15,000	500

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	80-132

Field ID:	SGI-GW-06	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	234357
Lab ID:	276191-002	Analyzed:	04/22/16

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	80-132

Type:	BLANK	Batch#:	234357
Lab ID:	QC832651	Analyzed:	04/22/16
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	80-132

Type:	BLANK	Batch#:	234407
Lab ID:	QC832846	Analyzed:	04/25/16
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	95	80-132

Batch QC Report

Total Volatile Hydrocarbons		
Lab #:	276191	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832652	Batch#: 234357
Matrix:	Water	Analyzed: 04/22/16
Units:	ug/L	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,002	100	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	80-132

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	276191	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	234357
MSS Lab ID:	276159-001	Sampled:	04/19/16
Matrix:	Water	Received:	04/20/16
Units:	ug/L	Analyzed:	04/22/16
Diln Fac:	76.92		

Type: MS Lab ID: QC832653

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	123,300	153,800	268,600	94	76-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	80-132

Type: MSD Lab ID: QC832654

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	153,800	269,300	95	76-120	0	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	80-132

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons		
Lab #:	276191	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8015B
Type:	LCS	Diln Fac: 1.000
Lab ID:	QC832845	Batch#: 234407
Matrix:	Water	Analyzed: 04/25/16
Units:	ug/L	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	961.6	96	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	95	80-132

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	276191	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	234407
MSS Lab ID:	276238-001	Sampled:	04/22/16
Matrix:	Water	Received:	04/22/16
Units:	ug/L	Analyzed:	04/25/16
Diln Fac:	1.000		

Type: MS Lab ID: QC832847

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,675	2,000	3,890	111	76-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	80-132

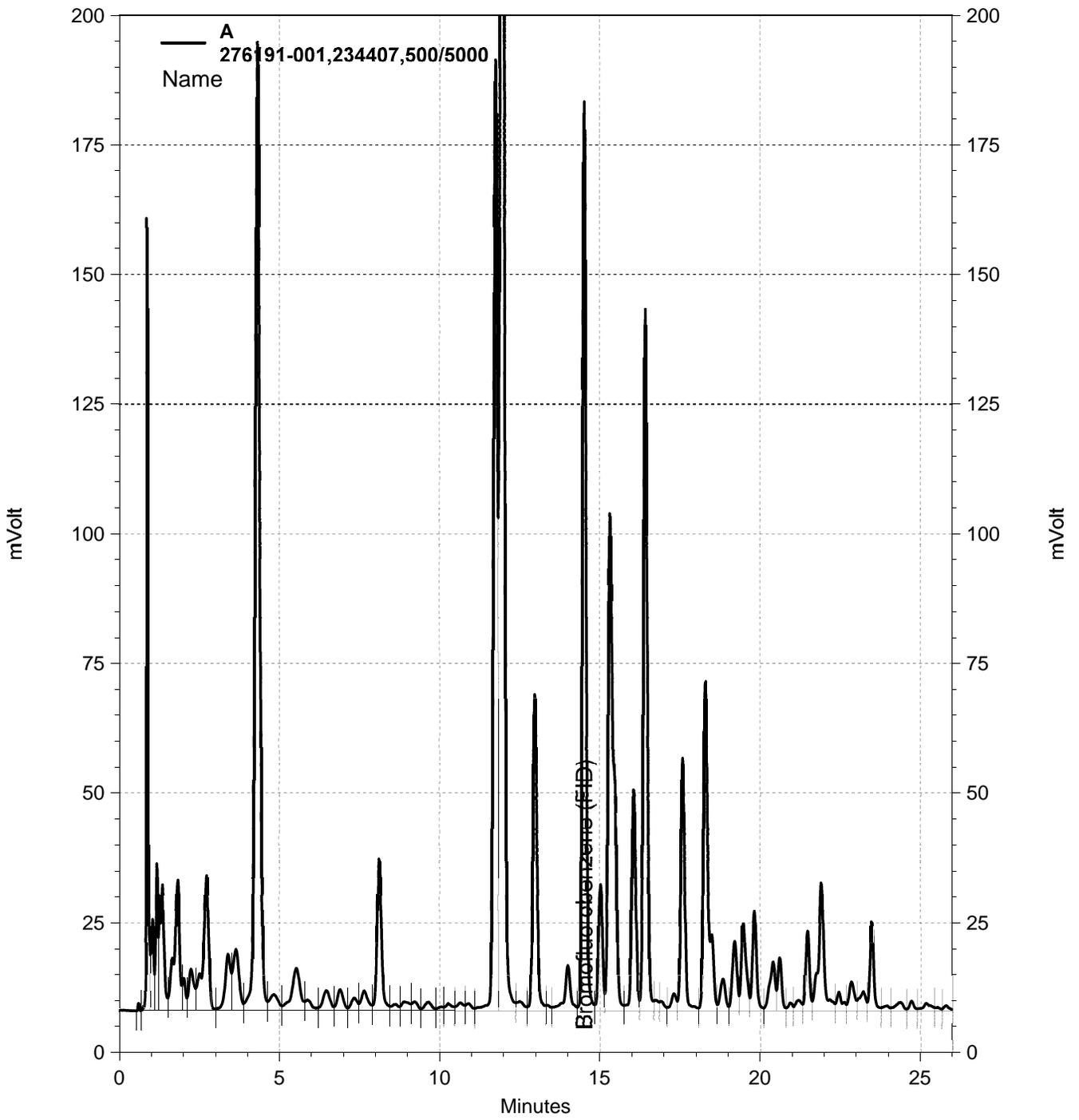
Type: MSD Lab ID: QC832848

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	4,109	122 *	76-120	5	20

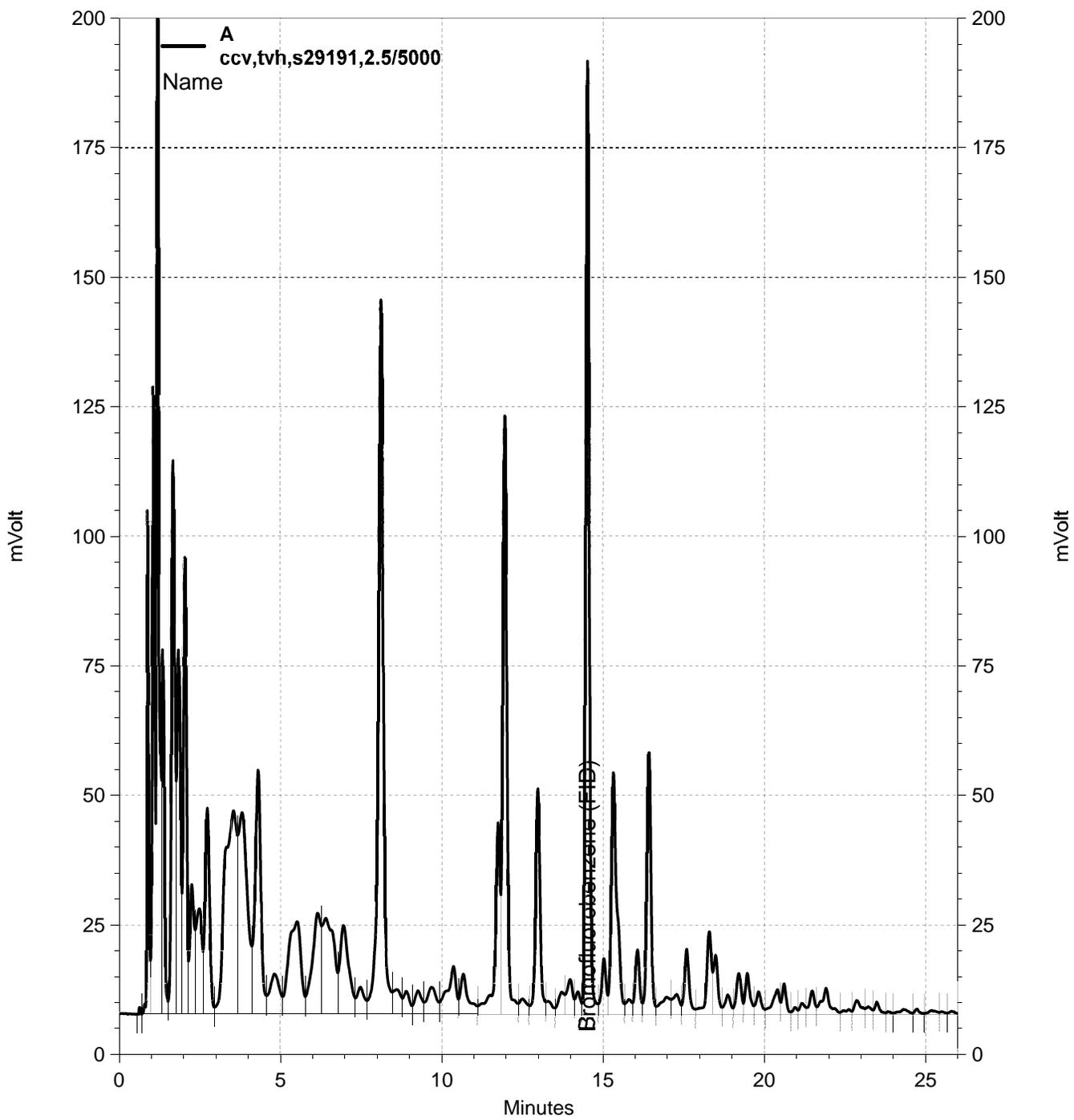
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	80-132

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference



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Purgeable Organics by GC/MS

Lab #:	276191	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-03	Batch#:	234443
Lab ID:	276191-001	Sampled:	04/21/16
Matrix:	Water	Received:	04/21/16
Units:	ug/L	Analyzed:	04/26/16
Diln Fac:	20.00		

Analyte	Result	RL
Freon 12	ND	20
Chloromethane	ND	20
Vinyl Chloride	ND	10
Bromomethane	ND	20
Chloroethane	ND	20
Trichlorofluoromethane	ND	20
Acetone	240	200
Freon 113	ND	100
1,1-Dichloroethene	ND	10
Methylene Chloride	ND	200
Carbon Disulfide	ND	10
MTBE	ND	10
trans-1,2-Dichloroethene	ND	10
Vinyl Acetate	ND	200
1,1-Dichloroethane	ND	10
2-Butanone	ND	200
cis-1,2-Dichloroethene	ND	10
2,2-Dichloropropane	ND	10
Chloroform	ND	10
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	10
1,1-Dichloropropene	ND	10
Carbon Tetrachloride	ND	10
1,2-Dichloroethane	ND	10
Benzene	740	10
Trichloroethene	ND	10
1,2-Dichloropropane	ND	10
Bromodichloromethane	ND	10
Dibromomethane	ND	10
4-Methyl-2-Pentanone	ND	200
cis-1,3-Dichloropropene	ND	10
Toluene	110	10
trans-1,3-Dichloropropene	ND	10
1,1,2-Trichloroethane	ND	10
2-Hexanone	ND	200
1,3-Dichloropropane	ND	10
Tetrachloroethene	ND	10

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276191	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-03	Batch#:	234443
Lab ID:	276191-001	Sampled:	04/21/16
Matrix:	Water	Received:	04/21/16
Units:	ug/L	Analyzed:	04/26/16
Diln Fac:	20.00		

Analyte	Result	RL
Dibromochloromethane	ND	10
1,2-Dibromoethane	ND	10
Chlorobenzene	ND	10
1,1,1,2-Tetrachloroethane	ND	10
Ethylbenzene	710	10
m,p-Xylenes	1,500	10
o-Xylene	220	10
Styrene	ND	10
Bromoform	ND	20
Isopropylbenzene	28	10
1,1,2,2-Tetrachloroethane	ND	10
1,2,3-Trichloropropane	ND	10
Propylbenzene	86	10
Bromobenzene	ND	10
1,3,5-Trimethylbenzene	160	10
2-Chlorotoluene	ND	10
4-Chlorotoluene	ND	10
tert-Butylbenzene	ND	10
1,2,4-Trimethylbenzene	560	10
sec-Butylbenzene	ND	10
para-Isopropyl Toluene	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
n-Butylbenzene	42	10
1,2-Dichlorobenzene	ND	10
1,2-Dibromo-3-Chloropropane	ND	40
1,2,4-Trichlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Naphthalene	150	10
1,2,3-Trichlorobenzene	ND	10

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	107	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276191	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-06	Batch#:	234443
Lab ID:	276191-002	Sampled:	04/21/16
Matrix:	Water	Received:	04/21/16
Units:	ug/L	Analyzed:	04/26/16
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	2.1	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #:	276191	Location:	Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep:	EPA 5030B
Project#:	01-ECR-001	Analysis:	EPA 8260B
Field ID:	SGI-GW-06	Batch#:	234443
Lab ID:	276191-002	Sampled:	04/21/16
Matrix:	Water	Received:	04/21/16
Units:	ug/L	Analyzed:	04/26/16
Diln Fac:	1.000		

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-128
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276191	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832974	Batch#: 234443
Matrix:	Water	Analyzed: 04/26/16
Units:	ug/L	

Analyte	Result	RL
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS		
Lab #:	276191	Location: Ellwood Commercial Real Estate
Client:	The Source Group, Inc.	Prep: EPA 5030B
Project#:	01-ECR-001	Analysis: EPA 8260B
Type:	BLANK	Diln Fac: 1.000
Lab ID:	QC832974	Batch#: 234443
Matrix:	Water	Analyzed: 04/26/16
Units:	ug/L	

Analyte	Result	RL
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	0.5
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	105	80-120

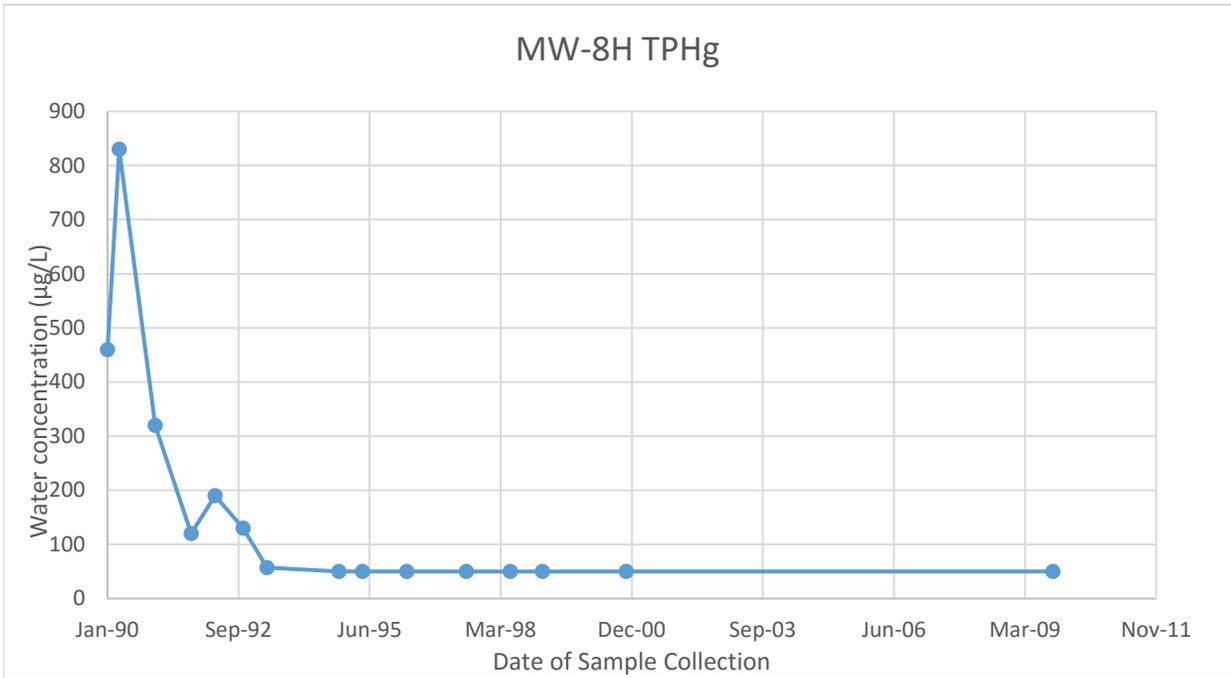
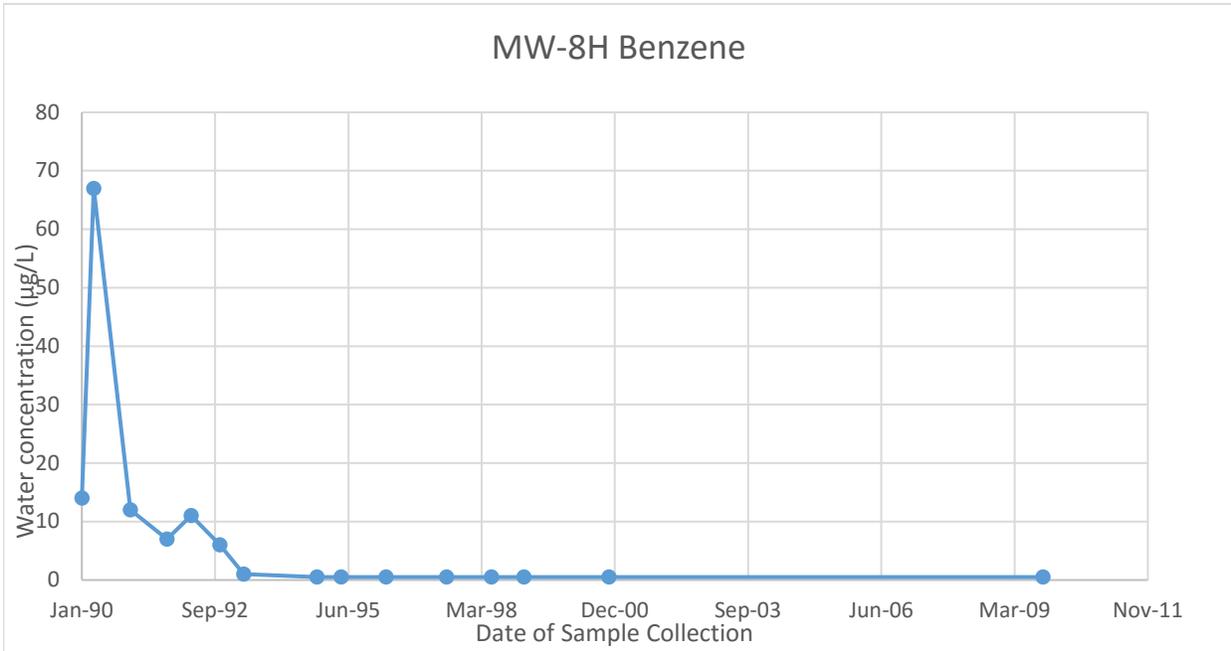
ND= Not Detected

RL= Reporting Limit

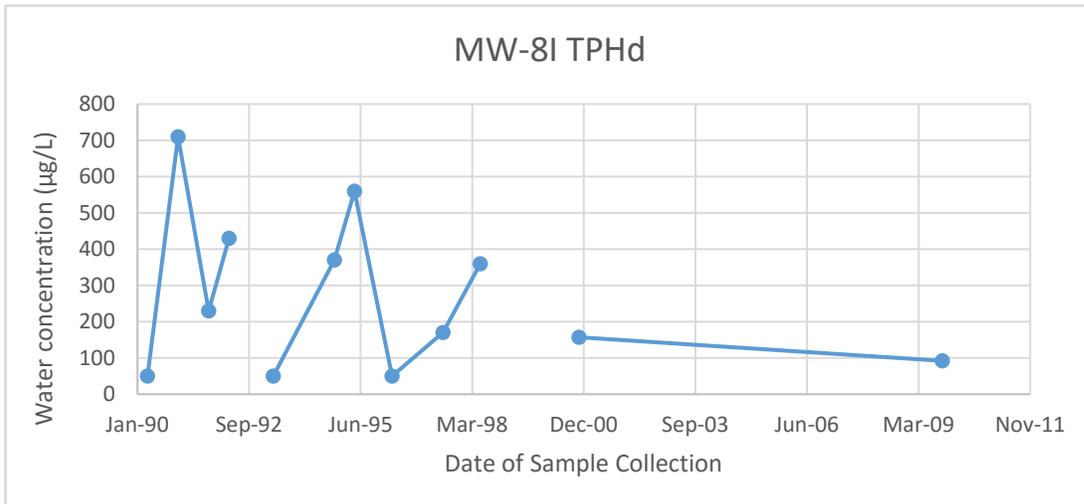
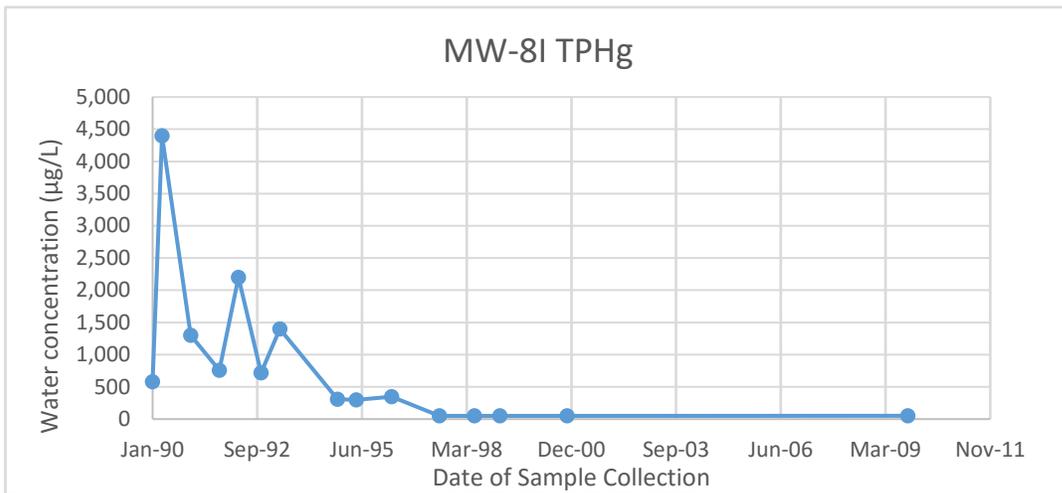
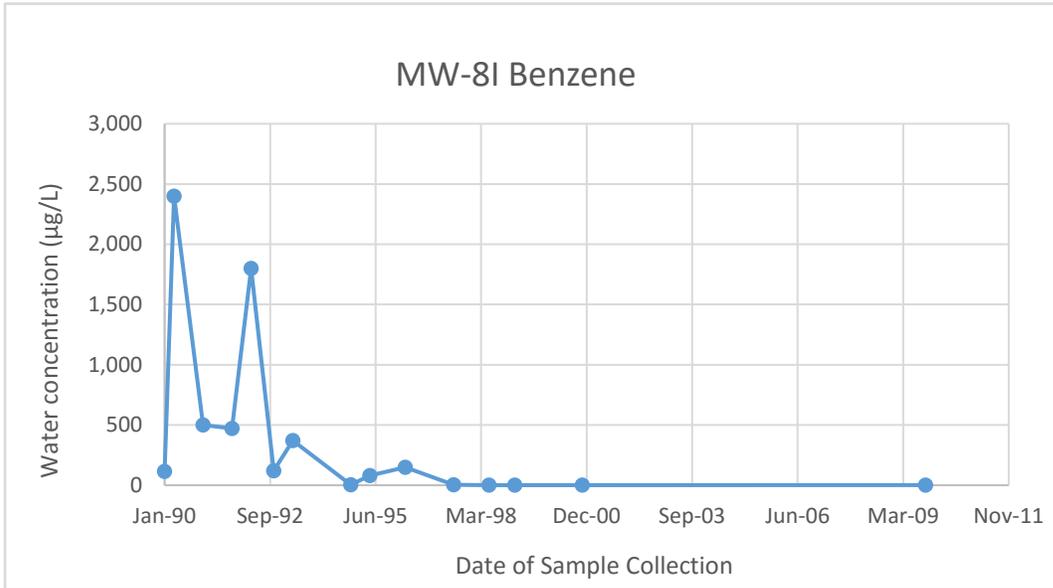
APPENDIX G

GROUNDWATER CONTAMINANT CONCENTRATION TREND CHARTS

Appendix G
Contaminant Concentration Over Time
Ellwood Development, Oakland, CA



Appendix G
 Contaminant Concentration Over Time
 Ellwood Development, Oakland, CA



APPENDIX H

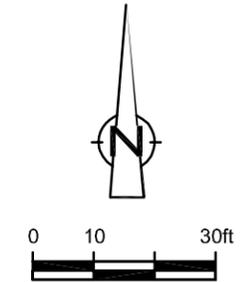
**CONESTOGA-ROVERS & ASSOCIATES, SITE CONCEPTUAL MODEL AND CASE CLOSURE
REQUEST, FIGURES 5 AND 6 AND TABLE 1, DATED DECEMBER 14, 2009**

LEGEND

- SV-1 ▲ SOIL VAPOR SAMPLE LOCATION
- MW-8K ● MONITORING WELL LOCATION
- B-6 ■ EXPLORATORY BORING LOCATION
- MW-8C ☒ DESTROYED MONITORING/OBSERVATION WELL LOCATION

NOTES:

1. TPHd - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
2. TPHg - TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
3. -- = NOT ANALYZED
4. <X = NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMITS
5. ND = NOT DETECTED, REPORTING LIMITS UNKNOWN.
6. FOR EXCAVATION CONFIRMATION SAMPLE LOCATIONS, PLEASE SEE APPENDIX F.
7. CONCENTRATIONS IN mg/kg.



Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
B-5	5.5	3/2/89	--	<10	<0.05
	10.5	3/2/89	--	<10	<0.05
	16	3/2/89	--	<10	<0.05

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
B-10	1.5	1/8/90	--	8.4	0.28
	2.5	1/8/90	--	ND	0.09
	5.5	1/8/90	--	ND	ND
	8.5	1/8/90	--	ND	ND

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
SV-5	2	3/18/08	--	<1.0	<0.0005

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
S-3	4	11/20/06	11	<1.0	<0.0005

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
SV-8	2	3/19/08	--	<1.0	<0.0005
	5	3/19/08	--	<1.0	<0.0005

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
B-6	2	10/26/89	<100	1	<0.05
	4.5	10/26/89	<10	<1.0	<0.05

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
B-4	3.5	10/10/88	--	510	<0.5

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
SV-7	2	3/18/08	--	16	0.001
	5	3/18/08	--	1,400	0.11

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
S-1	4	11/20/06	15	390	<0.062

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8E	5.5	10/11/88	--	750	0.82

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
S-2	4	11/20/06	580	3,800	0.41

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8H	1.5	1/10/90	--	ND	ND
	3	1/10/90	--	2.6	ND
	5.5	1/10/90	--	550	ND
	10.5	1/10/90	--	ND	ND

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8I	1.5	1/9/90	--	3	0.1
	3.5	1/9/90	--	ND	0.06
	5.5	1/9/90	--	280	ND
	10.5	1/9/90	--	ND	ND

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8F	11	3/16/89	--	<10	<0.5

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
B-1	6.5	10/10/88	--	12	<0.05

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8J	1.5	1/9/90	--	24	0.18
	3	1/9/90	--	13	0.08
	5.5	1/9/90	--	2,100	ND
	10.5	1/9/90	--	8	ND

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
B-8K	1.5	1/8/90	--	2.1	ND
	3	1/8/90	--	6.6	ND
	5.5	1/8/90	--	84	ND

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8D	1.3	6/7/88	--	10	<0.05

Boring/Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8G	6	3/16/89	--	<10	<0.5

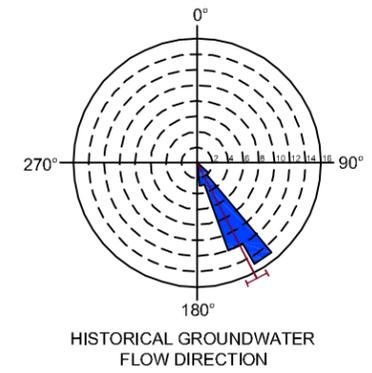


figure 5
HISTORICAL ANALYTICAL RESULTS IN SOIL
FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
Oakland, California



BASEMAP MODIFIED FROM DRAWING PROVIDED BY TEXACO

LEGEND

- SV-1 ▲ SOIL VAPOR SAMPLE LOCATION
- MW-8K ● MONITORING WELL LOCATION
- B-6 ■ EXPLORATORY BORING LOCATION
- MW-8C ☒ DESTROYED MONITORING/OBSERVATION WELL LOCATION
- (100) TPHd CONCENTRATION (ug/L)
- (242) TPHg CONCENTRATION (ug/L)
- (370) BENZENE CONCENTRATION (ug/L)
- (4) MTBE CONCENTRATION (ug/L)

NOTE: MW-8L WAS SAMPLED JUNE 10, 2009.

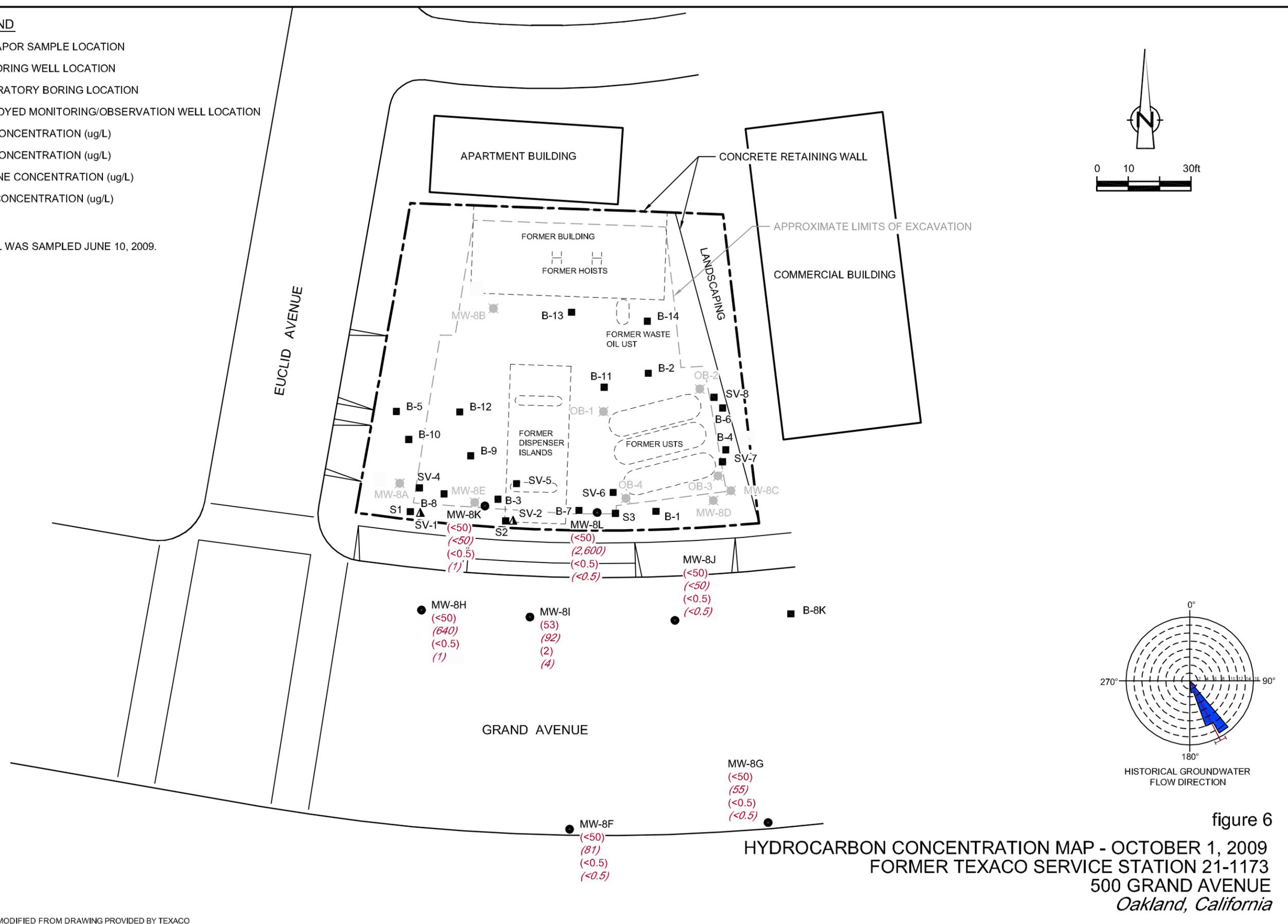


figure 6

HYDROCARBON CONCENTRATION MAP - OCTOBER 1, 2009
 FORMER TEXACO SERVICE STATION 21-1173
 500 GRAND AVENUE
 Oakland, California



BASEMAP MODIFIED FROM DRAWING PROVIDED BY TEXACO

Table 1
Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC* (<i>msl</i>)	DTW (ft.)	GWE (<i>msl</i>)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8A --	--	--	--	--	WELL ABANDONED								--
MW-8B --	--	--	--	--	WELL ABANDONED								--
MW-8C --	--	--	--	--	WELL ABANDONED								--
MW-8D --	--	--	--	--	WELL ABANDONED								--
MW-8E --	--	--	--	--	WELL ABANDONED								--
MW-8F													
01/23/92	97.94	10.24	87.70	--	<50	1,300	4.0	1.3	<0.5	1.9	--	--	--
02/28/92	97.94	9.93	88.01	--	--	--	--	--	--	--	--	--	--
03/26/92	97.94	8.78	89.16	--	--	--	--	--	--	--	--	--	--
04/30/92	97.94	9.36	88.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
09/28/92	97.94	11.83	86.11	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
11/19/92	97.94	11.22	86.72	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/12/93	97.94	9.66	88.28	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/06/93	97.94	8.83	89.11	--	<50	<100	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93	14.04	10.16	3.88	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93	14.04	10.60	3.44	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	14.04	9.29	4.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	14.04	9.34	4.70	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94	14.04	10.14	3.90	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	14.04	10.42	3.62	--	<50	520	<0.5	<0.5	<0.5	<0.5	--	--	--

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Groundwater Monitoring Data and Analytical Results
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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8F (cont)													
01/31/95	14.04	7.47	6.57	--	<50	290	<0.5	<0.5	<0.5	<0.5	--	--	--
05/18/95	14.04	8.00	6.04	--	<50	54	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	14.04	8.08	5.96	--	<50	83	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95	14.04	8.70	5.34	--	<50	51	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96	14.04	7.16	6.88	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	14.04	7.25	6.79	--	<50	62	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	14.04	8.72	5.32	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	14.04	8.16	5.88	--	210	110	17	17	11	46	<30	--	--
02/21/97	14.04	5.53	8.51	--	<50	85	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	14.04	7.85	6.19	--	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	--	--
07/30/97	14.04	8.87	5.17	--	<50	93	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	14.04	9.16	4.88	--	<50	140	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	14.04	8.56	5.48	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	14.04	8.30	5.74	--	<50	730	<0.5	<0.5	<0.5	<0.5	2.9	--	--
08/04/98	14.04	10.67	3.37	--	<50	210	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	14.04	8.72	5.32	--	<50	210	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
02/16/99	14.04	8.78	5.26	--	<50.0	230	<0.500	<0.500	<0.500	<0.500	<2.00	--	--
06/04/99	14.04	8.24	5.80	--	<50	120	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99	14.04	8.87	5.17	--	<50.0	176	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.7/1.4
11/03/99	14.04	9.40	4.64	--	<50.0	130	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	4.6/2.0
02/29/00	14.04	8.00	14.04	--	<50.0	59	<0.500	<0.500	<0.500	<0.500	<2.50	--	6.0/1.4
04/24/00	14.04	7.05	14.04	--	<50.0	161	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.1/2.0
07/25/00	14.04	8.66	14.04	--	<50.0	123	<0.500	<0.500	<0.500	<0.500	<2.50	--	0.4/1.2
11/06/00	14.04	9.37	14.04	--	--	77.3*	--	--	--	--	--	--	0.7/1.3
06/05/09 ¹	14.04	8.99	5.05	--	--	--	--	--	--	--	--	--	--
06/10/09 ⁴	NP ⁵	14.04	12.41	--	<50	300	<0.5	<0.5	<0.5	<0.5	--	<0.5	--
10/01/09 ⁴	NP ⁵	14.04	10.40	--	<50	81*	<0.5	<0.5	<0.5	<0.5	--	<0.5	--

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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8G													
01/23/92**	97.24	11.30	85.94	--	<50	980	<0.5	<0.5	<0.5	<0.5	--	--	--
02/28/92	97.24	10.83	86.41	--	--	--	--	--	--	--	--	--	--
03/26/92	97.24	9.20	88.04	--	--	--	--	--	--	--	--	--	--
04/30/92	97.24	9.00	88.24	--	<50	<50	1.7	<0.5	<0.5	<0.5	--	--	--
09/28/92	97.24	13.32	83.92	--	WELL DRY		--	--	--	--	--	--	--
11/19/92	97.24	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
02/12/93	97.24	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
05/06/93	97.24	11.18	86.06	--	<50	60	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93	13.32	9.51	3.81	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93	13.32	10.93	2.39	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	13.32	9.69	3.63	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	13.32	9.24	4.08	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94	13.32	9.74	3.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	13.32	10.08	3.24	--	<50	530	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95	13.32	5.75	7.57	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/18/95	13.32	6.60	6.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	13.32	8.14	5.18	--	<50	120	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95	13.32	9.16	4.16	--	<50	140	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96	13.32	7.18	6.14	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	13.32	7.00	6.32	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	13.32	8.94	4.38	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	13.32	9.22	4.10	--	190	57	16	16	9.0	39	<30	--	--
02/21/97	13.32	6.11	7.21	--	<50	54	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	13.32	7.54	5.78	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
07/30/97	13.32	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/05/97	13.32	9.65	3.67	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	13.32	--	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	13.32	7.57	5.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	13.32	9.37	3.95	--	<50	570	<0.5	<0.5	<0.5	<0.5	4.0	--	--
08/04/98	13.32	9.89	3.43	--	<50	200	<0.5	<0.5	<0.5	<0.5	<2.5	--	--

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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8G (cont)													
11/05/98	13.32	10.81	2.51	--	<50	170	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
02/16/99	13.32	8.63	4.69	--	<50.0	270	<0.500	<0.500	<0.500	<0.500	<2.00	--	--
06/04/99	13.32	7.95	5.37	--	<50	190	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99	13.32	9.11	4.21	--	<50.0	247	<0.500	<0.500	<0.500	<0.500	<2.50	--	4.5/1.3
11/03/99	13.32	9.58	3.74	--	<50.0	174	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	11.6/4.8
02/29/00	13.32	5.43	7.89	--	<50.0	90	<0.500	<0.500	<0.500	<0.500	<2.50	--	3.4/1.8
04/24/00	13.32	6.35	6.97	--	<50.0	72.4	<0.500	<0.500	<0.500	<0.500	<2.50	--	10.1/6.5
07/25/00	13.32	8.71	4.61	--	<50.0	79.2	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.2/0.8
11/06/00	13.32	9.76	3.56	--	--	106*	--	--	--	--	--	--	1.3/1.0
06/05/09 ¹	13.32	9.92	3.40	--	--	--	--	--	--	--	--	--	--
06/10/09 ⁴	NP ⁵	13.32	12.35	0.97	--	<50	140	<0.5	<0.5	<0.5	<0.5	<0.5	--
10/01/09 ⁴	NP ⁵	13.32	11.94	1.38	--	<50	55*	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-8H													
01/23/92	98.90	3.74	95.16	--	110	<60	7.2	1.2	4.7	3.2	--	--	--
02/28/92	98.90	4.44	94.46	--	--	--	--	--	--	--	--	--	--
03/26/92	98.90	4.21	94.69	--	--	--	--	--	--	--	--	--	--
04/30/92	98.90	3.46	95.44	--	190	90	11	1.5	5.6	3.6	--	--	--
09/28/92	98.90	--	--	--	WELL INACCESSIBLE			--	--	--	--	--	--
11/19/92	98.90	3.75	95.15	--	130	--	6.8	<0.5	1.1	1.5	--	--	--
02/12/93	98.90	4.12	94.78	--	73	--	5.9	<0.5	0.8	<0.5	--	--	--
05/06/93	98.90	3.85	95.05	--	57	<100	1.7	<0.5	<0.5	<0.5	--	--	--
08/16/93	15.04	3.88	11.16	--	<50	<50	0.5	<0.5	0.5	1.4	--	--	--
10/12/93	15.04	3.80	11.24	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	15.04	3.71	11.33	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	15.04	3.80	11.24	--	<50	<50	0.79	<0.5	<0.5	<0.5	--	--	--
08/25/94	15.04	3.89	11.15	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	15.04	3.64	11.40	--	<50	760	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95	15.04	3.58	11.46	--	<50	190	<0.5	<0.5	<0.5	<0.5	--	--	--

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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8H (cont)													
05/18/95	15.04	3.53	11.51	--	<50	370	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	15.04	3.55	11.49	--	<50	1,000	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/95	15.04	3.49	11.55	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/05/96	15.04	3.54	11.50	--	<50	190	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	15.04	3.50	11.54	--	<50	1,800	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	15.04	3.62	11.42	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	15.04	3.38	11.66	--	100	350	6.2	7.3	5.0	22	<30	--	--
02/21/97	15.04	3.77	11.27	--	<50	900	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	15.04	3.64	11.40	--	<50	450	<0.5	<0.5	<0.5	<0.5	--	--	--
07/30/97	15.04	3.65	11.39	--	<50	180	<0.5	0.62	<0.5	<0.5	<30	--	--
11/05/97	15.04	3.61	11.43	--	<50	280	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	15.04	3.57	11.47	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	15.04	3.50	11.54	--	<50	440	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
08/04/98	15.04	3.64	11.40	--	<50	300	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/03/99	15.04	3.49	11.55	--	<50.0	576	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00	15.04	3.63	11.41	--	<50.0	53.8	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00	15.04	3.54	11.50	--	<50.0	90.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00	15.04	3.49	11.55	--	--	433*	--	--	--	--	--	--	--
06/05/09 ¹	15.04	3.91	11.13	--	--	--	--	--	--	--	--	--	--
06/10/09 ⁴	15.04	3.66	11.38	--	<50	78	<0.5	<0.5	<0.5	<0.5	--	0.7	--
10/01/09 ⁴	NP ⁷	15.04	4.04	11.00	--	<50	640*	<0.5	<0.5	<0.5	<0.5	1	--
MW-8I													
01/23/92	98.27	6.33	91.94	--	820	210	420	7	27	20	--	--	--
02/28/92	98.27	6.55	91.72	--	--	--	--	--	--	--	--	--	--
03/26/92	98.27	6.45	91.82	--	--	--	--	--	--	--	--	--	--
04/30/92	98.27	6.48	91.79	--	2,200	430	1,800	19	180	25	--	--	--
09/28/92	98.27	--	--	--	WELL INACCESSIBLE			--	--	--	--	--	--
11/19/92	98.27	6.37	91.90	--	720	--	120	1.1	29	13	--	--	--

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MW-8I (cont)													
02/12/93	98.27	6.44	91.83	--	4,000	--	970	9.2	52	36	--	--	--
05/06/93	98.27	6.36	91.91	--	1,400	<10	370	2.4	40	8.4	--	--	--
08/16/93	14.40	6.35	8.05	--	<50	<50	3.1	<0.5	6	<0.5	--	--	--
10/12/93	14.40	5.99	8.41	--	<50	<50	1.4	<0.5	<0.5	<0.5	--	--	--
02/03/94	14.40	5.84	8.56	--	1,000	<50	270	3.2	51	14	--	--	--
05/31/94	14.40	6.25	8.15	--	1,400	<50	330	4.6	52	16	--	--	--
08/25/94	14.40	6.31	8.09	--	540	<50	14	0.58	30	4.3	--	--	--
11/02/94	14.40	6.10	8.30	--	310	370	5.7	0.74	20	<0.5	--	--	--
01/31/95	14.40	5.83	8.57	--	840	910	290	4.5	45	1.6	--	--	--
05/18/95	14.40	6.09	8.31	--	1,700	1100	390	7.8	80	10	--	--	--
08/29/95	14.40	6.09	8.31	--	300	560	81	<0.5	13	0.63	<10	--	--
11/02/95	14.40	6.26	8.14	--	81	160	<0.5	4.1	1.5	<0.5	<10	--	--
02/05/96	14.40	5.97	8.43	--	300	140	75	0.75	8.4	1.2	--	--	--
04/30/96	14.40	6.04	8.36	--	350	<50	150	0.77	3.2	1.3	--	--	--
08/28/96	14.40	6.20	8.20	--	1,100	380	300	2.9	3.2	2.1	--	--	--
12/05/96	14.40	6.01	8.39	--	340	53	23	8.7	11	26	<30	--	--
02/21/97	14.40	6.15	8.25	--	<50	330	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	14.40	6.20	8.20	--	110	<50	39	<0.5	0.92	<0.5	--	--	--
07/30/97	14.40	6.12	8.28	--	<50	170	4.2	<0.5	<0.5	<0.5	<30	--	--
11/05/97	14.40	6.26	8.14	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	14.40	6.00	8.40	--	<50	<50	1.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	14.40	6.74	7.66	--	<50	360	<0.5	<0.5	<0.5	<0.5	1.5	--	--
08/04/98	14.40	6.16	8.24	--	<50	83	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	14.40	6.14	8.26	--	<50	67	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99	14.40	6.12	8.28	--	--	--	--	--	--	--	--	--	--
11/03/99	14.40	6.45	7.95	--	<50.0	192	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	7.15/9.6
02/29/00	14.40	5.69	8.71	--	--	--	--	--	--	--	--	--	11.1
04/24/00	14.40	6.25	8.15	--	<50.0	69.2	<0.500	<0.500	<0.500	<0.500	<2.50	--	7.1/5.6
07/25/00	14.40	6.22	8.18	--	<50.0	80.1	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.4/1.2
11/06/00	14.40	6.34	8.06	--	--	157 ^a	--	--	--	--	--	--	1.5/1.1

Table 1
Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC ⁺ (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8I (cont)													
06/05/09	14.40	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--
06/10/09 ^{1,4}	14.40	6.31	8.09	--	420	360	23	<0.5	<0.5	<0.5	--	5	--
10/01/09 ⁴	NP ⁷	6.41	7.99	--	53	92 ^a	2	<0.5	<0.5	<0.5	--	4	--
MW-8J													
01/23/92	97.69	6.31	91.38	--	<50	<50	1	<0.5	<0.5	<0.5	--	--	--
02/28/92	97.69	6.28	91.41	--	--	--	--	--	--	--	--	--	--
03/26/92	97.69	6.20	91.49	--	--	--	--	--	--	--	--	--	--
04/30/92	97.69	6.48	91.21	--	<50	<50	2	<0.5	<0.5	<0.5	--	--	--
09/28/92	97.69	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/19/92	97.69	6.55	91.14	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/12/93	97.69	7.46	90.23	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/06/93	97.69	6.21	91.48	--	<50	<10	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93	13.82	6.29	7.53	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93	13.82	5.87	7.95	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	13.82	5.98	7.84	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	13.82	6.10	7.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94	13.82	6.01	7.81	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	13.82	5.90	7.92	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95	13.82	5.07	8.75	--	<50	<50	3.7	<0.5	<0.5	<0.5	--	--	--
05/18/95	13.82	5.33	8.49	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	13.82	3.50	10.32	--	<50	250	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95	13.82	5.94	7.88	--	<50	520	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96	13.82	5.34	8.48	--	<50	65	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	13.82	5.96	7.86	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	13.82	6.38	7.44	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	13.82	5.94	7.88	--	160	<50	13	14	8.9	38	<30	--	--
02/21/97	13.82	5.60	8.22	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	13.82	6.22	7.60	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--

Table 1
Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8J (cont)													
07/30/97	13.82	6.28	7.54	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	13.82	6.03	7.79	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	13.82	5.71	8.11	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	13.82	5.45	8.37	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
08/04/98	13.82	5.93	7.89	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	13.82	6.05	7.77	--	<50	<50	2.0	<0.50	<0.50	<0.50	<2.5	--	--
11/03/99	13.82	5.84	7.98	--	<50.0	58.9	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00	13.82	5.58	8.24	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00	13.82	5.89	7.93	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00	13.82	6.24	7.58	--	--	<50.0*	--	--	--	--	--	--	--
06/05/09 ¹	13.82	6.59	7.23	--	--	--	--	--	--	--	--	--	--
06/10/09 ⁴	13.82	6.41	7.41	--	<50	400	<0.5	<0.5	<0.5	<0.5	--	10	--
10/01/09 ⁴	NP ⁷	13.82	6.78	7.04	--	<50	<50*	<0.5	<0.5	<0.5	--	<0.5	--
MW-8K													
05/21/93	15.18	--	--	--	54	<50	12	<0.5	<0.5	<0.5	--	--	--
08/16/93	15.18	2.08	13.10	--	<50	<50	<0.5	<0.5	1.0	<0.5	--	--	--
10/12/93	15.18	1.95	13.23	--	<50	<50	4.2	<0.5	<0.5	<0.5	--	--	--
01/03/94	15.18	1.48	13.70	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	15.18	1.59	13.59	--	<50	<50	1.0	0.57	<0.5	<0.5	--	--	--
08/25/94	15.18	2.00	13.18	--	<50	<50	0.78	<0.5	<0.5	<0.5	--	--	--
11/02/94	15.18	2.10	13.08	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95	15.18	1.35	13.83	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/18/95	15.18	1.36	13.82	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	15.18	1.55	13.63	--	<50	160	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95	15.18	1.88	13.30	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96	15.18	1.46	13.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	15.18	1.43	13.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	15.18	1.75	13.43	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--

Table 1
Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8K (cont)													
12/05/96	15.18	1.42	13.76	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
02/21/97	15.18	1.49	13.69	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	15.18	1.60	13.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
07/30/97	15.18	1.66	13.52	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	15.18	1.62	13.56	--	<50	300	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	15.18	1.29	13.89	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	15.18	1.17	14.01	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
08/04/98	15.18	1.21	13.97	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	15.18	2.30	12.88	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
11/03/99	15.18	1.63	13.55	--	<50.0	270	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00	15.18	1.25	13.93	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00	15.18	1.38	13.80	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00	15.18	11.38	3.80	--	--	53.2 ^a	--	--	--	--	--	--	--
06/05/09 ¹	15.18	1.18	14.00	--	--	--	--	--	--	--	--	--	--
06/10/09 ⁴	15.18	1.31	13.87	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	2	--
10/01/09 ⁴	15.18	1.85	13.33	--	<50	<50 ^a	<0.5	<0.5	<0.5	<0.5	--	1	--
MW-8L													
05/21/93	14.44	--	--	--	76	<50	1.1	<0.5	<0.5	6	--	--	--
08/16/93	14.44	2.47	11.97	--	<50	<50	<0.5	<0.5	0.7	1.1	--	--	--
10/12/93	14.44	2.36	12.08	--	110	<50	13	<0.5	6	<0.5	--	--	--
01/03/94	14.44	2.82	11.62	--	590	<50	61	2.4	<0.5	110	--	--	--
05/31/94	14.44	2.66	11.78	--	410	<50	77	<0.5	20	1.1	--	--	--
08/25/94	14.44	2.34	12.10	--	260	<50	16	<0.5	2.5	<0.5	--	--	--
11/02/94	14.44	--	--	--	WELL INACCESSIBLE			--	--	--	--	--	--
01/31/95	14.44	0.08	14.36	--	WELL INACCESSIBLE			--	--	--	--	--	--
08/18/95	14.44	0.42	14.02	--	WELL INACCESSIBLE			--	--	--	--	--	--
08/29/95	14.44	--	--	--	WELL INACCESSIBLE			--	--	--	--	--	--
11/02/95	14.44	--	--	--	WELL INACCESSIBLE			--	--	--	--	--	--

Table 1
Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH- GRO (ug/L)	TPH- DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8L (cont)													
02/05/96	14.44	--	--	--	WELL INACCESSIBLE	--	--	--	--	--	--	--	--
04/30/96	14.44	--	--	--	WELL INACCESSIBLE	--	--	--	--	--	--	--	--
08/28/96	14.44	0.75	13.69	--	WELL INACCESSIBLE	--	--	--	--	--	--	--	--
12/05/96	14.44	--	--	--	WELL INACCESSIBLE	--	--	--	--	--	--	--	--
02/21/97	14.44	--	--	--	WELL INACCESSIBLE	--	--	--	--	--	--	--	--
05/02/97	14.44	0.60	13.84	--	WELL INACCESSIBLE	--	--	--	--	--	--	--	--
07/30/97	14.44	--	--	--	WELL INACCESSIBLE	--	--	--	--	--	--	--	--
11/05/97	14.44	0.67	13.77	--	--	--	--	--	--	--	--	--	--
01/21/98	14.44	--	--	--	--	--	--	--	--	--	--	--	--
06/05/09 ^{2,3}	14.44	0.90	13.54	--	--	--	--	--	--	--	--	--	--
06/10/09 ^{1,2,4}	NP ⁶	0.91	13.53	--	<50	2,600	<0.5	<0.5	<0.5	<0.5	--	<0.5	--
10/01/09	14.44	OBSTRUCTION IN WELL			--	--	--	--	--	--	--	--	--
TRIP BLANK													
QA													
06/10/09	--	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	<0.5	--
DISCONTINUED													

Table 1
Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

Data prior to June 5, 2009, compiled from Blaine Tech Reports.

EXPLANATIONS:

TOC = Top of Casing Elevation	GRO = Gasoline Range Organics	ug/L = parts per billion
ft = Feet	DRO = Diesel Range Organics	ppm = parts per million
GWE = Groundwater Elevation	B = Benzene	-- = Not Measured/Not Analyzed
msl = Mean sea level	T = Toluene	QA = Quality Assurance/Trip Blank
DTW = Depth to Water	E = Ethylbenzene	D = Duplicate sample
SPH = Separate-Phase Hydrocarbons	X = Xylenes	DO = Dissolved Oxygen
TPH = Total Petroleum Hydrocarbons	MTBE = Methyl Tertiary Butyl Ether	

ANALYTICAL METHODS:

TPH-GRO by modified EPA Method 8015

TPH-DRO by modified EPA Method 8015

Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8020

* New well elevation survey performed at wells MW-8F through MW-8L on August 16, 1993, based on mean sea level (MSL). Prior data based on arbitrary site data.

** Non-diesel mix >C16. The certified analytical report for sample MW-8G was revised on October 21, 1993.

^a TPH-DRO with Silica Gel Cleanup.

¹ Well Development performed.

² Casing bent, see field sheet for additional information.

³ Attempted well development.

⁴ BTEX analyzed by EPA Method 8260.

⁵ No purge due to insufficient water.

⁶ No purge due to bent well casing.

⁷ No purge due to traffic control constraints.

APPENDIX I

CALEPA DTSC J/E MODEL SPREADSHEETS, INPUT PARAMETERS AND RESULTS

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Acetone**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
3.30E+02	8.0E-05	2.6E-02	NA	1.9E-07	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w (µg/L)

Chemical

67641	2.40E+02	Acetone
-------	----------	---------

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T _S (°C)
15	259	L	24

ENTER
Average vapor flow rate into bldg. (Leave blank to calculate)
Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type <small>Lookup Soil Parameters</small>	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
L			L	1.63	0.383	0.326

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour) ⁻¹
1.0E-06	1	70	25	25	250	8	1

NEW=> Commercial

Used to calculate risk-based groundwater concentration.		(NEW)	(NEW)
---	--	-------	-------

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Benzene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g}/\text{L}$)	Noncancer HQ = 1 ($\mu\text{g}/\text{L}$)
1.61E+05	3.3E-06	5.3E-01	1.3E-06	4.0E-02	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w ($\mu\text{g}/\text{L}$)

Chemical

71432	7.40E+02	Benzene
-------	----------	---------

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)

ENTER Depth below grade to water table, L_{WT} (cm)

ENTER SCS soil type directly above water table

ENTER Average soil/groundwater temperature, T_s ($^{\circ}\text{C}$)

15	259	L	24
----	-----	---	----

ENTER Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)

OR

ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)

ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)

ENTER Vadose zone soil total porosity, n^v (unitless)

ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)

ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

ENTER Averaging time for carcinogens, AT_C (yrs)

ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)

ENTER Exposure duration, ED (yrs)

ENTER Exposure frequency, EF (days/yr)

ENTER Exposure Time, ET (hrs/day)

ENTER Air Exchange Rate, ACH (hour^{-1})

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Commercial

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **n-Butylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER

ENTER

Chemical
CAS No.
(numbers only,
no dashes)

Initial
groundwater
conc.,
 C_w
($\mu\text{g/L}$)

Chemical

104518	4.20E+01	n-Butylbenzene
--------	----------	----------------

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
2.56E+04	1.8E-06	4.6E-02	NA	6.0E-05	NA	NA

MESSAGE: Risk and/or HQ (or risk-based groundwater concentration) is based on route-to-route extrapolation.
MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER

ENTER

ENTER

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_f
(15 or 200 cm)

Depth
below grade
to water table,
 L_{WT}
(cm)

SCS
soil type
directly above
water table

Average
soil/
groundwater
temperature,
 T_s
($^{\circ}\text{C}$)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)

Q_{soil}
(L/m)

15	259	L	24
----	-----	---	----

5

MORE
↓

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

User-defined
vadose zone
soil vapor
permeability,
 k_v
(cm^2)

Lookup Soil
Parameters

Vadose zone
SCS
soil type

Vadose zone
soil dry
bulk density,
 ρ_b^v
(g/cm^3)

Vadose zone
soil total
porosity,
 n^v
(unitless)

Vadose zone
soil water-filled
porosity,
 θ_w^v
(cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE
↓

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

Target
risk for
carcinogens,
TR
(unitless)

Target hazard
quotient for
noncarcinogens,
THQ
(unitless)

Averaging
time for
carcinogens,
 AT_C
(yrs)

Averaging
time for
noncarcinogens,
 AT_{NC}
(yrs)

Exposure
duration,
ED
(yrs)

Exposure
frequency,
EF
(days/yr)

Exposure
Time
ET
(hrs/day)

Air Exchange
Rate
ACH
(hour)⁻¹

Lookup Receptor
Parameters

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

NEW=> Commercial

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **sec-Butylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER

ENTER

Chemical CAS No. (numbers only, no dashes)	Initial groundwater conc., C_w ($\mu\text{g/L}$)
---	--

135988	5.80E+00
--------	----------

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
2.28E+03	1.8E-06	4.2E-03	NA	2.4E-06	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER

ENTER

ENTER

ENTER

Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	Depth below grade to water table, L_{WT} (cm)	SCS soil type directly above water table	Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)
---	---	--	--

15	259	L	24
----	-----	---	----

ENTER

Average vapor flow rate into bldg.
(Leave blank to calculate)

Q_{soil}
(L/m)

5

MORE
↓

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	User-defined vadose zone soil vapor permeability, k_v (cm^2)	Vadose zone SCS soil type <small>Lookup Soil Parameters</small>	Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	Vadose zone soil total porosity, n^v (unitless)	Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
--	----	---	--	---	---	--

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE
↓

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

Lookup Receptor Parameters

Target risk for carcinogens, TR (unitless)	Target hazard quotient for noncarcinogens, THQ (unitless)	Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)	Exposure Time ET (hrs/day)	Air Exchange Rate ACH (hour) ⁻¹
--	---	--	--	-----------------------------------	--	----------------------------------	--

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

NEW=> Commercial

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **1,2-Dichloroethane**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)

Chemical

107062	3.10E+00	1,2-Dichloroethane
--------	----------	--------------------

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
1.43E+02	5.1E-06	7.2E-04	1.5E-09	2.4E-05	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_f (15 or 200 cm)

ENTER Depth below grade to water table, L_{WT} (cm)

ENTER SCS soil type directly above water table

ENTER Average soil/groundwater temperature, T_s ($^{\circ}\text{C}$)

15	259	L	24
----	-----	---	----

ENTER Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)

OR

ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)

ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)

ENTER Vadose zone soil total porosity, n^v (unitless)

ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)

ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

ENTER Averaging time for carcinogens, AT_C (yrs)

ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)

ENTER Exposure duration, ED (yrs)

ENTER Exposure frequency, EF (days/yr)

ENTER Exposure Time, ET (hrs/day)

ENTER Air Exchange Rate, ACH (hour^{-1})

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Commercial

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Ethylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

<p style="color: red; font-weight: bold;">ENTER</p> <p>Chemical CAS No. (numbers only, no dashes)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Initial groundwater conc., C_w ($\mu\text{g/L}$)</p>
---	---

100414	7.10E+02	Ethylbenzene
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Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
2.17E+05	2.4E-06	5.3E-01	1.1E-07	1.2E-04	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

<p style="color: red; font-weight: bold;">ENTER</p> <p>Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Depth below grade to water table, L_{WT} (cm)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>SCS soil type directly above water table</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Average soil/groundwater temperature, T_s ($^{\circ}\text{C}$)</p>
---	---	---	---

15	259	L	24
----	-----	---	----

ENTER

Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE
↓

<p style="color: red; font-weight: bold;">ENTER</p> <p>Vadose zone SCS soil type (used to estimate soil vapor permeability)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>User-defined vadose zone soil vapor permeability, k_v (cm^2)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Vadose zone SCS soil type</p> <p style="font-size: small; border: 1px solid black; padding: 2px;">Lookup Soil Parameters</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Vadose zone soil total porosity, n^v (unitless)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)</p>
---	--	---	--	---	---

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE
↓

Lookup Receptor Parameters

<p style="color: red; font-weight: bold;">ENTER</p> <p>Target risk for carcinogens, TR (unitless)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Target hazard quotient for noncarcinogens, THQ (unitless)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Averaging time for carcinogens, AT_C (yrs)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Averaging time for noncarcinogens, AT_{NC} (yrs)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Exposure duration, ED (yrs)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Exposure frequency, EF (days/yr)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Exposure Time, ET (hrs/day)</p>	<p style="color: red; font-weight: bold;">ENTER</p> <p>Air Exchange Rate, ACH (hour^{-1})</p>
---	--	--	--	--	---	--	---

1.0E-06	1	70	25	25	250	8	1
---------	---	----	----	----	-----	---	---

Used to calculate risk-based groundwater concentration.

NEW=> Commercial

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Cumene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)

Chemical

98828	2.80E+01	Cumene
-------	----------	--------

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g}/\text{L}$)	Noncancer HQ = 1 ($\mu\text{g}/\text{L}$)
1.23E+04	2.1E-06	2.6E-02	NA	1.5E-05	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)

ENTER Depth below grade to water table, L_{WT} (cm)

ENTER SCS soil type directly above water table

ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)

15	259	L	24
----	-----	---	----

ENTER Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)

OR

ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)

ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)

ENTER Vadose zone soil total porosity, n^v (unitless)

ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)

ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

ENTER Averaging time for carcinogens, AT_C (yrs)

ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)

ENTER Exposure duration, ED (yrs)

ENTER Exposure frequency, EF (days/yr)

ENTER Exposure Time, ET (hrs/day)

ENTER Air Exchange Rate, ACH (hour^{-1})

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

NEW=> Commercial

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Cumene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)

Chemical

98828	1.00E+01	Cumene
-------	----------	--------

Surrogate used for p-Isopropyltoluene.

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)
--	--	---	---

15	259	L	24
----	-----	---	----

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g}/\text{L}$)	Noncancer HQ = 1 ($\mu\text{g}/\text{L}$)
4.39E+03	2.1E-06	9.1E-03	NA	5.2E-06	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

ENTER Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE ↓

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil Parameters</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
---	-----------	--	---	---	--	---

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
---	--	---	---	--	---	--	--

NEW=> Commercial

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **MTBE (methyl-tert-butyl ether)**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)
ENTER Chemical

1634044	5.90E+00	MTBE (methyl-tert-butyl ether)
---------	----------	--------------------------------

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
1.36E+02	6.0E-06	8.2E-04	1.7E-11	6.3E-08	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)
ENTER Depth below grade to water table, L_{WT} (cm)
ENTER SCS soil type directly above water table
ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)

15	259	L	24
----	-----	---	----

ENTER Average vapor flow rate into bldg. (Leave blank to calculate)
 Q_{soil} (L/m)

5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)
OR **ENTER** User-defined vadose zone soil vapor permeability, k_v (cm^2)
ENTER Vadose zone SCS soil type (Lookup Soil Parameters)
ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)
ENTER Vadose zone soil total porosity, n^v (unitless)
ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)
ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
ENTER Averaging time for carcinogens, AT_C (yrs)
ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)
ENTER Exposure duration, ED (yrs)
ENTER Exposure frequency, EF (days/yr)
ENTER Exposure Time, ET (hrs/day)
ENTER Air Exchange Rate, ACH (hour^{-1})

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

NEW=> Commercial

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Naphthalene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER

ENTER

Chemical CAS No. (numbers only, no dashes)	Initial groundwater conc., C_w ($\mu\text{g/L}$)	Chemical
---	--	----------

91203	1.50E+02	Naphthalene
-------	----------	-------------

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
2.52E+03	6.8E-06	1.7E-02	4.8E-08	1.3E-03	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER

ENTER

ENTER

ENTER

Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	Depth below grade to water table, L_{WT} (cm)	SCS soil type directly above water table	Average soil/ groundwater temperature, T_S ($^{\circ}\text{C}$)
---	---	--	---

15	259	L	24
----	-----	---	----

ENTER
Average vapor flow rate into bldg.
(Leave blank to calculate)

Q_{soil}
(L/m)

5

MORE
↓

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	User-defined vadose zone soil vapor permeability, k_v (cm^2)	Vadose zone SCS soil type <small>Lookup Soil Parameters</small>	Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	Vadose zone soil total porosity, n^v (unitless)	Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
--	-----------	---	--	---	---	--

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE
↓

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

ENTER

Lookup Receptor Parameters

Target risk for carcinogens, TR (unitless)	Target hazard quotient for noncarcinogens, THQ (unitless)	Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)	Exposure Time ET (hrs/day)	Air Exchange Rate ACH (hour) ⁻¹
--	---	--	--	-----------------------------------	--	----------------------------------	--

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

NEW=> Commercial

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **n-Propylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER

ENTER

Chemical
CAS No.
(numbers only,
no dashes)

Initial
groundwater
conc.,
 C_w
($\mu\text{g/L}$)

Chemical

103651	8.60E+01	n-Propylbenzene
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Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
3.48E+04	2.1E-06	7.2E-02	NA	1.7E-05	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER

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ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F
(15 or 200 cm)

Depth
below grade
to water table,
 L_{WT}
(cm)

SCS
soil type
directly above
water table

Average
soil/
groundwater
temperature,
 T_S
($^{\circ}\text{C}$)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)

Q_{soil}
(L/m)

15	259	L	24
----	-----	---	----

5

MORE
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Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

User-defined
vadose zone
soil vapor
permeability,
 k_v
(cm^2)

Lookup Soil
Parameters

Vadose zone
SCS
soil type

Vadose zone
soil dry
bulk density,
 ρ_b^v
(g/cm^3)

Vadose zone
soil total
porosity,
 n^v
(unitless)

Vadose zone
soil water-filled
porosity,
 θ_w^v
(cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE
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ENTER

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ENTER

ENTER

ENTER

Target
risk for
carcinogens,
TR
(unitless)

Target hazard
quotient for
noncarcinogens,
THQ
(unitless)

Averaging
time for
carcinogens,
 AT_C
(yrs)

Averaging
time for
noncarcinogens,
 AT_{NC}
(yrs)

Exposure
duration,
ED
(yrs)

Exposure
frequency,
EF
(days/yr)

Exposure
Time
ET
(hrs/day)

Air Exchange
Rate
ACH
(hour)⁻¹

Lookup Receptor
Parameters

NEW=> Commercial

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **Toluene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)

Chemical

108883	1.10E+02	Toluene
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Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
2.85E+04	2.8E-06	8.0E-02	NA	6.1E-05	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)

ENTER Depth below grade to water table, L_{WT} (cm)

ENTER SCS soil type directly above water table

ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)

15	259	L	24
----	-----	---	----

ENTER Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)

OR

ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)

ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)

ENTER Vadose zone soil total porosity, n^v (unitless)

ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)

ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

ENTER Averaging time for carcinogens, AT_C (yrs)

ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)

ENTER Exposure duration, ED (yrs)

ENTER Exposure frequency, EF (days/yr)

ENTER Exposure Time, ET (hrs/day)

ENTER Air Exchange Rate, ACH (hour^{-1})

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Commercial

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **1,2,4-Trimethylbenzene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)

Chemical

95636	5.60E+02	1,2,4-Trimethylbenzene
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Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
1.33E+05	2.2E-06	3.0E-01	NA	9.7E-03	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)

ENTER Depth below grade to water table, L_{WT} (cm)

ENTER SCS soil type directly above water table

ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)

15	259	L	24
----	-----	---	----

ENTER Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)

OR

ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)

ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)

ENTER Vadose zone soil total porosity, n^v (unitless)

ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)

ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

ENTER Averaging time for carcinogens, AT_C (yrs)

ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)

ENTER Exposure duration, ED (yrs)

ENTER Exposure frequency, EF (days/yr)

ENTER Exposure Time, ET (hrs/day)

ENTER Air Exchange Rate, ACH (hour^{-1})

NEW=> Commercial

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **1,3,5-Trimethylbenzene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)

Chemical

108678	1.60E+02	1,3,5-Trimethylbenzene
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Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
5.39E+04	2.1E-06	1.1E-01	NA	7.5E-04	NA	NA

MESSAGE: Risk and/or HQ (or risk-based groundwater concentration) is based on route-to-route extrapolation.
MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)

ENTER Depth below grade to water table, L_{WT} (cm)

ENTER SCS soil type directly above water table

ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)

15	259	L	24
----	-----	---	----

ENTER Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)

OR

ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)

ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)

ENTER Vadose zone soil total porosity, n^v (unitless)

ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)

L		L	1.63	0.383	0.326
---	--	---	------	-------	-------

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)

ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

ENTER Averaging time for carcinogens, AT_C (yrs)

ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)

ENTER Exposure duration, ED (yrs)

ENTER Exposure frequency, EF (days/yr)

ENTER Exposure Time, ET (hrs/day)

ENTER Air Exchange Rate, ACH (hour^{-1})

NEW=> Commercial

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **m-Xylene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)

ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)

Chemical

108383	1.50E+03	m-Xylene
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Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
4.17E+05	2.5E-06	1.0E+00	NA	2.3E-03	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)

ENTER Depth below grade to water table, L_{WT} (cm)

ENTER SCS soil type directly above water table

ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)

15	259	L	24
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ENTER Average vapor flow rate into bldg. (Leave blank to calculate)

Q_{soil} (L/m)

5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)

OR

ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)

ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)

ENTER Vadose zone soil total porosity, n^v (unitless)

ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)

L		L	1.63	0.383	0.326
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MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)

ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

ENTER Averaging time for carcinogens, AT_C (yrs)

ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)

ENTER Exposure duration, ED (yrs)

ENTER Exposure frequency, EF (days/yr)

ENTER Exposure Time, ET (hrs/day)

ENTER Air Exchange Rate, ACH (hour^{-1})

NEW=> Commercial

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Commercial**
Chemical: **o-Xylene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION

(enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER

ENTER

Chemical CAS No. (numbers only, no dashes)	Initial groundwater conc., C_w ($\mu\text{g/L}$)	Chemical
---	--	----------

95476	2.20E+02	o-Xylene
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Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
4.41E+04	2.6E-06	1.1E-01	NA	2.6E-04	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE



ENTER

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ENTER

Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	Depth below grade to water table, L_{WT} (cm)	SCS soil type directly above water table	Average soil/ groundwater temperature, T_s ($^{\circ}\text{C}$)
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15	259	L	24
----	-----	---	----

ENTER

Average vapor flow rate into bldg.
(Leave blank to calculate)

Q_{soil}
(L/m)

5

MORE



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Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	User-defined vadose zone soil vapor permeability, k_v (cm^2)	Vadose zone SCS soil type <input type="button" value="Lookup Soil Parameters"/>	Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	Vadose zone soil total porosity, n^v (unitless)	Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
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L		L	1.63	0.383	0.326
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Target risk for carcinogens, TR (unitless)	Target hazard quotient for noncarcinogens, THQ (unitless)	Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)	Exposure Time ET (hrs/day)	Air Exchange Rate ACH (hour) ⁻¹
--	---	--	--	-----------------------------------	--	----------------------------------	--

Lookup Receptor Parameters

NEW=> Commercial

1.0E-06	1	70	25	25	250	8	1
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END