

RECEIVED

By Alameda County Environmental Health 11:19 am, Apr 13, 2016

April 8, 2016

Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Department of 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:

As per our April 5, 2016 meeting we have prepared the attached *Supplemental Investigation Work Plan (Work Plan)*. The Work Plan includes the revised the figure showing historic data sample locations, foundation footprint, and hot spots (mostly pre-excavation) of potential concern, along with all the proposed additional sampling locations. The issues and rationale for the soil and groundwater sample locations are included in concise tabular format, investigation point by investigation point.

As discussed, we have reserved the drill rig and depending upon owner/tenant schedule, we will be collecting the samples on either April 15 or April 16. We would appreciate an expedited review in order to meet this tight schedule.

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



Apex Companies, LLC
3478 Buskirk Avenue, Suite 100 • Pleasant Hill, CA 94523
P: (925) 944-2856 • F: (925) 944-2859

April 8, 2016

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

Transmittal: mark.detterman@acgov.org

RE: Supplemental Investigation Work Plan
500 Grand Avenue
Oakland, California

Dear Mr. Detterman:

The Source Group, Inc. (SGI) has prepared a Supplemental *Investigation Work Plan* (Work Plan) on behalf of Ellwood Commercial Real Estate (ECR) for the property at 500 Grand Avenue in Oakland, California (The Site, Figure 1). This Work Plan identifies 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 Alameda County Department of Environmental Health (ACDEH). During our discussion, the following four (4) areas of investigation were identified:

1. 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 is available.
2. 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 is available. In addition, PCE was previously identified in soil gas in this area.
3. PCE source area. Former waste oil UST is suspect but no data available to confirm if PCE remains localized to the southeast corner of the Site.
4. Excavation backfill samples. No data is available to indicate "clean" material was utilized to backfill the UST, dispenser island, and waste oil tank excavations.



The Source Group, Inc. is a division
of Apex Companies, LLC

www.apexcos.com

The purpose of the proposed scope of work is to assess these areas for residual petroleum hydrocarbons and PCE and determine the impact, if any, on the proposed redevelopment. The following scope of work is proposed:

- Advance ten (10) continuously cored direct push borings (DPT) to a maximum depth of 12-feet below ground surface (bgs);
- Log and field screen soil samples;
- Collect discrete soil samples from specified soil bore intervals and DPT locations;
- Collect grab groundwater samples from specified DPT locations;
- Analyze soil and groundwater samples for contaminants of concern (CoCs); and
- Prepare a summary letter and update the conceptual site model (CSM).

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 and depths (Figure 1) are based on historic data, prior operations, footprint of the proposed redevelopment, and our April 5th ACDEH meeting. The DPT investigation will provide SGI with an updated soil and groundwater data set to evaluate the risk of residual petroleum hydrocarbons with respect to the planned redevelopment of the Site. As discussed in the table below, the soil and groundwater sample locations have been selected to focus on known areas of the Site where residual petroleum hydrocarbons are present above the residential ESLs and PCE was previously detected. Samples obtained from these locations will be used to establish a new baseline for the site in context of the planned redevelopment.

Methodology: DPT Investigation

A total of ten (10) DPT borings (SGI-SB-01 through SGI-SB-10) will be advanced as shown on Figure 1. The first occurrence of groundwater will be noted and then stabilized depth to groundwater will be recorded. Hand augering of the first five (5) feet will be performed in areas of undisturbed soil as an extra safety measure to protect against damage to underground utilities. Continuous soil cores will be collected to depth using a split-spoon sampler, core barrel, or equivalent. Soil samples will be collected by advancing the direct push rods lined with acetate sleeves into the subsurface until the desired sampling depth is reached. Selected samples will be analyzed for geotechnical data (i.e., bulk density, total porosity, soil grain-size diameter, moisture content, and fraction organic carbon). Soil stratigraphy and geotechnical data will be useful in estimating fate and transport properties of soil vapor in the vadose zone.

Soil samples from each borehole will be visually evaluated. Visual description of soil samples will 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 will be screened in the field for volatile organic compounds (VOCs) using an organic vapor monitor (OVM) equipped with a photo-ionization (10.9 eV bulb) detector. Approximately 20 grams of saturated or unsaturated soil from every one (1)-foot interval will be placed in a self-sealing plastic bag to allow the pore space to volatilize. The headspace in the plastic bag will then be monitored for VOCs with the OVM. Selected soil samples from the borings may be analyzed in a California certified laboratory for VOCs using EPA Methods 8260 and 8015.

Grab groundwater samples will be collected from the specified borings. Samples will be collected using a Hydropunch™ sampler (or equivalent) equipped with a retrievable stainless steel screen. The groundwater sampler operates by advancing 1 ¾-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 will be used for sample collection. Upon completion of sample collection, the push rods and sampler are retrieved.

Samples will be collected in laboratory provided containers appropriate for the analysis to be performed. The containers will be capped with Teflon™ septa, labeled, and placed on ice for transport to the analytical laboratory. All non-disposable sampling equipment will be cleaned with a non-phosphate detergent solution, rinsed with tap water, and rinsed a third time with deionized water prior to use.

A chain-of-custody record will be initiated in the field to accompany the samples to the laboratory. The soil and groundwater samples will be analyzed for CoCs as shown in the table below. Rational for sample locations and analytes are also provided in the table below.

Boring/ Sample ID	Sample Media	Sample Depth (ft bgs)	Analytes	Sample Location Rational
SGI-SB-01	Soil	4-4.5	VOCs, CVOCs, 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, 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, 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-GW-01 (Dup)	Water		VOCs, CVOCs, TPHg, TPHd, TPHmo	Duplicate – for quality control purposes.
SGI-SB-02	Soil	4-4.5	VOCs, CVOCs, 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, 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, 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, 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 (Dup)	Soil	4-4.5	VOCs, CVOCs, TPHg, TPHd, TPHmo	Duplicate – for quality control purposes.
SGI-SB-03	Soil	10-10.5	VOCs, CVOCs, 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.

Boring/ Sample ID	Sample Media	Sample Depth (ft bgs)	Analytes	Sample Location Rational
SGI-GW-03	Water		VOCs, CVOCs, 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.
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.

Boring/ Sample ID	Sample Media	Sample Depth (ft bgs)	Analytes	Sample Location Rational
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.
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, 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, 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, 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.

Boring/ Sample ID	Sample Media	Sample Depth (ft bgs)	Analytes	Sample Location Rational
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				
NA = Not Analyzed				

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

Investigation Report

SGI will prepare a summary letter documenting the investigation activities conducted at the site and provide an evaluation of updated data. In addition, results from the Data Gap Investigation will be incorporated into an updated CSM.

Please do not hesitate to contact Mr. J. Glen Smith (925) 9951-6402 if you have any questions or comments.

Sincerely,
The Source Group, Inc.



J. Glen Smith
Senior Project Manager



Stephen J. Hickey, P.E. (CSD)
Senior Engineer

ATTACHMENTS

Figure 1 Supplemental Investigation (Proposed Sample Locations)

FIGURE

