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Mr. Keith Nowell
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Subject: **Soil, Water, and Soil Gas Investigation & Updated LTCP Data Gap Analysis**
3101 35th Avenue, Oakland, CA
Fuel Leak Case No. RO0003164; Global ID T10000006539

Dear Mr. Nowell,

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached *Soil, Water, and Soil Gas Investigation & Updated LTCP Data Gap Analysis* are true and correct to the best of my knowledge.

Sincerely,

Ms. Mona Hsieh
Responsible Party Representative

a

Soil, Water, and Soil Gas Investigation & Updated LTCP Data Gap Analysis

3101 35th Avenue
Oakland, California

December 4, 2015

Prepared for:
Green Oak Builders
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1.0 INTRODUCTION

Almar Environmental (Almar) appreciates the opportunity to work on the 3101 35th Avenue project in Oakland, California (Figures 1 through 3). Almar has been retained by Green Oak Builders to prepare and implement this *Soil, Water, and Soil Gas Investigation* report for the subject site. On June 25, 2015 Almar prepared a *Data Gap Investigation Workplan and Site Conceptual Model* for the subject site. The Workplan proposed, in general, to advance up to eight (8) temporary borings at the site and collect soil and "grab" groundwater samples from each boring. In addition, the Workplan also proposed installing and collecting soil gas samples from three (3) temporary soil gas sampling points. The Alameda County Health Care Services Agency (ACHCSA) reviewed the Workplan and issued a directive letter (Appendix A) approving the proposed scope of work. As such, the Workplan was implemented in November 2015. Due to time constraints and encountered subsurface conditions only three of the proposed soil and groundwater borings was advanced. The details and results of the investigation, along with an updated LTCP data gap analysis are presented, herein.

2.0 SITE INFORMATION

The project site is located at 3101 35th Avenue in the city of Oakland, California (Figure 1). The site consists of a roughly rectangular property associated with Alameda County Assessor's parcel number 28-951-12-1. The site is located on the northern corner of the intersection of 35th Avenue and School Street. An Aerial Photograph of the Site Area is included as Figure 2 and a detailed Site Map is included as Figure 3.

2.1 Physical Setting

Based on the U.S. Geological Survey Oakland East, California Quadrangle 7.5 Minute Series Topo Map, the subject property is approximately 160 feet (ft) above mean sea level (msl). The topographic slope of the subject property and surrounding areas is generally to the west, towards the San Francisco Bay (Figure 1).

According to the *Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California*, the site lies upon Pleistocence alluvial fan and fluvial deposits (Qpaf) (Graymer, 1996). Site specific soils, encountered during tank removal activities were described by the tank removal contractor as predominantly silty, low plasticity clays (CL) from the ground surface to approximately two feet below ground surface (bgs). From approximately two feet to the total depths explored (approximately 10 feet bgs) soils consisted of clayey sand (SC) to sandy clay (CL) with some gravels (ERS, 2015). Subsurface soils encountered during this current investigation are described in detail in Section 3.2.1 and depicted on the boring logs (Appendix C).

The nearest surface water to the site is the seasonal Peralta Creek, located approximately 800 feet north and north west of the subject site. The larger San Francisco Bay is located approximately 2.5 miles west of the site (Figure 1). Based upon topography of the area, regional groundwater flow is expected to be to the west/southwest (towards the San Francisco Bay). Site specific groundwater data is unavailable. However, an active leaking underground storage tank case is located directly across School Street from the subject site (Figure 2). The site is a former Exxon Service Station associated with 3055 35th Avenue (ACHCSA Case #RO0000271). Significant groundwater studies have been conducted at this site, including over 50 groundwater monitoring events since 1999. During the most recent groundwater monitoring event conducted at this site, static groundwater was encountered at between 12 and 16 feet bgs and has been shown to consistently flow in a west to west by southwest direction (Weber Hayes, 2015).

2.2 Site History

The subject site appears to have operated as a gasoline service station from at least 1929 until the early 1980s. In the later years the service station was owned and operated by Texaco. Texaco sold the property in 1982. It appears that the USTs associated with the former Texaco station were previously located near the southern corner of the property (Figure 3) and were removed sometime prior to 1982. From the mid 1980s until the late 1990s the site was an auto parts sales and auto glass repair facility. The building and associated canopy appear to have remained unoccupied from at least 1995 until the buildings were demolished in 2014. The property is currently a vacant lot surrounded by a chain link fence.

2.3 Summary of Previous Environmental Investigations

Phase I Environmental Site Assessment (ESA) – January, 2005

On January 31, 2005 as part of a property transfer, a Phase I ESA was prepared for the subject site by Martin & Associates of Oakland, California (Martin). Part of the conclusions of that report found:

> *"No evidence of (current) storage tanks or pipelines was identified. Former USTs were reportedly removed when gasoline service station activities were discontinued in the early 1980s. No further action or investigation is recommended regarding storage tanks or pipelines at the project."*

Based upon these findings and recommendations, the current property owner proceeded with purchasing the property.

Phase I Environmental Site Assessment (ESA) – October, 2014

On October 3, 2014 a second Phase I ESA, as part of a loan process, was prepared for the subject site by Piers Environmental Services, Inc. of Mill Valley, California (Piers). Part of the conclusions of that report found:

> *This assessment has revealed evidence of a **Recognized Environmental Condition (REC)** from the prior use of the Property**.** The Property operated as a gasoline service station from at least 1929 to 1982, apparently with several generations of tank locations.*
>
> *The gasoline service station closed before environmental regulations existed that required the tanks to be removed and inspected by the regulatory agencies. PIERS was unable to obtain any information concerning tank removals. **Therefore, PIERS recommends performing a geophysical survey in the known tank locations to determine if the tanks have been removed.***
>
> *A groundwater monitoring well, MW-6, from an adjacent down-gradient LUST case at 3055 35th Avenue has detected 1,800 parts per billion (ppb) of Total Petroleum Hydrocarbons (TPH) as gasoline and 230 ppb of benzene, significantly above the Water Quality Objective of 1,000 ppb and one ppb, respectively.*
>
> *PIERS contacted Mr. Keith Nowell of the ACEH regarding the 3055 35th Avenue LUST case and the consultant's claim that, based on well MW-6 in front of the Property, contamination from the Property was migrating to the 3055 35th site. **Therefore, PIERS recommends conducting a limited soil and groundwater site investigation to determine if the gasoline and benzene concentrations detected in well MW-6 are due to an on-site source of contamination from the Property.***

A Phase II investigation of soil and groundwater conditions and additional effort to determine if there are any tanks remaining at the Property should be completed.

UST Removal Activities – January, 2015

Based upon the findings of the Piers Phase I ESA, an underground survey of the property was conducted and three (3) 350 gallon USTs were identified on the property. Two of the tanks contained gasoline and were located along the western property boundary, along School Street. The third tank was a waste oil tank located near the center of the property. The tank locations are shown on Figure 3. The tanks were subsequently removed under permit by Environmental Restoration Services of Menlo Park, California (ERS). Confirmation soil samples were collected by ERS from below each of the former tanks and the two associated former pump island locations. Elevated concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg) were detected in soil samples collected from below the former western most pump island (Table 1A and Figure 4). A detailed summary of the tank removal and initial sampling activities is documented in ERS's *Underground Tank Technical Closure Report.*

Interim Remedial Action by Overexcavation – April, 2015

Based upon the findings of the elevated hydrocarbon concentrations documented during the tank removal activities, ERS prepared and implemented an *Interim Remedial Action Workplan* for the subject site. Interim remedial activities consisted of overexcavated hydrocarbon impacted soils in the area of the former dispenser location. In total, approximately 25 cubic yards of non-hazardous petroleum impacted soils were excavated and transported to Newby Island Landfill under non-hazardous manifests. Interim remedial activities are documented in ERS's *Report of Interim Remedial Action.*

Data Gap Investigation Workplan and Site Conceptual Model – June, 2015

On June 25th, 2015 Almar prepared a *Data Gap Investigation Workplan and Site Conceptual Model* for the site. This Workplan identified several data gaps which remained unaddressed prior to the being eligible for closure under the State's Low Threat Closure Policy (LTCP). The Workplan, in addition to presenting an initial site conceptual model for the site, set forth a series of tasks to close those data gaps. The ACHCSA reviewed the Workplan and issued a directive letter (Appendix A) approving the proposed scope of work. As such, the Workplan was implemented in November 2015. The details and results of the investigation are presented in the following sections.

3.0 SOIL, WATER, AND SOIL GAS FIELD INVESTIGATION

Field activities involving soil borings, grab groundwater, and soil gas sampling were performed in November, 2015. Almar advanced a total of three (3) temporary borings (DP-1, DP-3, and DP-5) and collected soil and grab groundwater samples from each of the borings. Additionally, Almar installed and collected soil gas samples from three (3) temporary soil gas sampling points (SG-1 through SG-3). The specific details of the investigation are presented below. All project activities were completed under the direction of a State of California Professional Geologist.

3.1 Regulatory Liaison, Permitting, and Project Management

Almar represented the client with regulatory agencies and onsite residences in meetings and/or communications. A representative of Almar also coordinated, oversaw, and/or conducted all activities detailed in this Workplan. Almar also obtained the appropriate subsurface drilling permit from the

Alameda County Public Works Agency (ACPWA) (Appendix B). As required by law, Almar marked the subject property and notified Underground Service Alert (USA) to clear the boring locations of underground utilities prior to drilling activities.

3.2 Drilling and Soil Sampling

Soil borings were advanced by a C-57 licensed driller, under the direction of a licensed State of California Professional Geologist. A Geoprobe™ direct-push sampling rig, capable of continuous core soil sampling, was used to advance the temporary borings. The Geoprobe™ direct-pushed (hammered) a 2-inch diameter steel core barrel to the desired depth at each of the boring locations. The core barrels were lined with clear plastic disposable tubing to facilitate continuous soil coring and soil logging for description. Soils were logged using the United Soil Classification System (USCS). Soil samples were collected at five (5) foot intervals and where contamination was noted in the field (if any).

Soil samples for laboratory analysis were collected by cutting the desired section of disposable plastic tubing, sealing the ends of the tube with Teflon™ tape, and capped. The caps were then sealed with silicone tape, labeled, sealed in individual plastic bags, and placed in a pre-chilled ice chest with ice to remain at 4^{o} Celsius (^{o}C) until they arrived at the lab. A discussion of the soil sampling analytical results is presented in Section 4.2.

3.2.1 Encountered Subsurface Materials

Site specific soils encountered during this investigation were identified as predominately Clayey Gravel to Gravelly Clay (CL) of varying consistency and plasticity from the ground surface until drill rig refusal was encountered at approximately 30 feet bgs. Borings DP-3 and DP-5 were advanced to this depth and allowed to sit open overnight to allow groundwater to seep into the borings. Groundwater slowly recharged into each boring until reaching equilibrium at 16.20 and 16.80 feet, respectively. Conversely, groundwater was first encountered in boring DP-1 at 14.50 feet bgs and rose to a static level of 1.90 feet. The groundwater encountered in this boring is likely an isolated perched zone and not indicative of true groundwater conditions across the site (as encountered in DP-3 and DP-5). Detailed boring logs depicting the encountered subsurface materials are presented in Appendix C.

3.3 Groundwater Sampling

Once groundwater was encountered in each of the borings, and a sufficient amount was present for sampling, the Macrocore sampler was removed from the boring, and a temporary flush threaded, ¾-inch schedule 40 polyvinyl chloride (PVC) casing was placed within the boring. The bottom cap was flush threaded and the screened casing was 0.010-inch slots. Groundwater samples were then collected from the temporary casing using a peristaltic pump. Each groundwater sample was collected in laboratory supplied EPA Testing Method approved containers, labeled, sealed in individual plastic bags, and placed in a pre-chilled ice chest with ice to remain at 4 degrees Celsius (ºC) until they arrive at the lab. A discussion of the groundwater sampling analytical results is presented in Section 4.3.

3.4 Borings for Temporary Soil-Gas Sampling Points

In addition to the borings described above, Almar also advanced three borings (SG-1 through SG-3) and converted each of the borings into temporary soil gas sampling points. Each boring was advanced with a Geoprobe™ direct-push sampling rig in the same manner described in Section 3.2. The boring locations are shown on Figure 3.

3.5 Construction of Soil-Gas Sampling Points

Following advancement of the borings, Almar converted each of the borings into temporary soil gas sampling points. Each sampling was constructed by placing ¼-inch diameter Teflon® tubing attached to a polyethylene vapor implant to 5.0 feet bgs. A sand pack consisting of #2/12 sand was then installed around the implant from 5.5 to 4.5 feet bgs. Approximately 12-inches of dry granular bentonite was placed above the sand pack, followed by a hydrated bentonite seal to the ground surface. The seal was designed to minimize ambient air from the atmosphere from intruding into the area of the polyethylene probe. Specific well construction details are depicted on the boring logs (Attachment C).

3.6 Soil Gas Sampling

On November 9, 2015, after allowing at least 72-hours post installation of the soil-gas sampling point for subsurface conditions to equilibrate, Almar conducted the purging and sampling of each of the four (4) soil gas sample points. To ensure representative soil gas samples were collected, Almar followed the steps outlined by the CA DTSC in their *Soil Gas Advisory Document* (March 2010). In general, a Helium tracer shroud was used to perform a quantitative leak test while sampling each soil gas point. A sealed chamber was placed over the head of the soil gas point. A minimum 20% Helium in air atmosphere was maintained around the sample train and above the sample point annulus.

Each of the soil gas samples was collected using a SUMA® canister supplied by the contracted laboratory. Prior to the collection of the sample, the at least 3 purge volumes of air (soil gas) were removed from the probe and tubing associated with the point. Each sampling point was purged using a SUMA® canister (purge canister) attached to a flow meter which, in turn is attached to the Teflon tubing of the soil gas point. The sampling points were purged at a rate of 150 ml/minute. Once the points were purged, a sample collection SUMA® canister was attached to the Teflon tubing of the sampling point, the initial negative pressure of the canister measured (and recorded), and soil gas was delivered to the canister from the well until a negative pressure of about five-inches of Hg is noted on the vacuum gauge on the sample collection SUMA® canister. All vacuum readings were documented on the chain of custody record and are shown on the soil gas purge data sheets (Appendix D). A discussion of the soil gas sampling analytical results is presented in Section 4.4.

3.7 Backfilling of Borings

Once all soil, grab groundwater, and soil gas samples were collected from the borings, each boring was backfilled from the bottom of the boring to ground surface with neat cement grout. The neat cement grout was composed of a mix consistency of one 94 pound bag of Portland cement to five gallons of water. As required in the drilling permit, the grouting operations were witnessed by a representative of the ACPWA.

4.0 SAMPLE ANALYSIS AND RESULTS

During the drilling activities, soil, grab groundwater, and soil gas samples for laboratory analysis were collected in the methods described in Sections 3.2, 3.3, and 3.6, respectively. The analytical results are summarized in the following sections.

4.1 Laboratory Analytical Methods

Soil and Groundwater Samples

Once all soil and groundwater samples were collected and appropriately packed, they were transported by courier observing chain-of-custody procedures to BC Laboratories, Inc. (State of California-certified

testing laboratory #1186) for analysis. Soil samples and groundwater samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), MtBE, naphthalene, and t-butyl alcohol (TBA) by EPA Test Method 8260b.

Soil Gas Samples

Once the soil gas samples were collected, they were transported, observing formal chain-of-custody (COC) procedures to Curtis & Tompkins, Ltd. (State of California-certified testing laboratory #2896) for analysis. Each soil gas sample was analyzed for VOCs (including PCE) by EPA Test Method TO-15, gasoline range organics (TPHg) by EPA Test Method TO-3, and the fixed gases Oxygen and Helium by ASTM D1946.

4.2 Soil Analytical Results

A total of fifteen (15) soil samples were submitted for laboratory analysis. A summary of the current analytical results is presented in Table 2, historical data is presented in Tables 1A through 1C. The complete laboratory data sheets are presented in Appendix E and summarized as follows:

- **TPHg** was detected above laboratory detection limits 5 of the 15 samples submitted for analysis at concentrations ranging from 0.30 mg/Kg (DP-5d15.0) to 18 mg/Kg (DP-5d20.0);
- **Benzene** was detected above laboratory detection limits in one of the 15 samples submitted for analysis at a concentration of 0.0023 mg/Kg in sample DP-3d20.0;
- **Toluene** was detected above laboratory detection limits in one of the 15 samples submitted for analysis at a concentration of 0.013 mg/Kg in sample DP-3d20.0;
- **Ethylbenzene** was not detected above laboratory detection limits (<0.005 mg/Kg) in any of the 15 samples submitted for analysis;
- **Xylenes** (total) were not detected above laboratory detection limits (<0.010 mg/Kg) in any of the 15 samples submitted for analysis;
- **MtBE** was not detected above laboratory detection limits (<0.005 mg/Kg) in any of the 15 samples submitted for analysis;
- **Naphthalene** was not detected above laboratory detection limits (<0.005 mg/Kg) in any of the 15 samples submitted for analysis; and
- **TBA** was not detected above laboratory detection limits (<0.005 mg/Kg) in any of the 15 samples submitted for analysis.

4.3 Grab Groundwater Analytical Results

A summary of the laboratory analysis of the grab groundwater samples is presented in Table 3. The complete laboratory data sheets are presented in Appendix E. A brief summary of the analytical data is as follows:

- **TPHg** was detected in two of the three samples submitted for analysis at concentrations ranging from 1,000 µg/L (DP-3) to 3,700 µg/L (DP-5);
- **Benzene** was detected in two one of the three samples submitted for analysis at concentrations ranging from 2.2 µg/L (DP-5) to 19 µg/L (DP-3);
- **Toluene** was detected in each of the three samples submitted for analysis at concentrations ranging from 0.11 µg/L (DP-1) to 1.5 µg/L (DP-5);
- **Ethylbenzene** was detected in two one of the three samples submitted for analysis at concentrations ranging from 1.4 µg/L (DP-5) to 34 µg/L (DP-3);

- **Xylenes** (total) were detected in two one of the three samples submitted for analysis at concentrations ranging from 5.1 µg/L (DP-3) to 5.5 µg/L (DP-5);
- **MtBE** was not detected above laboratory detection limits (<0.50 µg/L) in any of the samples submitted for analysis;
- **Naphthalene** was detected in two one of the three samples submitted for analysis at concentrations ranging from 2.6 µg/L (DP-5) to 7.2 µg/L (DP-3); and
- **TBA** was not detected above laboratory detection limits (<10 µg/L) in any of the samples submitted for analysis.

4.4 Soil Gas Analytical Results

A total of three soil gas samples (SG-1 through SG-3) were collected and submitted for laboratory analysis. A summary of the soil vapor sampling analytical laboratory results is presented in Table 4 and the complete laboratory data sheets are presented in Attachment F. A brief summary of the analytical data is presented as follows:

- **O_2** was reported in each of the three soil vapor samples submitted for analysis. The mol % concentrations ranged from 2.6% (SG-1) to 15% (SG-3);
- **Helium** was not reported above laboratory detection limits in any of the three samples submitted for analysis. This indicates that no breakthrough occurred and each sample is valid;
- **TPHg** (C_6-C_{12}) was reported in each of the three samples submitted for analysis, at concentrations ranging from 210 µg/m^3 (SG-3) to 96,000 µg/m^3 (SG-2);
- **Benzene** was reported in each of the three samples submitted for analysis at concentrations ranging from 3.3 µg/m^3 (SG-3) to 61 µg/m^3 (SG-2);
- **Toluene** was reported in each of the three samples submitted for analysis at concentrations of 7.8 µg/m^3 to 91 µg/m^3 (SG-2);
- **Ethylbenzene** was not reported above laboratory detection limits in any of the samples submitted for analysis;
- **Xylenes** (total) were reported in one sample (SG-2) at a concentration of 74 µg/m^3;
- **MtBE** was not reported above laboratory detection levels in any of the samples submitted for analysis;
- **Naphthalene** was not reported above laboratory detection levels in any of the samples submitted for analysis;
- **PCE** was reported in one sample (SG-3) at a concentration of 160 µg/m^3; and
- No other contaminants of concern (COCs) were reported above laboratory detection limits in any of the samples submitted for analysis.

4.5 Discussion of Analytical Results

The purpose of this investigation was to 1.) Further define the extent of contaminants of concern in subsurface soils, 2.) Determine the extent of impacts to groundwater (if any), and 3.) Determine the condition of soil vapor at the subject site. Each of these points are addressed, as follows:

<u>Soil Results</u>

A total of 15 soil samples were collected and submitted for laboratory analysis as part of this investigation. Based upon the analytical results, the main contaminant of concern (CoC) appears to be TPHg, as relatively low concentrations (up to 18 mg/Kg) were detected in 6 of the 15 samples submitted for analysis. This is consistent with historical sampling data which showed the highest post interim

remediation CoC to also be TPHg (up to 110 mg/Kg) in shallow soils near the former dispenser islands (Table 1A). It should also be noted that during both this current and in historical investigations, no VOCs (including BTEX, MtBE, Naphthalene, or TBA) have been detected at concentrations exceeding residential Environmental Screening Levels (ESLs) or recommended LTCP levels in any soil sample submitted for analysis (Tables 1A and 2).

Groundwater Results

A total of three grab groundwater samples were collected and submitted for laboratory analysis as part of this investigation. Based upon the analytical results, and as shown on Table 3, groundwater at the subject site appears to be slightly impacted with TPHg, BTEX compounds, and naphthalene. Benzene concentrations exceeded the residential ESL of 1.0 µg/L for shallow groundwater in the samples collected from borings DP-3 (19 µg/L) and DP-5 (2.2 µg/L). Additionally, the residential ESL of 6.2 µg/L for naphthalene was exceeded in the sample collected from DP-3 (7.2 µg/L).

As illustrated on Figure 2, the subject site is located directly upgradient (i.e. northeast) of a former Exxon service station associated with 3055 35th Avenue and directly cross-gradient (i.e. northwest) of an active Quickstop fuel service station associated with 3130 35th Avenue. The former Exxon site is an open LUST case (#RO0000271). During the most recent semi-annual sampling event of groundwater monitoring wells associated with this site elevated concentrations of TPHg, BTEX compounds and TBA were detected in offsite wells MW-5 and MW-6 (see Figure 5). MW-6, in particular, is located directly downgradient from the subject site and is less than 25 feet from temporary boring DP-5 and approximately 15 feet from DP-3. The elevated concentrations of VOCs detected in this well (specifically benzene and TBA) do not coincide with the concentrations detected in boring DP-3 and DP-5. Furthermore, no elevated concentrations of VOCs were detected in soil samples collected from the site during this investigation. This indicates that the elevated concentrations of VOCs in MW-6 and MW-5 are either from upgradient flow from the release associated with the former Exxon station or possibly from an unknown release associated with the current QuikStop station. Based upon the concentrations and flow direction, it seems most likely that the source of the majority of these groundwater contaminants is the QuikStop service station.

Soil Gas Results

A total of three soil gas samples were collected and submitted for laboratory analysis as part of this investigation. Each of the samples was collected from 5 feet bgs in the locations shown on Figure 4. O_2 was reported in each of the three samples at mol % concentrations of 2.6%, 4.1%, and 15% in SG-1, SG-2, and SG-3, respectively. It should be noted that SG-3 was installed within imported sand backfill of the former tank pit, while SG-1 and SG-2 were installed within native soils consisting of Gravelly Silty Clays (CL). Even though O_2 is less than 4% in one of the samples, for LTCP purposes this indicates a 5 foot bioattenuation zone is present at the site because benzene concentrations in groundwater are less than 100 µg/L (LTCP: Appendix 3 -Scenario 3). Laboratory analysis of the samples also indicated TPHg (up to 96,000 µg/m^3) and benzene (up to 61 µg/m^3) were present in each of the three samples. However, all detected soil gas concentrations were less than corresponding Regional Water Quality Control Board (RWQCB) established environmental screening levels (ESLs) for residential properties and well below LTCP established concentrations for potential residential properties where a bioattenuation zone is present (Table 4).

5.0 UPDATED LTCP DATA GAP ANALYSIS

Based upon the results of this investigation, Almar believes this case may potentially qualify for closure under the State Water Resource Control Board's (SWRCB's) Low Threat Closure Policy (LTCP). In order for the case to qualify for closure, all general and media-specific criteria of the policy must be met. In the following sections each criteria of the LTCP is addressed.

5.1 General Criteria

There are eight specific general criteria (identified as a through h) of the LTCP that must be satisfied prior to closure. The following is a list of each of these eight criteria and whether they have been satisfied or not:

a. The unauthorized release is located within the service area of a public water system.
   - **Yes,** this criteria has been met.

b. The unauthorized release consists only of petroleum.
   - **Yes,** this criteria has been met. The main constituent of concern (COC) appears to be TPHg and, to a lesser extent, benzene.

c. The unauthorized ("primary") release from the UST system has been stopped.
   - **Yes,** this criteria has been met. All known USTs and associated pipes and appurtenant structures have been removed.

d. Free product has been removed to the maximum extent practicable.
   - **Yes**, this criteria appears has been met. No free product was encountered during tank removal activities or during this soil and water investigation.

e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.
   - **Yes**, an initial site conceptual model (SCM) was prepared for the site. The SCM was prepared and presented as part of Almar's *Data Gap Investigation Workplan and Site Conceptual Model* document. A copy of this document can be found on file with the ACHCSA and online within the SWRCB's Geotracker database at the following link:

http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1214311718/T10000006539.PDF

f. Secondary source has been removed to the extent practicable.
   - **Yes**, this criteria appears has been met. "Secondary source" is defined as petroleum-impacted soil or groundwater located at or immediately beneath the point of release from the primary source. Based upon the results of this investigation, little or no secondary source remains in the subsurface soils and groundwater at the site.

g. Soil and groundwater have been tested for MtBE and results reported in accordance with Health and Safety Code section 25296.15.
   - **Yes**, this criteria appears has been met. Soil and groundwater samples collected during this current investigation were tested for MtBE. MtBE was not detected above laboratory test limits in any of the samples submitted for analysis (Tables 1 through 3).

h. Nuisance as defined by Water Code section 13050 does not exist at the site.

- **Yes**, this criteria appears has been met, as no nuisances as defined by the policy are known to exist at the site.

5.2 Media-Specific Criteria

To simplify implementation, the LTCP has identified three media-specific criteria which must be addressed and satisfied. The three media-specific criteria are: 1.) Groundwater, 2.) Vapor Intrusion to Indoor Air, and 3.) Direct Contact and Outdoor Air Exposure. Each of these three criteria are addressed below.

1.) Groundwater-Specific Criteria

To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of groundwater sites listed in the LTCP. Which of the five classes the site falls under is determined by plume length, free product status, the location of the nearest water supply well or surface water body, and the dissolved concentrations of benzene and MtBE. Based upon the results of this current investigation the site appears to meet groundwater criteria scenario 1 because:

A.) The contaminant plume that exceeds water quality objectives appears to be less than 100 feet (as defined by offsite downgradient well MW-6),
B.) There in no free product, and
C.) The nearest existing water supply well or surface water body is greater than 250 feet away.

2.) Petroleum Vapor Intrusion to Indoor Air

Exposure to petroleum vapors migrating from soil or groundwater to indoor air may pose unacceptable human health risks. Because buildings for human occupancy (residential) are reasonably expected to be constructed in the future, the vapor intrusion risks to indoor air must be addressed. These vapor intrusion concerns were addressed as part of this current investigation. Based upon the results, the site appears to meet the criteria of Scenario 4 (Appendix 4) of the LTCP. The site meets this criteria because: 1.) a bioattenuation zone (as defined by the LTCP) is present and 2.) all measured soil gas concentrations are less than the minimum required concentrations for benzene, ethylbenzene, and naphthalene (see Table 4). Therefore, this media-specific criteria has been met.

3.) Direct Contact and Outdoor Air Exposure

The LTCP describes conditions where direct contact with contaminated soil or inhalation of contaminants volatized to outdoor air poses a low threat to human health. Table 1 of the LTCP describes concentrations of constituents (specifically, benzene, ethylbenzene, naphthalene, and PAHs) in soil that will have no significant risk of adversely affecting human health. A total of 15 soil samples from various depths were collected during this current investigation and analyzed for the contaminants of concern. 19 additional historical soil samples were collected during previous investigations at the site. None of the subsurface samples were found to contain concentrations exceeding those described in Table 1 of the LTCP (see tables 1A, 1B, and 2). Therefore, this condition of the LTCP has been satisfied.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The following conclusions are based upon review of historical environmental reports, interpretation of analytical data, and field measurements collected during November 2015:

- The vertical and lateral extent of contaminants of concern (primarily TPHg and to a lesser extent benzene) in subsurface soils appear to be fully defined.
- Little (if any) secondary source appears to remain in the subsurface at the subject site. This indicates that secondary source has been removed to the extent practical.
- Shallow groundwater at the subject site appears to be minimally impacted with TPHg, BTEX compounds, and naphthalene. The length of the contaminant plume appears to be less than 100 feet as it is bounded by down gradient offsite well MW-6 (associated with the former Exxon Service station located at 3055 35th Avenue).
- A total of three soil gas samples were collected and submitted for laboratory analysis as part of this investigation. For LTCP purposes, the results of the soil gas sampling indicates a 5 foot bioattenuation zone is present at the site because benzene concentrations in groundwater are less than 100 µg/L (LTCP: Appendix 3 -Scenario 3). All detected soil gas concentrations were below LTCP established concentrations for potential residential properties where a bioattenuation zone is present.
- The site appears to meet all eight (identified as a through h) of the general criteria of the LTCP.
- The site appears to meet the media-specific criteria of the LTCP for petroleum vapor intrusion to indoor air.
- The site appears to meet the media-specific criteria of the LTCP for direct contact and outdoor air exposure.
- The site appears to meet media-specific criteria of the LTCP for groundwater (Scenario 1).
- PCE was detected reported in one of the three soil gas samples collected during this investigation at a concentration of 160 µg/m^3. The source of this contamiant is unknown. Regardless, the detected concentration is well below the corresponding ESL and CHHSL for residential properties.

6.2 Recommendations

Based on the data collected during this investigation and the above conclusions, Almar makes the following recommendations:

- The case should be reviewed by the local oversight agency for case closure under the RWQCB's Low Threat Closure Policy.

7.0 CERTIFICATION AND DISTRIBUTION

To the best of our knowledge, all statements made in this Report are true and correct. This report is based on data provided by the client and others, site conditions observed, samples collected and analytical data. No warranty whatsoever is made that this report addresses all contamination found on the site.

Respectfully submitted,

Forrest N. Cook
Owner/Principal Scientist
Almar Environmental
California Professional Geologist #8201 (exp 9/16)

cc:
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8.0 REFERENCES

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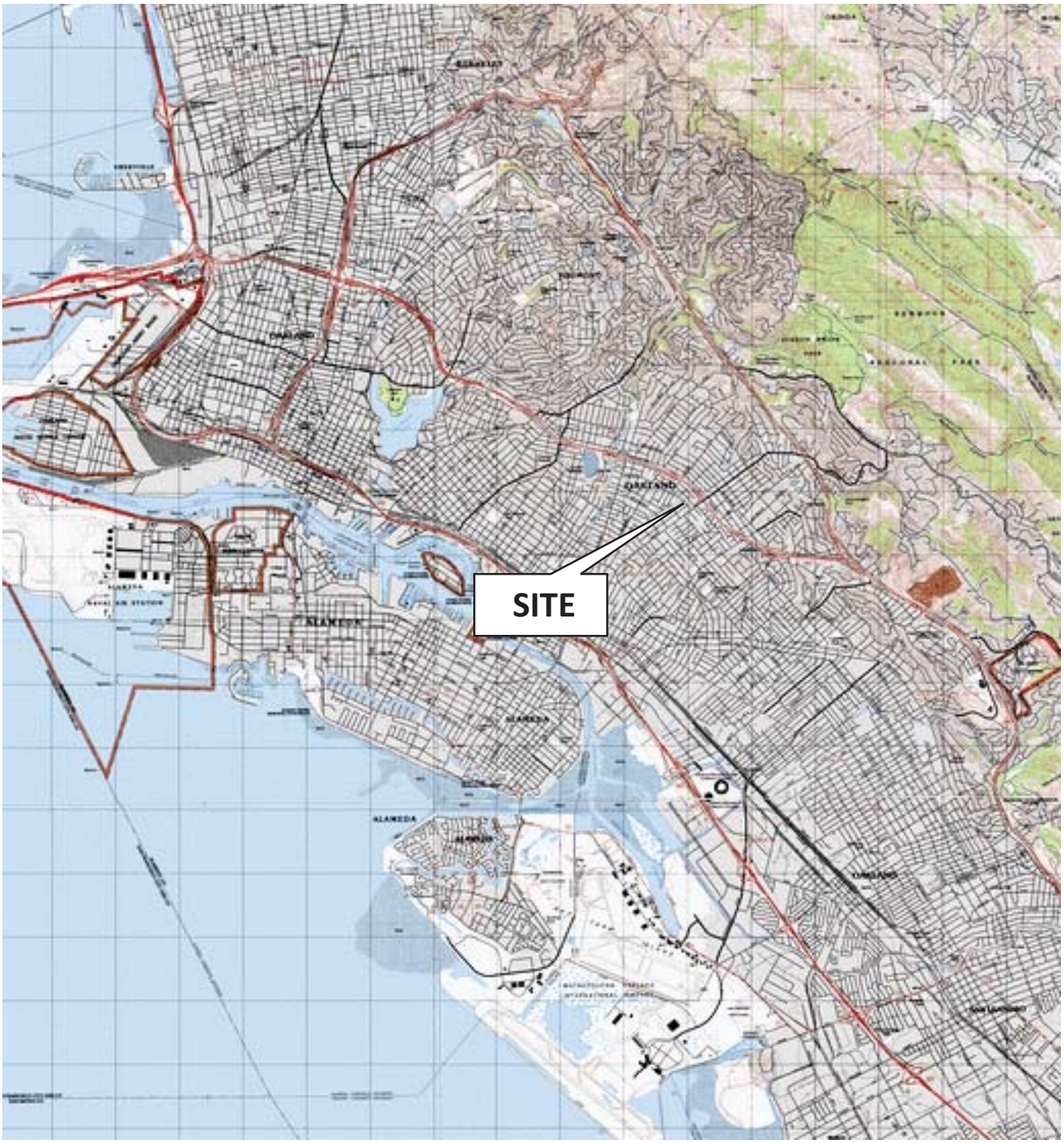
FIGURES



SOURCE: USGS 1:24,000 SCALE SERIES OAKLAND EAST, CA QUAD

APPROX. SCALE

0 1.5 3.0 MI

ALMAR environmental

3101 35th AVENUE
OAKLAND, CALIFORNIA

SITE VICINITY TOPO MAP

FIGURE

1

SOURCE: Google Earth, 2015

APPROX. SCALE

0 60 120 FT.

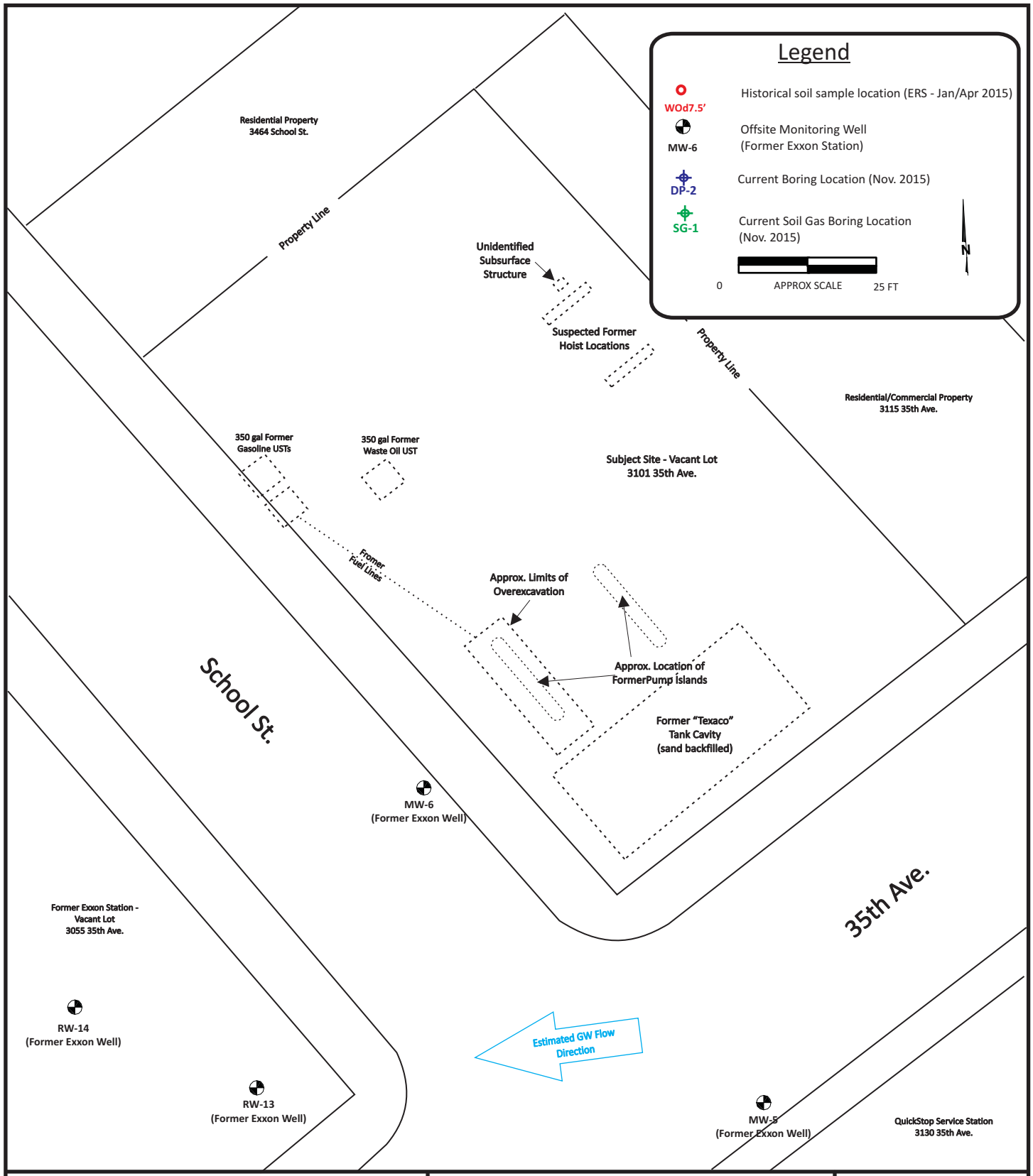
ALMAR environmental

3101 35th AVENUE
OAKLAND, CALIFORNIA

AERIAL PHOTOGRAPH OF SITE AREA

FIGURE

2



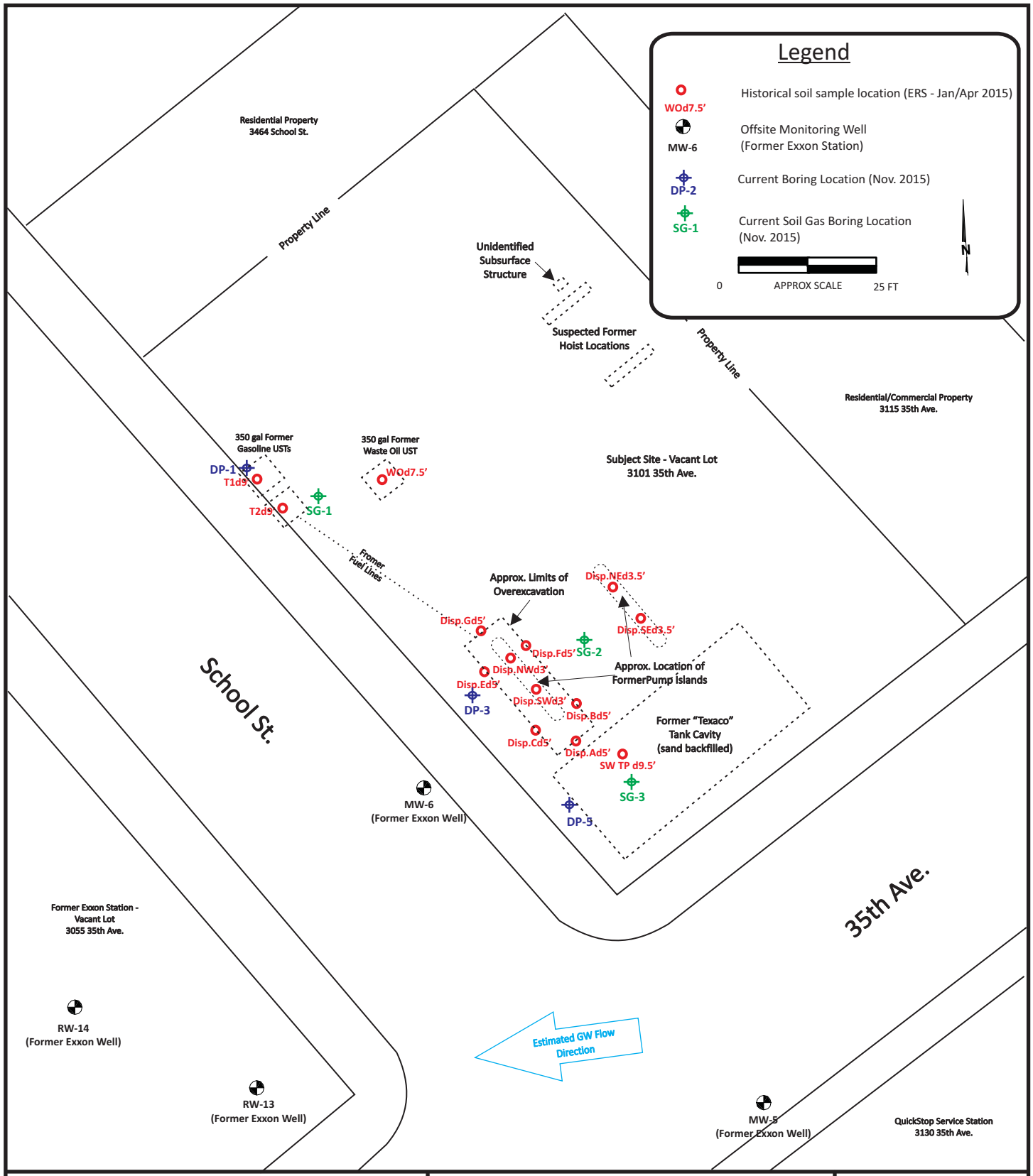
ALMAR environmental

3101 35th AVENUE
OAKLAND, CALIFORNIA

DETAILED SITE MAP

FIGURE

3



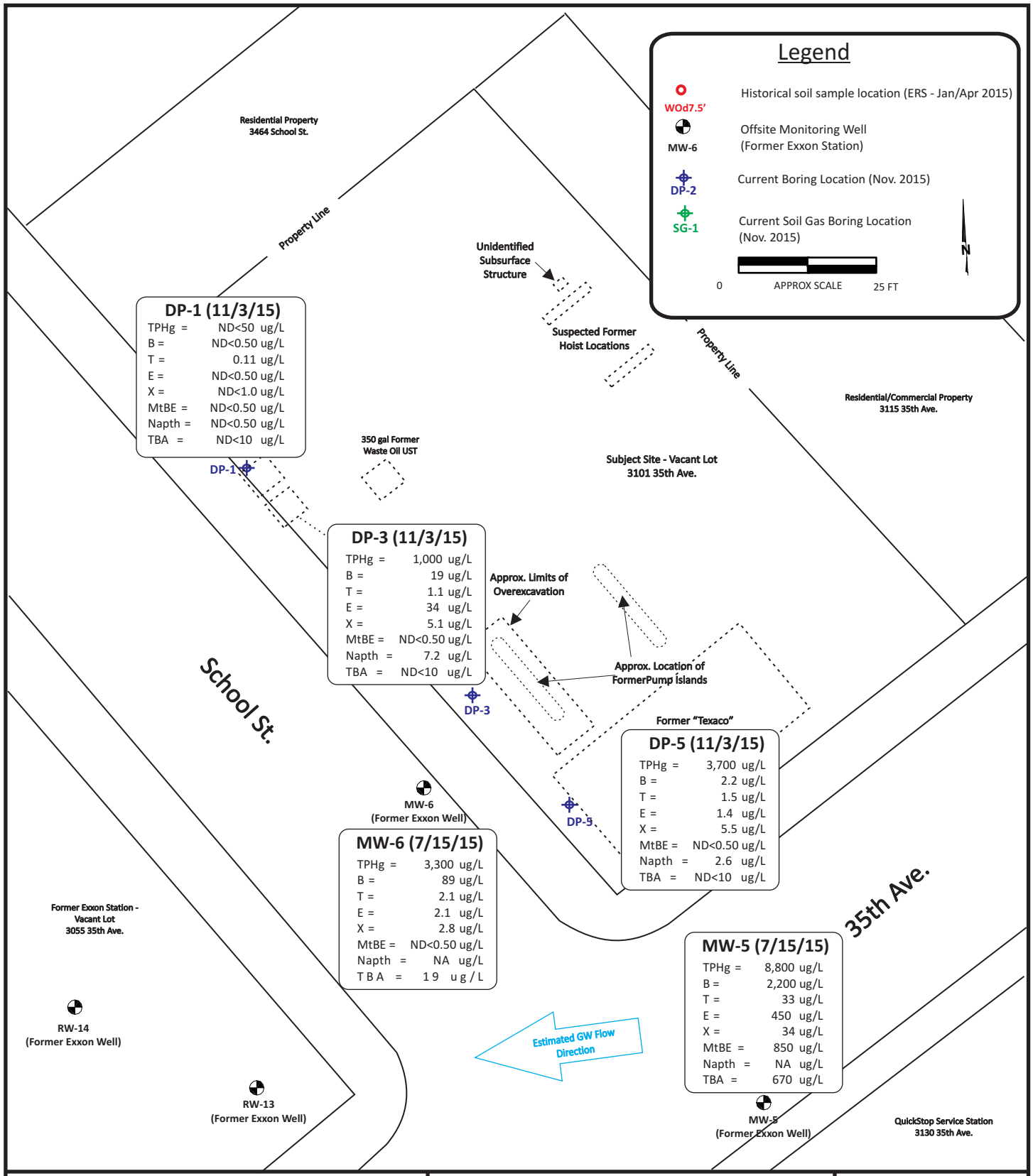
ALMAR environmental

3101 35th AVENUE
OAKLAND, CALIFORNIA

DETAILED SITE MAP SHOWING
CURRENT & HISTORICAL BORING LOCATIONS

FIGURE

4



ALMAR environmental

3101 35th AVENUE
OAKLAND, CALIFORNIA

DETAILED SITE MAP SHOWING GROUNDWATER SAMPLING RESULTS

FIGURE

5

TABLES

TABLE 1A
SUMMARY OF HISTORICAL VOC AND HYDROCARBON SOIL ANALYTICAL DATA
3101 35th Avenue
Oakland, California

Sample ID	Sample Depth (ft.)	Sample Date	TPHg (mg/Kg)	TPHd (mg/Kg)	TPHmo (mg/Kg)	B (mg/Kg)	T (mg/Kg)	E (mg/Kg)	X (mg/Kg)	MtBE (mg/Kg)	Napth. (mg/Kg)	Other VOCs (mg/Kg)
WO d 7.5'	7.5	01/27/15	ND<0.25	ND<1.0	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.010	All ND
T1 d 9'	9.0	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
T2 d 9'	9.0	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
Disp. SW d 3'	3.0	01/27/15	**230**	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
Disp. NW d 3'	3.0	01/27/15	**850**	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
Disp. SE d 3.5'	3.5	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
Disp. NE d 3'	3.0	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
SW TP d 9.5'	9.5	01/27/15	**180**	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
Dispenser SP	stopckpile	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
Main TP SP	Stockpile	01/27/15	ND<0.25	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	---	All ND
WO SP	Stockpile	01/27/15	**32**	**84**	**360**	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.71**	All ND
Disp.Ad5'	5.0	04/16/15	**46**	---	---	ND<0.005	ND<0.005	ND<0.005	**0.069**	ND<0.05	---	---
Disp.Bd4'	4.0	04/16/15	**1.1**	---	---	ND<0.005	ND<0.005	ND<0.005	ND<0.050	ND<0.05	---	---
Disp.Cd5'	5.0	04/16/15	**77**	---	---	ND<0.001	ND<0.001	**0.17**	**0.22**	ND<0.10	---	---
Disp.Dd5'	5.0	04/16/15	**110**	---	---	ND<0.05	**0.21**	**0.87**	**0.16**	ND<0.05	---	---
Disp.Ed5'	5.0	04/16/15	**21**	---	---	ND<0.05	**0.031**	**0.012**	**0.16**	ND<0.05	---	---
Disp.Fd5'	5.0	04/16/15	**68**	---	---	ND<0.05	ND<0.005	ND<0.005	**0.035**	ND<0.05	---	---
Disp.Gd4'	4.0	04/16/15	ND<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.050	ND<0.05	---	---
Disp.Hd4'	4.0	04/16/15	**68**	---	---	ND<0.05	**0.34**	ND<0.050	**0.093**	ND<0.05	---	---
ESL Residential			**100**	**100**	**500**	**0.044**	**2.9**	**3.3**	**2.3**	**0.023**	**1.2**	**varies**
LTCP Residential (0' to 5')			**---**	**---**	**---**	**1.9**	**---**	**21.0**	**---**	**---**	**9.7**	**varies**
LTCP Residential (5' to 10')			**---**	**---**	**---**	**2.8**	**---**	**32.0**	**---**	**---**	**9.7**	**varies**

Notes:
11/25/14 & 4/16/15 samples collected by ERS
--- = Parameter not analyzed
<0.5 / ND = Not present at or above reporting detection limit
mg/Kg = micrograms per kilogram = parts per million = ppm
ESLs = RWQCB Environmental Screening Levels shallow soil (Table A: Potential source of drinking water)
LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil that will have no significant risk of adversly affecting human health
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
TPHmo = Total Petroleum Hydrocarbons as motor oil
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MtBE = Methyl-t-butyl ether
Bolded Value =detected concentration
Shaded Value = concentration excedes either ESL or LTCP value

TABLE 1B
SUMMARY OF HISTORICAL PAHs SOIL ANALYTICAL DATA
3101 35th Avenue
Oakland, California

Sample ID	WO d 7.5'	WO SP	LTCP Residential 0 to 5 ft bgs (mg/Kg)	LTCP Residential 5 to 10 ft bgs (mg/Kg)	Residential ESL (mg/Kg)
Sample Depth	7.5 ft bgs	Stockpile			
Sample Date	01/27/15	01/27/15			
Units	(mg/Kg)	(mg/Kg)			
Acenaphthene	ND<0.010	ND<0.010	**0.063**	**NA**	**16**
Acenaphthylene	ND<0.010	ND<0.010	**0.063**	**NA**	**13**
Anthracene	ND<0.010	ND<0.010	**0.063**	**NA**	**28**
Benzo[a]anthracene	ND<0.010	ND<0.010	**0.063**	**NA**	**0.38**
Benzo[b]fluoranthene	ND<0.010	ND<0.010	**0.063**	**NA**	**0.38**
Benzo[k]fluoranthene	ND<0.010	ND<0.010	**0.063**	**NA**	**0.38**
Benzo[a]pyrene	ND<0.010	ND<0.010	**0.063**	**NA**	**0.38**
Benzo[g,h,i]perylene	ND<0.010	ND<0.010	**0.063**	**NA**	**27**
Chrysene	ND<0.010	ND<0.010	**0.063**	**NA**	**3.8**
Dibenzo[a,h]anthracene	ND<0.010	ND<0.010	**0.063**	**NA**	**0.11**
Fluoranthene	ND<0.010	ND<0.010	**0.063**	**NA**	**40**
Fluorene	ND<0.010	ND<0.010	**0.063**	**NA**	**8.9**
Indeno[1,2,3-cd]pyrene	ND<0.010	ND<0.010	**0.063**	**NA**	**0.38**
1-Methylnaphthalene	ND<0.010	**0.66**	**0.063**	**NA**	**NA**
2-Methylnaphthalene	ND<0.010	**1.2**	**0.063**	**NA**	**NA**
Napthalene	ND<0.010	**0.71**	**9.7**	**9.7**	**1.2**
Phenanthrene	ND<0.010	ND<0.010	**0.063**	**NA**	**11**
Pyrene	ND<0.010	ND<0.010	**0.063**	**NA**	**85**

Notes:

--- = Parameter not analyzed
<0.5 / ND = Not present at or above reporting detection limit
mg/Kg = micrograms per kilogram = parts per million = ppm
ESLs = RWQCB Environmental Screening Levels shallow soil
(Table A: Potential source of drinking water)
Bolded Value =detected concentration
Shaded Value = concentration excedes either ESL or LTCP value

TABLE 1C
SUMMARY OF HISTORICAL METALS SOIL ANALYTICAL DATA
3101 35th Avenue
Oakland, California

Sample ID	Sample Depth (ft.)	Sample Date	Cadmium (mg/Kg)	Chromium (mg/Kg)	Lead (mg/Kg)	Nickel (mg/Kg)	Zinc (mg/Kg)
WO d 7.5'	7.5	01/27/15	ND<0.25	**46**	**6.9**	100	120
T1 d 9'	9.0	01/27/15	---	---	**6.5**	---	---
T2 d 9'	9.0	01/27/15	---	---	**9.7**	---	---
Disp. SW d 3'	3.0	01/27/15	---	---	**25**	---	---
Disp. NW d 3'	3.0	01/27/15	---	---	**35**	---	---
Disp. SE d 3.5'	3.5	01/27/15	---	---	**13**	---	---
Disp. NE d 3'	3.0	01/27/15	---	---	**8.3**	---	---
SW TP d 9.5'	9.5	01/27/15	---	---	**18**	---	---
Dispenser SP	stopckpile	01/27/15	---	---	**170**	---	---
Main TP SP	Stockpile	01/27/15	---	---	**43**	---	---
WO SP	Stockpile	01/27/15	**0.32**	**52**	**65**	**80**	**160**
ESL Residential			**12**	**1,000**	**80**	**150**	**600**
LTCP Residential (0' to 5')			**---**	**---**	**---**	**---**	**---**
LTCP Residential (5' to 10')			**---**	**---**	**---**	**---**	**---**

Notes:

1/27/15 samples collected by ERS
--- = Parameter not analyzed
<0.5 / ND = Not present at or above reporting detection limit
mg/Kg = micrograms per kilogram = parts per million = ppm
ESLs = RWQCB Environmental Screening Levels shallow soil (Table A: Potential source of drinking water)
LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil
that will have no significant risk of adversly affecting human health

TABLE 2
SUMMARY OF CURRENT SOIL ANALYTICAL DATA
3101 35th Avenue
Oakland, California

Sample ID	Sample Depth (ft.)	Sample Date	TPHg (mg/Kg)	B (mg/Kg)	T (mg/Kg)	E (mg/Kg)	X (mg/Kg)	MtBE (mg/Kg)	Naphth. (mg/Kg)	TBA (mg/Kg)
DP-1d5.0	5	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-1d10.0	10.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-1d15.0	15.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-3d5.0	5.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-3d10.0	10.0	11/02/15	**12**	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-3d20.0	20.0	11/02/15	**0.73**	**0.0023**	**0.013**	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-3d30.0	30.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d5.0	5.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d10.0	10.0	11/02/15	**6.1**	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d15.0	15.0	11/02/15	**0.30**	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d20.0	20.0	11/02/15	**18**	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
DP-5d30.0	30.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
SG-1d5.0	5.0	11/02/15	**0.065**	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
SG-2d5.0	5.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
SG-3d5.0	5.0	11/02/15	ND<0.20	ND<0.005	ND<0.005	ND<0.005	ND<0.010	ND<0.005	ND<0.005	ND<0.050
ESL Residential			**100**	**0.044**	**2.9**	**3.3**	**2.3**	**0.023**	**1.2**	**varies**
LTCP Residential (0' to 5')			**---**	**1.9**	**---**	**21.0**	**---**	**---**	**9.7**	**varies**
LTCP Residential (5' to 10')			**---**	**2.8**	**---**	**32.0**	**---**	**---**	**9.7**	**varies**

Notes:

--- = Parameter not analyzed
<0.5 / ND = Not present at or above reporting detection limit
mg/Kg = micrograms per kilogram = parts per million = ppm
ESLs = RWQCB Environmental Screening Levels shallow soil (Table A: Potential source of drinking water)
LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil that will have no significant risk of adversly affecting human health
TPHg = Total Petroleum Hydrocarbons as gasoline

B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MtBE = Methyl-t-butyl ether
TBA = t-Butyl alcohol
Naphth. = Naphthalene

TABLE 3
SUMMARY OF CURRENT GROUNDWATER ANALYTICAL DATA
3101 35th Avenue
Oakland, California

Sample ID	Sample Date	TPHg (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MtBE (ug/L)	Naphth. (ug/L)	TBA (ug/L)
DP-1	11/03/15	ND<50	ND<0.50	**0.11**	ND<0.50	**ND<1.0**	ND<0.50	ND<0.50	ND<10
DP-3	11/03/15	**1,000**	**19**	**1.1**	**34**	**5.1**	ND<0.50	**7.2**	ND<10
DP-5	11/03/15	**3,700**	**2.2**	**1.5**	**1.4**	**5.5**	ND<0.50	**2.6**	ND<10
ESL Residential		**100**	**1.0**	**40.0**	**30.0**	**20.0**	**5.0**	**6.2**	**12**

Notes:

Samples DP-1 thru DP-3 collected as "grab" groundwater samples

--- = Parameter not analyzed

<0.5 / ND = Not present at or above reporting detection limit

ug/L = micrograms per Liter = parts per billioni = ppb

ESLs = RWQCB Environmental Screening Levels shallow soil (Table A: Potential source of drinking water)

LTCP = Low Threat Closure Policy - Table 1: Concentrations of Petroleum Constituents in soil that will have no significant risk of adversly affecting human health

TPHg = Total Petroleum Hydrocarbons as gasoline

TPHd = Total Petroleum Hydrocarbons as diesel

B = Benzene Naphth. = Naphthalene

T = Toluene MtBE = Methyl-t-butyl ether

E = Ethylbenzene

X = Total Xylenes

Bolded Value =detected concentration

Shaded Value = concentration excedes either ESL or LTCP value

TABLE 4
SUMMARY OF CURRENT SOIL GAS ANALYTICAL DATA
3101 35th Ave.
Oakland, California

SAMPLE ID	Sample Depth (ft.)	Sample Date	Oxygen (O_2)	Helium	TPHg (C6-C12)	Tetrahydrofuran	Carbon Disulfide	n-Hexane	Chloroform	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Isopropanol	PCE	Naphthalene	Other VOCs
			Mol%	Mol%	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
SG-1	5.0	11/09/15	**2.6**	ND<0.47	**460**	**80**	**47**	ND<2.3	**16**	**10**	**28**	ND<2.3	ND<2.3	ND<2.3	ND<2.3	ND<2.3	<MDL
SG-2	5.0	11/09/15	**4.1**	ND<0.45	**96,000**	**190**	**140**	**70**	ND<14	**61**	**91**	ND<14	**74**	ND<14	ND<14	ND<14	<MDL[1]
SG-3	5.0	11/09/15	**15**	ND<0.19	**210**	**22**	**12**	ND<0.97	ND<0.97	**3.3**	**7.8**	ND<0.97	ND<0.97	ND<0.97	**160**	ND<3.9	<MDL
Residential ESL			**NA**	**NA**	**150,000**	**NA**	**NA**	**NA**	**2,300**	**42**	**160,000**	**490**	**52,000**	**NA**	**210**	**36**	**Varies**
Residential CHHSL			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**85**	**320,000**	**1,100**	**NA**	**NA**	**470**	**93**	**Varies**
LTCP w/Bioattenuation			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**85,000**	**NA**	**1,000,000**	**NA**	**NA**	**NA**	**93,000**	**Varies**
LTCP w/o Bioattenuation			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**85**	**NA**	**1,100**	**NA**	**NA**	**NA**	**93**	**Varies**

Notes:

--- = Parameter not Sampled
NA = Not analyzed or Not established
<0.5 / ND = Not present at or above reporting detection limit
ug/m3 = micrograms per cubic meter = ppmv
ESLs = RWQCB established environmental screening levels, May 2013
CHHSL = California Human Health Screening Level - January 2005
LTCP = Low Threat Closure Policy (Appendix 4 - Scenerio 4)

<MDL[1] = 1,2,4-Trimethylbenzene at 73 ug/m3

Bold = detected concentration
Shaded Value = concentration excedes either ESL or LTCP value

APPENDIX A

Directive Letter

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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August 19, 2015

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(*Sent via E-mail to mona.hsieh@yahoo.com*)
(*Sent via E-mail to patrickykong@gmail.com*)

Subject: Review of the Data Gap Investigation Work Plan and Site Conceptual Model, Fuel Leak Case No. RO0003164 and GeoTracker Global ID T10000006539, Green Oak Builders, 3101 35th Avenue, Oakland, CA 94619

Dear Ms. Hsieh and Mr. Kong:

Thank you for the recent document submittals, including the document entitled *Data Gap Investigation Work Plan* (Work Plan) *and Site Conceptual Model* (SCM) dated June 25, 2015, prepared by Almar Environmental (Almar) for the subject site. Alameda County Environmental Health (ACEH) staff has reviewed the case file for the subject fuel leak case including afore mentioned document.

The Site Conceptual Model (SCM) reviewed the site against the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP) and found the site met all eight General Criteria, met the Direct Contact and Outdoor Air Exposure media specific Criteria, but did not meet the Groundwater-Specific Criteria and Petroleum Vapor Intrusion to Indoor Air. The associated Work Plan proposes to investigate these criteria by the installation of five bores (Groundwater Criteria) and soil gas sampling (Vapor Intrusion to Indoor Air) with another three bores.

ACEH has also reviewed the case against the LTCP and is in disagreement with the assessment offered by the referenced document. Based on ACEH staff review, we have determined that the site fails to meet the LTCP General Criteria f (Secondary Source Removal), the Media-Specific Criteria for Groundwater, the Media-Specific Criteria for Vapor Intrusion to Indoor Air, and the Media-Specific Criteria for Direct Contact (see Geotracker).

Additional data may be available that ACEH is not aware of, or may not have been submitted, and therefore has not been incorporated in to ACEH's review. If additional data is made available, the data can be incorporated in future LTCP reviews. The evaluation of the site under the LTCP that is presented below is intended to initiate further discussions, submittal of other available documents, or the collection of additional data in order to determine if or when the site can be closed under the LTCP and to document current LTCP data gaps.

Therefore, at this juncture ACEH requests that you prepare a Data Gap Investigation Work Plan Addendum, consisting of a revised Figure 5, to address Technical Comment 2 provided below.

TECHNICAL COMMENTS

1. **Submittal of Additional Documents -** ACEH notes that Section 8.0 for the referenced report is comprised of a set of references. Two Phase I Environmental Sit Assessment reports are included in the list; however, have not been submitted to ACEH. Additional information, as requested below, in the following Technical Comment may be contained in these two documents. Therefore, please submit electronic copies to the ACEH ftp and to the SWRCB GeoTracker websites by the date identified below.

2. **General Criteria f – Secondary Source Has Been Removed to the Extent Practicable –** In general, ACEH is not aware of previous station configurations to determine previous tank and dispenser locations. This information may be present in the two Phase I assessments referenced in the Work Plan but not yet submitted to ACEH. Finally, it does not appear that sufficient sampling in the native soil beneath the former Texaco tank pit has been performed yet.

   The subject site has been reported to have been an active gasoline service station since prior to 1930, through the early 1980s. Prior to its demolition, the most recent station building configuration was indicative of having at least one service bay. Please investigate the probable hydraulic hoist locations and propose an adequate number of bores to investigate this concern. Please be aware that the experience of ACEH is that hydraulic hoist releases may include polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs).

   Therefore, ACEH requests a Work Plan Addendum by the date identified below to incorporate additional bore locations to address these concerns.

3. **LTCP Media Specific Criteria for Groundwater –** To satisfy the groundwater-specific data gap, Almar proposes to conduct a soil and water investigation at the subject site. The investigation consists of the collection of soil and "grab" groundwater samples from a total of up to five (5) temporary borings (DP-1 through DP-5) at the subject site. Soil samples will be collected at five (5) foot intervals, where contamination is observed in the field, and at the soil-groundwater interface. A minimum of two (2) soil samples from each boring will be retained for laboratory analysis.

   ACEH is in general agreement with the locations of DP-1 through DP-5. For the purpose of the Groundwater Media Specific criteria, the locations of these borings should be adjacent to, but not inside of, the former excavation areas to be investigated so native – not import fill- is sampled for the investigation.

   Alternatively, a determination of the history of the station layout for 50+ years the station was in operation may be made to more accurately to situate or eliminate soil bore locations in these areas.

4. **LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air –** To satisfy the petroleum vapor intrusion to indoor air data gap, Almar proposes to conduct a soil gas investigation consisting of the collection of soil gas samples from a total of three (3) semi-permanent soil gas sampling points identified as SG-1 through SG-3.

   Due to the presence of petroleum-related volatile organic compounds (VOCs) in proximity to soil sample labeled either 'NDd6' or 'Dd5' with 110 milligrams per kilogram (mg/kg) total

petroleum hydrocarbons as gasoline (TPHg) and 0.87 mg/kg ethylbenzene, it appears appropriate to determine if VOCs at this location represent a vapor intrusion health risk to the site.

5. **Soil Sampling –** In accordance with the LTCP, ACEH requests that soil samples be collected and analyzed at two different depths (one sample from each bore) in the 0- to 5-foot zone and one from each bore in the 5- to 10-foot zone. Additional soil samples should be collected in areas of obvious contamination, at the soil/groundwater interface, and at significant changes in lithology. If staining, odor, or elevated PID readings are observed over an interval of several feet, a sufficient number of soil samples from this interval should be submitted for laboratory analyses to characterize the fuel hydrocarbon concentrations within this interval. Please ensure that the analytical results define the vertical and horizontal extent of TPH impacts at the site.

   Additionally, ACEH requests a soil sample be recovered from near the base of each soil gas bore.

6. **Bore Logs –** Though not stated in the Work Plan, ACEH requests bore logs for the soil gas bores be provided in the investigation report.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Keith Nowell), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention and schedule:

- **August 26, 2015 – Submittal of Phase I Reports** and email notification to Attn.: Keith Nowell

- **September 18, 2015 –Data Gap Identification Work Plan Addendum** (Revised Figure 5 - file to be named RO0003164_WP_ADEND_R_yyyy-mm-dd and provided via email to Attn.: Keith Nowell at keith.nowell@acgov.org)

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at keith.nowell@acgov.org

Sincerely,

Keith Nowell

Digitally signed by Keith Nowell
DN: cn=Keith Nowell, o=Alameda County, ou=Department of Environmental Health, email=keith.nowell@acgov.org, c=US
Date: 2015.08.19 16:00:58 -07'00'

Keith Nowell, PG, CHG
Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements/Obligations and Electronic Report Upload (ftp) Instructions

cc: Forrest Cook, Almar Environmental, 407 Almar Avenue, Santa Cruz, CA 95060
(Sent via *E*-mail to *cook.forrest@gmail.com*)

Dilan Roe, ACEH (*Sent via E-mail to: dilan.roe@acgov.org*)
Keith Nowell, ACEH (*Sent via E-mail to keith.nowell@acgov.org*)
GeoTracker/ File

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to deh.loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

ACPWA Drilling Permit

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: 10/20/2015 By jamesy

Permit Numbers: W2015-0982
Permits Valid from 10/28/2015 to 10/29/2015

Application Id: 1444841869223
City of Project Site: Oakland
Site Location: 3101 35th Avenue
Oakland, CA
Project Start Date: 10/28/2015
Completion Date: 10/29/2015
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: Almar Environmental - Forrest Cook
407 Almar Ave., Santa Cruz, CA 95060
Phone: 831-420-7923

Property Owner: Green Oak Builders, Inc.
888 Brannan Street, #101, San Francisco, CA 94103
Phone: --

Client: ** same as Property Owner **

	Total Due:	$265.00
Receipt Number: WR2015-0525	**Total Amount Paid:**	$265.00
Payer Name : Forrest Cook	Paid By: VISA	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 11 Boreholes
Driller: WellTest, Inc. - Lic #: 843074 - Method: DP

Work Total: $265.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2015-0982	10/20/2015	01/26/2016	11	2.00 in.	20.00 ft

Specific Work Permit Conditions

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

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

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

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

5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or

waterways or be allowed to move off the property where work is being completed.

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

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

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

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

APPENDIX C

Boring Logs

FIELD LOCATION OF BORING:

PROJECT: No. 1078C | DATES DRILLED: 11/2/15

CLIENT: Green Oak Builders | DRILLER: ERS (C-57 #589652)

SITE ADDRESS: 3101 35th Ave., Oakland, CA | LOGGED BY: Forrest Cook PG#8201

DRILLING METHOD AND EQUIPMENT: Geoprobe w/macro core sampler

WATER LEVEL		TIME	
1st Encountered	NA	Start	
Static	1.90 (on 11/3/15)	Finish	

Depth (Feet)	Sample	Sample ID	Blow Count	PID (ppm)	Well Const.	Lithology	USCS	SOIL DESCRIPTION
1					Backfilled with neat cement			Static water = 1.90 (11/3/15)
2							CL	GRAVELLY CLAY (CL): Strong brown (7.5YR5/8), estimated moist, estimated stiff to very stiff, estimated low to medium plasticity.
3								
4								
5	■	DP-1d5.0						
6								
7								
8							GC / CL	CLAYEY GRAVEL (GC) to GRAVELLY CLAY (CL): Yellowish brown (10YR5/8), estimated very stiff to hard, estimated low plasticity
9								
10	■	DP-1d10.0						
11								
12								
13								
14								1st encountered water = 14.50’
15	■	DP-1d15.0						Bottom of Hole = 15.0 feet
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

WELL / BORING CONSTRUCTION DETAILS:

Backfilled with neat cement (Portland I/II)

ALMAR environmental

3101 35th AVE.
OAKLAND, CALIFORNIA

BORING LOG

BORING

DP-1

FIELD LOCATION OF BORING:

PROJECT: No. 1078C DATES DRILLED: 11/2/15

CLIENT: Green Oak Builders DRILLER: ERS (C-57 #589652)

SITE ADDRESS: 3101 35th Ave., Oakland, CA LOGGED BY: Forrest Cook PG#8201

DRILLING METHOD AND EQUIPMENT: Geoprobe w/macro core sampler

WATER LEVEL		TIME	
1st Encountered	NA	Start	
Static	16.20 (on 11/3/15)	Finish	

Depth (Feet)	Sample	Sample ID	Blow Count	PID (ppm)	Well Const.	Lithology	USCS	SOIL DESCRIPTION
0					Backfilled with neat cement			4" Concrete Slab
5	■	DP-3d5.0					CL	GRAVELLY CLAY (CL): Very dark greenish gray (GLEY 1 3/1), estimated damp, estimated very stiff, estimated low to plasticity.
10	■	DP-3d10.0					CL / GC	GRAVELLY CLAY (CL) to CLAYEY GRAVEL (GC): Brown (7.5YR4/3), estimated damp, estimated very stiff, estimated low to plasticity.
16								▼ Static water = 16.20' (11/3/15)
20	■	DP-3d20.0					CL	SILTY CLAY (CL): Olive brown (2.5Y4/4), estimated damp, estimated very stiff to hard.
25								Continued ->

WELL / BORING CONSTRUCTION DETAILS:

Backfilled with neat cement (Portland I/II)

ALMAR environmental

3101 35th AVE.
OAKLAND, CALIFORNIA

BORING LOG

BORING

DP-3

FIELD LOCATION OF BORING:

PROJECT: No. 1078C DATES DRILLED: 11/2/15

CLIENT: Green Oak Builders DRILLER: ERS (C-57 #589652)

SITE ADDRESS: 3101 35th Ave, Oakland, CA

LOGGED BY: Forrest Cook PG#8201

DRILLING METHOD AND EQUIPMENT: Geoprobe w/macro core sampler

WATER LEVEL		TIME	
1st Encountered	NA	Start	
Static	16.20 (on 11/3/15)	Finish	

Depth (Feet)	Sample	Sample ID	Blow Count	PID (ppm)	Well Const.	Lithology	USCS	SOIL DESCRIPTION
26–30	■	DP-1d28.0					CL	SILTY CLAY (CL) w/ trace gravels: Olive brown (2.5Y4/4), estimated damp, estimated very stiff to hard.
								Bottom of Hole = 30 ft

WELL / BORING CONSTRUCTION DETAILS:

Backfilled with neat cement (Portland I/II)

ALMAR environmental

3101 35th AVE.
OAKLAND, CALIFORNIA

BORING LOG

BORING
DP-3
(cont.)

FIELD LOCATION OF BORING:

PROJECT: No. 1078C DATES DRILLED: 11/2/15

CLIENT: Green Oak Builders DRILLER: ERS (C-57 #589652)

SITE ADDRESS: 3101 35th Ave., Oakland, CA

LOGGED BY: Forrest Cook PG#8201

DRILLING METHOD AND EQUIPMENT: Geoprobe w/macro core sampler

WATER LEVEL		TIME	
1st Encountered	NA	Start	
Static	16.80 (on 11/3/15)	Finish	

Depth (Feet)	Sample	Sample ID	Blow Count	PID (ppm)	Well Const.	Lithology	USCS	SOIL DESCRIPTION
1					Backfilled with neat cement			4" Concrete Slab
2								FILL - Non native imported clean sand
3								
4								
5		DP-5d5.0					CL / GC	GRAVELLY CLAY (CL) to CLAYEY GRAVEL (GC): Light olive brown (2.5Y5/6), estimated damp, estimated very stiff to hard. Estimated low to plasticity. Very hard drilling.
6								
7								
8								
9								
10		DP-5d10.0						
11								
12								
13								
14							CL	SILTY CLAY (CL) w/trace gravel: Dark greenish gray (GLEY 1 4/1), estimated damp, estimated very stiff to hard.
15		DP-5d10.0						
16								
17								Static water = 16.80' (11/3/15)
18								
19								
20		DP-5d20.0					CL	SILTY CLAY (CL): Greenish gray (GLEY 1 5/1), estimated damp, estimated very stiff. Estimated low plasticity. No gravels.
21								
22								
23								
24								
25								

Continued ->

WELL / BORING CONSTRUCTION DETAILS:

Backfilled with neat cement (Portland I/II)

ALMAR environmental

3101 35th AVE.
OAKLAND, CALIFORNIA

BORING LOG

BORING

DP-5

FIELD LOCATION OF BORING:

PROJECT: No. 1078C DATES DRILLED: 11/2/15

CLIENT: Green Oak Builders DRILLER: ERS (C-57 #589652)

SITE ADDRESS: 3101 35th Ave, Oakland, CA LOGGED BY: Forrest Cook PG#8201

DRILLING METHOD AND EQUIPMENT: Geoprobe w/macro core sampler

WATER LEVEL		TIME	
1st Encountered	NA	Start	
Static	16.80 (on 11/3/15)	Finish	

Depth (Feet)	Sample	Sample ID	Blow Count	PID (ppm)	Well Const.	Lithology	USCS	SOIL DESCRIPTION
26–30	■	DP-5d30.0					CL	SILTY CLAY (CL) w/ trace sand and gravels: Dark yellowish brown (10YR4/6), estimated damp, hard.
30								Bottom of Hole = 30 ft
31–50								

WELL / BORING CONSTRUCTION DETAILS:

Backfilled with neat cement (Portland I/II)

ALMAR environmental

3101 35th AVE.
OAKLAND, CALIFORNIA

BORING LOG

BORING
DP-5 (cont.)

APPENDIX D

Soil Gas Purge Data Sheets

ALMAR environmental

Soil Vapor Well Purging and Sampling Form

Well No. SG-1

Project Name 35th Ave	Project No. 1078C	Date 11-5-15
Project Address, City, County		

PURGING AND SAMPLING INSTRUMENTATION AND METHOD

Water Level Meter (Model/ID)				Interface probe (Model/ID)			
Water Quality Meter (Model/ID)				Decontamination Method			
Purging Method(s)	X Summa		Vacuum Truck		Submersible Pump		Other
Sampling Method(s)	X Summa Canister		Disposal Bailer		Other		

BOREHOLE AND WELL CASING VOLUME INFORMATION

Borehole Diameter (Circle)	(2")	6"	8"	Casing Diameter (Circle)	3/16"
				Casing Multiplier (CM) (mL/foot)	5.42

MONITORING MEASUREMENTS

Depth to Free Product (feet)	-
Depth to Water (DTW) (feet)	-
Total Well Depth (WD) (feet)	5.0
Water Column (WC) (feet)	-
Free Product Thickness (feet)	-

PURGING CALCULATORS

Casing Volume (CV)

_____ WD x CM _____ _____ CV (mL) x 3.0 CV (mL) _____

purge rate = 200 mL/min

Free Product Purged (gal)

PURGING DATA

Time (24 hr)	12:50	12:51	12:52	12:53	12:54	12:55	12:56		
mL Purged	0	200	400	600	800	1,000	1,200		
He Meter in	37.6	38.0	36.6	34.8	32.2	30.8	28.4		
He out	00.3	00.3	00.3	00.3	00.2	00.2	00.2		
Sample Time	12:56	12:57	13:01						
He in	28.8	27.5	23.8						
H_2S =	-30	-25	-20	-15	-10	-5			
Other					end Sample @ 13:15 -20"				
Other					canister # 187				

SAMPLING DATA

Sample ID	Time	Quantity	Volume	Type	Filtered	Preserved	Analysis

FIELD PERSONNEL

Field Technician Representative(s):	Subcontractor:
Signature	Date:

purge start = 20"
end = 15"

ALMAR environmental

Soil Vapor Well Purging and Sampling Form

Well No. SG-2

Project Name 35th Ave	Project No. 1078C	Date 11-9-15
Project Address, City, County 3101 35th Ave, Oakland, CA		

PURGING AND SAMPLING INSTRUMENTATION AND METHOD

Water Level Meter (Model/ID)	—		Interface probe (Model/ID)		
Water Quality Meter (Model/ID)	—		Decontamination Method		
Purging Method(s)	X Summa	____ Vacuum Truck	____ Submersible Pump	____ Other	
Sampling Method(s)	X Summa Canister	____ Disposal Bailer	____ Other		

BOREHOLE AND WELL CASING VOLUME INFORMATION

Borehole Diameter (Circle)	(2")	6"	8"	Casing Diameter (Circle)	(3/16")
				Casing Multiplier (CM) (mL/foot)	5.42

MONITORING MEASUREMENTS

Depth to Free Product (feet)	—
Depth to Water (DTW) (feet)	—
Total Well Depth (WD) (feet)	5.0'
Water Column (WC) (feet)	—
Free Product Thickness (feet)	—

PURGING CALCULATORS

Casing Volume (CV)

____ WD x CM ____ ____ CV (mL) x 3.0 CV (mL) ____

Purge = 700 mL/Min

Free Product Purged (gal)

PURGING DATA

Time (24 hr)	11:57	11:59	12:00	12:01	12:02	12:03	12:04		
mL Purged	✓	200	400	600	800	1,000	1,200		
He Meter in	24.2	26.0	25.4	24.9	24.7	23.6	22.5		
2nd	00.4	00.4	00.4	00.4	00.4	00.4	00.3		
Sample time	12:05		12:08	12:10					
He (in)	24.0		23.3	22.3					
H_2S	-25	-20	-15	-10	-5				
					Sample Time = 12:10				
Other					Canister # 78				
Other					Meth. Total # A00030				

SAMPLING DATA

Sample ID	Time	Quantity	Volume	Type	Filtered	Preserved	Analysis

FIELD PERSONNEL

Field Technician Representative(s):	Subcontractor:
Signature	Date:

purge start = 25"
end = 21"

ALMAR environmental

Soil Vapor Well Purging and Sampling Form

Well No. SG-3

Project Name 35th Ave	Project No.	Date 11-9-15
Project Address, City, County	3101 35th Ave, Oakland, CA	

PURGING AND SAMPLING INSTRUMENTATION AND METHOD

Water Level Meter (Model/ID)		Interface probe (Model/ID)		
Water Quality Meter (Model/ID)		Decontamination Method		
Purging Method(s)	X Summa	Vacuum Truck	Submersible Pump	Other
Sampling Method(s)	X Summa Canister	Disposal Bailer	Other	

BOREHOLE AND WELL CASING VOLUME INFORMATION

Borehole Diameter (Circle)	(2) 6" 8"	Casing Diameter (Circle)	3/16"
		Casing Multiplier (CM) (mL/foot)	5.42

MONITORING MEASUREMENTS		PURGING CALCULATORS	
Depth to Free Product (feet)	-	Casing Volume (CV)	
Depth to Water (DTW) (feet)	-	_____ WD x CM _____	_____ CV (mL) x 3.0 CV (mL) _____
Total Well Depth (WD) (feet)	5.0'	Purge = 200 mL/min	
Water Column (WC) (feet)	-		
Free Product Thickness (feet)	-	Free Product Purged (gal)	

PURGING DATA

Time (24 hr)	10:40	10:41	10:42	10:43	10:44	10:45	10:46		
mL Purged	0	200	400	600	800	1,000	1,200		
He Meter in	24.7		27.2	28.7	28.6	26.1	25.0		
He out	00.3	00.1	00.1	00.0	00.0	00.0	00.0		
Sample Time	10:46	10:50	10:54	10:58	11:03	11:07			
He in	24.7	20.7	23.5	20.5	20.9				
Hg =	-30	-25	-20	-15	-10	-5			
					Sample Time =		11:07		
Other					MonTotal #		A0005J		
Other					Canister #		112		

SAMPLING DATA

Sample ID	Time	Quantity	Volume	Type	Filtered	Preserved	Analysis

FIELD PERSONNEL

Field Technician Representative(s):	Subcontractor:
Signature	Date:

Purge start = 29"
end = 25"

Stroud Valve A

APPENDIX E

Soil and Groundwater Lab Data Sheets

Date of Report: 11/12/2015

Forrest Cook

Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Client Project:	3101 35th Ave. Oakland, CA
BCL Project:	Soils/Waters
BCL Work Order:	1528500
Invoice ID:	B218837

Enclosed are the results of analyses for samples received by the laboratory on 11/5/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval
Client Service Rep

Authorized Signature

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Table of Contents

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Chain of Custody and Cooler Receipt Form for 1528500 Page 1 of 4

BC LABORATORIES

4100 Atlas Court Bakersfield, Ca. 93308
(661) 327-4911 • FAX (661) 327-1918 • www.bclabs.com

Chain of Custody

* Required Fields 15-28500 TEMP: ______

Client/Company Name *:	Report Attention *:	Phone * #: 831-420-7923 FAX * #:
Almar Environmental	Forrest Cook	E-mail: cook.forrest@gmail.com

Address *: 407 Almar Ave. City *: Santa Cruz State *: CA Zip *: 95060

Project Information: 3101 35th Ave, Ockland, CA
PO # 1078C
BCL Quote #

How would you like your completed results sent? [X] E-Mail [ ] Fax [ ] EDD [ ] Mail Only

Sampler Name Printed / Signature: F. Cook / [signature]

QC Request: [ ] STD [ ] Level II

Result Request ** Surcharge: [X] STD [ ] 5 Day** [ ] 2 Day** [ ] 1 Day**

Carbon Copies: CDHS [ ] Fresno Co [ ] EPA [ ] Merced Co [ ] Tulare Co [ ] Other:

Regulatory Compliance
Electronic Data Transfer: Y [X] N [X]
System No. *: EDF T10000006539

Matrix Types: RSW = Raw Surface Water CFW = Clorinated Finished Water CWW = Chorinated Waste Water BW = Bottled Water
RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

ANALYSIS REQUESTED: TPHg, BTEX, MTBE, TBA, Naphth by 8260B

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	TPHg, BTEX, MTBE	TBA, Naphth by 8260B
-1		11-2-15	11:05	DP-1d5.0	SOIL		X	X
-2		↓	11:15	DP-1d10.0	↓		X	X
-3			11:40	DP-1d15.0			X	X
-4			12:15	DP-3d5.0			X	X
-5			12:45	DP-3d10.0			X	X
-6			13:30	DP-3d20.0			X	X
-7			14:00	DP-3d30.0			X	X
-8			8:15	DP-5d5.0			X	X
-9			8:30	DP-5d10.0			X	X
-10			9:00	DP-5d15.0			X	X
-11			9:30	DP-5d20.0			X	X

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
[signature]	Almar Env	11/5/15	10am	[signature]	BCL 11/5/15 10am
[signature]	BCL	11/5/15	1401	Gary Bogan	BCLab 11-5-15 1401

Received for Lab by: (Signature and Printed Name)	Date	Time	Payment Received at Delivery:
[signature]	11.5.15	2200	Date: Amount: Check/Cash/Card PIA # Init.

Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER
Cooling Method: WET BLUE NONE
Packing Material:

REL. Gary Bogan 11-5-15 1830 REC. [signature]

REL. [signature] 11/5/15 2200

SR-FL-0012-00 (Analytical)

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BC LABORATORIES

4100 Atlas Court Bakersfield, Ca. 93308
(661) 327-4911 • FAX (661) 327-1918 • www.bclabs.com

Chain of Custody

* Required Fields 15-28500 TEMP: _____

Client/Company Name *:	Report Attention *:	Phone * #: 831-420-7923 FAX * #:
Almar Environmental	Forrest Cook	E-mail: cook.forrest@gmail.com

Address *	City *	State *	Zip *
407 Almar Ave.	Santa Cruz	CA	95060

Project Information: 3101 35th Ave, Oakland, CA
PO # 1078C
BCL Quote #

How would you like your completed results sent? [X] E-Mail [ ] Fax [ ] EDD [ ] Mail Only

Sampler Name Printed / Signature

QC Request: [ ] STD [ ] Level II

Result Request ** Surcharge: [ ] STD [ ] 5 Day** [ ] 2 Day** [ ] 1 Day**

Carbon Copies: CDHS [ ] Fresno Co [ ] EPA [ ] Merced Co [ ] Tulare Co [ ] Other:

Regulatory Compliance Electronic Data Transfer: Y [X] N [ ] System No. * EDF

Matrix Types: RSW = Raw Surface Water CFW = Clorinated Finished Water CWW = Chorinated Waste Water BW = Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

ANALYSIS REQUESTED

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	THs, BTEX, MTBE	TRA, Naphth, by 8260B						
-12		11-2-15	10:15	DP-5d30.0	Soil		X	X						
-13		"	16:15	SG-1d5.0	"		X	X						
-14		"	16:20	SG-2d5.0	"		X	X						
-15		"	16:30	SG-3d5.0	"		X	X						
-16		11-3-15	11:40	DP-1	GW		X	X						
-17		"	11:25	DP-3	"		X	X						
-18		"	11:50	DP-5	"		X	X						

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
	Almar Env	11/5/15	10AM		BCL 11/5/15 10AM
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
	BCL	11/5/15	1401	Hang Bogan	BCLab 11-5-15 1401
Received for Lab by: (Signature and Printed Name)		Date	Time	Payment Received at Delivery: Date: Amount: Check/Cash/Card PIA # Init.	
		11-5-15	2200		

Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER

Cooling Method: WET BLUE NONE

Packing Material:

REL. 11/5/15 2200

REL. Hang Bogan 11-5-15 1830 REC.

SR-FL-0012-00 (Analytical)

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Chain of Custody and Cooler Receipt Form for 1528500 Page 3 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 15-28500

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____	Other ☐ (Specify)_____	

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: VOA Thermometer ID: 208 Date/Time 11/5/15

Temperature: (A) 0.4 °C / (C) 0.3 °C Analyst Init KJB 2209

CHK BY JML DISTRIBUTION SUB-OUT ☐

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
0 ml VOA VIAL- 504										
PT EPA 508/608/8080										
PT EPA 515.1/8150										
PT EPA 525										
PT EPA 525 TRAVEL BLANK										
0ml EPA 547										
0ml EPA 531.1										
oz EPA 548										
PT EPA 549										
PT EPA 8015M										
PT EPA 8270										
oz / 16oz / 32oz AMBER										
oz / 16oz / 32oz JAR										
OIL SLEEVE XO2	A	A	A	A	A	A	A	A	A	A
OB VIAL										
PLASTIC BAG										
POLAR BAG										
FERROUS IRON										
ENCORE										
TART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: JML Date/Time: 11-6-15 0800

A = Actual / C = Corrected

Rev 20 07/24/2015

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Chain of Custody and Cooler Receipt Form for 1528500 Page 4 of 4

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 2

Submission #: 15-28500

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____	Other ☐ (Specify)_____	

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: VOA Thermometer ID: 208 Date/Time 11/5/15 2209

Temperature: (A) 0.4 °C / (C) 0.3 °C Analyst Init KJB

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL 0960						ABC	ABC	ABC		
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE X08	A	A	A	A	A					
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: JM Date/Time: 11-6-15 0900

A = Actual / C = Corrected

Rev 20 07/24/2015

[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC rev 20]

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1528500-01	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 11:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-1d5.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-1d5.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1528500-02	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 11:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-1d10.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-1d10.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1528500-03	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 11:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-1d15.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-1d15.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1528500-04	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 12:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-3d5.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-3d5.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1528500-05	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 12:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-3d10.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-3d10.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1528500-06	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 13:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-3d20.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-3d20.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1528500-07	**COC Number:**	---	**Receive Date:** 11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:** 11/02/2015 14:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	DP-3d30.0	**Lab Matrix:** Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:** Soil
			Delivery Work Order:
			Global ID: T0000006539
			Location ID (FieldPoint): DP-3d30.0
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1528500-08	**COC Number:**	---	**Receive Date:** 11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:** 11/02/2015 08:15
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	DP-5d5.0	**Lab Matrix:** Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:** Soil
			Delivery Work Order:
			Global ID: T0000006539
			Location ID (FieldPoint): DP-5d5.0
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1528500-09	**COC Number:**	---	**Receive Date:** 11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:** 11/02/2015 08:30
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	DP-5d10.0	**Lab Matrix:** Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:** Soil
			Delivery Work Order:
			Global ID: T0000006539
			Location ID (FieldPoint): DP-5d10.0
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1528500-10	**COC Number:**	---	**Receive Date:** 11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:** 11/02/2015 09:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	DP-5d15.0	**Lab Matrix:** Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:** Soil
			Delivery Work Order:
			Global ID: T0000006539
			Location ID (FieldPoint): DP-5d15.0
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1528500-11	**COC Number:**	---	**Receive Date:** 11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:** 11/02/2015 09:30
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	DP-5d20.0	**Lab Matrix:** Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:** Soil
			Delivery Work Order:
			Global ID: T0000006539
			Location ID (FieldPoint): DP-5d20.0
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1528500-12	**COC Number:**	---	**Receive Date:** 11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:** 11/02/2015 10:15
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	DP-5d30.0	**Lab Matrix:** Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:** Soil
			Delivery Work Order:
			Global ID: T0000006539
			Location ID (FieldPoint): DP-5d30.0
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1528500-13	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 16:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SG-1d5.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): SG-1d5.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1528500-14	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 16:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SG-2d5.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): SG-2d5.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1528500-15	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/02/2015 16:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SG-3d5.0	**Lab Matrix:**	Solids
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Soil
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): SG-3d5.0	
			Matrix: SO	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1528500-16	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/03/2015 11:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-1	**Lab Matrix:**	Water
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1528500-17	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/03/2015 11:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-3	**Lab Matrix:**	Water
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-3	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1528500-18	**COC Number:**	---	**Receive Date:**	11/05/2015 22:00
	Project Number:	Oakland Ca	**Sampling Date:**	11/03/2015 11:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	DP-5	**Lab Matrix:**	Water
	Sampled By:	Forrest Cook of ALSC	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0000006539	
			Location ID (FieldPoint): DP-5	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-01 | **Client Sample Name:** Oakland Ca, DP-1d5.0, 11/2/2015 11:05:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	88.8	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.5	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.6	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 00:23	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-02 | **Client Sample Name:** Oakland Ca, DP-1d10.0, 11/2/2015 11:15:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	89.8	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.6	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.1	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 00:45	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-03 | **Client Sample Name:** Oakland Ca, DP-1d15.0, 11/2/2015 11:40:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.0	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.9	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.3	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 01:08	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-04 | **Client Sample Name:** Oakland Ca, DP-3d5.0, 11/2/2015 12:35:00PM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.2	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.1	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.5	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 01:31	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-05 | **Client Sample Name:** Oakland Ca, DP-3d10.0, 11/2/2015 12:45:00PM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**12**	**mg/kg**	**2.0**	**0.20**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	102	%	70 - 121 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	87.6	%	70 - 121 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	104	%	81 - 117 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.7	%	81 - 117 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	102	%	74 - 121 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.2	%	74 - 121 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 01:53	ADC	MS-V2	1	BYK0810
2	EPA-8260B	11/09/15	11/10/15 15:51	ADC	MS-V2	10	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-06 | **Client Sample Name:** Oakland Ca, DP-3d20.0, 11/2/2015 1:30:00PM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**0.0023**	**mg/kg**	**0.0050**	**0.0013**	**EPA-8260B**	ND	**J**	1
Ethylbenzene	**0.013**	**mg/kg**	**0.0050**	**0.0015**	**EPA-8260B**	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	**0.0029**	**mg/kg**	**0.0050**	**0.0022**	**EPA-8260B**	ND	**J**	1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.73**	**mg/kg**	**0.20**	**0.020**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.9	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.4	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.4	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 02:16	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-07 | **Client Sample Name:** Oakland Ca, DP-3d30.0, 11/2/2015 2:00:00PM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.3	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.1	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.3	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 02:39	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-08 | **Client Sample Name:** Oakland Ca, DP-5d5.0, 11/2/2015 8:15:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.8	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.8	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 03:01	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-09 | **Client Sample Name:** Oakland Ca, DP-5d10.0, 11/2/2015 8:30:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**6.1**	**mg/kg**	**2.0**	**0.20**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	93.8	%	70 - 121 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	86.0	%	70 - 121 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.1	%	81 - 117 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	101	%	74 - 121 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.2	%	74 - 121 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 03:24	ADC	MS-V2	1	BYK0810
2	EPA-8260B	11/09/15	11/10/15 16:13	ADC	MS-V2	10	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-10 | **Client Sample Name:** Oakland Ca, DP-5d15.0, 11/2/2015 9:00:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.30**	**mg/kg**	**0.20**	**0.020**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	95.9	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	93.1	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 03:46	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-11 | **Client Sample Name:** Oakland Ca, DP-5d20.0, 11/2/2015 9:30:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**18**	**mg/kg**	**2.0**	**0.20**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	96.7	%	70 - 121 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	85.7	%	70 - 121 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	107	%	81 - 117 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.5	%	81 - 117 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	98.1	%	74 - 121 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.3	%	74 - 121 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 04:09	ADC	MS-V2	1	BYK0810
2	EPA-8260B	11/09/15	11/10/15 16:36	ADC	MS-V2	10	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-12 | **Client Sample Name:** Oakland Ca, DP-5d30.0, 11/2/2015 10:15:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	91.6	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.7	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.4	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 04:32	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-13 | **Client Sample Name:** Oakland Ca, SG-1d5.0, 11/2/2015 4:15:00PM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**0.065**	**mg/kg**	**0.20**	**0.020**	**Luft-GC/MS**	ND	**J**	1
1,2-Dichloroethane-d4 (Surrogate)	88.3	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.0	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.3	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 04:54	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-14 | **Client Sample Name:** Oakland Ca, SG-2d5.0, 11/2/2015 4:00:00PM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	85.4	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.4	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.7	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 15:06	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-15 | **Client Sample Name:** Oakland Ca, SG-3d5.0, 11/2/2015 4:30:00PM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	0.0013	EPA-8260B	ND		1
Ethylbenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00050	EPA-8260B	ND		1
Naphthalene	ND	mg/kg	0.0050	0.0014	EPA-8260B	ND		1
Toluene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Xylenes	ND	mg/kg	0.010	0.0034	EPA-8260B	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	0.017	EPA-8260B	ND		1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0022	EPA-8260B	ND		1
o-Xylene	ND	mg/kg	0.0050	0.0012	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	87.2	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.7	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.3	%	74 - 121 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 15:28	ADC	MS-V2	1	BYK0810

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-16 | **Client Sample Name:** Oakland Ca, DP-1, 11/3/2015 11:40:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND	Z1	1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND	Z1	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	ND	ug/L	0.50	0.36	EPA-8260B	ND	Z1	1
Toluene	**0.11**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND	**J,Z1**	1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z1	1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260B	ND	Z1	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	Z1	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND	Z1	1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	7.2	Luft-GC/MS	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	105	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	93.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	85.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 12:14	JPT	MS-V13	1	BYK0855

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-17 | **Client Sample Name:** Oakland Ca, DP-3, 11/3/2015 11:25:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**19**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND	**Z1**	1
Ethylbenzene	**34**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND	**Z1**	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	**7.2**	**ug/L**	**0.50**	**0.36**	**EPA-8260B**	ND	**Z1**	1
Toluene	**1.1**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND	**Z1**	1
Total Xylenes	**5.1**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND	**Z1**	1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260B	ND	Z1	1
p- & m-Xylenes	**4.9**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND	**Z1**	1
o-Xylene	**0.21**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND	**J,Z1**	1
Total Purgeable Petroleum Hydrocarbons	**1000**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND	**Z1**	1
1,2-Dichloroethane-d4 (Surrogate)	90.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 12:38	JPT	MS-V13	1	BYK0855

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1528500-18 | **Client Sample Name:** Oakland Ca, DP-5, 11/3/2015 11:50:00AM, Forrest Cook

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**2.2**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND	**Z1**	1
Ethylbenzene	**1.4**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND	**Z1**	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1	1
Naphthalene	**2.6**	**ug/L**	**0.50**	**0.36**	**EPA-8260B**	ND	**Z1**	1
Toluene	**1.5**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND	**Z1**	1
Total Xylenes	**5.5**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND	**Z1**	1
t-Butyl alcohol	ND	ug/L	10	9.4	EPA-8260B	ND	Z1	1
p- & m-Xylenes	**4.1**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND	**Z1**	1
o-Xylene	**1.4**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND	**Z1**	1
Total Purgeable Petroleum Hydrocarbons	**3700**	**ug/L**	**250**	**36**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	91.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	77.8	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	109	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.4	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	11/09/15	11/10/15 13:02	JPT	MS-V13	1	BYK0855
2	EPA-8260B	11/09/15	11/11/15 02:45	JPT	MS-V13	5	BYK0855

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYK0810						
Benzene	BYK0810-BLK1	ND	mg/kg	0.0050	0.0013	
Ethylbenzene	BYK0810-BLK1	ND	mg/kg	0.0050	0.0015	
Methyl t-butyl ether	BYK0810-BLK1	ND	mg/kg	0.0050	0.00050	
Naphthalene	BYK0810-BLK1	ND	mg/kg	0.0050	0.0014	
Toluene	BYK0810-BLK1	ND	mg/kg	0.0050	0.0012	
Total Xylenes	BYK0810-BLK1	ND	mg/kg	0.010	0.0034	
t-Butyl alcohol	BYK0810-BLK1	ND	mg/kg	0.050	0.017	
p- & m-Xylenes	BYK0810-BLK1	ND	mg/kg	0.0050	0.0022	
o-Xylene	BYK0810-BLK1	ND	mg/kg	0.0050	0.0012	
Total Purgeable Petroleum Hydrocarbons	BYK0810-BLK1	ND	mg/kg	0.20	0.020	
1,2-Dichloroethane-d4 (Surrogate)	**BYK0810-BLK1**	**83.4**	%	**70 - 121 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYK0810-BLK1**	**94.7**	%	**81 - 117 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYK0810-BLK1**	**94.7**	%	**74 - 121 (LCL - UCL)**		
QC Batch ID: BYK0855						
Benzene	BYK0855-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BYK0855-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BYK0855-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYK0855-BLK1	ND	ug/L	0.50	0.36	
Toluene	BYK0855-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BYK0855-BLK1	ND	ug/L	1.0	0.36	
t-Butyl alcohol	BYK0855-BLK1	ND	ug/L	10	9.4	
p- & m-Xylenes	BYK0855-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYK0855-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	BYK0855-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	**BYK0855-BLK1**	**118**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYK0855-BLK1**	**96.5**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYK0855-BLK1**	**91.3**	%	**80 - 120 (LCL - UCL)**		

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYK0810										
Benzene	BYK0810-BS1	LCS	0.10631	0.12500	mg/kg	85.0		70 - 130		
Toluene	BYK0810-BS1	LCS	0.11270	0.12500	mg/kg	90.2		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYK0810-BS1	LCS	0.042060	0.050000	mg/kg	84.1		70 - 121		
Toluene-d8 (Surrogate)	BYK0810-BS1	LCS	0.047010	0.050000	mg/kg	94.0		81 - 117		
4-Bromofluorobenzene (Surrogate)	BYK0810-BS1	LCS	0.048070	0.050000	mg/kg	96.1		74 - 121		
QC Batch ID: BYK0855										
Benzene	BYK0855-BS1	LCS	26.480	25.000	ug/L	106		70 - 130		
Toluene	BYK0855-BS1	LCS	26.250	25.000	ug/L	105		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYK0855-BS1	LCS	9.8500	10.000	ug/L	98.5		75 - 125		
Toluene-d8 (Surrogate)	BYK0855-BS1	LCS	10.300	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYK0855-BS1	LCS	9.5200	10.000	ug/L	95.2		80 - 120		

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYK0810	Used client sample: N										
Benzene	MS	1524843-97	ND	0.11189	0.12500	mg/kg		89.5		70 - 130	
	MSD	1524843-97	ND	0.10700	0.12500	mg/kg	4.5	85.6	20	70 - 130	
Toluene	MS	1524843-97	ND	0.12137	0.12500	mg/kg		97.1		70 - 130	
	MSD	1524843-97	ND	0.11642	0.12500	mg/kg	4.2	93.1	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1524843-97	ND	0.040840	0.050000	mg/kg		81.7		70 - 121	
	MSD	1524843-97	ND	0.043130	0.050000	mg/kg	5.5	86.3		70 - 121	
Toluene-d8 (Surrogate)	MS	1524843-97	ND	0.047180	0.050000	mg/kg		94.4		81 - 117	
	MSD	1524843-97	ND	0.049020	0.050000	mg/kg	3.8	98.0		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1524843-97	ND	0.046560	0.050000	mg/kg		93.1		74 - 121	
	MSD	1524843-97	ND	0.047840	0.050000	mg/kg	2.7	95.7		74 - 121	
QC Batch ID: BYK0855	Used client sample: N										
Benzene	MS	1528561-05	ND	25.800	25.000	ug/L		103		70 - 130	
	MSD	1528561-05	ND	26.430	25.000	ug/L	2.4	106	20	70 - 130	
Toluene	MS	1528561-05	ND	25.240	25.000	ug/L		101		70 - 130	
	MSD	1528561-05	ND	25.650	25.000	ug/L	1.6	103	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1528561-05	ND	9.8100	10.000	ug/L		98.1		75 - 125	
	MSD	1528561-05	ND	10.130	10.000	ug/L	3.2	101		75 - 125	
Toluene-d8 (Surrogate)	MS	1528561-05	ND	10.110	10.000	ug/L		101		80 - 120	
	MSD	1528561-05	ND	10.110	10.000	ug/L	0	101		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1528561-05	ND	9.7500	10.000	ug/L		97.5		80 - 120	
	MSD	1528561-05	ND	9.7700	10.000	ug/L	0.2	97.7		80 - 120	

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Almar Environmental
407 Almar Avenue
Santa Cruz, CA 95060

Reported: 11/12/2015 13:44
Project: Soils/Waters
Project Number: 3101 35th Ave. Oakland, CA
Project Manager: Forrest Cook

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.
Z1	[50uL of antifoamer added to sample voa]

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APPENDIX F

Soil Gas Lab Data Sheets


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 271427
ANALYTICAL REPORT

Almar Environmental	Project : 1078C Location : 3101 35th street Level : II

Sample ID	Lab ID
SG-1	271427-001
SG-2	271427-002
SG-3	271427-003

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: _____ Date: 11/16/2015

Will Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**271427**
Client:	**Almar Environmental**
Project:	**1078C**
Location:	**3101 35th street**
Request Date:	**11/09/15**
Samples Received:	**11/09/15**

This data package contains sample and QC results for three air samples, requested for the above referenced project on 11/09/15. The samples were received cold and intact.

Volatile Organics in Air by MS (EPA TO-15):
SG-2 (lab # 271427-002) was diluted due to high hydrocarbons. No other analytical problems were encountered.

Volatile Organics in Air GC (ASTM D1946 and EPA TO-3):
No analytical problems were encountered.

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

AIR TESTING CHAIN OF CUSTODY
& PURCHASE ORDER

Chain of Custody # :

C&T LOGIN # 271427

Project No: 10786
Project Name: 3101 35th Ave
EDD Format: EDR **Rpt Level:** II III IV
Turnaround Time: ☐ RUSH ____ ☒ Standard

Sampler: F. Cook
Report To: F. Cook
Company : Alm Env.
Telephone: (831) 420-7923
Email: cook.forrest@gmail.com

Lab No.	Sample ID.	Sampling Information					TESTING REQUESTED				
		Date Collected	Time Collected	Canister ID (Bar Code #)	Flow Controller ID	Sample Volume (Gauge Reading)	TPHs + VOCs (full) By TO-15	Fixed Gases He, O2			
1	SG-1	11-5-15	13:15	187	A00052	-20	X	X			
2	SG-2	11	12:30	78	A00030	-10	X	X			
3	SG-3	11	11:07	112	A00053	-5	X	X			

Notes:

RELINQUISHED BY:
DATE/TIME 11/5/15 13:53
DATE/TIME
DATE/TIME

RECEIVED BY:
Pat Young 11/6/15 1753
DATE/TIME
DATE/TIME
DATE/TIME

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 27142 7 Date Received 11/9/15 Number of coolers 0
Client Amar Project 3101 35th Ave

Date Opened 11/9/15 By (print) AA (sign)
Date Logged in J By (print) J (sign) J

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)

   ☐ Samples Received on ice & cold without a temperature blank

   ☐ 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? 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

Rev 9, 10/11

Curtis & Tompkins, Ltd.

Detections Summary for 271427

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

Client : Almar Environmental
Project : 1078C
Location : 3101 35th street

Client Sample ID : SG-1 Laboratory Sample ID : 271427-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Carbon Disulfide	15		2.3		ppbv	As Recd	4.650	EPA TO-15	METHOD
Tetrahydrofuran	27		2.3		ppbv	As Recd	4.650	EPA TO-15	METHOD
Chloroform	3.2		2.3		ppbv	As Recd	4.650	EPA TO-15	METHOD
Benzene	3.3		2.3		ppbv	As Recd	4.650	EPA TO-15	METHOD
Toluene	7.5		2.3		ppbv	As Recd	4.650	EPA TO-15	METHOD
Oxygen	26,000		4,700		ppmv	As Recd	4.650	ASTM D1946	METHOD
Gasoline Range Organics C6-C12	110	J	230	26	ppbv	As Recd	4.650	EPA TO-3	METHOD

Client Sample ID : SG-2 Laboratory Sample ID : 271427-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Carbon Disulfide	45		14		ppbv	As Recd	27.24	EPA TO-15	METHOD
n-Hexane	20		14		ppbv	As Recd	27.24	EPA TO-15	METHOD
Tetrahydrofuran	63		14		ppbv	As Recd	27.24	EPA TO-15	METHOD
Benzene	19		14		ppbv	As Recd	27.24	EPA TO-15	METHOD
Toluene	24		14		ppbv	As Recd	27.24	EPA TO-15	METHOD
m,p-Xylenes	17		14		ppbv	As Recd	27.24	EPA TO-15	METHOD
1,2,4-Trimethylbenzene	15		14		ppbv	As Recd	27.24	EPA TO-15	METHOD
Oxygen	41,000		4,500		ppmv	As Recd	4.540	ASTM D1946	METHOD
Gasoline Range Organics C6-C12	23,000		230	25	ppbv	As Recd	4.540	EPA TO-3	METHOD

Client Sample ID : SG-3 Laboratory Sample ID : 271427-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Isopropanol	4.9		3.9		ppbv	As Recd	1.940	EPA TO-15	METHOD
Tetrahydrofuran	7.5		0.97		ppbv	As Recd	1.940	EPA TO-15	METHOD
Benzene	1.0		0.97		ppbv	As Recd	1.940	EPA TO-15	METHOD
Toluene	2.1		0.97		ppbv	As Recd	1.940	EPA TO-15	METHOD
Tetrachloroethene	23		0.97		ppbv	As Recd	1.940	EPA TO-15	METHOD
Oxygen	150,000		1,900		ppmv	As Recd	1.940	ASTM D1946	METHOD
Gasoline Range Organics C6-C12	50	J	97	11	ppbv	As Recd	1.940	EPA TO-3	METHOD

J = Estimated value

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Field ID:	SG-1	Diln Fac:	4.650
Lab ID:	271427-001	Batch#:	229317
Matrix:	Air	Sampled:	11/09/15
Units (V):	ppbv	Received:	11/09/15
Units (M):	ug/m3	Analyzed:	11/11/15

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	2.3	ND	11
Freon 114	ND	2.3	ND	16
Chloromethane	ND	2.3	ND	4.8
Vinyl Chloride	ND	2.3	ND	5.9
1,3-Butadiene	ND	2.3	ND	5.1
Bromomethane	ND	2.3	ND	9.0
Chloroethane	ND	2.3	ND	6.1
Trichlorofluoromethane	ND	2.3	ND	13
Acrolein	ND	9.3	ND	21
1,1-Dichloroethene	ND	2.3	ND	9.2
Freon 113	ND	2.3	ND	18
Acetone	ND	9.3	ND	22
Carbon Disulfide	15	2.3	47	7.2
Isopropanol	ND	9.3	ND	23
Methylene Chloride	ND	2.3	ND	8.1
trans-1,2-Dichloroethene	ND	2.3	ND	9.2
MTBE	ND	2.3	ND	8.4
n-Hexane	ND	2.3	ND	8.2
1,1-Dichloroethane	ND	2.3	ND	9.4
Vinyl Acetate	ND	2.3	ND	8.2
cis-1,2-Dichloroethene	ND	2.3	ND	9.2
2-Butanone	ND	2.3	ND	6.9
Ethyl Acetate	ND	2.3	ND	8.4
Tetrahydrofuran	27	2.3	80	6.9
Chloroform	3.2	2.3	16	11
1,1,1-Trichloroethane	ND	2.3	ND	13
Cyclohexane	ND	2.3	ND	8.0
Carbon Tetrachloride	ND	2.3	ND	15
Benzene	3.3	2.3	10	7.4
1,2-Dichloroethane	ND	2.3	ND	9.4
n-Heptane	ND	2.3	ND	9.5
Trichloroethene	ND	2.3	ND	12
1,2-Dichloropropane	ND	2.3	ND	11
Bromodichloromethane	ND	2.3	ND	16
cis-1,3-Dichloropropene	ND	2.3	ND	11

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Field ID:	SG-1	Diln Fac:	4.650
Lab ID:	271427-001	Batch#:	229317
Matrix:	Air	Sampled:	11/09/15
Units (V):	ppbv	Received:	11/09/15
Units (M):	ug/m3	Analyzed:	11/11/15

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	2.3	ND	9.5
Toluene	7.5	2.3	28	8.8
trans-1,3-Dichloropropene	ND	2.3	ND	11
1,1,2-Trichloroethane	ND	2.3	ND	13
Tetrachloroethene	ND	2.3	ND	16
2-Hexanone	ND	2.3	ND	9.5
Dibromochloromethane	ND	2.3	ND	20
1,2-Dibromoethane	ND	2.3	ND	18
Chlorobenzene	ND	2.3	ND	11
Ethylbenzene	ND	2.3	ND	10
m,p-Xylenes	ND	2.3	ND	10
o-Xylene	ND	2.3	ND	10
Styrene	ND	2.3	ND	9.9
Bromoform	ND	2.3	ND	24
1,1,2,2-Tetrachloroethane	ND	2.3	ND	16
4-Ethyltoluene	ND	2.3	ND	11
1,3,5-Trimethylbenzene	ND	2.3	ND	11
1,2,4-Trimethylbenzene	ND	2.3	ND	11
1,3-Dichlorobenzene	ND	2.3	ND	14
1,4-Dichlorobenzene	ND	2.3	ND	14
Benzyl chloride	ND	2.3	ND	12
1,2-Dichlorobenzene	ND	2.3	ND	14
1,2,4-Trichlorobenzene	ND	2.3	ND	17
Hexachlorobutadiene	ND	2.3	ND	25
Naphthalene	ND	9.3	ND	49

Surrogate	%REC	Limits
Bromofluorobenzene	88	80-121

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Field ID:	SG-2	Diln Fac:	27.24
Lab ID:	271427-002	Batch#:	229317
Matrix:	Air	Sampled:	11/09/15
Units (V):	ppbv	Received:	11/09/15
Units (M):	ug/m3	Analyzed:	11/11/15

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	14	ND	67
Freon 114	ND	14	ND	95
Chloromethane	ND	14	ND	28
Vinyl Chloride	ND	14	ND	35
1,3-Butadiene	ND	14	ND	30
Bromomethane	ND	14	ND	53
Chloroethane	ND	14	ND	36
Trichlorofluoromethane	ND	14	ND	77
Acrolein	ND	54	ND	120
1,1-Dichloroethene	ND	14	ND	54
Freon 113	ND	14	ND	100
Acetone	ND	54	ND	130
Carbon Disulfide	45	14	140	42
Isopropanol	ND	54	ND	130
Methylene Chloride	ND	14	ND	47
trans-1,2-Dichloroethene	ND	14	ND	54
MTBE	ND	14	ND	49
n-Hexane	20	14	70	48
1,1-Dichloroethane	ND	14	ND	55
Vinyl Acetate	ND	14	ND	48
cis-1,2-Dichloroethene	ND	14	ND	54
2-Butanone	ND	14	ND	40
Ethyl Acetate	ND	14	ND	49
Tetrahydrofuran	63	14	190	40
Chloroform	ND	14	ND	67
1,1,1-Trichloroethane	ND	14	ND	74
Cyclohexane	ND	14	ND	47
Carbon Tetrachloride	ND	14	ND	86
Benzene	19	14	61	44
1,2-Dichloroethane	ND	14	ND	55
n-Heptane	ND	14	ND	56
Trichloroethene	ND	14	ND	73
1,2-Dichloropropane	ND	14	ND	63
Bromodichloromethane	ND	14	ND	91
cis-1,3-Dichloropropene	ND	14	ND	62

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Field ID:	SG-2	Diln Fac:	27.24
Lab ID:	271427-002	Batch#:	229317
Matrix:	Air	Sampled:	11/09/15
Units (V):	ppbv	Received:	11/09/15
Units (M):	ug/m3	Analyzed:	11/11/15

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	14	ND	56
Toluene	24	14	91	51
trans-1,3-Dichloropropene	ND	14	ND	62
1,1,2-Trichloroethane	ND	14	ND	74
Tetrachloroethene	ND	14	ND	92
2-Hexanone	ND	14	ND	56
Dibromochloromethane	ND	14	ND	120
1,2-Dibromoethane	ND	14	ND	100
Chlorobenzene	ND	14	ND	63
Ethylbenzene	ND	14	ND	59
m,p-Xylenes	17	14	74	59
o-Xylene	ND	14	ND	59
Styrene	ND	14	ND	58
Bromoform	ND	14	ND	140
1,1,2,2-Tetrachloroethane	ND	14	ND	94
4-Ethyltoluene	ND	14	ND	67
1,3,5-Trimethylbenzene	ND	14	ND	67
1,2,4-Trimethylbenzene	15	14	73	67
1,3-Dichlorobenzene	ND	14	ND	82
1,4-Dichlorobenzene	ND	14	ND	82
Benzyl chloride	ND	14	ND	71
1,2-Dichlorobenzene	ND	14	ND	82
1,2,4-Trichlorobenzene	ND	14	ND	100
Hexachlorobutadiene	ND	14	ND	150
Naphthalene	ND	54	ND	290

Surrogate	%REC	Limits
Bromofluorobenzene	89	80-121

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Field ID:	SG-3	Diln Fac:	1.940
Lab ID:	271427-003	Batch#:	229317
Matrix:	Air	Sampled:	11/09/15
Units (V):	ppbv	Received:	11/09/15
Units (M):	ug/m3	Analyzed:	11/11/15

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.97	ND	4.8
Freon 114	ND	0.97	ND	6.8
Chloromethane	ND	0.97	ND	2.0
Vinyl Chloride	ND	0.97	ND	2.5
1,3-Butadiene	ND	0.97	ND	2.1
Bromomethane	ND	0.97	ND	3.8
Chloroethane	ND	0.97	ND	2.6
Trichlorofluoromethane	ND	0.97	ND	5.4
Acrolein	ND	3.9	ND	8.9
1,1-Dichloroethene	ND	0.97	ND	3.8
Freon 113	ND	0.97	ND	7.4
Acetone	ND	3.9	ND	9.2
Carbon Disulfide	ND	0.97	ND	3.0
Isopropanol	4.9	3.9	12	9.5
Methylene Chloride	ND	0.97	ND	3.4
trans-1,2-Dichloroethene	ND	0.97	ND	3.8
MTBE	ND	0.97	ND	3.5
n-Hexane	ND	0.97	ND	3.4
1,1-Dichloroethane	ND	0.97	ND	3.9
Vinyl Acetate	ND	0.97	ND	3.4
cis-1,2-Dichloroethene	ND	0.97	ND	3.8
2-Butanone	ND	0.97	ND	2.9
Ethyl Acetate	ND	0.97	ND	3.5
Tetrahydrofuran	7.5	0.97	22	2.9
Chloroform	ND	0.97	ND	4.7
1,1,1-Trichloroethane	ND	0.97	ND	5.3
Cyclohexane	ND	0.97	ND	3.3
Carbon Tetrachloride	ND	0.97	ND	6.1
Benzene	1.0	0.97	3.3	3.1
1,2-Dichloroethane	ND	0.97	ND	3.9
n-Heptane	ND	0.97	ND	4.0
Trichloroethene	ND	0.97	ND	5.2
1,2-Dichloropropane	ND	0.97	ND	4.5
Bromodichloromethane	ND	0.97	ND	6.5
cis-1,3-Dichloropropene	ND	0.97	ND	4.4

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Field ID:	SG-3	Diln Fac:	1.940
Lab ID:	271427-003	Batch#:	229317
Matrix:	Air	Sampled:	11/09/15
Units (V):	ppbv	Received:	11/09/15
Units (M):	ug/m3	Analyzed:	11/11/15

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.97	ND	4.0
Toluene	2.1	0.97	7.8	3.7
trans-1,3-Dichloropropene	ND	0.97	ND	4.4
1,1,2-Trichloroethane	ND	0.97	ND	5.3
Tetrachloroethene	23	0.97	160	6.6
2-Hexanone	ND	0.97	ND	4.0
Dibromochloromethane	ND	0.97	ND	8.3
1,2-Dibromoethane	ND	0.97	ND	7.5
Chlorobenzene	ND	0.97	ND	4.5
Ethylbenzene	ND	0.97	ND	4.2
m,p-Xylenes	ND	0.97	ND	4.2
o-Xylene	ND	0.97	ND	4.2
Styrene	ND	0.97	ND	4.1
Bromoform	ND	0.97	ND	10
1,1,2,2-Tetrachloroethane	ND	0.97	ND	6.7
4-Ethyltoluene	ND	0.97	ND	4.8
1,3,5-Trimethylbenzene	ND	0.97	ND	4.8
1,2,4-Trimethylbenzene	ND	0.97	ND	4.8
1,3-Dichlorobenzene	ND	0.97	ND	5.8
1,4-Dichlorobenzene	ND	0.97	ND	5.8
Benzyl chloride	ND	0.97	ND	5.0
1,2-Dichlorobenzene	ND	0.97	ND	5.8
1,2,4-Trichlorobenzene	ND	0.97	ND	7.2
Hexachlorobutadiene	ND	0.97	ND	10
Naphthalene	ND	3.9	ND	20

Surrogate	%REC	Limits
Bromofluorobenzene	89	80-121

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	229317
Units (V):	ppbv	Analyzed:	11/11/15
Diln Fac:	1.000		

Type: BS Lab ID: QC812278

Analyte	Spiked	Result (V)	%REC	Limits
Freon 12	10.00	10.47	105	70-130
Freon 114	10.00	10.05	100	70-130
Chloromethane	10.00	10.06	101	70-130
Vinyl Chloride	10.00	9.473	95	70-130
1,3-Butadiene	10.00	9.957	100	70-130
Bromomethane	10.00	10.40	104	70-130
Chloroethane	10.00	8.053	81	70-130
Trichlorofluoromethane	10.00	10.12	101	70-130
Acrolein	10.00	8.497	85	70-130
1,1-Dichloroethene	10.00	9.216	92	70-130
Freon 113	10.00	9.770	98	70-130
Acetone	10.00	9.145	91	70-130
Carbon Disulfide	10.00	9.202	92	70-130
Isopropanol	10.00	7.373	74	70-130
Methylene Chloride	10.00	9.129	91	70-130
trans-1,2-Dichloroethene	10.00	9.839	98	70-130
MTBE	10.00	9.574	96	70-130
n-Hexane	10.00	8.748	87	70-130
1,1-Dichloroethane	10.00	9.585	96	70-130
Vinyl Acetate	10.00	9.336	93	70-130
cis-1,2-Dichloroethene	10.00	9.289	93	70-130
2-Butanone	10.00	9.922	99	70-130
Ethyl Acetate	10.00	10.39	104	70-130
Tetrahydrofuran	10.00	10.03	100	70-130
Chloroform	10.00	9.762	98	70-130
1,1,1-Trichloroethane	10.00	9.618	96	70-130
Cyclohexane	10.00	8.910	89	70-130
Carbon Tetrachloride	10.00	8.860	89	70-130
Benzene	10.00	8.547	85	70-130
1,2-Dichloroethane	10.00	8.656	87	70-130
n-Heptane	10.00	8.972	90	70-130
Trichloroethene	10.00	9.287	93	70-130
1,2-Dichloropropane	10.00	8.811	88	70-130
Bromodichloromethane	10.00	9.196	92	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	229317
Units (V):	ppbv	Analyzed:	11/11/15
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits
cis-1,3-Dichloropropene	10.00	8.767	88	70-130
4-Methyl-2-Pentanone	10.00	10.81	108	70-130
Toluene	10.00	8.393	84	70-130
trans-1,3-Dichloropropene	10.00	8.955	90	70-130
1,1,2-Trichloroethane	10.00	9.885	99	70-130
Tetrachloroethene	10.00	9.342	93	70-130
2-Hexanone	10.00	9.778	98	70-130
Dibromochloromethane	10.00	9.362	94	70-130
1,2-Dibromoethane	10.00	9.126	91	70-130
Chlorobenzene	10.00	8.808	88	70-130
Ethylbenzene	10.00	8.555	86	70-130
m,p-Xylenes	20.00	17.94	90	70-130
o-Xylene	10.00	9.031	90	70-130
Styrene	10.00	10.05	100	70-130
Bromoform	10.00	8.172	82	70-130
1,1,2,2-Tetrachloroethane	10.00	8.396	84	70-130
4-Ethyltoluene	10.00	9.839	98	70-130
1,3,5-Trimethylbenzene	10.00	9.159	92	70-130
1,2,4-Trimethylbenzene	10.00	9.429	94	70-130
1,3-Dichlorobenzene	10.00	9.529	95	70-130
1,4-Dichlorobenzene	10.00	9.390	94	70-130
Benzyl chloride	10.00	8.944	89	70-130
1,2-Dichlorobenzene	10.00	8.906	89	70-130
1,2,4-Trichlorobenzene	10.00	9.510	95	70-130
Hexachlorobutadiene	10.00	8.768	88	70-130
Naphthalene	10.00	9.748	97	70-130

Surrogate	%REC	Limits
Bromofluorobenzene	94	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	229317
Units (V):	ppbv	Analyzed:	11/11/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC812279

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
Freon 12	10.00	10.65	106	70-130	2	25
Freon 114	10.00	10.34	103	70-130	3	25
Chloromethane	10.00	9.952	100	70-130	1	25
Vinyl Chloride	10.00	9.620	96	70-130	2	25
1,3-Butadiene	10.00	10.09	101	70-130	1	25
Bromomethane	10.00	10.51	105	70-130	1	25
Chloroethane	10.00	8.245	82	70-130	2	25
Trichlorofluoromethane	10.00	10.43	104	70-130	3	25
Acrolein	10.00	8.644	86	70-130	2	25
1,1-Dichloroethene	10.00	9.300	93	70-130	1	25
Freon 113	10.00	10.06	101	70-130	3	25
Acetone	10.00	9.214	92	70-130	1	25
Carbon Disulfide	10.00	9.387	94	70-130	2	25
Isopropanol	10.00	8.201	82	70-130	11	25
Methylene Chloride	10.00	9.220	92	70-130	1	25
trans-1,2-Dichloroethene	10.00	9.970	100	70-130	1	25
MTBE	10.00	9.642	96	70-130	1	25
n-Hexane	10.00	8.961	90	70-130	2	25
1,1-Dichloroethane	10.00	9.771	98	70-130	2	25
Vinyl Acetate	10.00	9.394	94	70-130	1	25
cis-1,2-Dichloroethene	10.00	9.412	94	70-130	1	25
2-Butanone	10.00	10.15	102	70-130	2	25
Ethyl Acetate	10.00	10.37	104	70-130	0	25
Tetrahydrofuran	10.00	10.10	101	70-130	1	25
Chloroform	10.00	10.01	100	70-130	3	25
1,1,1-Trichloroethane	10.00	9.526	95	70-130	1	25
Cyclohexane	10.00	8.711	87	70-130	2	25
Carbon Tetrachloride	10.00	8.735	87	70-130	1	25
Benzene	10.00	8.503	85	70-130	1	25
1,2-Dichloroethane	10.00	8.316	83	70-130	4	25
n-Heptane	10.00	8.640	86	70-130	4	25
Trichloroethene	10.00	9.065	91	70-130	2	25
1,2-Dichloropropane	10.00	8.724	87	70-130	1	25
Bromodichloromethane	10.00	9.126	91	70-130	1	25

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Matrix:	Air	Batch#:	229317
Units (V):	ppbv	Analyzed:	11/11/15
Diln Fac:	1.000		

Analyte	Spiked	Result (V)	%REC	Limits	RPD	Lim
cis-1,3-Dichloropropene	10.00	8.671	87	70-130	1	25
4-Methyl-2-Pentanone	10.00	10.88	109	70-130	1	25
Toluene	10.00	8.378	84	70-130	0	25
trans-1,3-Dichloropropene	10.00	8.667	87	70-130	3	25
1,1,2-Trichloroethane	10.00	9.415	94	70-130	5	25
Tetrachloroethene	10.00	9.384	94	70-130	0	25
2-Hexanone	10.00	9.900	99	70-130	1	25
Dibromochloromethane	10.00	9.292	93	70-130	1	25
1,2-Dibromoethane	10.00	9.067	91	70-130	1	25
Chlorobenzene	10.00	8.641	86	70-130	2	25
Ethylbenzene	10.00	8.361	84	70-130	2	25
m,p-Xylenes	20.00	17.49	87	70-130	3	25
o-Xylene	10.00	8.801	88	70-130	3	25
Styrene	10.00	9.895	99	70-130	2	25
Bromoform	10.00	8.209	82	70-130	0	25
1,1,2,2-Tetrachloroethane	10.00	8.252	83	70-130	2	25
4-Ethyltoluene	10.00	9.505	95	70-130	3	25
1,3,5-Trimethylbenzene	10.00	9.186	92	70-130	0	25
1,2,4-Trimethylbenzene	10.00	9.536	95	70-130	1	25
1,3-Dichlorobenzene	10.00	9.101	91	70-130	5	25
1,4-Dichlorobenzene	10.00	9.127	91	70-130	3	25
Benzyl chloride	10.00	8.586	86	70-130	4	25
1,2-Dichlorobenzene	10.00	8.908	89	70-130	0	25
1,2,4-Trichlorobenzene	10.00	9.507	95	70-130	0	25
Hexachlorobutadiene	10.00	8.833	88	70-130	1	25
Naphthalene	10.00	9.833	98	70-130	1	25

Surrogate	%REC	Limits
Bromofluorobenzene	96	70-130

RPD= Relative Percent Difference
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC812280	Diln Fac:	1.000
Matrix:	Air	Batch#:	229317
Units (V):	ppbv	Analyzed:	11/11/15

Analyte	Result (V)	RL	Result (M)	RL
Freon 12	ND	0.50	ND	2.5
Freon 114	ND	0.50	ND	3.5
Chloromethane	ND	0.50	ND	1.0
Vinyl Chloride	ND	0.50	ND	1.3
1,3-Butadiene	ND	0.50	ND	1.1
Bromomethane	ND	0.50	ND	1.9
Chloroethane	ND	0.50	ND	1.3
Trichlorofluoromethane	ND	0.50	ND	2.8
Acrolein	ND	2.0	ND	4.6
1,1-Dichloroethene	ND	0.50	ND	2.0
Freon 113	ND	0.50	ND	3.8
Acetone	ND	2.0	ND	4.8
Carbon Disulfide	ND	0.50	ND	1.6
Isopropanol	ND	2.0	ND	4.9
Methylene Chloride	ND	0.50	ND	1.7
trans-1,2-Dichloroethene	ND	0.50	ND	2.0
MTBE	ND	0.50	ND	1.8
n-Hexane	ND	0.50	ND	1.8
1,1-Dichloroethane	ND	0.50	ND	2.0
Vinyl Acetate	ND	0.50	ND	1.8
cis-1,2-Dichloroethene	ND	0.50	ND	2.0
2-Butanone	ND	0.50	ND	1.5
Ethyl Acetate	ND	0.50	ND	1.8
Tetrahydrofuran	ND	0.50	ND	1.5
Chloroform	ND	0.50	ND	2.4
1,1,1-Trichloroethane	ND	0.50	ND	2.7
Cyclohexane	ND	0.50	ND	1.7
Carbon Tetrachloride	ND	0.50	ND	3.1
Benzene	ND	0.50	ND	1.6
1,2-Dichloroethane	ND	0.50	ND	2.0
n-Heptane	ND	0.50	ND	2.0
Trichloroethene	ND	0.50	ND	2.7
1,2-Dichloropropane	ND	0.50	ND	2.3
Bromodichloromethane	ND	0.50	ND	3.4
cis-1,3-Dichloropropene	ND	0.50	ND	2.3

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Volatile Organics in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-15
Type:	BLANK	Units (M):	ug/m3
Lab ID:	QC812280	Diln Fac:	1.000
Matrix:	Air	Batch#:	229317
Units (V):	ppbv	Analyzed:	11/11/15

Analyte	Result (V)	RL	Result (M)	RL
4-Methyl-2-Pentanone	ND	0.50	ND	2.0
Toluene	ND	0.50	ND	1.9
trans-1,3-Dichloropropene	ND	0.50	ND	2.3
1,1,2-Trichloroethane	ND	0.50	ND	2.7
Tetrachloroethene	ND	0.50	ND	3.4
2-Hexanone	ND	0.50	ND	2.0
Dibromochloromethane	ND	0.50	ND	4.3
1,2-Dibromoethane	ND	0.50	ND	3.8
Chlorobenzene	ND	0.50	ND	2.3
Ethylbenzene	ND	0.50	ND	2.2
m,p-Xylenes	ND	0.50	ND	2.2
o-Xylene	ND	0.50	ND	2.2
Styrene	ND	0.50	ND	2.1
Bromoform	ND	0.50	ND	5.2
1,1,2,2-Tetrachloroethane	ND	0.50	ND	3.4
4-Ethyltoluene	ND	0.50	ND	2.5
1,3,5-Trimethylbenzene	ND	0.50	ND	2.5
1,2,4-Trimethylbenzene	ND	0.50	ND	2.5
1,3-Dichlorobenzene	ND	0.50	ND	3.0
1,4-Dichlorobenzene	ND	0.50	ND	3.0
Benzyl chloride	ND	0.50	ND	2.6
1,2-Dichlorobenzene	ND	0.50	ND	3.0
1,2,4-Trichlorobenzene	ND	0.50	ND	3.7
Hexachlorobutadiene	ND	0.50	ND	5.3
Naphthalene	ND	2.0	ND	10

Surrogate	%REC	Limits
Bromofluorobenzene	89	70-130

ND= Not Detected
RL= Reporting Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Fixed Gas Analysis

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	ASTM D1946
Matrix:	Air	Sampled:	11/09/15
Units:	ppmv	Received:	11/09/15
Units (Mol %):	MOL %	Analyzed:	11/11/15
Batch#:	229325		

Field ID: SG-1 Lab ID: 271427-001
Type: SAMPLE Diln Fac: 4.650

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	4,700	ND	0.47
Oxygen	26,000	4,700	2.6	0.47

Field ID: SG-2 Lab ID: 271427-002
Type: SAMPLE Diln Fac: 4.540

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	4,500	ND	0.45
Oxygen	41,000	4,500	4.1	0.45

Field ID: SG-3 Lab ID: 271427-003
Type: SAMPLE Diln Fac: 1.940

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,900	ND	0.19
Oxygen	150,000	1,900	15	0.19

Type: BLANK Diln Fac: 1.000
Lab ID: QC812317

Analyte	Result	RL	Result (Mol %)	RL
Helium	ND	1,000	ND	0.10
Oxygen	ND	1,000	ND	0.10

ND= Not Detected
RL= Reporting Limit
Result Mol %= Result in Mole Percent

Curtis & Tompkins, Ltd.

Aromatic / Petroleum Hydrocarbons in Air

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Batch#:	229332
Matrix:	Air	Sampled:	11/09/15
Units (V):	ppbv	Received:	11/09/15
Units (M):	ug/m3	Analyzed:	11/11/15

Field ID	Type	Lab ID	Result (V)	RL	MDL	Result (M)	RL	MDL	Diln Fac
SG-1	SAMPLE	271427-001	110 J	230	26	460 J	950	110	4.650
SG-2	SAMPLE	271427-002	23,000	230	25	96,000	930	100	4.540
SG-3	SAMPLE	271427-003	50 J	97	11	210 J	400	44	1.940
	BLANK	QC812340	ND	50	5.6	ND	200	23	1.000

J= Estimated value
ND= Not Detected
RL= Reporting Limit
MDL= Method Detection Limit
Result M= Result in mass units
Result V= Result in volume units

Curtis & Tompkins, Ltd.

Batch QC Report

Fixed Gas Analysis

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	ASTM D1946
Matrix:	Air	Batch#:	229325
Units:	ppmv	Analyzed:	11/11/15
Diln Fac:	1.000		

Type: BS Lab ID: QC812314

Analyte	Spiked	Result	%REC	Limits
Helium	100,000	96,890	97	70-130
Oxygen		NA		

Type: BSD Lab ID: QC812315

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Helium	100,000	96,360	96	70-130	1	30
Oxygen		NA				

NA= Not Analyzed
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Fixed Gas Analysis

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	ASTM D1946
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC812316	Batch#:	229325
Matrix:	Air	Analyzed:	11/11/15
Units:	ppmv		

Analyte	Spiked	Result	%REC	Limits
Helium		NA		
Oxygen	2,000	1,868	93	70-130

NA= Not Analyzed

Curtis & Tompkins, Ltd.

Batch QC Report

Fixed Gas Analysis

Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	ASTM D1946
Field ID:	SG-1	Units (Mol %):	MOL %
Type:	SDUP	Diln Fac:	4.650
MSS Lab ID:	271427-001	Batch#:	229325
Lab ID:	QC812318	Sampled:	11/09/15
Matrix:	Air	Received:	11/09/15
Units:	ppmv	Analyzed:	11/11/15

Analyte	MSS Result	Result	RL	Result (Mol %)	RL	RPD	Lim
Helium	<4,650	ND	4,650	ND	0.4650	NC	30
Oxygen	26,370	26,340	4,650	2.634	0.4650	0	30

NC= Not Calculated
ND= Not Detected
RL= Reporting Limit
RPD= Relative Percent Difference
Result Mol %= Result in Mole Percent

Curtis & Tompkins, Ltd.

Batch QC Report

Aromatic / Petroleum Hydrocarbons in Air

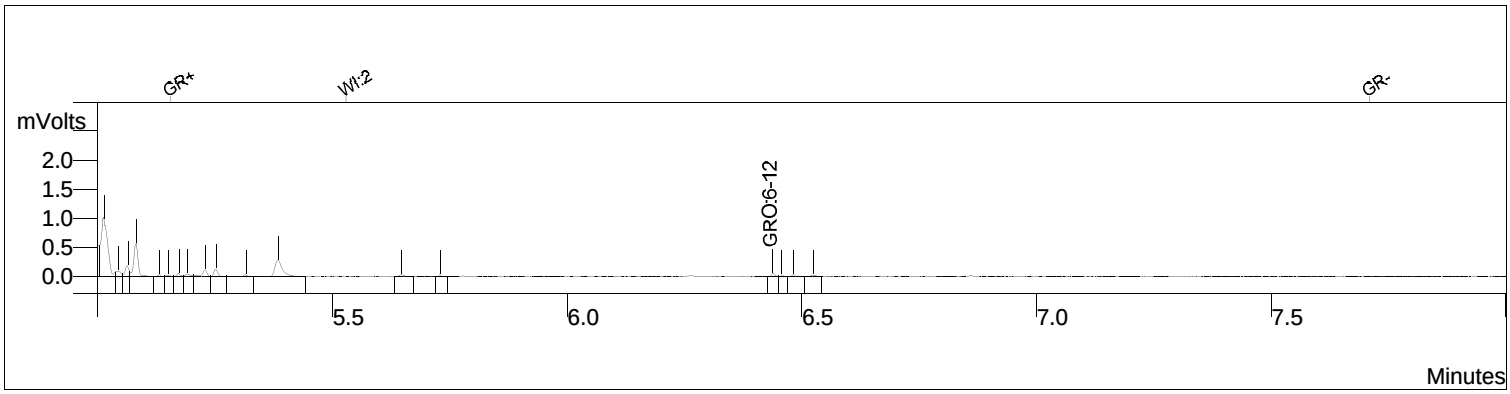
Lab #:	271427	Location:	3101 35th street
Client:	Almar Environmental	Prep:	METHOD
Project#:	1078C	Analysis:	EPA TO-3
Analyte:	Gasoline Range Organics C6-C12	Diln Fac:	1.000
Matrix:	Air	Batch#:	229332
Units (V):	ppbv	Analyzed:	11/11/15

Type	Lab ID	Spiked	Result (V)	%REC	Limits	RPD	Lim
BS	QC812338	210.0	181.5	86	70-130		
BSD	QC812339	210.0	171.7	82	70-130	6	25

RPD= Relative Percent Difference
Result V= Result in volume units

GRO by TO-3

Sample ID:	271427-001,229332		
Data File:	c:\varianws\data\111115\315_004.run		
Sample List:	c:\varianws\111115.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	11/11/2015 14:26:47		
Calculation Date:	11/11/2015 14:38:49		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	4.65x,c00187		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	893	24.032
		Totals	**893**	**24.032**

Integration Parameters

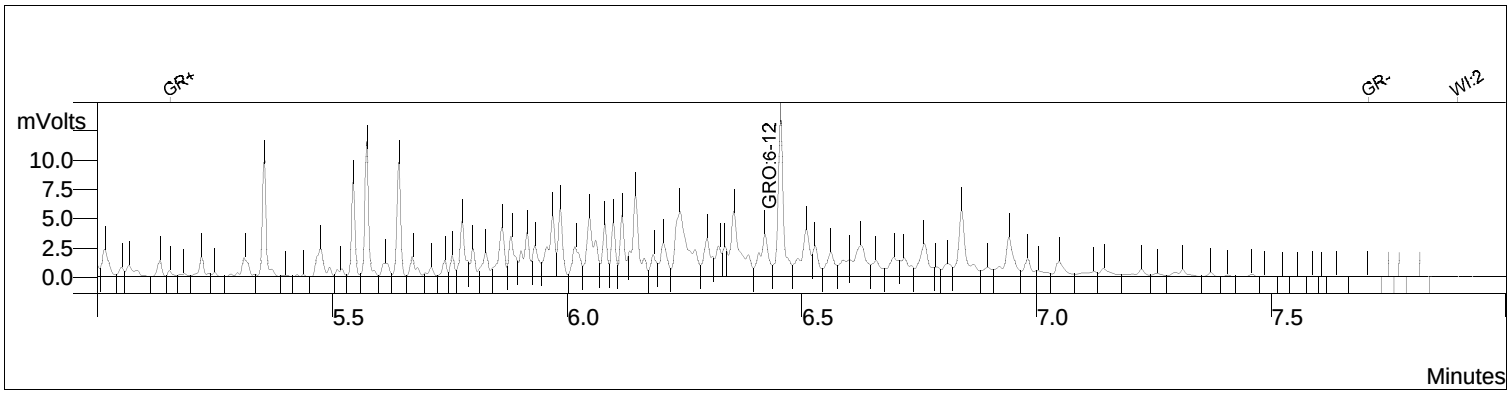
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	5

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
5.529	WI 2.0 sec
7.708	GR off

GRO by TO-3

Sample ID:	271427-002,229332		
Data File:	c:\varianws\data\111115\315_005.run		
Sample List:	c:\varianws\111115.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	11/11/2015 14:42:52		
Calculation Date:	11/11/2015 14:54:54		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	4.54x,c00078		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	191921	5166.083
		Totals	**191921**	**5166.083**

Integration Parameters

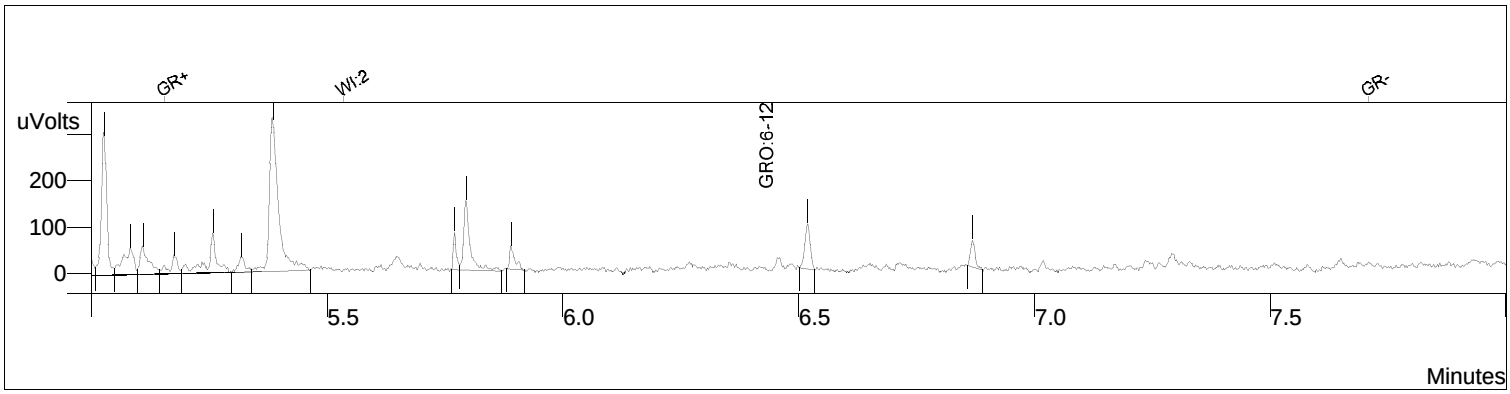
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	5

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
7.708	GR off
7.897	WI 2.0 sec

GRO by TO-3

Sample ID:	271427-003,229332		
Data File:	c:\varianws\data\111115\315_006.run		
Sample List:	c:\varianws\111115.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	11/11/2015 14:59:21		
Calculation Date:	11/11/2015 15:11:23		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	1.94x,c00112		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	965	25.976
		Totals	**965**	**25.976**

Integration Parameters

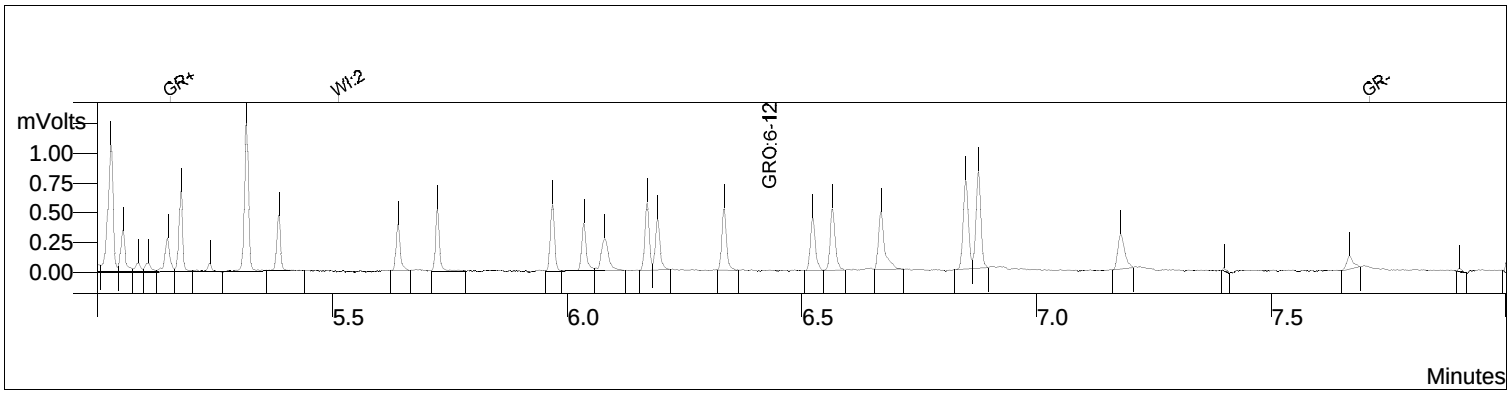
Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	5

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
5.535	WI 2.0 sec
7.708	GR off

GRO by TO-3

Sample ID:	ccv/bs,qc812338		
Data File:	c:\varianws\data\111115\315_001.run		
Sample List:	c:\varianws\111115.smp		
Method:	c:\varianws\to3_103114.mth		
Acquisition Date:	11/11/2015 13:37:08		
Calculation Date:	11/11/2015 13:49:10		
Instrument ID:	MSAIR03	Operator:	TO-3
Injection Notes:	229332,s28315,1x		
Multiplier:	1.000	Divisor:	1.000



Channel: **Front = FID** **RESULTS**

#	RT (min)	Peak Name	Area	Result (ppbv)
1	6.431	GRO:6-12	6743	181.499
		Totals	**6743**	**181.499**

Integration Parameters

Initial Tangent %:	0
Initial Peak Width (sec):	4
Initial Peak Reject Value:	50.000
Initial S/N Ratio:	5

Data Handling Time Events

Time (min)	Event
0.009	II on
4.801	II off
5.155	GR on
5.513	WI 2.0 sec
7.708	GR off