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By Alameda County Environmental Health at 3:43 pm, Oct 31, 2013

Solano Group P.O. Box 9026 Berkeley, CA 94709

October 25, 2013

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

Re: Albany 1-Hour Cleaners

1187 Solano Avenue Albany, California ACEH Case No. 2857

Dear Mr. Detterman:

The Solano Group has retained Pangea Environmental Services, Inc. (Pangea) for environmental consulting services for the project referenced above. On my behalf, Pangea is submitting the attached Site Investigation and Interim Remediation Report and Corrective Action Plan.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report is true and correct to the best of my knowledge.

Sincerely,

J. Anthony Kershaw

General Partner Solano Group



October 28, 2013

#### VIA ALAMEDA COUNTY FTP SITE

Mr. Mark Detterman Alameda County Environmental Health 1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor Alameda, California 94502

Re: Site Investigation and Interim Remediation Report and Corrective Action Plan

Former Albany 1-Hour Cleaners 1187 Solano Avenue Albany, CA 94706 ACEH SLIC Case RO0002857

Dear Mr. Detterman:

On behalf of the Solano Group, Pangea Environmental Services, Inc. (Pangea) has prepared this *Site Investigation and Interim Remediation Report and Corrective Action Plan* for the subject property. This report describes site investigation and interim remediation of tetrachloroethene (PCE) impact from former dry cleaner operations at the site. The interim remediation activities included extensive soil excavation and installation of a passive ventilation system to help safeguard indoor air quality, and post-excavation assessment of indoor air quality. The report also presents a site conceptual model, proposed cleanup standards, feasibility study, and corrective action plan for residual PCE impact.

If you have any questions or comments, please call me at (510) 435-8664 or email briddell@pangeaenv.com.

Sincerely,

Pangea Environmental Services, Inc.

Behlelf

Bob Clark-Riddell, P.E. Principal Engineer

Attachment: Site Investigation and Interim Remediation Report and Corrective Action Plan

CC: Mr. J. Anthony Kershaw, Solano Group, P.O. Box 9026, Berkeley, California 94709 Dr. Romtin Nassiri, Solano Smile Dental (1183 Solano Avenue Tenant) Anne J. Wolfe, USPS Facilities R&A Team West (1191 Solano Avenue Tenant)



# SITE INVESTIGATION AND INTERIM REMEDIATION REPORT AND CORRECTIVE ACTION PLAN

Former Albany 1-Hour Cleaners 1187 Solano Avenue Albany, CA 94706 ACEH SLIC Case RO0002857

October 28, 2013

Prepared for:

J. Anthony Kershaw Solano Group P.O. Box 9026 Berkeley, California 94709

Prepared by:

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, California 94612

Written by:

Morgan Gillies Project Manager Bob Clark-Riddell, P.E. Principal Engineer

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# SITE INVESTIGATION AND INTERIM REMEDIATION REPORT AND CORRECTIVE ACTION PLAN

# 1187 Solano Avenue Albany, California ACEH SLIC Case RO0002857

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#### INTRODUCTION

On behalf of the Solano Group, Pangea Environmental Services, Inc. (Pangea) has prepared this *Site Investigation and Interim Remediation Report and Corrective Action Plan* for the subject property. This report describes site investigation and interim remediation of tetrachloroethene (PCE) impact from former dry cleaner operations at the site. The interim remediation activities included extensive soil excavation and installation of a passive ventilation system to help safeguard indoor air quality, and post-excavation assessment of indoor air quality. Site work was performed in accordance with agency interaction and the following approved plans: *Assessment Workplan* dated June 17, 2013 (Pangea, 2013a), *Interim Remediation Workplan* dated July 29, 2013 (Pangea, 2013b), and *Workplan for Preliminary Assessment of Indoor Air* dated September 9, 2013 (Pangea, 2013c). The report also presents a site conceptual model (SCM), proposed cleanup standards, feasibility study and corrective action plan (FS/CAP) for residual PCE impact.

#### **EXECUTIVE SUMMARY**

Dry cleaner operations occurred at Albany 1-Hour Cleaners at 1187 Solano Avenue (subject site) from approximately 1986 to 2011. In 2004, hydrocarbon-based cleaning equipment was installed to replace the equipment that used tetrachloroethene, also known as perchloroethene (PCE). Limited site assessment was conducted in 2004 and 2005. The site vicinity and site map are shown on Figures 1 and 2, respectively. The location of former dry cleaning equipment is shown on Figure 3.

#### **Completed Activities**

In 2013, extensive assessment and interim remediation of the dry cleaner release was performed as detailed below. Figures illustrating site conditions before and after remedial action are included in this report. Site assessment data is tabulated and compared to environmental screening levels. A map of all sample locations (e.g., borings and wells) is included as Figure 4. Site assessment, interim remediation, and vapor intrusion mitigation has been performed in general accordance with CalEPA/DTSC guidance documents.

- Initial Assessment (2004 through 2006): Subsurface assessment was performed in 2004 and 2005 to evaluate potential cleaning solvent impact to soil, soil gas, and groundwater (Avalon, 2004 and 2005). The assessment included soil gas sampling from 5 ft depth in four (4) temporary probes, soil sampling from three (3) shallow borings at 5 ft depth, soil sampling from five (5) deeper borings to 10 to 30 ft depth, and groundwater sampling from approximately 30 ft deep within the five deeper borings. The primary chemical of concern (COC) is PCE. Figure 5 presents PCE concentrations in soil gas in 2004. Prior site assessment was summarized and evaluated in the Soil Gas Investigation and Health Risk Assessment dated June 8, 2006 (Avalon, 2006). This report concluded that the risk posed by the identified compounds was within acceptable levels for commercial site use and recommended no further action at the time. In a letter dated July 5, 2006, the Alameda County Environmental Health (ACEH) concurred with the report findings and requested a closure request for commercial land use with a draft deed restriction limiting future land use. The ACEH provides oversight for this SLIC case file number RO0002857. The ACEH required additional action to allow case closure with unrestricted land use and avoid a deed restriction.
- Early 2013 Assessment: In early 2013, additional subsurface assessment was performed to further evaluate site conditions prior to site improvements by the future tenant, and to help

facilitate future case closure with unrestricted land use. The additional assessment included soil sampling from numerous borings; groundwater sampling within borings and the open excavation; and subslab soil gas sampling from many probes. The additional assessment found elevated PCE impact near the old drycleaning equipment in soil, subslab gas, and groundwater. The PCE concentrations at select locations in soil, subslab gas, and shallow groundwater impact exceeded applicable environmental screening levels. Figure 6 presents PCE concentrations in shallow groundwater, Figure 7 presents PCE concentrations in shallow groundwater monitoring wells, while Figure 8 presents PCE concentrations in deeper groundwater.

- Initial Soil Excavation in Feb/March 2013: Due to elevated impact and the potential for vapor intrusion, interim remediation was performed in February and March 2013 to remove source material under much of the former dry cleaning unit at 1187 Solano and also underneath the adjacent unit at 1191 Solano. All identified soil impact that exceeded residential Environmental Screening Levels (ESLs) established by the San Francisco Bay Region Regional Water Quality Control Board was removed and disposed offsite. Approximately 361.8 tons of soil was removed and disposed offsite. The excavation cavity was primarily backfilled with controlled density fill (CDF, a cement slurry) to support the building wall during excavation under the wall, to help mitigate upward vapor intrusion from any residual PCE impact, and to help avoid soil compaction activity within the deeper excavation. Figures 9 and 10 present PCE concentrations in soil and subslab gas, respectively, before initial excavation. Figures 11 and 12 present the excavation extent/depth and PCE concentrations in compliance samples.
- Temporary Vapor Mitigation System Testing: To mitigate potential intrusion of PCE vapors, subslab slotted piping was installed for potential incorporation into a temporary passive subslab ventilation (SSV) or active subslab depressurization (SSD) system. The piping allowed extraction of subslab vapor beneath the former dry cleaner unit at 1187 Solano Avenue, and beneath the adjacent units at 1185 Solano (vacant) and 1191 Solano (Post Office). A 2.5 hp regenerative extraction blower was temporarily installed to facilitate five-day tests of the SSD system within these units. The temporary SSD system effectively reduced subslab PCE vapor concentrations at all monitored locations. This temporary system (except for vent piping in 1191 Solano) was removed during subsequent excavation. Figure 13 shows the layout and design of the temporary subslab depressurization system. Figure 14 shows PCE concentrations in subslab gas after initial excavation and two 5-day vapor extraction tests to remove residual PCE vapors.
- Public Fact Sheet Notice, Summer 2013: In July 2013, a fact sheet on environmental assessment was mailed to identified property owners and occupants within a 200-ft radius of the site. This fact sheet contained information concerning site background, results of recent investigation and cleanup activities, planned investigation activities, and information contacts. No public comments were received.
- Additional Assessment in July 2013: In July 2013, following the initial interim remediation (excavation), additional subsurface assessment was performed to evaluate site conditions beyond the lateral limits of the initial excavation. The additional assessment included soil sampling from numerous borings, groundwater sampling within borings and three site monitoring wells (MW-1 through MW-3), and subslab soil gas sampling from new and existing probes. The assessment was performed in accordance with the agency-approved Assessment Workplan dated June 17, 2013 (Pangea, 2013a). Additional sampling of three subslab gas probes was also performed using Summa canisters, to obtain lower detection limits, on August 1, 2013. The additional assessment found elevated PCE at select locations in soil and subslab gas that exceeded applicable environmental screening levels, suggesting the need for additional interim remediation. Figures

15 and 16 present PCE concentrations in soil and subslab gas, respectively, before initial excavation. Figures 17 and 18 present the final excavation extent/depth and PCE concentrations in compliance samples.

- Additional Soil Excavation in 2013: Based on agency discussions, interim remediation was performed in August and September 2013 to remove target additional source material identified by the July/August 2013 assessment that posed a potential vapor intrusion concern. additional soil removal at 1185 and 1187 Solano was performed in accordance with the agencyapproved Interim Remediation Workplan dated July 29, 2013 (Pangea, 2013b). Again, all identified soil impact that exceeded residential Environmental Screening Levels (ESLs) established by the San Francisco Bay Region - Regional Water Quality Control Board was removed and disposed offsite. Since only one soil shallow soil sample exceeded the residential ESL in this area, the excavation primarily targeted soil with field indication of organic vapors that could pose a vapor intrusion risk. Approximately 140.8 additional tons of soil was removed and disposed offsite, for a total soil removal of 502.6 tons including the February/March 2013 excavation. Portions of the excavation cavity under the bathrooms and hallway at 1185 Solano Avenue was backfilled with controlled density fill (CDF) to support the building. The remainder of the excavation was backfilled with sand, gravel, and CDF as part of the ventilation system. Figures 19, 20 and 21 provide a cross-sectional view of the excavation extent and soil and groundwater conditions.
- Passive Subslab Venting System Installation: Except for CDF areas under the bathroom and hallway for support, the excavation cavity was backfilled with sand and gravel for incorporation into a passive subslab ventilation system. Slotted piping was installed within the gravel layer and overlain by 10 mil plastic sheeting and then CDF to facilitate collection of subsurface vapors and transport for passive venting. The passive ventilation piping is routed through two 4-inch diameter solid ABS piping risers into a sealed roof turbine fan for ventilation to the atmosphere. In addition, slotted PVC ventilation piping was installed under the units at 1183 Solano, 1185 Solano, 1187 Solano, and 1191 Solano Avenue. The piping is manifolded together within the ceiling; this piping could be used for future passive or active ventilation as merited. Access to the manifolded piping is provided by three panels in the hallway of 1185 Solano. A fourth panel provides access to the four subslab gas probes installed within the gravel layer beneath 1185 and 1187 Solano, and to a fourth monitoring well (MW-4) installed to monitor source area groundwater. The ventilation system is illustrated on Figure 22.
- Post Interim Remediation Evaluation of Site Conditions: Following soil excavation and installation of the passive ventilation system, Pangea performed additional assessment to evaluate the effectiveness of the interim remediation. Pangea also retained a specialist to identify underground utility locations that could act a preferential pathways for contaminant transport. Figure 23 shows a post-excavation site map, while Figure 24 also shows the underground utility locations. Figure 25 superimposes subslab gas concentrations before site excavation on this post-excavation site map with underground utilities. Based on prior data from July/August 2013 data, this figure illustrates that PCE vapors have likely preferentially migrated along the underground electrical conduit/backfill at 1183 Solano, and along the sanitary sewer in 1191 Solano. (Note that significant vacuum influence observed in subslab probe SSPO-4 during vent testing suggests a vapor pathway between SSPO-4 and the vent piping at 1191 Solano, which is adjacent the former dry cleaning equipment and previous elevated PCE concentrations in soil.) Figure 25 also shows the distribution of PCE in subslab gas before excavation with respect to residential environmental screening levels. To evaluate conditions after excavation and passive venting system installation, Pangea collected additional subslab gas data in October 2013 from probes

within 1183 Solano and within the passive venting gravel layer at 1185/1187 Solano. Figure 26 shows that PCE concentrations have significantly reduced near the conduits in the rear of 1183 Solano, with a small residual area further along the electrical conduit in the middle of 1183 Solano (at probe SS-17) that should attenuate later. PCE concentrations in subslab gas have been significantly reduced beneath 1185 and 1187 Solano. As also shown on Figure 26, all PCE concentrations in subslab gas are *below* environmental screening levels for *commercial* site use.

• Preliminary Assessment of Indoor Air, October 2013: At directed by the oversight agency, indoor air sampling was conducted to assess whether any imminent health threats to site occupants are currently present due to chemicals from the former drycleaner at the subject site. The sampling was performed in accordance with the agency-approved *Workplan for Preliminary Assessment of Indoor Air* dated September 9, 2013 (Pangea, 2013c). A vapor intrusion fact sheet was provided to the tenants at 1183 and 1191 Solano, who completed building survey forms regarding potential volatile organic compounds used or stored at the site. Prior to indoor air sampling, Pangea retained specialists to identify underground utility locations, to perform a blower door test, and to seal potential vapor leaks/penetrations in the building slab. All identified penetrations were sealed with Retro-Coat<sup>TM</sup> System. As shown on Figure 27, indoor air sampling results indicate that PCE concentrations in all tested units were *below* applicable environmental screening levels for *commercial* site use established by the San Francisco Regional Water Quality Control Board, which also provides regulatory oversight for this case as requested by the lead agency (ACEH).

# Conceptual Model, Feasibility Study and Corrective Action Plan

Based on the completed site assessment and interim remediation, Pangea offers the following information pertaining to residual PCE impact.

Site Conceptual Model: Our review of available information suggests that PCE releases could have commenced in 1986 and would have discontinued in 2004 when hydrocarbon-based cleaning equipment was installed (an 18 year period). PCE likely primarily entered the subsurface by penetrating the concrete floor near the former dry cleaner location where most elevated impact has been detected (near boring B-7), or by breaching the concrete floor or the southern sanitary sewer piping near the former washing equipment (near boring B-3). To a presumed lesser extent, PCE may have migrated along preferential pathways/conduits under the floor in vapor phase, or in aqueous phase aided by reported extensive water flooding at the 1187 Solano unit. Potential preferential pathways include the sanitary sewer, sanitary sewer backfill material, and subslab baserock, as well as the underground electrical conduit exiting near the rear of 1185 Solano and subsequent electrical conduit/backfill extending under specialty chairs in the dental office in 1183 Solano. A video survey of the sanitary sewer out to the Solano Avenue main suggests that the cast iron piping is in good condition. The lack of significant PCE impact detected in soil and soil gas along the sanitary sewer suggests that PCE did not leak significantly from the sanitary sewer. Once under the concrete floor, PCE migrated downward through clavey site soil to the apparent groundwater interface/capillary fringe at approximately 9 ft depth bgs. PCE then migrated laterally approximately 100 ft within the low-permeability saturated zone at approximately 9 to 15 ft bgs. No PCE impact has been detected in soil deeper than 15 ft bgs, or in the first real water-bearing materials (silty gravel) approximately 6 to 12 inches thick encountered approximately 30 ft bgs. Site excavation activity has removed all identified soil impact that exceeded residential screening levels. The clayey site soil will tend to mitigate PCE vapor migration from groundwater into shallower soil, and vapor intrusion from groundwater does not appear to be a significant concern. Limited PCE impact is apparently present in residual

soil, subslab soil gas, and/or groundwater beneath the four units at 1183 through 1191 Solano Avenue. Based on site data and RWQCB ESLs, residual PCE at the site does not pose a significant risk to future site residents, occupants, or construction workers, and residual PCE in groundwater does not represent a significant risk to nearby receptors and does not pose a significant vapor intrusion risk. Additional information about other COCs and an evaluation of data gaps are presented in a tabular SCM.

- Feasibility Study/Corrective Action Plan: Based on site data and our site conceptual model, Pangea prepared a feasibility study/corrective action plan for addressing residual PCE impact beneath all four units at 1183 through 1191 Solano Avenue. The proposed cleanup standards are applicable environmental screening levels (ESLs) established by the Regional Water Quality Control Board (RWQCB). Our FS/CAP employs the following contingent activities:
  - o Passive ventilation of subslab soil gas using the existing passive ventilation system under 1185 and 1187 Solano and the existing vent piping at 1183 and 1191 Solano;
  - o Additional monitoring of groundwater, subslab soil gas, and indoor air to further evaluate the effect of the extensive interim remediation and the effectiveness of the ventilation system;
  - o Expansion of the passive ventilation system, if merited;
  - o Installation of an extraction blower to provide active ventilation to accelerate PCE removal and further safeguard indoor air, if merited;
  - o Excavation of additional shallow soil beneath 1183 and/or 1191 Solano, if merited; and
  - o Installation of a vapor intrusion barrier using Retro-Coat<sup>TM</sup> System, if merited.

The initial goal of the CAP is to sufficiently safeguard human health to allow resumed occupancy of vacant units at 1185 and 1187 Solano, and ongoing use for the occupied units at 1183 through 1191 Solano Avenue. The ultimate goal of the CAP is to help facilitate regulatory case closure within the relative near future in accordance with the RWQCB's regulatory guidance document *Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites* (RWQCB, 2009).

#### **Conclusions and Recommendations**

Pangea offers the following conclusions regarding the PCE impact at the site:

- All site *soil* has excavated to *below* applicable screening levels for *residential* site use.
- All site *indoor air*, *subslab gas*, *and groundwater* concentrations are *below* applicable screening levels for *commercial* site use in all tested units.
- Therefore, current site data suggests that residual PCE does not represent a significant threat to human health or the environment.

Pangea recommends performing additional monitoring of indoor air and subsurface conditions to confirm the effectiveness of the completed interim remediation (excavation) and passive subslab venting system for mitigating threats to sensitive receptors and the environment. Pangea also recommends addressing data gaps discussed in the site conceptual model to provide more thorough assessment of site conditions.

If this additional (post-interim remediation) monitoring identifies potential concerns, Pangea would recommend implementation of one or more of the contingent measures presented in the CAP below. If the monitoring confirms plume stability and safe conditions, Pangea will recommend regulatory case closure in accordance with criteria established in the RWQCB's Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites.

#### SITE BACKGROUND

The subject site consists of a vacant, one-story commercial unit at 1187 Solano Avenue (Figures 1 and 2). Dry cleaner operations occurred at Albany 1-Hour Cleaners at 1187 Solano Avenue (subject site) from approximately 1986 to 2011. In 2004, hydrocarbon-based cleaning equipment was installed to replace the equipment that used tetrachloroethene, also known as perchloroethene (PCE). Dry cleaning equipment locations are shown on Figure 4.

The subject site represents one unit of an entire commercial block of single-story units/buildings along Solano Avenue, for which the responsible party (Solano Group) owns the north side of the block. Parcel number 66.2801-22-1 includes 1175 Solano (pizza restaurant), 1181 Solano (medical offices), 1183 Solano (dentist office), and 1185 Solano (vacant and immediately adjacent subject site). Parcel number 66.2801-20 includes 1191 Solano (U.S. Post Office). The commercial parking lot for the site (parcel numbers 66.2801-18 and 66.2801-18) is immediately north of the site, and residential properties are north and northwest of the subject site parking lot. Cornell Elementary School is present about 150 ft southeast (upgradient) of the subject site.

Subsurface assessment was performed in 2004 and 2005 by Avalon Environmental Consultants of Tustin, California, to evaluate potential cleaning solvent impact to soil, soil gas, and groundwater. The assessment included soil gas sampling from 5 ft depth in four (4) temporary probes (SG- 1 through SG-4), soil sampling from three (3) shallow borings at 5 ft depth (GP-1 through GP-3), soil sampling from five (5) deeper borings to 10 to 30 ft depth (GPA-1 through GPA-5), and groundwater sampling from approximately 30 ft deep within the five deeper borings completed to a maximum of 37 ft bgs. Prior site assessment was summarized and evaluated in the *Soil Gas Investigation and Human Health Risk Assessment* dated June 8, 2006. Avalon reported that no sensitive receptors such as schools, day care centers or hospitals are located within 100 ft of the subject property structure, and that the nearest residences are located greater than 100 ft north and separated by a parking lot. Avalon's report concluded that the risk posed by the identified compounds was within acceptable levels for commercial site use and recommended no further action at the time. In a letter dated July 5, 2006, the Alameda County Environmental Health (ACEH) concurred with the report findings and requested a closure request for commercial land use with a draft deed restriction limiting future land use. The ACEH required additional action to allow case closure with *unrestricted* land use and avoid a deed restriction.

In January 2013, the Solano Group retained Pangea Environmental Services of Oakland, California, to review site environmental conditions prior to site improvements for a planned restaurant. All sampling locations are shown on Figure 4. The PCE concentrations in soil gas from 2004 sampling (at 5 ft depth) are illustrated on Figure 5. Historic and recent sampling data for soil, groundwater, and soil gas are summarized on Tables, 1, 2 and 3, respectively. This report documents the extensive site assessment, interim remediation, and vapor intrusion mitigation efforts performed by Pangea in 2013, and our corrective action plan for future site activity toward pursuing case closure.

#### SITE INVESTIGATION PROCEDURES

The scope of work for subsurface site assessment reported herein included a sewer inspection and extensive sampling of soil, subslab gas, and groundwater. The assessment included soil sampling from over fifty borings (50) borings; groundwater sampling within eleven (11) borings, four (4) groundwater monitoring wells, and three (3) excavation locations; and subslab soil gas sampling from twenty-six of twenty-eight (28) probes. Additional soil assessment performed during sidewall and floor sampling of the completed excavation are described in the excavation section. In general, the site assessment was performed in a dynamic manner, with subsequent site assessment conducted in response to prior assessment results.

# **Utility Locating**

The location of existing and abandoned underground utilities are shown on Figure 24. Underground utility locating was first performed by PipeSpy of Berkeley, California on February 15, 2013. PipeSpy confirmed the location of the *abandoned sanitary sewer*. The abandoned, cast-iron sanitary sewer piping ran from the rear of the 1187 Solano unit, under the 1185 Solano unit, and into the 1183 Solano unit where it turns and exits into Solano Avenue. A more detailed description of the sewer conditions is described below in the sewer video inspection section. PipeSpy also confirmed the location of the underground *electrical* service running from the front of 1187 to the rear of 1185 Solano, which provides power for 1183, 1185 and 1187 Solano (1191 Solano obtains power separately from Cornell Street).

On September 17, 2013, GeoTech Utility Locating, LLC of Moraga, California performed utility locating for units at 1183 and 1191 Solano in advance of slab penetration sealing and subsequent indoor air sampling. This survey identified the location of the *current sanitary sewer piping beneath 1183 Solano*, which runs parallel the abandoned sewer out to the sidewalk along Solano Avenue. To conduct the survey, GeoTech used the cleanout in the parking lot north of the 1183 Solano unit. The survey did not identify the many connections to the numerous sinks at 1183 Solano and flushed a sensor down the toilet. The survey also identified the underground electrical conduit running from the mechanical room in the rear of 1183 Solano to the five dentist chairs within 1183 Solano. This conduit raceway apparently includes electrical service, a fresh air supply line, and a return vacuum line for each chair. A vacuum pump is present in the mechanical room in the rear of 1183 Solano.

The September 17, 2013 survey also confirmed the location of the sanitary sewer beneath 1191 Solano. This sewer runs approximately 30 inches east of the western unit wall along the entire unit. As shown in cross-sectional view on Figure 21, the sewer piping is shallower than the bottom of the footing since it was not encountered during excavation that extended under the footing and beneath the 1191 Solano unit. The survey did not confirm the specific locations of the sewer piping from the main lateral to the discovered cleanouts and penetrations in the slab.

In September 2013, the Solano Group retained a plumber to install *new sanitary sewer piping* from the rear of each unit at 1185 and 1187 Solano. The piping was connected to the new sanitary sewer piping running out of 1187 Solano to the main under the sidewalk. Select utilities are shown in the site photographs in Appendix A.

# **Sewer Video Inspection**

An inspection of the abandoned sanitary sewer at the site was conducted by PipeSpy of Berkeley, California on February 15, 2013. The abandoned sanitary sewer piping ran from the rear of the 1187 Solano unit, under the 1185 Solano unit, and into the 1183 Solano unit where it turns and exits into Solano Avenue (Figures 3 and 4). From the 1187 Solano unit, the sewer ran perpendicular to the wall and about 7 ft under the bathrooms of 1185 Solano, before turning about 45 degrees and routing into 1183 Solano. The sewer was approximately 1 ft under the slab at the rear of the 1187 Solano unit. The sewer was apparently surrounded by a few inches of backfill material used during sewer installation. This backfill material is presumably significantly more permeable than the surrounding native clayey soil. In 2001, a new sewer was installed for use by the tenant at 1183 Solano. The inspected sewer was abandoned and no longer used by the other units in November 2012.

The sewer is cast iron and appeared in very good condition with no observed cracks, low points, or ponded water that could increase the potential for leakage. The initial few feet of the sewer contained paper residue and was less smooth. The sewer had unions approximately every five feet or more.

A second sewer line was discovered about 6 ft south of the apparent primary sanitary sewer. The second line ran approximately 45 degrees from the 1187 Solano western wall and ended about 3 ft under the wall beneath 1185 Solano, based on observations by the excavation contractor. A tee was observed in the primary sewer line a few feet away, which may have connected to this second sewer line. The second sewer line appeared slightly shallower than the primarily sewer and may have sloped toward the primary sewer. (Both of these abandoned sanitary sewer lines were removed up to a few feet below 1183 Solano during site excavation activities).

# **Pre-Drilling Activities**

A comprehensive site safety plan was prepared to protect site workers and the plan was kept onsite during all field activities. The proposed drilling locations were marked and Underground Service Alert was notified at least 48 hours before the proposed field activities. Boring and well permits were obtained from Alameda County Public Works Agency (Appendix B).

# Soil and Groundwater Sampling

Soil and groundwater sampling was performed using over fifty borings (50) borings. Groundwater sampling was conducted from eleven (11) borings, four (4) groundwater monitoring wells, and three (3) excavation locations. The sampling was performed between January 10 and September 27, 2013. Boring locations are shown on Figure 2. The soil boring activities are summarized below in Table A.

**Table A - Soil Boring Summary** 

Date	Boring ID	Boring Locations	Boring Method	Comments
1/10/13	B-1 to B-10	1187 Solano	Hand auger	Initial Pangea assessment
1/18/13	B-11 to B-15	1191 Solano	Hand auger and limited access rig	Initial assessment in adjacent Post Office unit
2/1/13 2/8/13	A-2 to A-7	1191 Solano	Bobcat auger	Angled boring from 1187 unit
3/8/13	B-16 & B-17	1187 Solano	Bobcat auger	Groundwater assessment
3/20/13	B-18 to B-20, and DB-1	1185 Solano	Bobcat auger and direct push rig	Soil and groundwater assessment downgradient, with deep (30') sampling
4/25/13	B-21 to B-30	1187 Solano (south), 1191 Solano & Courtyard	Hand auger	Soil and groundwater delineation
5/17/13	MW-1 to 3	Near source (MW-1) and Downgrad (MW-2 & MW-3)	Direct push and hand auger for pre-pack wells	Plume delineation with monitoring wells
5/24/13	A-8	1185 Solano	Hand auger	Angled assessment from 1187 unit, under bathroom
7/2/13 & 7/3/13	A-9 to A-13, B-31 to B-34	1185 Solano	Hand auger	Vertical borings in 1185, and angled assessment from 1187
8/29/13 & 9/2/13	HA-1 to HA-3, 1183 North+	1183 Solano	Hand auger	Angled borings from 1187
9/11/13	MW-4	1185 Solano (Near Source)	Hand auger	Angled from 1187

Soil and groundwater sampling procedures are described below. All sampling was performed in general accordance with our Standard Operating Procedures included in Appendix C. Boring logs and well construction diagrams are included in Appendix D. Select soil and groundwater samples were analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8260B (Method 8010 Target List). All samples were shipped under chain of custody to McCampbell Analytical Laboratories, Inc., of Pittsburg, California, a California-certified laboratory.

The drilling was observed in the field by Pangea project manager Morgan Gillies and supervised by Bob Clark-Riddell, a California Registered Professional Civil Engineer (P.E.). Soil characteristics such as color, texture, and relative water content were noted in the field using the USCS classification system and entered onto a field boring log. Field screening of soil samples for potential volatile organic compounds included visual and olfactory observations.

On January 10, 2013, Pangea coordinated the drilling of ten soil borings (B-1 through B-10) within the former drycleaning unit of 1187 Solano Avenue, except boring B-9 located near the sanitary sewer in 1185 Solano. The 1187 Solano borings were performed to further assess conditions in the northern half of the unit where former dry cleaning equipment and a drain were located. Due to elevated PCE impact detected along the eastern wall of 1187 Solano, five (5) additional soil borings (B-11 through B-15) were completed in the adjacent unit at 1191 Solano (U.S. Post Office facility) on January 18, 2013.

For the January 10, 2013 borings, Pangea retained Confluence Environmental of Sacramento, California, to hand auger the borings. Confluence hand augered borings B-1 through B-10 to approximately 6 ft below grade surface (bgs) to facilitate soil sample collection. For the January 18, 2013 borings, Pangea retained Penecore Drilling of Woodland, California to drill with a limited access Geoprobe<sup>TM</sup> 420 drill rig using dual-tube direct-push drilling methods to collect continuously cored soil samples. Borings B-6, B-7, and B-11 through B-15 were advanced to approximately 15 to 16 ft below grade surface (bgs). For direct-push borings, select soil samples were collected from each boring for laboratory analysis in acetate liners, and capped with Teflon tape and plastic end caps. For hand augered borings, soil samples were collected in brass or stainless steel soil sleeves, and capped with Teflon tape and plastic end caps. Soil samples were collected at approximately four ft intervals and/or at lithologic changes.

On February 1 and 8, 2013, Sustainable Technologies (ST) of Alameda, California completed six borings (A-2 through A-7) angled under the adjacent 1191 Solano unit using a Bobcat equipped with a nine-inch diameter auger.

On March 20, 2013, Pangea retained Penecore Drilling to complete three shallow (B-18 through B-20) borings and one deep boring (DB-1). These borings were initially completed using Geoprobe<sup>TM</sup> 6600 drill rig using dual-tube direct-push drilling techniques. Shallow soil samples were collected from borings B-19 and B-20 to assess conditions adjacent the abandoned sanitary sewer. After removing the inner drilling rods, temporary PVC piping and well screen was installed within the boring and the outer drill rods were removed. A discrete depth groundwater sample was collected from deep boring DB-1 using a clean stainless steel bailer. Since water did not enter the three shallow borings (due to clayey material likely inhibiting groundwater infiltration), ST performed soil boring using the Bobcat equipped with a nine-inch diameter auger at boring locations B-18, B-19 and B-20. Grab groundwater was collected from these three borings using disposable bailers. Groundwater samples were then decanted into appropriate containers.

On April 25, 2013, Pangea retained Cascade Drilling of Richmond, California to complete ten shallow borings using hand auger drilling techniques. Five borings were completed to further delineate the extent of PCE in shallow groundwater, including borings B-21, B-22, and B-30 for downgradient delineation west of 1183 Solano, and borings B-23 and B-24 for upgradient delineation within 1191 Solano. The groundwater gradient is presumed to be towards the west or southwest based on surface topography and

groundwater flow at nearby sites. Five borings (B-25 to B-29) were completed to approximately 5 ft bgs to further assess soil conditions within the southern half of the 1187 Solano unit prior to tenant improvements for the planned restaurant. The goal of this shallow soil assessment was to confirm that no significant source of PCE was present within the 1187 Solano unit that could merit potential future source remediation, other than subslab gas venting.

On May 17, 2013, Pangea retained Cascade Drilling of Richmond, California to install three shallow groundwater monitoring wells using direct-push sampling techniques. Pre-pack wells were installed in each borehole to facilitate collection of repeatable data. As shown on the well construction logs in Appendix C, wells MW-1 and MW-3 are screened from 9 to 14 ft bgs, and well MW-2 is screened from 10 to 15 ft bgs. For several days following well installation there was insufficient water to facilitate well development or sampling. Despite only a few inches of water, wells MW-2 and MW-3 were sampled on May 22 and 24, respectively using a new, small diameter disposable bailer for each well. Well MW-1 had sufficient water on June 10, 2013 to allow sampling using a new, small diameter disposable bailer. There was insufficient water to conduct purging prior to well sampling.

On May 24, 2013, ST hand augered boring A-8 angled under the bathroom of the adjacent 1185 Solano unit. This boring was performed to evaluate conditions near the abandoned sewer.

On July 2 and 3, 2013, Pangea commenced implementation of the approved *Assessment Workplan*. ST hand augered borings A-9 through A-13 angled under the bathroom and hallway of the adjacent 1185 Solano unit. Confluence hand augered borings B-31 through B-34 within 1185 Solano to an approximate depth of 5 ft bgs to facilitate soil sample collection. These borings were performed to identify residual PCE (which was subsequently excavated).

On August 29 and 30, and September 2, 2013, ST hand augered laterally under 1183 Solano to evaluate conditions beneath and nearby the existing and abandoned sewer piping beneath 1183 Solano. This assessment was conducted in general accordance with the approved *Interim Remediation Workplan*, during installation of subslab ventilation piping and removal of additional soil along the sanitary sewer. The assessment included borings HA-1 through HA-3, 1183 Central N, and 1183 North. Also, boring 'SS-1183' was performed directly beneath the sanitary sewer within 1183 Solano, a few feet after the sewer exited 1185 Solano. And boring 'HA-2D-1SS' was augered horizontally under the footer to evaluate conditions approximately 1 ft below the sewer conduits at 1183 Solano.

On September 10, 2013, Confluence installed source area monitoring well MW-4 using a 3.25-inch diameter hand auger. As shown on the well construction log in Appendix D, well MW-4 is a 1-inch diameter well screened from 9 to 14 ft bgs. On September 27, 2013, Pangea purged approximately 2 liters of groundwater and sampled the well using 3/8-inch diameter tubing a Watera check valve (SS-10 micro flow system).

Additional soil and grab groundwater sampling was performed during excavation efforts in February/March 2013 and August/September 2013, as described in the interim remediation section of this report.

#### **Subslab Gas Sampling Procedures**

To evaluate shallow subsurface gas conditions beneath site buildings, Pangea conducted subslab gas sampling from twenty-six of twenty-eight (28) installed probes. The sampling was performed between January 10 and October 11, 2013. Probe locations are shown on Figure 4. The subslab probe installation and sampling activities are summarized below in Table B.

Table B - Subslab Gas Probe Installation and Sampling Summary

Date	Probe IDs	New Probe Locations	Sample Containers	Comments
1/16/13 & 1/17/13	SSPO-1 and SSPO-2 SS-3 to SS-7 CSV-1	1185, 1187 and 1191 Solano	1L Summa Canisters	Initial Pangea assessment. Sample all new probes.
4/8/13 to 5/13/13	Vent Pipe Testing	1185 and 1191 Solano	1L Tedlar Bags	Testing of Ventilation System Piping.
4/25/13	SS-9 & SS-10 (new) (resample SSPO-1 and SSPO-2 and SS-6 and SS-7)	1185 and 1187 Solano (1185 and 1191 Solano)	1L Tedlar Bag	Sample new and existing probes about 7 days after vent testing.
7/2/13 & 7/3/13	SS-8, SS-11 to SS-20, SS-PO-3 and SS-PO-4	1183 to 1191 Solano and Courtyard	1L Summa Canisters and 1L Tedlar Bags	Sampling per approved Assessment Workplan.
7/2/13	1185 Bath, 1185 Hall	1185 Solano	1L Tedlar Bags	Sampled tubing in vents, per Workplan.
8/1/13	SS-PO-5 (resampled SS-9 and SS-16)	1191 Solano	1L Summa Canisters	Sampled per Interim Remediation Workplan.
9/12/13 (install) 10/10/13 (sample)	SG-1185 N & S SG-1187 N & S	1185 and 1187 Solano	1L Tedlar Bags	Installed probes within gravel layer of passive venting system. Sampled N probes 10/10/13.
10/11/13	SS-16 and SS-17	1191 Solano	1L Tedlar Bags	Resampled after Additional Excavation.

#### Subslab Probe Locations and Sampling Purpose

On January 16 and 17, for initial subslab gas sampling, probes SSPO-1 and SSPO-2 were installed in the Post Office unit at 1191 Solano Avenue, just east of the former dry cleaning machine. Subslab probe SSPO-2 was installed beneath the underlying slab near B-13, while SSPO-1 was installed where no wooden floor is present above the slab. Subslab gas probes SS-3, SS-4 and SS-5 were installed within the former cleaner unit to evaluated conditions near the north end, adjacent the former cleaning machine, and near the south end, respectively. Subslab gas probes SS-6 and SS-7 were installed within the 1185 Solano unit, not very far from the abandoned sewer. (No SS-8 probe was installed at this time). Subfloor gas probe CSV-1 was installed beneath the wooden floor that covers the southern half of the 1191 Solano unit, to assess conditions between the flooring material (a void space of approximately 4 inches thick) and the underlying slab.

On April 25, 2013, subslab gas probes SS-9 and SS-10 were installed near the south end of the units at 1187 Solano and 1185 Solano, respectively. These probes were installed to evaluate conditions further south within the units. Existing probes were also sampled to evaluated conditions after initial excavation and vent testing. Probes SS-3, SS-4 and SS-5 were overexcavated and therefore were not sampled on April 25, 2013. This sampling was performed after some venting of the subslab materials during 5-day extraction tests, and a minimum of approximately one week of subsurface equilibration was allowed before subslab gas probe sampling.

On July 2 and 3, 2013, Pangea installed eleven additional subslab probes (SS-8, and SS-11 through SS-20), and resampled select probes in accordance with the approved *Assessment Workplan*. The probe locations evaluated conditions beneath all four units at 1183 through 1191 Solano, and in the courtyard

east of 1181 Solano. Assessment included sampling of ventilation piping/vents labeled "1185 Hall' and "1185 Bath" to evaluate conditions in shallow soil under the 1185 bathrooms and hallway.

On August 1, 2013, Pangea installed new probe SSPO-5 to further delineate subslab conditions in 1191 Solano, and resampled probes SS-9 and SS-16 using Summa canisters to reassess conditions.

On September 12, 2013, Pangea installed four new probes to allow ongoing evaluation of conditions within the gravel layer of the passive ventilation system. Probes SG-1185 N and SG-1185 S were installed within the northern and southern portion of the gravel layer, respectively, in 1185 Solano. Similarly, probes SG-1187 N and SG-1187 S were installed within the northern and southern portion of the gravel layer, respectively, in 1187 Solano. Each probe consists of a 12-inch long, 1-inch diameter slotted PVC pipe with a ¼" Teflon tubing and brass fittings. The tubing runs approximately 15 ft back to the manifold area, where it is capped for future sampling. A photograph of the probe construction is shown in Appendix A. On October 10, 2013, Pangea collected 1-liter Tedlar bag samples from northern probes SG-1185 N and SG-1187 N.

On October 11, 2013, Pangea resampled probes SS-16 and SS-17 using Summa canisters to reassess conditions after performing excavation, blower door testing, and penetration sealing.

#### Sample Collection Techniques

To prepare for the subslab gas sampling, a site safety plan (SSP) was prepared to protect site workers. The subslab sampling was conducted in general accordance with select procedures described in Pangea's Standard Operating Procedures (SOPs) for Subslab Vapor Sampling (Appendix C). Field forms from the subslab sampling are included in Appendix E.

The subslab gas samples were collected from approximately 0.5 ft bgs, immediately below the approximately 4 ½-inch thick concrete slab. The subslab gas probe installation procedure involved using a rotohammer to drill a 1 ½-inch diameter, 3 ½-inch deep hole in the approximately 4 ½-inch thick concrete slab, drilling a ½-inch diameter hole through the remaining concrete, installing a rubber stopper with stainless steel tubing (capped on one end with a Swagelok fitting), and placing a bentonite and cement seal from the top of the stopper to within an inch of the surface. A second rubber stopper was placed over the subslab probe for protection and probes equilibrated for at least 2 hours prior to sampling.

Pangea collected initial subslab gas samples using laboratory-supplied manifolds and certified Summa canisters for sampling and purging. The Summa canisters were supplied under a vacuum of approximately 30 inches of mercury. Prior to sample collection from the probes, vacuum/leak tests were conducted on the sampling assembly with a vacuum pump. The vacuum/leak tests indicated some leakage, so the fittings were tightened and the leak test was performed again to confirm no leakage and maintenance of the initial vacuum in the sampling manifold system. After a minimum of 5 minutes of vacuum/leak testing, the vacuum pump was started and opened to purge the manifold/probe assembly. Upon completion of purging of approximately five or more times the ambient volume of air in the assembly/probe, the sampling Summa canister was opened for sample collection. The pre-set valve regulated the vapor flow to approximately 150 milliliters of air per minute. After approximately 5 or more minutes, the vacuum within the Summa canisters decreased to below 5 inches of mercury but not below 3 inches of mercury and the canister valve was closed.

To further evaluate potential leakage within the sampling system, a leak-check enclosure was placed over the subslab probe, and helium gas was introduced into the leak-check enclosure. A helium detector was used to monitor the concentration of helium within the enclosure during sample collection. During purging, vapor from the probe was routed through a Tedlar bag within a vacuum chamber to check for helium within the probe/sampling assembly (indicating a probe leak) and to qualitatively screen for contaminants. After sample collection, subslab probes were capped for future sampling, as merited.

During subsequent subslab gas sampling on April 25, 2013 and May 17, 2013. Pangea collected subslab gas samples from all probes using 1-liter Tedlar<sup>TM</sup> bags. Each probe was purged for approximately 15 seconds (approximately 75 mL) using a PID to check for contaminant concentrations. Each probe was then sampled using a vacuum pump equipped with an iron lung containing a Tedlar<sup>TM</sup> bag. Sample collection was performed approximately ten (10) days after the most recent 5-day venting test at the site.

On July 2 and 3, 2013, Pangea used Tedlar bags and Summa canisters to collect soil samples in accordance with our Standard Operating Procedures. This sampling was performed with leak-check testing described in our SOPs. To collect a sample from the '1185 Hall' and '1185 Bath" vents, Pangea inserted '4" diameter Teflon tubing to the approximate middle of the screen section length several days before the sample collection. Prior to sample collection with 1-liter Tedlar bags, Pangea purged approximately three times the calculated tubing volume.

On August 1, 2013, Summa canisters were used to collect samples from probes SSPO-5, SS-9 and SS-16. During the subsequent limited subslab gas testing on October 10 and 11, 2013, Pangea collected 1-liter Tedlar bag samples using an iron-lung. Prior to sample collection, Pangea purged approximately 1.0 liters from northern probes SG-1185 N and SG-1187 N, and purged approximately 0.5 liters from subslab probes SS-16 and SS-17. Since probe integrity was demonstrated during prior testing of SS-16 and 17, a leak-check enclosure was not used for these sampling events.

# **Subslab Gas Sample Analyses**

Initial subslab gas samples were collected within Summa canisters and submitted for analysis to McCampbell Analytical, Inc., of Pittsburg, California, a State-certified laboratory. These initial subslab gas samples were analyzed by Total Organics Method 15 (TO-15) for volatile organic compounds (VOCs), which included analysis for petroleum hydrocarbons (e.g., BTEX and naphthalene) and chlorinated hydrocarbons. Select samples were analyzed for helium by ASTM 1946. Due to lack of significant BTEX compounds in initial samples, most subsequent subslab gas samples were analyzed by EPA Method 8260B for VOCs (Method 8010 target list). Select subsequent samples were analyzed and reported for full list compounds of EPA Method 8260 to evaluate if select hydrocarbons (e.g., benzene, toluene, xylenes, and naphthalene) detected in indoor air samples on October 3, 2013were also present in subslab gas.

# SITE INVESTIGATION RESULTS

The site assessment found elevated PCE impact near the old dry cleaning equipment in soil, subslab gas, and groundwater. The PCE concentrations at select locations in soil, subslab gas, and shallow groundwater impact exceeded applicable environmental screening levels.

#### **Field Observations**

Based on soil logging during hand augering and drilling, site soil consists primarily of brown silty clay to the maximum explored depth of approximately 35 ft bgs, with occasional thin units of clayey gravel or sandy clay. Shallow clayey soil was predominantly dense and plastic. Shallow soil under the bathrooms and hallway under the 1185 Solano unit was less dense and contained sand. During soil excavation in February and March 2013, shallow groundwater was encountered at approximately 9 ft bgs within the excavation cavity.

The prior consultant, Avalon, reported gravelly and silty clay, which were very expansive. The soils were moist and soft to a depth of three feet. Avalon did not encounter groundwater in the initial borings advanced to a maximum depth of 20 ft bgs. Avalon later reported a thin (6 inch to 1 ft) water-bearing layer of silty gravel at approximately 30 to 31 ft bgs in their four deeper borings installed to encounter

and sample groundwater (GPA-1 through GPA-4). Avalon reported that the groundwater in the gravel layer was under pressure and the top of water was detected at approximately 26 ft bgs.

Pangea used a PID to conduct field screening of soil samples from borings and excavation boundaries for potential volatile organic compounds. The highest PID readings were observed in site soil beneath and nearby the former PCE-using dry cleaning machine adjacent the eastern wall of the 1187 Solano unit. Areas with elevated PID readings were targeted for soil excavation. A sweet solvent odor was observed in areas with the highest elevated PID readings.

#### **Records Research**

The local topograhy slopes generally toward the west to west-southwest. To estimate groundwater flow direction and subsurface conditions in the area, Pangea reviewed the State Water Resources Control Boards (SWRCBs) Geotracker website for nearby sites with existing monitoring well networks. Based on reviewed file information from nearby sites, groundwater reportedly flows to the west to west-southwest. The Kelly-Moore Paint Company at 696 San Pablo Avenue, Albany, had an estimated groundwater flow direction of west-southwest for October 2012. The Shell station at 999 San Pablo, Albany, had estimated groundwater flow direction of west-southwest for June 2012.

#### Soil and Groundwater Analytical Results

Soil and groundwater analytical results are summarized and compared to regulatory environmental screening levels on Tables 1 and 2, respectively. The primary VOC detected in site soil and groundwater was tetrachloroethene (PCE). Limited concentrations of 1,1,1-trichloroethene (TCE) and cis-1,2-dichloroethane (cis-1,2-DCE), which are degradation products of PCE, were also detected. Figures illustrating site conditions before and after interim remedial action are referenced below. The laboratory analytical reports are included in Appendix K.

Soil: Tetrachloroethene (PCE) was detected in soil at a maximum concentration of 7.9 milligrams per kilogram (mg/Kg), at approximately 5.5 ft depth in boring A-6 near the former dry cleaning equipment and angled under the adjacent wall. Other elevated PCE concentrations were detected in site soil within approximately 15 ft of the former dry cleaning equipment. Figure 9 illustrates the extent of PCE in soil prior to the initial excavation (based on prior soil sampling or later sampling beyond the excavation limit). Figure 15 presents PCE in soil results in soil in 1185 Solano prior to the additional excavation in August/September 2013, which indicates that only one shallow soil sample result of 0.7 mg/kg (boring B-33 at 1 ft bgs) exceeded the applicable residential screening level of 0.55 mg/kg. As shown on the cross-section in Figure 20, PCE concentrations above the residential screening level were primarily limited to near the former dry cleaning equipment, only extended to about 10 ft bgs, and were removed during excavation activities.

On Table 1 Pangea compares detected PCE concentrations to applicable Environmental Screening Levels (ESLs) established by the San Francisco Bay - Regional Water Quality Control Board's (RWQCB). These ESLs were recently updated in February 2013 and May 2013. As shown on Figures 9, 12, 17, 18, and 20, all detected PCE concentrations in soil above the current applicable ESL of 0.55 mg/Kg were excavated. (This ESL was previously 0.43 mg/Kg before the May 2013 revision). The final ESL for residential site use for shallow (<3 meters) soil, and safeguards human health via the direct exposure pathway.

*Groundwater:* No PCE or other VOCs have been detected in deeper water-bearing materials present at approximately 30 ft bgs. Deeper groundwater sampling was performed in the source area (DB-1) and in surrounding borings GPA-1 through GPA-4. The sampling locations and PCE reporting limits for sampling of deeper groundwater are shown on Figure 8.

The extent of PCE impact in shallow (about 10 ft depth) groundwater is illustrated on Figure 6. Grab groundwater samples were collected from beneath the former dry cleaning equipment (sample EX-E-GW), north of this location (sample EX-N-GW), and south of this location (sample EX-SE). A PCE concentration of 750  $\mu$ g/L was detected in groundwater immediately below the former dry cleaning equipment location (EX-E-GW). Significantly lower PCE concentrations were detected to the north (8.3  $\mu$ g/L) and south (93  $\mu$ g/L) of this location. Subsequent grab groundwater results from ten (10) temporary borings indicated that no PCE impact was detected in upgradient groundwater (1191 Solano, Post Office), but PCE impact has migrated at least 50 ft in the presumed downgradient direction. The maximum PCE concentration detected in groundwater was 820  $\mu$ g/L, in boring B-22 within the walkway west of 1183 Solano.

Four groundwater monitoring wells were installed to further delineate the extent of PCE in shallow groundwater, to allow collection of periodic groundwater data, and to estimate the groundwater flow direction. Initially, only a few inches of water collected in the site wells. As shown on Figure 7, data from these wells has provided additional delineation of source area impact and the downgradient extent of PCE in shallow groundwater. Detected PCE concentrations in groundwater wells are lower than those in nearby grab groundwater samples. For example,  $200 \,\mu\text{g/L}$  in source area well MW-1 is lower than 820  $\,\mu\text{g/L}$  in nearby grab sample from B-22. The PCE concentration of 110  $\,\mu\text{g/L}$  in source area well MW-4 suggests that the PCE source contributing to the nearby higher grab sample results (750  $\,\mu\text{g/L}$  at EX-E-GW and 650  $\,\mu\text{g/L}$  at B-18) has been significantly removed by site excavation.

The PCE concentrations in shallow groundwater exceed the final ESLs protective of drinking water (5  $\mu g/L$ ), but since site water is not used as a drinking water resource, this ESL is not applicable to the subject site. Given the fine-grain soil, the applicable ESL for groundwater is the ESL protective of vapor intrusion into indoor air of 640  $\mu g/L$  for commercial use (63  $\mu g/L$  for residential use). The predominantly shallow clayey soil and the controlled density fill (CDF) backfill overlying the PCE impact should effectively mitigate upward vapor migration to sufficiently safeguard indoor air quality. As shown on Figure 7, PCE concentrations in groundwater monitoring wells (maximum of 200  $\mu g/L$ ) is below the applicable ESL for commercial site use.

The only other VOC detected in site groundwater is TCE. TCE was detected at 7.1  $\mu$ g/L in boring B-20 and 1.4  $\mu$ g/L in sample EX-N-GW located north of the former dry cleaning equipment location. Only one of these TCE concentrations in shallow groundwater slightly exceeds the final ESLs protective of drinkning water (5  $\mu$ g/L), and neither exceed the final ESL protective of non-drinking water (130  $\mu$ g/L).

### **Subslab Gas Analytical Results**

Subslab soil gas analytical results are summarized on Table 3. The laboratory analytical reports are included in Appendix K. The limited helium detected in select subslab samples suggests that the probes did not 'short circuit' to surface air and that the results are likely representative of subslab soil gas conditions.

The results of *initial* subslab gas sampling on January 17, 2013 are summarized on Figure 10. The maximum PCE concentration detected in subslab gas was 770,000  $\mu$ g/m³, in probe SS-4 located immediately adjacent the former dry cleaning equipment. Elevated PCE concentrations were also detected in other subslab gas probes in 1185 and 1187 Solano. Significantly lower PCE concentrations were detected in subslab gas below 1191 Solano, likely due to the footing separating the 1187 and 1191 Solano units/building, and due to the higher elevation at 1191 Solano (about 2 ft higher than the adjacent 1187 Solano unit).

As shown on Table 3, the detected PCE concentrations prior to excavation significantly exceeded the shallow soil gas Environmental Screening Levels (ESLs) established by the San Francisco Regional Water Quality Control Board (RWQCB) for *commercial* site use  $(2,100~\mu g/m^3)$ . The only other VOC detected in subslab gas was TCE, which is a degradation product of PCE. The detected TCE concentrations were a small percentage of the PCE concentrations, but also exceed the applicable ESLs.

After soil excavation and subslab gas ventilation testing, PCE concentrations in subslab gas were significantly reduced. As shown in Figure 14, the maximum PCE concentration in subslab gas after excavation and venting was  $19,000~\mu g/m^3$ , in probe SS-6, on May 17, 2013. For probe SS-6, this is a significant reduction from  $120,000~\mu g/m^3$  on January 17, 2013 and from  $40,000~\mu g/m^3$  on April 25, 2013. Subslab gas data at that time suggested that residual PCE impact in subslab gas was primarily limited to the northern half of 1185 Solano unit, with a smaller residual impact under a small portion of 1191 Solano. In July and August 2013, additional subslab gas assessment was performed in all units. This additional data suggested that the PCE impact was still most elevated in the northern half of 1185 Solano, but extended beneath 1183 Solano and further beneath 1191 Solano. The extent of PCE in subslab gas based on this more complete July/August 2013 data is shown on Figure 16, which also presents the proposed extent for additional excavation and additional ventilation piping.

Most importantly, Figure 26 presents subslab gas concentrations after the completion of interim soil excavation and passive ventilation system installation. All subslab gas concentrations were below the RWQCB ESL for commercial site use of  $2,100 \, \mu g/m^3$ .

#### INTERIM SOIL EXCAVATION

Based on the elevated PCE impact identified by Pangea's subslab gas and soil assessment, the Solano Group retained Sustainable Technologies, Inc., of Alameda, California to excavate soil impacted by chemicals from the former dry cleaner operations at the site. Pangea observed the soil excavation activities. Due to the potential for vapor intrusion of PCE vapors into indoor air, initial source remediation (excavation) was performed under the rear of the former dry cleaning unit at 1187 Solano and also underneath the adjacent units at 1185 Solano and 1191 Solano (Figure 11). Based on the results of additional site assessment, subsequent excavation was performed under most of 1185 Solano and extended south within 1187 Solano (Figure 18).

All identified soil impact that exceeded residential Environmental Screening Levels (ESLs) established by the San Francisco Bay Region - Regional Water Quality Control Board was removed and disposed offsite. During site excavation, a total of approximately 502.6 tons of soil was removed and disposed offsite.

Soil excavation activities included the following:

- Coordination with client/property owner and client representatives,
- Notification to adjacent tenants by property owner,
- Excavation planning with contractors and analytical laboratory,
- Excavation by appropriately licensed excavation contractor Sustainable Technologies,
- Preparation of a health and safety plan for excavation work,
- Submission of a grading permit application to the City of Albany,
- Interaction with structural engineer for underpinning, excavation support, and backfill design,

- Monitoring of indoor air with a photo-ionization device (PID) and personnel monitoring devices,
- Collection of excavation sidewall and floor soil samples,
- Collection of groundwater encountered in the excavation,
- Coordination of soil profiling and offsite disposal with contractor Advanced Environmental Solutions,
- Backfilling with cement slurry, base rock, gravel and sand. (Passive subslab venting system installation described separately).

# Initial Excavation Sequence and Structural Engineering (February - April 2013)

Soil excavation and backfilling activities first occurred between February and April 2013. The initial soil excavation involved two primary stages: the first under the footing and load-bearing wall along the eastern side of 1187 Solano, and the second under the remainder of the rear of 1187 Solano and a few feet under 1185 Solano.

**Stage 1:** The first stage involved excavating under the existing continuous footing and load-bearing wall along the eastern side of the unit. Consulted structural engineers and specialty contractors unanimously agreed that the classic underpinning technique would be the most appropriate and cost-effective approach for this soil excavation stage. An exploratory excavation confirmed that the load-bearing wall had a continuous footing, and presumably had internal reinforcement for added strength. ST retained JM Turner Engineering Inc of Santa Rosa, California to provide stamped drawings for the excavation, with special emphasis on the first excavation stage. Stamped drawings prepared by JM Turner Engineering are included in Appendix F.

The drawing shows Stage 1 as four 6-ft wide trenches perpendicular and under the continuous footing for the load-bearing wall, with up to two trenches excavated on a given day. Each trench was excavated and subsequently filled with an appropriate cement slurry. For added strength, ST used 3-sack cement slurry to exceed the minimum required 2-sack slurry. After sufficient drying of the cement slurry, one or two adjacent trenches were excavated and backfilled. To help evenly distribute the slurry under the footing, ST's cement subcontractor used vibration equipment and extended the slurry about 1 ft above the footing bottom for added pressure. During the trench excavation, the clayey soil held up exceedingly well with no signs of unraveling or sloughing. This alternating trenching and backfilling approach was continued until the Stage 1 excavation under the wall was complete. Based on field conditions and the longer than planned excavation, the actual trench width was slightly increased from 6 ft width with oversight from JM Turner Engineering. Also due to space limitations, ST initially excavated the entire excavation area inside the walls to approximately 4 ft depth to provide sufficient access for the excavation equipment to reach under the footing and adjacent unit. To access impacted shallow soil under the load-bearing wall, ST used an 18-inch diameter auger with extensions. This was a time-consuming yet effective approach to remove impacted soil up to approximately 7 ft laterally under the edge of the footing. Deeper soil under the footing/wall was removed with a small excavator bucket.

**Stage 2**: The second stage involved extending the excavation depth from approximately 4 ft to a final depth of 6 to 11 ft, as shown on Figure 11. To stage the excavation within the narrow building, ST first excavated and backfilled the eastern half of the 1187 unit area from 4 ft to final depth. ST then excavated and backfilled the western half of the 1187 unit area from 4 ft to final depth. Each excavation was backfilled with a cement slurry to expedite site work, avoid compaction requirements for deeper backfill, and help mitigate upward migration of PCE vapors from any residual impact in soil or groundwater. The final excavation backfill material and vent piping is illustrated in cross section on Figure 21.

#### Additional Excavation Activity (August – September 2013)

Soil excavation resumed in August 2013. This excavation was also performed in two primary stages: the first under the bathrooms and hallway of 1185 Solano, and the second under the remainder of the rear of 1185 and 1187 Solano. The first stage included the use of CDF (cement slurry) in two slots under the hallway on either side of the piping manifold area, and a third long slot under the second bathroom. Two other slots were partially backfilled with gravel and sand and ventilation piping, before final backfilling with CDF. The second stage involved excavation using portable equipment for the open portions of 1185 and 1187 Solano.

#### **Excavation Extent**

The initial excavation extent and depth is shown on Figure 11. The initial excavation area was approximately 35 ft long by 22 ft wide. The excavation was completed to 11 ft depth beneath the former dry cleaning equipment, and to a depth of 8 to 11 ft for most of the remaining excavation. Based on compliance sampling results the northwest and southwestern corners were only excavated to 4 and 6 ft depth, respectively. A total of 361.8 tons of soil (estimated 240 cubic yards) was excavated and disposed offsite during this phase.

The final excavation extent and depth is shown on Figure 18. The final excavation area was approximately 50 ft long by 15 to 18 ft wide in 1185 Solano, and approximately 25 ft long by 18 ft wide in 1187 Solano. The excavation was completed to 2.5 to 4 ft depth. A total of 140.8 tons of soil (estimated 95 cubic yards) was excavated and disposed offsite during this phase of excavation.

#### Soil Disposal

A total of 502.6 tons of soil from the excavation activity was loaded and transported to the Clean Harbors Buttonwillow, LLC hazardous waste treatment, storage, and disposal facility in Buttonwillow, California for disposal as Class I RCRA hazardous waste (F-listed waste). The weight tickets for the disposed soil are included in Appendix G. Approximately 187.5 tons of soil was loaded into bins for transportation to the disposal facility during the initial excavation. Approximately 174.3 tons of soil was loaded into end dump trucks for transportation to the disposal facility for the initial excavation, with an additional 140.8 tons loaded into end dump trucks for the subsequent excavation. The Department of Toxics Substances Control issued EPA (RCRA) ID# CAP000234476 under RCRA Site Name Albany 1-Hour Cleaners.

#### **Compliance Sampling**

The initial excavation extent was based on soil assessment data from soil borings described above. After excavating each area the planned lateral and vertical extent, compliance soil samples were collected from the excavation sidewalls or floor. If soil contained PCE concentrations exceeding the final residential ESL for shallow soil of 0.43 mg/Kg (protective of direct contact per February 2013 ESLs), additional soil excavation and compliance sampling was performed. PID readings were also used on occasion to help screen soil for excavation due to elevated organic vapor concentrations in site soil. Therefore, the site assessment was performed in a dynamic manner, with subsequent site assessment conducted in response to field screening and laboratory assessment results.

A total of 15 sidewall and 10 floor samples were collected for the initial excavation boundary. Compliance sampling locations are shown on Figure 12. Soil analytical data from compliance sampling is summarized both on Figure 12 and Table 1.

For the subsequent excavation, a total of 10 sidewall and 16 floor samples were collected. Compliance sampling locations are shown on Figure 17. Soil analytical data from compliance sampling is summarized both on Figure 17 and Table 1.

The excavator bucket was used to facilitate sample collection from the sidewalls and bottoms of the deeper excavation areas. Soil from each depth and location was lifted to the side of the pit in the excavator bucket, where a sample was collected. For shallower sidewall samples the excavator bucket was not required to assist with sample collection. All soil samples were collected in stainless steel tubes hammered into the soil and capped with Teflon tape and plastic end caps. The samples were placed into a cooler filled with ice and delivered under chain-of-custody procedures to McCampbell Analytical, Inc. of Pittsburg, California, a State-certified laboratory. Soil sampling was performed in accordance with Pangea's Standard Excavation Sampling Procedures presented in Appendix C.

The compliance soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B (using EPA Method 8010 reporting list to control cost).

# **Backfilling**

The excavation cavity was initially backfilled with cement slurry in two stages as described above. The cement slurry was used from 4 ft depth to the final excavation depth (maximum of 11 ft), as shown on Figure 21. For added strength, ST used 3-sack cement slurry to exceed the minimum required 2-sack slurry. The cement subcontractor used vibration equipment and the slurry extends about 1 ft above the footing bottom for added pressure along the eastern portion of the backfilling.

On top of the cement slurry, from approximately 24 inches to 4 ft depth, a recycled base rock was backfilled and compacted in 8" lifts. The base rock backfill material was compacted with a 30" sheep foot roller. From approximately 12" to 24" depth, recycled sand was backfilled and compacted in two lifts. Compaction testing on March 22, 2013, indicated that the backfill material had been compacted to approximately 90 to 92% (Appendix H). The compaction technician determined that more moisture was needed to achieve higher compaction density. ST wet the soil and performed additional compaction with the sheep foot roller.

For the subsequent excavation, portions of the excavation cavity under the bathrooms and hallway at 1185 Solano Avenue was backfilled with controlled density fill (CDF) to support the building. The remainder of the excavation was backfilled with sand and gravel. After installation of the ventilation piping with the gravel layer, 10 mil plastic sheeting was installed over the gravel. The plastic sheeting and gravel extended over the entire excavation area, except for the small CDF slots under the hallway, bathroom, and 1191 Solano. CDF was installed over the plastic sheeting. Figures 20 and 21 provide a cross-sectional view of the excavation extent and backfill materials.

Also prior to installation of the plastic sheeting and CDF, sanitary sewer piping was installed where shown on Figure 24. Permeable material was placed around the shallow sanitary piping in 1187 Solano to facilitate future connections to the piping. After completion of the final plumbing for the future tenants, a 4-inch thick concrete slab will be installed over the excavation area.

#### **VAPOR INTRUSION MITIGATION**

To help mitigate potential intrusion of vapors from any residual PCE impact in soil and groundwater, Pangea first installed and tested a temporary subslab ventilation system. This system was removed during subsequent excavation, except for the vent piping in 1191 Solano. In conjunction with the additional excavation, Pangea also installed a passive ventilation system under 1185 and 1187 Solano, and additional piping for contingent use as active or passive ventilation under all units. Testing of this system is described below. Finally, Pangea performed a blower door test and sealed slab penetrations using the Retro-Coat<sup>TM</sup> System. Vapor intrusion mitigation has been initiated in general accordance with CalEPA/DTSC guidance and protocols, particularly the *Vapor Intrusion Mitigation Advisory (VIMA)* document of October 2011.

#### **Temporary Ventilation System**

Installation and testing of the temporary ventilation system (which was subsequently removed) is described below. Test data is relevant to help with contingent installation of an active ventilation system.

# Installation of the Temporary Ventilation Piping

The subslab ventilation/depressurization system and subslab vapor flow is illustrated on Figure 13. The extraction and air inlet vent piping consisted of 4-inch diameter slotted schedule 40 PVC piping, wrapped with geotextile material. One end of each 'vent' was capped, and the other plumbed with 2-inch diameter solid schedule 40 PVC to the vent piping manifold within the western wall of 1187 Solano. Ball valves and sampling ports are located within fire-rated enclosures at the vent piping manifold to allow monitoring and adjustment of extracted subslab vapors. Bentonite plugs were installed at the end of each vent to help minimize the potential for vapor flow short-circuiting within the subsurface.

Above the former excavation area, two extraction vents were installed within shallow sand backfill along the eastern wall of 1187 Solano. Two air inlet vents were installed within shallow sand backfill along the western wall of 1187 Solano.

To target subslab and shallow soil gas beyond the limits of the excavation, six additional vent pipes were installed. Four of these vents were installed by excavating trenches approximately 18 inches deep and 12 inches wide, prior to installation of sand, slotted vent piping, and a bentonite plug. The first vent pipe targeted subslab gas at 1191 Solano (and an additional 2-inch PVC pipe was terminated at the end of that vent pipe for future expansion of venting in this adjacent unit). The second vent pipe targeted the southern portion of 1187 Solano. The third and fourth vent pipes targeted the primary room at 1185 Solano, and are located nearby the abandoned sanitary sewer present nearby in the adjacent 1183 Solano unit.

Two additional vent pipes were installed under the northern portion of 1185 Solano, where site assessment and/or excavation was inhibited by the presence of remodeled bathrooms and a ramp/passage for disabled persons. These vents were constructed by ST on May 22 and 24, 2013, using a 7-inch diameter hand auger and a PID to screened soil for PCE vapors. The first additional vent pipe was installed immediately beneath the primary sanitary sewer as it travelled beneath the bathroom at 1185 Solano, extending beyond 7 ft from the wall where the sewer turned 45 degrees. This vent ('1185 Bathroom') was screened from approximately 6 to 10 ft horizontally from the 1187 Solano wall, with the sand pack extending to 11 ft under the wall (where a PID reading of 4 ppmv was measured). To enhance influence within subslab materials, the sanitary sewer piping was removed along with sand/backfill material surrounding the sewer. The vent pipe was installed within the location of the former sewer and the underlying hand auger borehole. (Subsequent vent testing confirmed significant vacuum influence extending from the '1185 Bathroom' vent through subslab materials to probe SS-6 located approximately 15 ft to the south).

The second additional vent pipe ('1185 Hall Soil'), installed beneath the hallway/ramp in 1185 Solano, was screened from approximately 7 to 12 ft horizontally from the 1187 Solano wall, with the sand pack extending from 6 to 7 ft under to wall and againg from 12 to 14.5 ft under the wall. This vent pipe was extended this length to influence potential residual PCE under the abandoned sanitary sewer location as it angled toward 1183 Solano. The screen interval targeted the highest PID readings in this boring, which were 12 ppmv (at 8 ft) and 15 ppmv (at 12 ft). Due to access limitations, this vent pipe was angled slightly downward and allowed soil gas extraction from slightly deeper subsurface soil rather than subslab materials already influenced by the '1185 Bathroom' vent. For each vent, sand was compacted inside the borehole prior to insertion of the capped and plumbed slotted pipe.

On May 24, 2013, ST also hand augered boring A-8 angled under the bathroom of the adjacent 1185 Solano unit. This boring was performed to evaluate conditions near the abandoned sewer. Due to limited PID readings (maximum of 6 ppmv at 6.5 ft under the wall) and significant vacuum influence from the adjacent '1185 Bathroom' vent, an additional vent was not constructed in this borehole. A soil sample collected from 5 ft under the wall (about 2 ft bgs) contained only 0.0093 mg/Kg.

#### Testing of the Temporary Ventilation System

Pangea coordinated testing of select subslab vent piping in April and May 2013. Subslab gas concentrations in the influent vapor stream and in tested subslab gas probes are summarized on Table 3. A regenerative extraction blower was temporarily installed to facilitate the testing of the subslab depressurization (SSD) system within these units. The test blower was a 2.5 hp Fuji Model VFC50 providing vapor flow of approximately 125 cubic-foot-per-minute (cfm). Vapor emissions were treated with granular activated carbon. Prior to five-day tests, Pangea notified the Bay Area Air Quality Management District.

From April 6 to 10, 2013, a five-day test was performed on the three existing subslab vent pipes. The test was conducted on the two vents in the main room of 1185 Solano ("1185 North' and '1185 South'), and the one vent in the Post Office building at 1191 Solano ('1191 Post Office'). During this initial testing of the SSD system, PCE concentrations in extracted subslab gas decreased from approximately 5,000  $\mu$ g/m³ (Day 3) to 4,400  $\mu$ g/m³ (Day 5), as shown on Table 3.

From April 10 to 15, 2013, a five-day test was performed only on the vent pipe in the Post Office building at 1191 Solano ('1191 Post Office'). During this testing, PCE concentrations in extracted subslab gas decreased from approximately 700  $\mu$ g/m<sup>3</sup> (Day 1) to 370  $\mu$ g/m<sup>3</sup> (Day 5).

Following these tests the subsurface was allowed to re-equilibrate prior to sample collection from subslab gas probes on April 25, 2013. As described above, subslab gas samples were collected and analyzed from previously installed probes, as well as newly installed probes SS-9 and SS-10. As shown on Table 3, significant PCE concentration reductions were observed in site subslab probes. For probe SS-7, PCE concentrations reduced from  $540,000~\mu\text{g/m}^3$  on January 17, 2013 to only  $2,000~\mu\text{g/m}^3$  on April 25, 2013. For probe SS-6, PCE concentrations reduced significantly from  $120,000~\mu\text{g/m}^3$  on January 17, 2013 to  $40,000~\mu\text{g/m}^3$  on April 25, 2013. Concentration reductions were also observed in the Post Office probes at 1191 Solano, and no PCE was detected in subslab gas from probe SS-PO-2 or new probes SS-9 and SS-10.

Testing results indicated that residual PCE impact was highest near subslab gas probe SS-6 and persisted at 1191 Solano. Therefore, another five-day test was performed from April 29 to May 3, 2013 on all three existing vents at the time: 1185 North, 1185 South, and 1191 Post Office. During this testing, PCE concentrations in extracted these subslab gas decreased from approximately 4,400  $\mu$ g/m³ (April 10) to 1,600  $\mu$ g/m³ by Day 4 (May 2).

Due to elevated impact at probe SS-6, a short test was performed to only extract vapor from vent '1185 North' on May 13. A PCE concentration of 1,300  $\mu$ g/m³ was reported for this vent, which is lower than the 40,000  $\mu$ g/m³ recently detected in nearby SS-6 on April 25, 2013. On May 17, 2013, Pangea sampled subslab probe SS-6 after additional subsurface equilibration. Laboratory analytical results indicated that PCE concentrations in SS-6 had further decreased to 19,000  $\mu$ g/m³ by May 17, 2013.

On July 10, 2013, the test system was mobilized to the site for four hours of testing. The testing primarily evaluated vacuum influence in the recently installed subslab probes.

## Vacuum Influence of Temporary Ventilation System

The maximum vacuum influence measured in subslab probes during testing is summarized on Table B. Vacuum influence in subslab probes for most probes equaled or exceeded CalEPA/DTSC's VIMA value of 0.1" water vacuum for effective mitigation of subslab vapors, for probes in 1185, 1187 and 1191 Solano. No testing of SS-9 was performed since installation of the floor slab and vent for 1187 South was pending renovation. Limited vacuum influence was observed for probes in 1191 Solano, which is not surprising given the deep footing discovered during subsequent excavation. The subsequent vents installed beneath 1183 Solano can be tested in the future.

Probe SSPO-1 SSPO-2 SSPO-3 SSPO-4 SS-7 SS-14 SS-6 SS-10 Vacuum >0.50 0.10 0.15 0.35 0.80 >1.0 0.06 0.10  $("H_20)$ 

Table C - Maximum Vacuum Influence in Subslab Probes

#### Mass Removal Rates

During testing of the temporary ventilation system, the applied vacuum ranged from approximately 20" to 70" of water for the various vent pipes/horizontal wells. The induced vapor extraction ranged from approximately 92 to 178 cubic feet per minute (cfm). For testing of the three initially installed vents (1185 North + 1185 South + 1191 Post Office), the applied vacuum was approximately 30" water and induced a flow rate of approximately 120 cfm. PID readings from the system influent decreased from an initial maximum reading of 11.9 ppmv (April 5, 2013) to 0.7 ppmv (April 10, 2013). During a short test on April 25, 2013, PID measurements indicated a very slight rebound to 1.1 ppmv.

Mass removal rates were calculated using vapor extraction flow rates and VOC concentrations from laboratory analysis of vapor samples collected during testing. During testing from the three vents, the estimated PCE removal rate initially decreased from approximately 0.054 lbs/day (April 8) to 0.048 lbs/day (April 10), and later reduced to 0.021 lbs/day (May 2). During testing of 1191 Post Office only, the estimated PCE removal rate decreased from approximately 0.007 lbs/day (April 10) to 0.004 lbs/day (April 15). During brief testing of 1185 North only on May 13, the estimated PCE removal rate decreased from approximately 0.014 lbs/day.

Based on discussions with the Bay Area Air Quality Management District, a permit is required to operate an active ventilation system although emission treatment may not be required for the anticipated emissions. To operate a passive subslab ventilation system (SSV), which operates on a wind-powered fan rather than an electrical extraction blower, the BAAQMD may issue a permit exemption notice.

# **Testing Conclusions**

Testing of the temporary ventilation system indicates that an active system could effectively mitigate vapor intrusion concerns within 1185, 1187 and 1191 Solano. Depending on final requirements for vapor intrusion mitigation and future data, additional vents may be required to enhance the effectiveness of the existing vent piping network at 1183 and 1191 Solano. Operation of an active system would require a permit from BAAQMD but no vapor treatment would likely be required. Operation of a passive system would likely be eligible for a permit exemption notice from BAAQMD.

<sup>\*</sup> CalEPA/DTSC Vapor Intrusion Mitigation Advisory (VIMA) cites 0.1" water vacuum as sufficient vacuum influence for vapor mitigation.

#### Passive Subslab Venting System (and Contingent Active System)

After completion of the additional excavation, a subslab ventilation system was installed in 1185 and 1187 Solano. The ventilation system is illustrated on Figures 22 and 23. Except for CDF areas under the bathroom and hallway for support, the excavation cavity was backfilled with sand and gravel for incorporation into a passive subslab ventilation system. Slotted piping was installed within the gravel layer and overlain by 10 mil plastic sheeting and then CDF to facilitate collection of subsurface vapors and transport for passive venting. The passive ventilation piping is routed through two 4-inch diameter solid ABS piping risers into a sealed roof turbine fan for ventilation to the atmosphere. In addition, slotted PVC ventilation piping was installed under the units at 1183 Solano, 1185 Solano, 1187 Solano, and 1191 Solano Avenue. This additional piping is manifolded together within the ceiling and could be used for future passive or active ventilation. Access to the manifolded piping is provided by three panels in the hallway of 1185 Solano. A fourth panel provides access to the four subslab gas probes installed within the gravel layer beneath 1185 and 1187 Solano, and to a fourth monitoring well (MW-4) installed to monitor source area groundwater.

Based on testing of subslab gas on October 10, 2013 and indoor air testing on September 27, 2013 and October 3, 2013, the passive ventilation system (and prior excavation) is sufficiently safeguarding indoor air. The future slab installation in 1185 and 1187 will further safeguard human health.

### **Slab Penetration Sealing and Blower Door Test**

To further mitigate potential vapor intrusion, Pangea performed sealed slab penetrations using the Retro-Coat<sup>TM</sup> System manufactured by Land Science Technologies of San Clemente, California. To help identify potential slab penetrations, Pangea first retained GeoTech Utility Locating as described in the utility locating section above. This survey identified the location of the current sanitary sewer piping beneath 1183 Solano. The survey also identified the underground electrical conduit running from the mechanical room in the rear of 1183 Solano to the five dentist chairs within 1183 Solano. At each dentist chair an underground vault contained electrical service, an air supply line, and a vacuum conduit. The survey also confirmed the location of the sanitary sewer beneath 1191 Solano. The owner's contractor then removed sheet rock to find and expose plumbing penetrations near sinks and toilets within 1183 and 1191 Solano.

The blower door test was performed on September 17, 2013 by Ultimate Home Performance to look for locations where air enters the building, after sealing up the doors. The 1191 Solano unit was very 'tight', with an average air flow of 3333 cubic feet per minute extracted through the door at 50 Pascals of pressure. A little air flow was observed entering the building near the plumbing water supply fixtures in the bathrooms, so these fixtures were later sealed. Some air flow was observed exiting the toilet, so the toilets were later removed and the penetration filled with grout. Air was also entering along the eastern wall where the mail cart wore away the plaster on the lathe, so this was filled with sheetrock compound. Some air entered around electrical outlets but these were not sealed. It was difficult to determine in any air flow was observed along the plumbing penetrations at the exposed cleanouts, as these cleanouts appeared cemented or grouted in place. To help mitigate any potential vapor intrusion from these penetrations, they were sealed as detailed below.

Slab and wall penetrations were sealed using the Retro-Coat<sup>TM</sup> products by contractor American Industrial Coatings of Woodland, California on September 19 and 20, 2013. Retro-Coat<sup>TM</sup> CAULK was used to seal all identified slab penetrations in 1183 and 1191 Solano, as well as the vent piping penetrations at the manifold in 1187 Solano. The Retro-Coat<sup>TM</sup> System of Retro-Coat<sup>TM</sup> PREP, Retro-Coat<sup>TM</sup> PRIMER, and Retro-Coat<sup>TM</sup> was used to seal the underground vaults for each dentist chair at 1183 Solano. To provide an acceptable surface for the Retro-Coat<sup>TM</sup> primer and finish coat, ST first installed

an approximate 2-inch thick quick-set grout layer on the permeable rock present in the bottom of the vault. The vault box sides are plastic or metal. Photographs of the blower door test and sealing are included in Appendix I.

#### INDOOR AIR ASSESSMENT

To evaluate indoor air quality at the site following mitigation measures, Pangea sampled indoor air in accordance with the approved *Workplan for Preliminary Assessment of Indoor Air* dated September 9, 2013. The testing was initiated on October 3 and completed on October 4, 2013, with one sample collected on September 27, 2013. In accordance with the ACEH request, the following indoor air samples were collected:

- 1183 Solano: one 8- hour sample near the primary dentist/patient work area, and a 24-hour sample to evaluate diurnal affects in accordance with CalEPA/DTSC guidance;
- 1187 Solano: one 8-hour sample near the center of the open area that connects to 1185 Solano (sample is likely representative of both units);
- 1191 Solano: one 8-hour sample in the rear breakroom (adjacent impacted subslab gas probes SSPO-3 and SSPO-4), another 8-hour sample near the front work area, and a nearby 24-hour sample to evaluate diurnal affects in accordance with CalEPA/DTSC guidance;
- Ambient Air: one 8-hour sample on the rooftop of 1181 Solano, approximately 40 ft upwind (northwest) of the closest sample at 1183 Solano and approximately 70 ft upwind of the sample at 1187 Solano (the prevailing wind was from the north or northwest during sampling).

The indoor air sample locations and analytical results are shown on Figure 27. Indoor air analytical results are summarized on Table 4. All COC concentrations (PCE and its degradation products) were lower than *commercial* ESLs in *all sampled units* and at negligible levels in the ambient air sample. Concentrations of PCE in 1183 and 1187 Solano did slightly exceed the *residential* ESL in the 8-hr work day sample, and the 24-hr sample in 1183 Solano was slightly more than double the *residential* ESL. The higher level for the 24-hr 1183 Solano sample is likely due to the fact that the HVAC system, which produces a slight positive pressure, was shut down for the period following the work day, thus allowing increased intrusion rates during the period that it was not occupied. The 24-hr sample in 1191 Solano was comparable to the 8-hr sample.

Select other compounds were detected in the ambient/background sample and indoor air at concentrations slightly exceeding commercial ESLs. The compounds are not associated with the PCE release, are present in ambient air, and are likely associated with background conditions or another source.

These other compounds were not detected in subslab gas during recent sampling. The detected concentrations were also well below the 10 in a million risk level, a level deemed acceptable by the ACEH upon review of the prior site human health risk assessment. The other detected compounds that slightly exceeded commercial ESLs were benzene, naphthalene, carbon tetrachloride, and 1,2-dichloroethane. Based on these detections, Pangea had the laboratory report the full list of EPA Method 8260 compounds for recent samples. Benzene was detected at 1185 and 1187 Solano in subslab gas at very low concentrations in January 2013, but has not been detected since. Benzene concentrations in indoor air in all units was similar or about twice the ambient air concentration. Naphthalene concentrations in indoor air in all units was about two or three times the ambient air concentration. Naphthalene is not present in subsurface samples. Naphthalene may be due to exhaust from nearby vehicles, or exhaust from the excavation equipment. Concentrations of 1,2-dichloroethane were significantly higher in 1183 Solano than the other units, and may be associated with products used by the

dental operations. Carbon tetrachloride concentrations were very similar in ambient air and all samples, and may be associated with refrigerant use. Carbon tetrachloride is used in the manufacturing of refrigerants, and other refrigerants (e.g., dichlorodifluoromethane and trichlorofluoromethane) were present in all samples.

In summary, all COC concentrations (PCE and its degradation products) were lower than *commercial* ESLs in *all sampled units*. The other compounds detected in indoor air are not associated with the PCE release, are present in ambient air, and are likely associated with background conditions or another source.

#### SITE CONCEPTUAL MODEL

Pangea prepared this site conceptual model (SCM) to describe and illustrate site conditions. All site data is summarized on Tables 1 through 4, and subsurface conditions are illustrated on Figures 1 through 27. To facilitate agency review and oversight, Pangea also prepared an SCM in the tabular format requested by ACEH. The tabular SCM, presented in Appendix J, also identifies potential data gaps. A summary of the SCM is provided below.

Our review of available information suggests that PCE releases could have commenced in 1986 and would have discontinued in 2004 when hydrocarbon-based cleaning equipment was installed (an 18 year period). PCE likely primarily entered the subsurface by penetrating the concrete floor near the former dry cleaner location where most elevated impact has been detected (near boring B-7), or by breaching the concrete floor or the southern sanitary sewer piping near the former washing equipment (near boring B-3). To a presumed lesser extent, PCE may have migrated along preferential pathways/conduits under the floor in vapor phase, or in aqueous phase aided by reported extensive water flooding at the 1187 Solano unit. Potential preferential pathways include the sanitary sewer, sanitary sewer backfill material, and subslab baserock, as well as the underground electrical conduit exiting near the rear of 1185 Solano and subsequent electrical conduit/backfill extending under specialty chairs in the dental office in 1183 Solano. A video survey of the sanitary sewer out to the Solano Avenue main suggests that the cast iron piping is in good condition. The lack of significant PCE impact detected in soil and soil gas along the sanitary sewer suggests that PCE did not leak significantly from the sanitary sewer.

Once under the concrete floor, PCE migrated downward through clayey site soil to the apparent groundwater interface/capillary fringe at approximately 9 ft depth bgs. PCE then migrated laterally approximately 100 ft within the low-permeability saturated zone at approximately 9 to 15 ft bgs. No PCE impact has been detected in soil deeper than 15 ft bgs, or in the first real water-bearing materials (silty gravel) approximately 6 to 12 inches thick encountered approximately 30 ft bgs. Site excavation activity has removed all identified soil impact that exceeded residential screening levels. The clayey site soil will tend to mitigate PCE vapor migration from groundwater into shallower soil, and vapor intrusion from groundwater does not appear to be a significant concern. Limited PCE impact is apparently present in residual soil, subslab soil gas, and/or groundwater beneath the four units at 1183 through 1191 Solano Avenue.

#### **SCM Conclusions**

Pangea offers the following conclusions regarding the PCE impact at the site:

- All site *soil* has excavated to *below* applicable screening levels for *residential* site use.
- Indoor air quality is below applicable screening levels for commercial site use in all tested units.
- Subslab gas is below applicable screening levels for commercial site use in all tested units.

- Well data indicates that residual PCE impact in groundwater is below applicable screening levels
  for commercial site use for all units. The applicable screening level is protective of vapor
  intrusion to indoor air based on the site's fine-grained soil.
- Therefore, current site data suggests that residual PCE does not represent a significant threat to human health (e.g., site occupants or construction workers) or the environment.

#### **Data Gaps**

To help confirm that residual PCE does not represent a significant threat to human health and the environment, Pangea plans to address data gaps in the SCM and prior site work. Therefore, Pangea plans to perform the following:

- Survey site monitoring wells to facilitate determination of the groundwater gradient and flow direction at the site, and to allow data uploading to State databases.
- Perform additional groundwater monitoring to evaluate plume stability.
- Perform additional subslab soil gas and indoor air monitoring to confirm the effectiveness of the completed interim remediation measures of excavation and passive subslab ventilation.
- Conduct a survey to identify any water wells or other sensitive receptors (e.g., basements or other subgrade development) within approximately 250 ft of the site in the crossgradient and downgraident directions.
- Short-term feasibility testing from vent piping to evaluate the potential benefit of contingent active or passive ventilation of vents installed under 1183 and 1191 Solano.

# REMEDIAL OBJECTIVES AND CLEANUP GOALS

The initial remedial objective is to sufficiently safeguard human health to allow resumed occupancy of vacant units at 1185 and 1187 Solano, and ongoing use for the occupied units at 1183 through 1191 Solano Avenue. The ultimate objective is to help facilitate regulatory case closure within the relative near future in accordance with the RWQCB's regulatory guidance document *Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites (Low-Threat Closure Tool)* (RWQCB, 2009).

#### **Cleanup Levels and Goals**

The proposed cleanup goals and levels are presented on Table 5 (this table is also included at the end of the SCM). The proposed cleanup levels and goals are based on applicable RWQCB Environmental Screening Levels (ESLs) for commercial site use. Pangea has used RWQCB ESLs for several reasons. First, these ESLs were established by the same agency that provides oversight for this case in conjunction with the local lead agency (ACEH). Second, the RWQCB created the *Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites* that your agency referenced for criteria for closing the case. Third, the ESLs were revised in May 2013 and are much more recent that other screening criteria referenced in the *Low-Threat Closure Tool*. Finally, changes in attenuation factors and exposure duration have been incorporated into the revised ESLs and not into older screening criteria such as CalEPA/DTSC's California Human Health Screening Levels (CHHSLs). For example, the RWQCB commercial ESLs are based on an 8 hour exposure, while commercial CHHSLs use a 24 hour commercial exposure.

Although current site data indicates that COC concentrations in all media are below cleanup levels and goals, additional effort planned to confirm site conditions and satisfy case closure criteria are discussed below.

#### Low-Threat Chlorinated Solvent Site Closure Criteria

The Low-Threat Closure Tool summarizes nine narrative criteria for site closure, shown below in three groups. The narrative criteria describe the conditions under which closure is warranted for low-threat sites. These criteria are introduced below.

- 1. Develop a complete Site Conceptual Model (SCM)
  - Pollutant sources are identified and evaluated
  - o The site is adequately characterized
  - Exposure pathways, receptors, and potential risks, threats, and other environmental concerns are identified and assessed
- 2. Control sources and mitigate risks and threats
  - o Pollutant sources are remediated to the extent feasible
  - o Unacceptable risks to human health, ecological health, and sensitive receptors, considering current and future land and water uses, are mitigated
  - o Unacceptable threats to groundwater and surface water resources, considering existing and potential beneficial uses, are mitigated
- 3. Demonstrate that residual pollution in all media will not adversely affect present and anticipated land and water uses
  - o Groundwater plumes are decreasing
  - o Cleanup standards can be met within a reasonable timeframe
  - Risk management measures are appropriate, documented, and do not require future Water Board oversight

This report addresses the nine narrative criteria for low-threat case closure.

### Group 1 Closure Criteria

With respect to the above Group 1 criteria, our SCM included herein describes how (a) the PCE impact from the former dry cleaning business has been identified, (b) the site is adequately characterized, and (c) environmental concerns pathways have been identified and assessed -- with the exception of the identified few data gaps to be evaluated in the near future.

#### Group 2 Closure Criteria

For Group 2 criteria, the completed interim remediation (excavation) removal of 502.6 tons of impacted soil has likely remediated the site subsurface to the point where unacceptable risks to human health and sensitive receptors are mitigated. Addressing the SCM data gaps will help confirm that unacceptable threats to sensitive receptors or groundwater resources/beneficial uses are sufficiently mitigated. The planned assessment, ongoing monitoring data, and implementation of risk management measures (e.g., passive subslab venting) will provide additional information to demonstrate effective risk mitigation at this site.

As described in the SCM, the East Bay Plain Beneficial Use Evaluation Report (Water Board, 1999) indicates that the site lies within the Berkeley/Albany Groundwater Management Zone part of Zone B, which identifies areas where groundwater is *unlikely* to be used as a drinking water resource. In addition, shallow groundwater lies in very low permeability soils that are highly unlikely to be able to yield

sufficient water to constitute a potential drinking water resource as defined in State Water Resources Control Board Resolution 88-63. Therefore, risks to groundwater beneficial uses are likely to be non-existent. However, it is possible that sumps, basements or wells are present in the downgradient areas of the plume and that accidental ingestion of groundwater could potentially occur within any area where groundwater concentrations exceed ESLs for drinking water. Therefore, a receptor survey is planned to confirm the limited risk.

# Group 3 Closure Criteria

Group 3 criteria apply specifically when residual pollution in any medium (e.g. soil, soil gas, indoor air, groundwater, or surface water) remains in-place above cleanup standards. As described below, current site data indicates that residual pollution in all media is *below* cleanup standards (applicable ESLs) for commercial site use. Therefore, Group 3 criteria should be satisfied once data gap assessment and additional monitoring confirms that current site conditions are representative of site conditions.

Future data gap assessment and monitoring should demonstrate that (a) the groundwater plume is stable and/or decreasing, (b) cleanup standards are already met (or will be in a reasonable time), and (c) risk management measures are appropriate, documented, and do not require future Water Board oversight.

Engineering controls are already implemented at the site, and our plan includes contingent additional controls. The installed passive subslab ventilation system was installed as a risk management measure rather than an active system since the passive system does not have active components (e.g., blower) that could require agency oversight. Our corrective action plan also includes a vapor barrier as a contingent measure for futher risk management, if merited by future data.

The Low-Threat Closure Tool allows for agency discretion regarding the need for deed restrictions upon issuance of case closure.

### **FEASIBILITY STUDY**

Pangea prepared a feasibility study/corrective action plan for addressing residual PCE impact beneath all four units at 1183 through 1191 Solano Avenue. To help select a cost-effective and appropriate alternative for meeting the remediation objectives, Pangea evaluated several site remediation techniques applicable to sites with chlorinated solvent impact. The evaluated remedial alternatives include:

- Excavation
- Soil Vapor Extraction (and Active Venting)
- Monitored Natural Attenuation (Soil Gas and Groundwater Monitoring)
- No Action

The evaluation of alternatives is discussed below.

#### **Excavation**

Excavation is a proven and effective technique for remediation of chlorinated hydrocarbons. Excavation is most appropriate for shallow soils, and especially for low permeability materials where in-situ remedial techniques have very limited effectiveness. This method is also a cost-effective option for undeveloped sites where the excavation area is accessible and not beneath site facilities. Excavation can remove unsaturated soil, capillary fringe soil, and saturated soil. Soil is usually transported offsite for disposal, but soil can be treated and reused at the site in accordance with regulatory guidelines and approval.

Despite limited access inside the site building units, extensive and costly excavation was performed as an interim remedial measure at this site. The excavation was expanded in an effort to address applicable cleanup standards for commercial or residential site use, and that sufficiently mitigate potential vapor

intrusion into indoor air. Any future excavation expanded into the adjacent units at 1183 and 1191 Solano would be disruptive of the current tenants. Excavation would be most disruptive and costly for 1183 Solano due to sensitive dentist/orthodontist operations and significant site improvements. Excavation would be less disruptive in 1191 Solano, if limited to the storage room where the vent pipe was installed. Extending the excavation into other rooms would be more challenging given the ongoing U.S. Mail operations and site improvements. Nonetheless, Pangea considers excavation as a viable contingent measure (primarily for portions of 1191 Solano), if merited by future site data.

# **Soil Vapor Extraction (and Active Venting)**

Soil vapor extraction is a common approach for remediating unsaturated soil. This approach uses an aboveground vacuum blower to extract vapor-phase chlorinated hydrocarbons from the site subsurface. SVE also effectively removes chlorinated hydrocarbons adsorbed to unsaturated soil that could pose a risk to groundwater quality. Extracted vapors are typically treated aboveground with granular activated carbon, although emissions can be discharged to the atmosphere without treatment if acceptable to the air district.

Based on the predominantly fine-grained soil at this site, SVE may have limited effectiveness due to low soil permeability, water upwelling and shallow groundwater (about 9 ft bgs). SVE will also not target residual groundwater impact. However, testing of the temporary venting system and shallow wells/vents installed into site soil suggests that SVE can be used to provide 'active venting' of the site subsurface. This venting would likely provide preferential PCE removal from the more permeable subsurface materials, such as backfill material around utility conduits or subslab baserock materials. Therefore, Pangea considers SVE and Active Venting as a viable contingent measure, if merited by future site data.

# **Monitored Natural Attenuation (Soil Gas and Groundwater Monitoring)**

This alternative involves no active remediation, and assumes that residual contaminants will attenuate naturally. To be selected as an appropriate alternative, residual contaminants are often required to attenuate (or are projected to attenuate) to water quality objectives or other applicable cleanup standards within a reasonable timeframe. In addition, subslab/soil gas are required to attenuate (or are projected to attenuate) to applicable cleanup standards within a reasonable timeframe.

Given the extensive source removal via excavation (which removed source area soil impact and saturated-zone, groundwater impact), chlorinated concentrations in subslab/soil gas groundwater will likely attenuate naturally. Subslab gas monitoring data from probe SS-16 in 1183 Solano suggests that removal of the source area in the adjacent 1185 Solano unit has removed the PCE vapor source that likely migrated along preferential pathways to probe SS-16. Subslab gas monitoring of probe SS-17 will evaluate attenuation further along the same preferential pathway that intersects probe SS-16. For groundwater, it will likely require a very long time to reduce PCE concentrations to water quality objectives protective of drinking water standards, due to predominantly fine-grained material and the lack of significant PCE degradation (e.g, formation of TCE and cis-1,2-DCE) observed in other site media. However, the Basin Plan indicates that groundwater will not likely be used as a drinking water resource, so the risk to beneficial use is minimal or non-existent. This alternative may be appropriate to confirm plume stability and subslab gas attenuation to more fully satisfy criteria of the Low-Threat Closure Tool.

#### No Action

This alternative involves no further action. Feasibility studies are often required to consider this alternative. This alternative would be appropriate after sufficiently satisfying criteria of the Low-Threat Closure Tool.

#### **CORRECTION ACTION PLAN**

Based on our evaluation of the site conditions with respect to proposed cleanup levels and the Low-Threat Closure Tool, Pangea recommends additional monitoring of indoor air and subsurface conditions in subslab gas and groundwater. This is the monitored natural attenuation alternative presented above. The monitoring will assess the effectiveness of the completed interim remediation (excavation) and passive subslab venting system for mitigating threats to sensitive receptors and the environment. Pangea also recommends addressing data gaps discussed in the site conceptual model to provide more thorough assessment of site conditions.

If this additional (post-interim remediation) monitoring identifies potential concerns, Pangea would recommend implementation of one or more of the contingent measures presented below. If the future monitoring confirms plume stability and safe conditions, Pangea will recommend regulatory case closure in accordance with criteria established in the RWQCB's Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites.

Our CAP employs the following contingent activities, which include remedial approaches and engineering controls:

- Passive ventilation of subslab soil gas using the existing passive ventilation system under 1185 and 1187 Solano and the existing vent piping at 1183 and 1191 Solano;
- Additional monitoring of groundwater, subslab soil gas, and indoor air to further evaluate the effect of the extensive interim remediation and the effectiveness of the ventilation system;
- Excavation of additional shallow soil beneath 1183 and/or 1191 Solano, if merited;
- Expansion of the passive ventilation system, if merited;
- Installation of an extraction blower to provide active ventilation to accelerate PCE removal and further safeguard indoor air, if merited; and
- Installation of a vapor intrusion barrier using the Retro-Coat<sup>TM</sup> System, if merited.

In summary, the initial goal of the CAP is to sufficiently safeguard human health to allow resumed occupancy of vacant units at 1185 and 1187 Solano, and ongoing use for the occupied units at 1183 through 1191 Solano Avenue. The ultimate goal of the CAP is to help facilitate regulatory case closure within the relative near future in accordance with the RWQCB's regulatory guidance document Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites (RWQCB, 2009).

#### CONCLUSIONS AND RECOMMENDATIONS

Pangea offers the following conclusions regarding the PCE impact at the site:

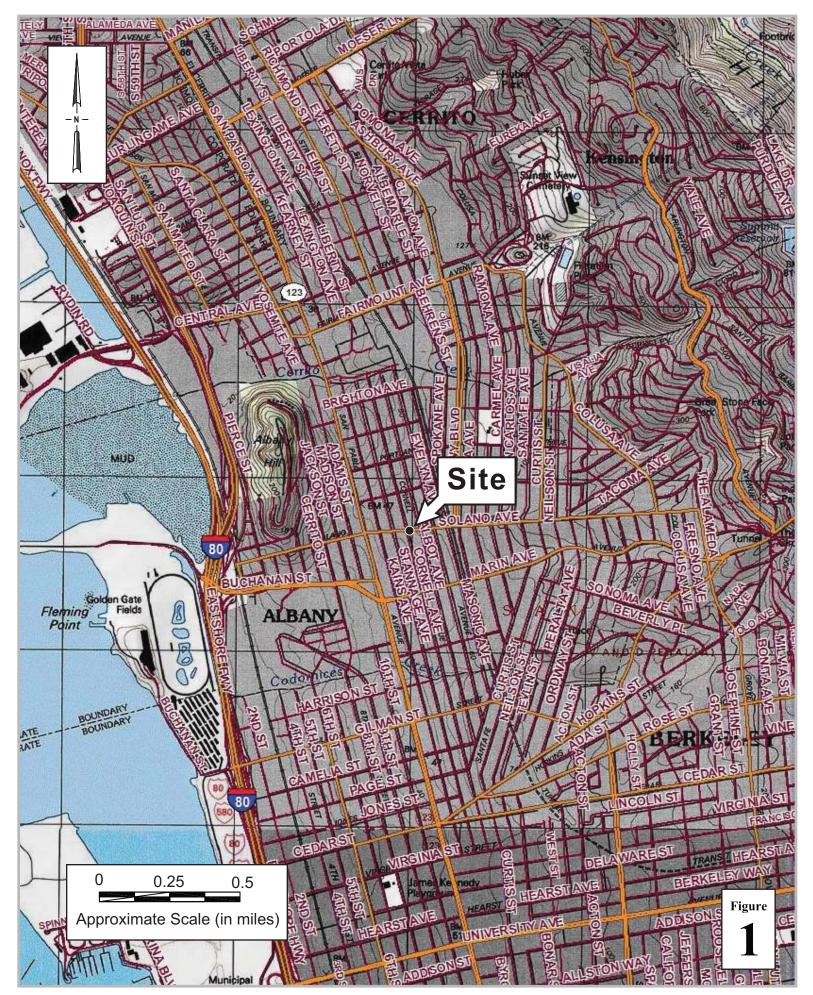
- All site *soil* has been excavated to *below* applicable screening levels for *residential* site use.
- All site *indoor air*, *subslab gas*, *and groundwater* concentrations are *below* applicable screening levels for *commercial* site use in all tested units.
- Therefore, current site data suggests that residual PCE does not represent a significant threat to human health or the environment.

Pangea recommends performing additional monitoring of indoor air and subsurface conditions to confirm the effectiveness of the completed interim remediation (excavation) and passive subslab venting system for mitigating threats to sensitive receptors and the environment. Pangea also recommends addressing data gaps discussed in the site conceptual model to provide more thorough assessment of site conditions.

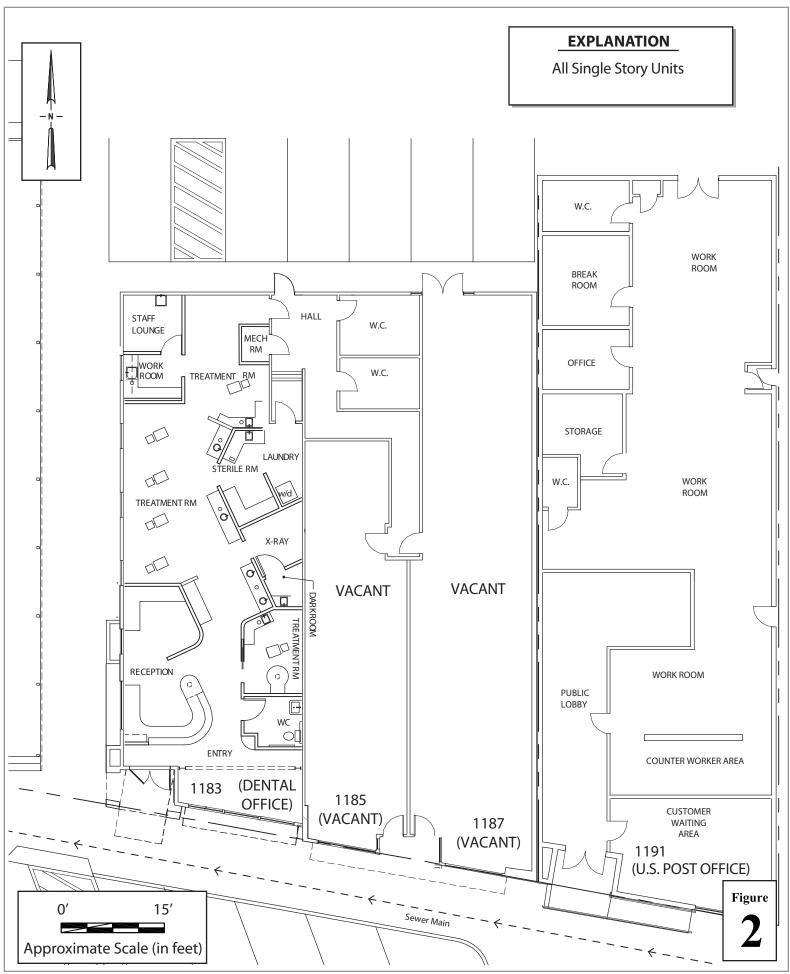
If this additional (post-interim remediation) monitoring identifies potential concerns, Pangea would recommend implementation of one or more of the contingent measures presented in the above CAP. If the monitoring confirms plume stability and safe conditions, Pangea will recommend regulatory case closure in accordance with criteria established in the RWQCB's Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites.

#### **REFERENCES**

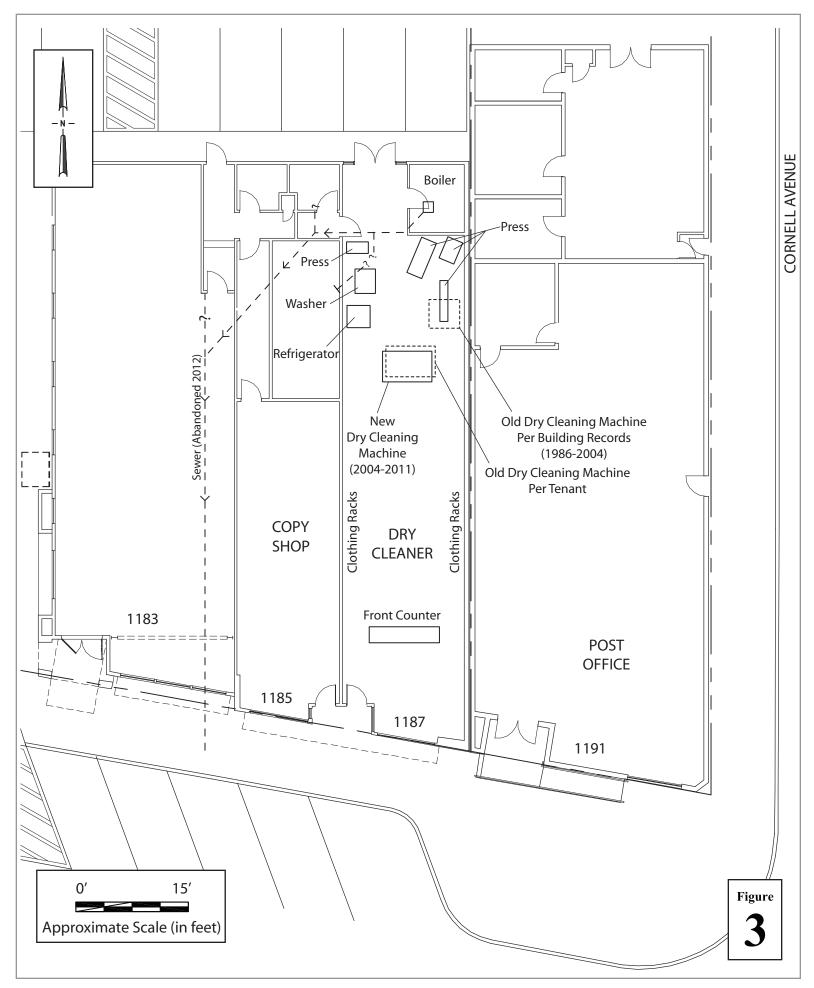
- Avalon Environmental Consultants, 2004, (Avalon, 2004), *Phase II Subsurface Site Assessment*, November 10.
- Avalon Environmental Consultants, 2005, (Avalon, 2005), *Phase II Subsurface Groundwater Assessment*, May 4.
- Avalon Environmental Consultants, 2006, (Avalon, 2006), Soil Gas Investigation and Health Risk Assessment, June 8.
- CalEPA/DTSC, 2011, (CalEPA, 2011) Vapor Intrusion Mitigation Advisory (VIMA), October 2011
- Pangea Environmental Services, 2013, (Pangea, 2013a), Assessment Workplan, June 17.
- Pangea Environmental Services, 2013, (Pangea, 2013b), Interim Remediation Workplan, July 29.
- Pangea Environmental Services, 2013, (Pangea, 2013c), Workplan for Preliminary Assessment of Indoor Air, September 9.
- Regional Water Quality Control Board, 1999, (RWQCB, 1999), East Bay Plain Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, CA, June 1999
- Regional Water Quality Control Board, 2009, (RWQCB, 2009) Draft Final Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites, July 31
- San Francisco Regional Water Quality Control Board, 2013, (RWQCB, 2013) *Environmental Screening Levels*, November 2007, Revised May 2013

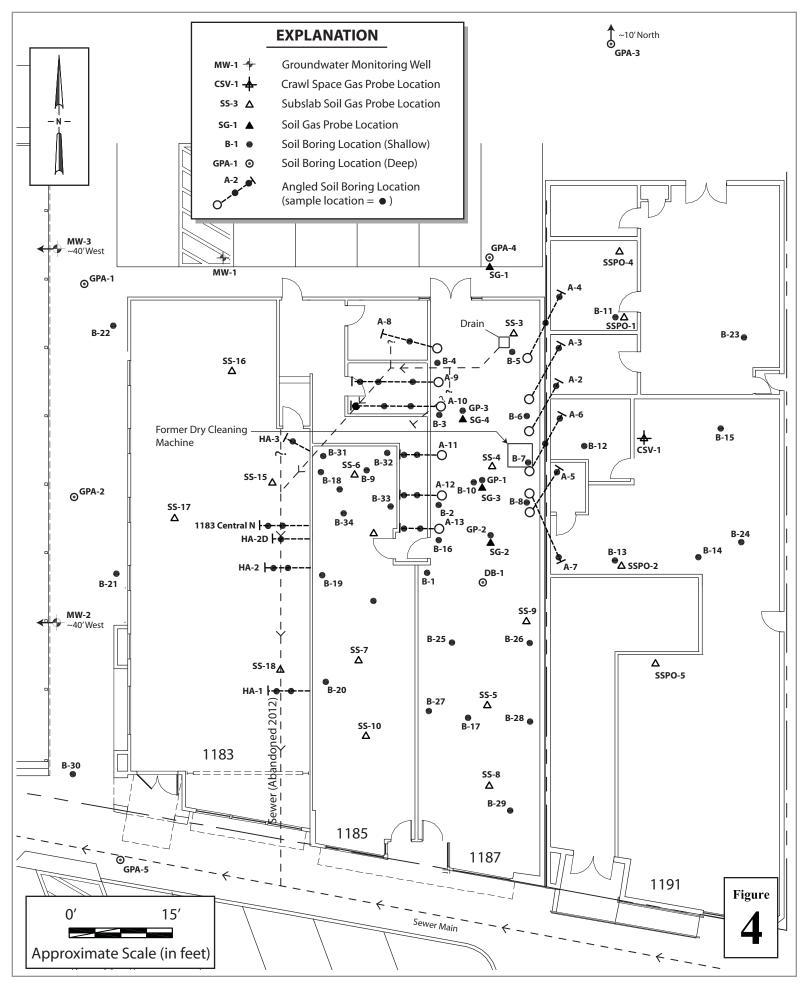


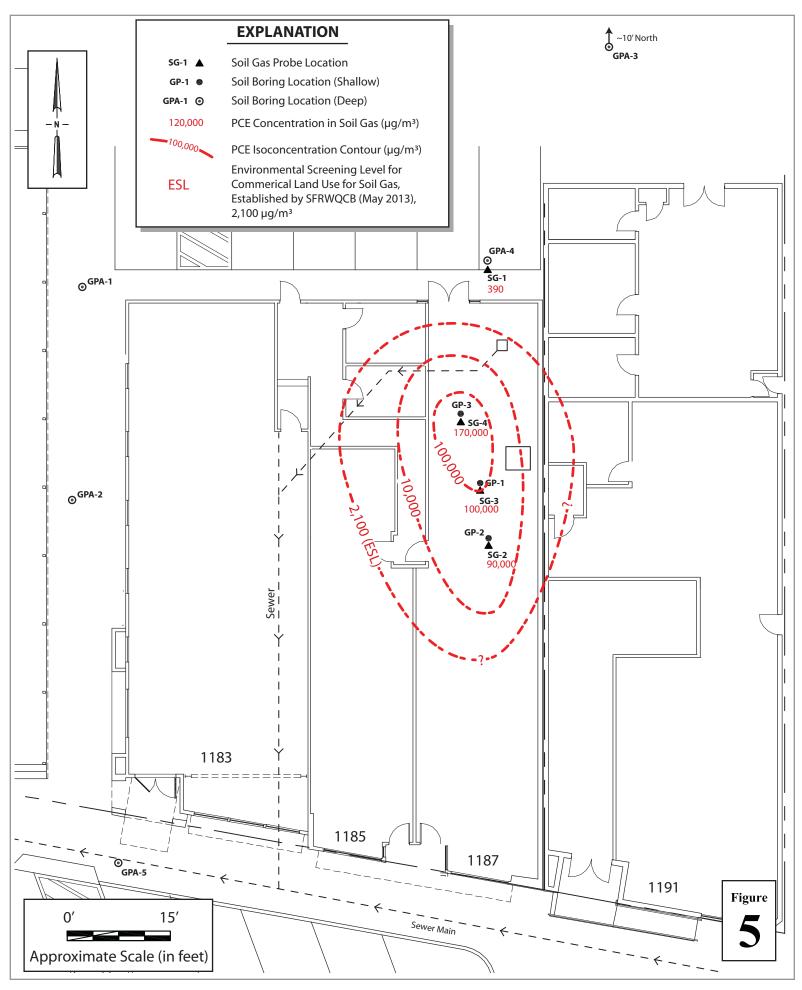






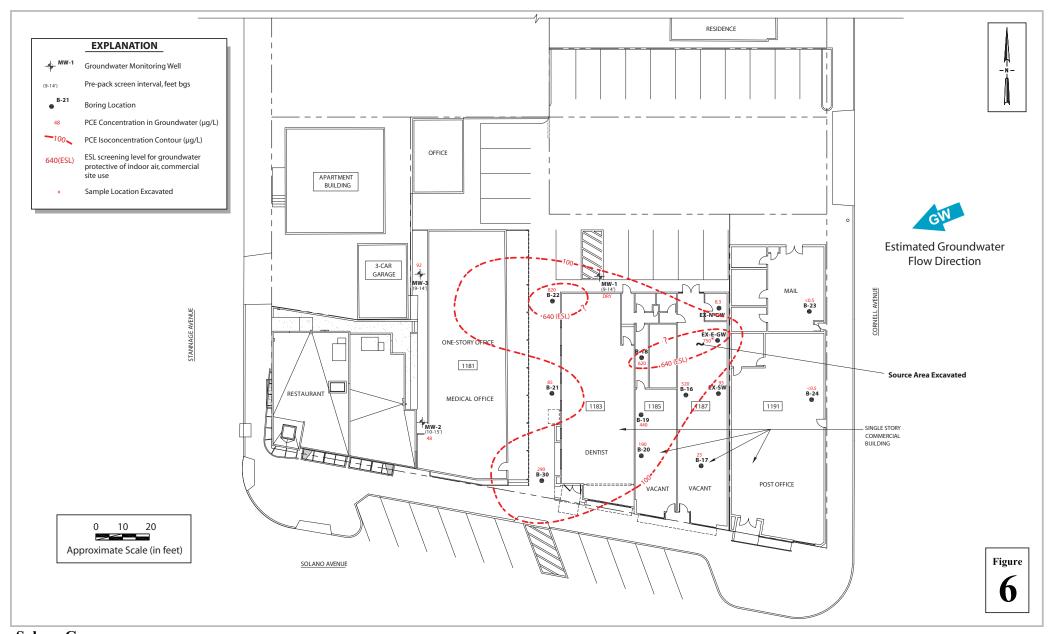






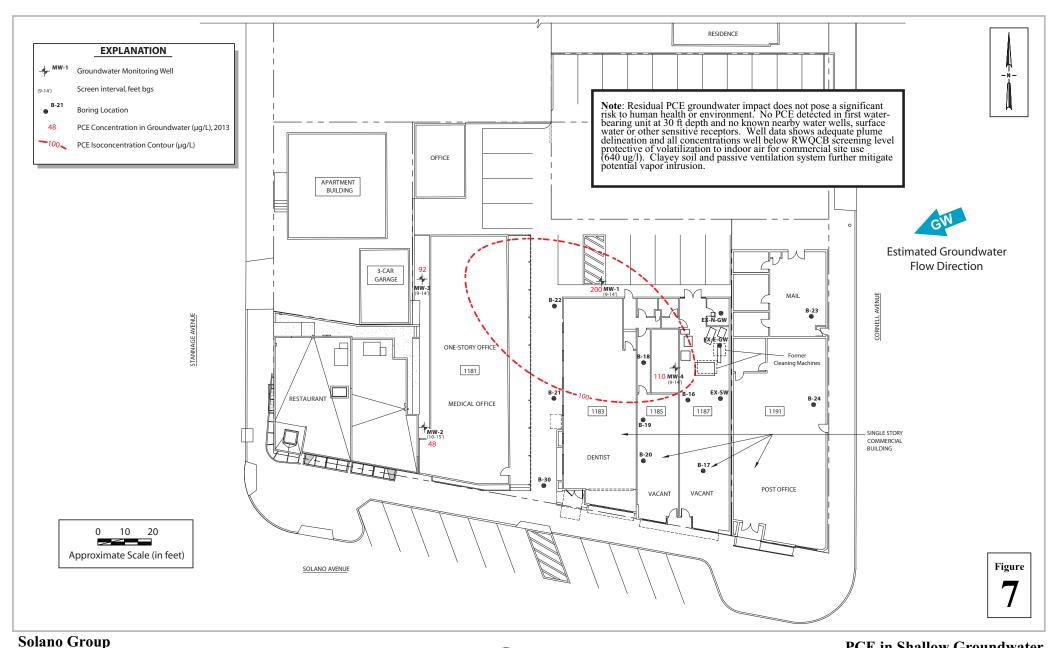


PCE in Soil Gas (2004)





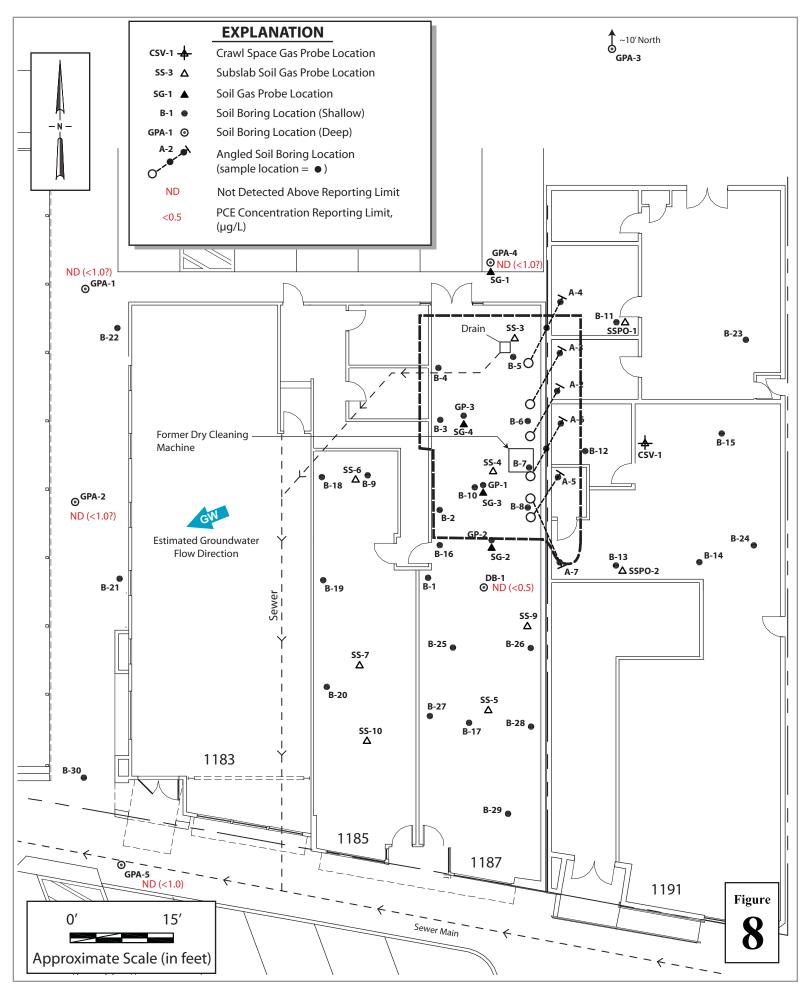
PCE in Shallow (~10') Grab Groundwater



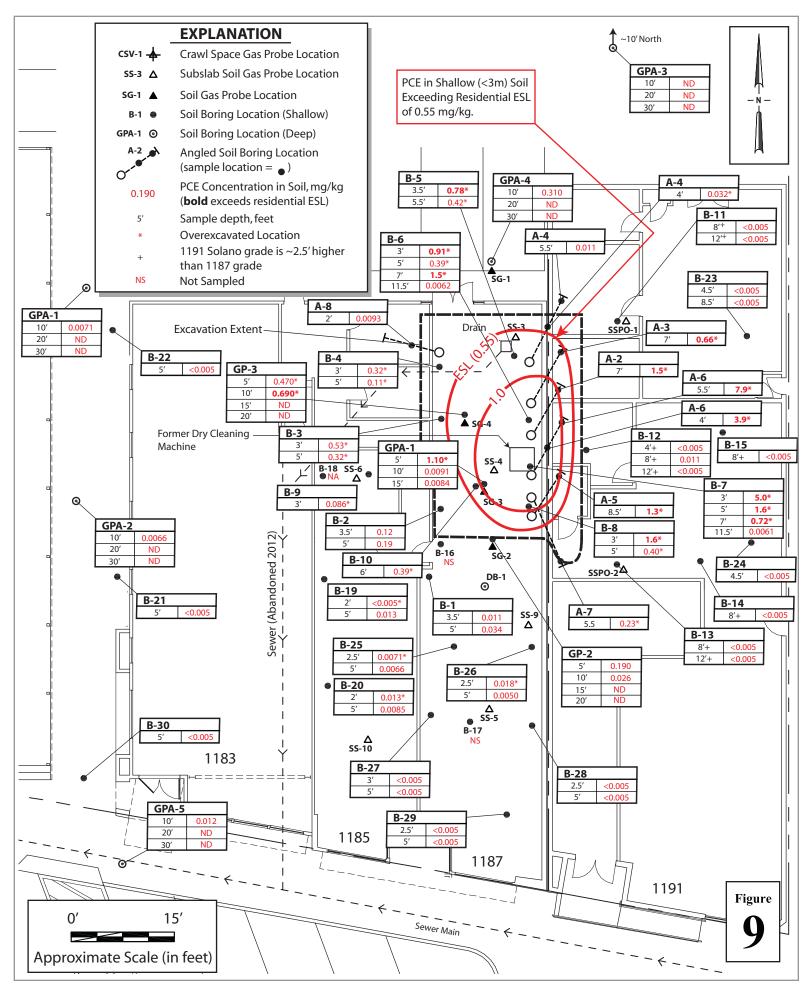
1187 Solano Avenue Albany, California

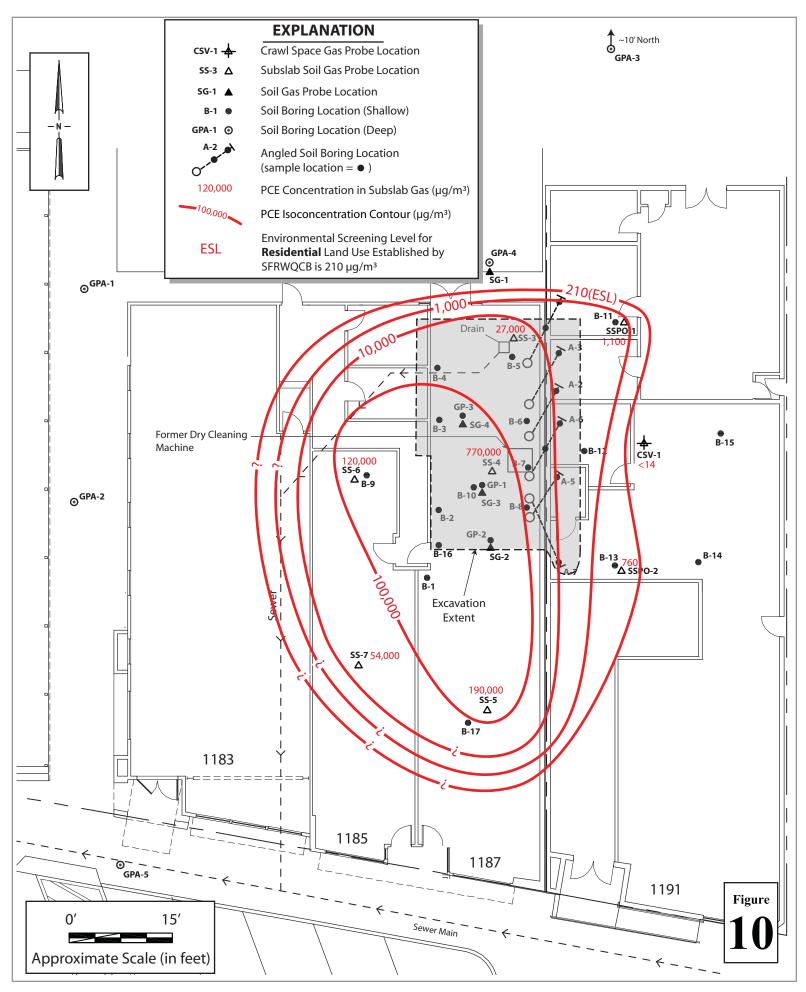


PCE in Shallow Groundwater Monitoring Wells

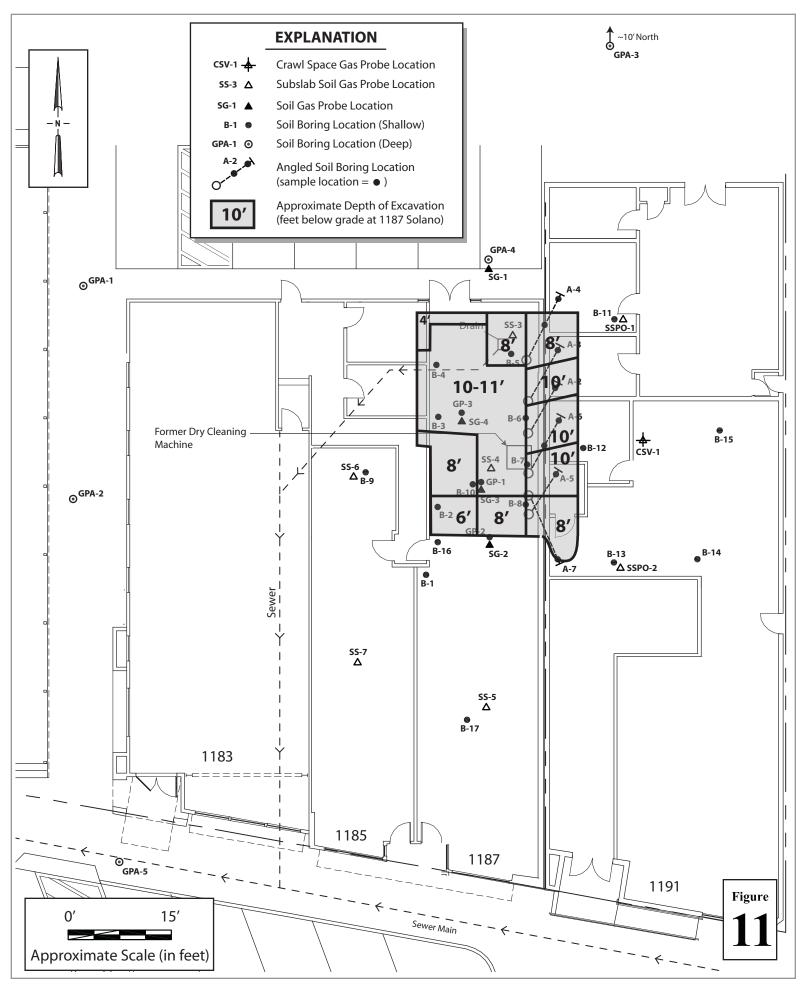






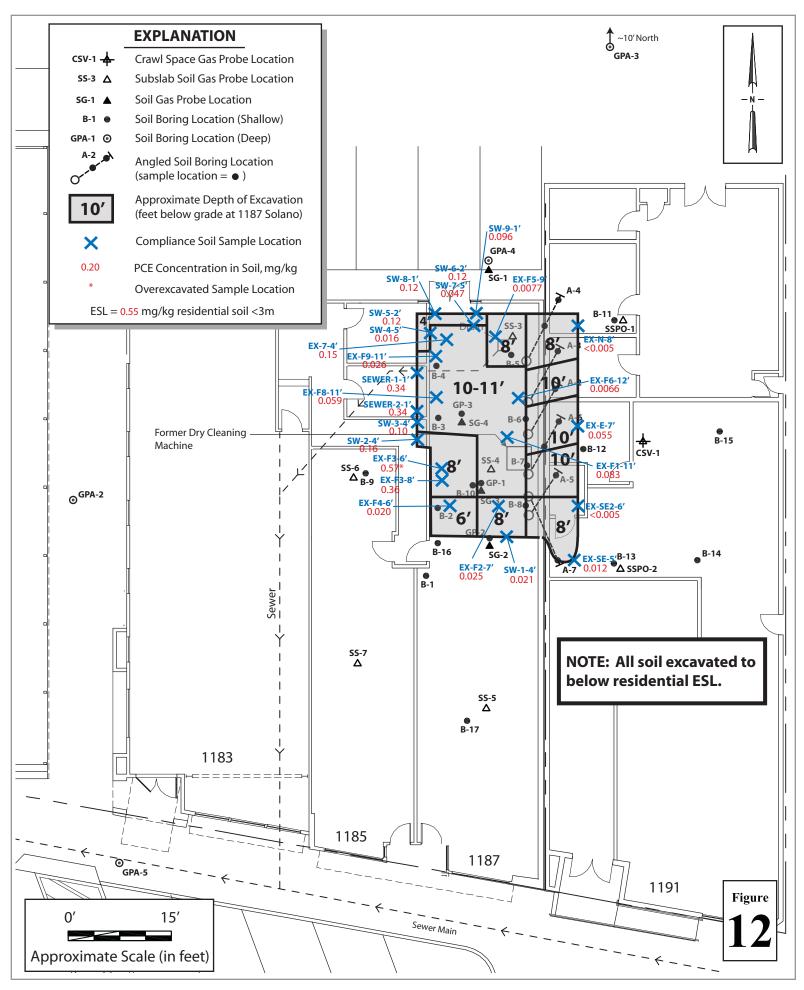


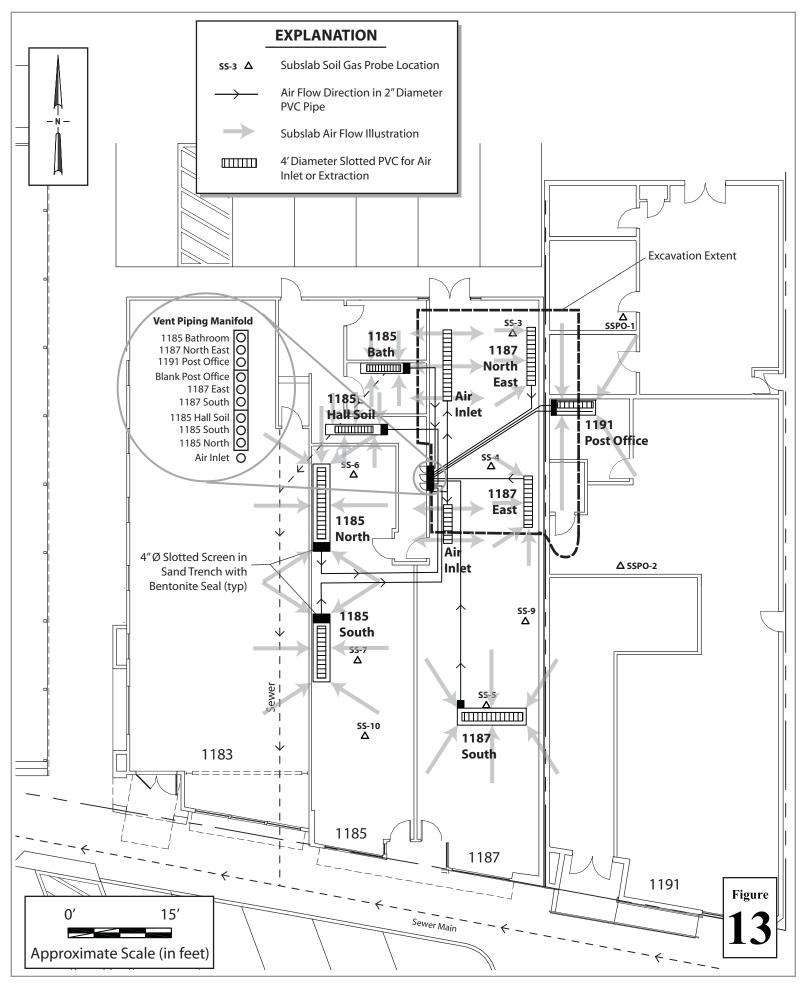




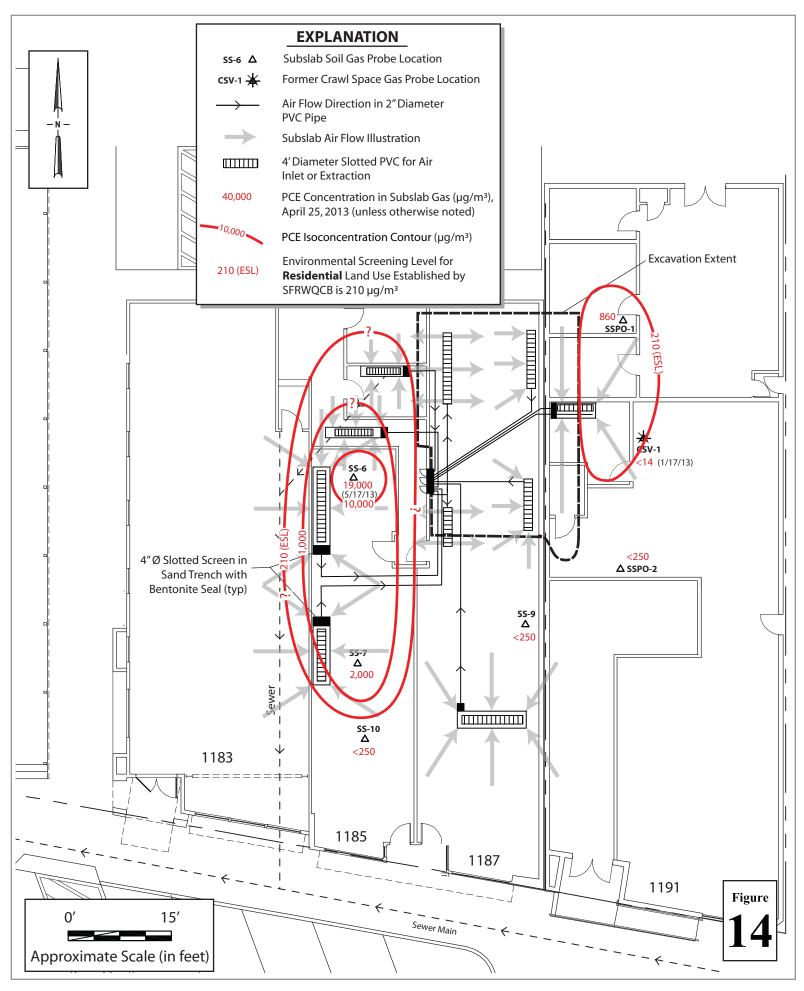


Initial Excavation Extent and Depth, February/March 2013

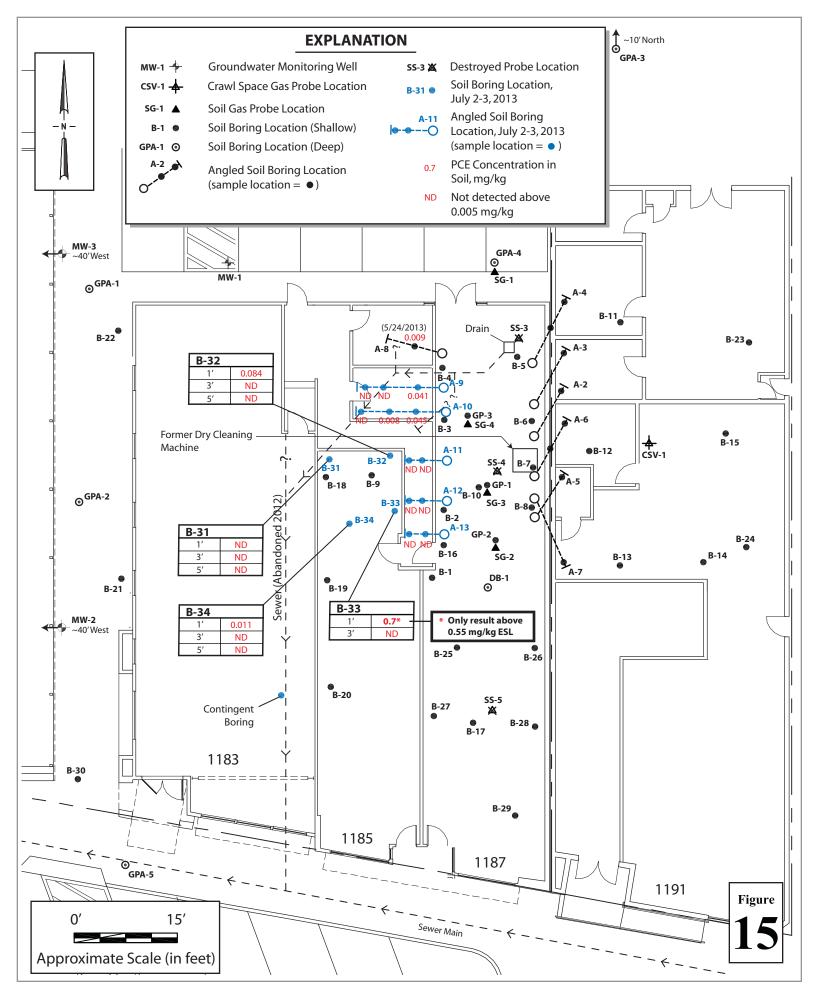




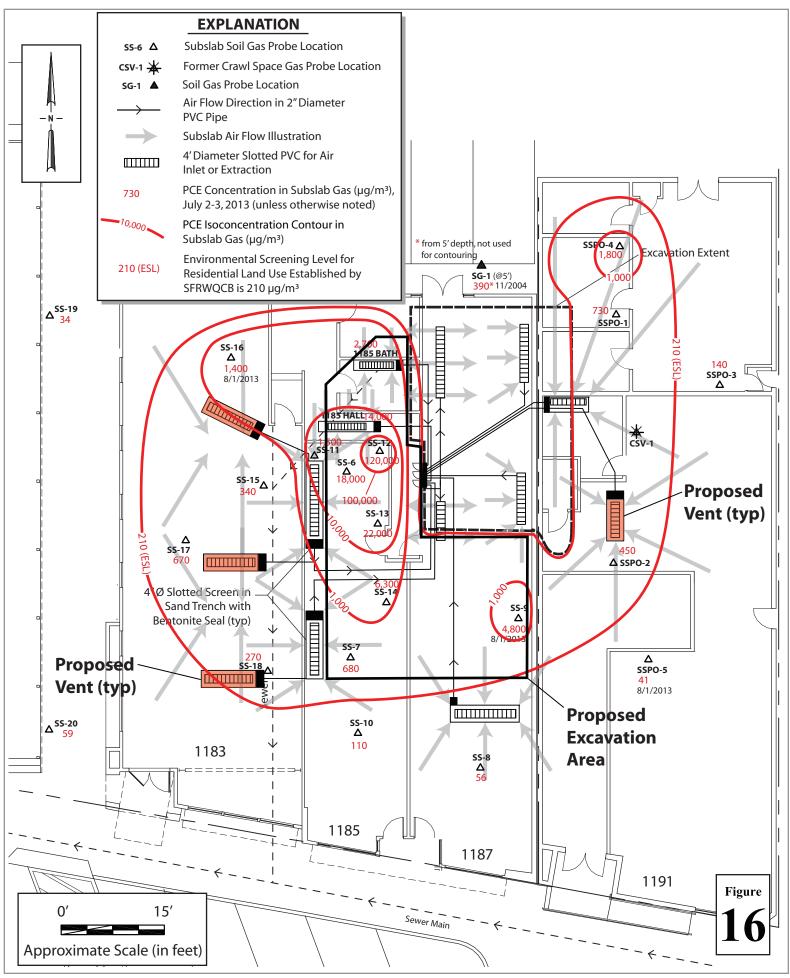






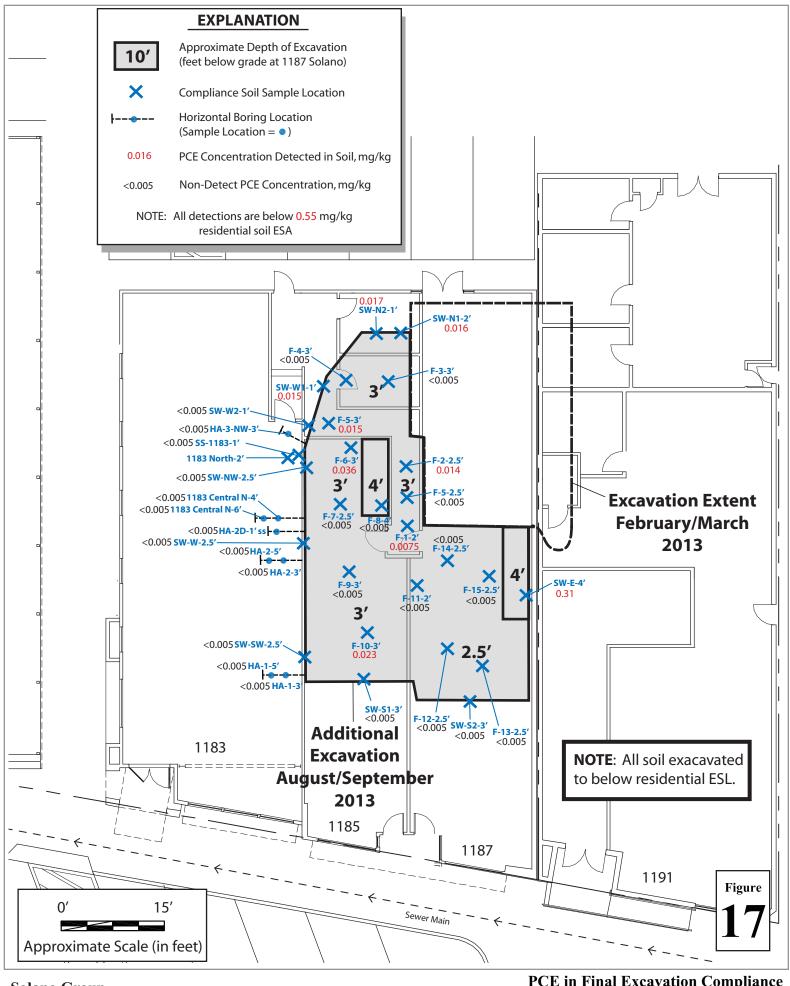






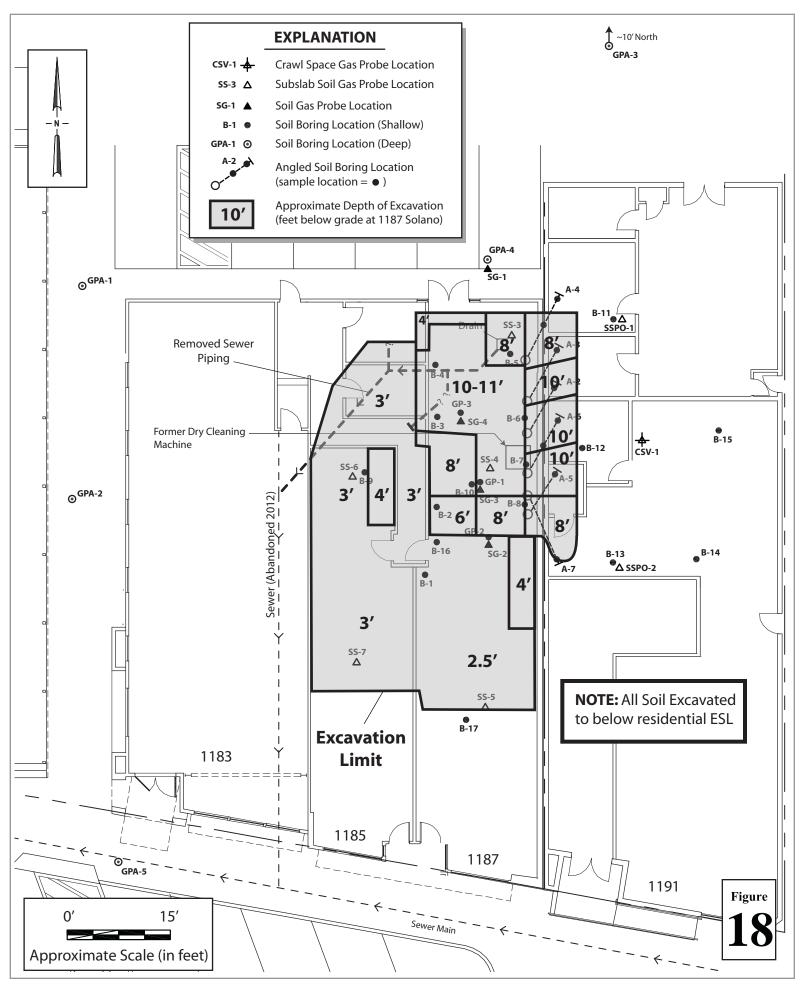


PCE in Subslab Gas (July/August 2013 Data) and Interim Remediation



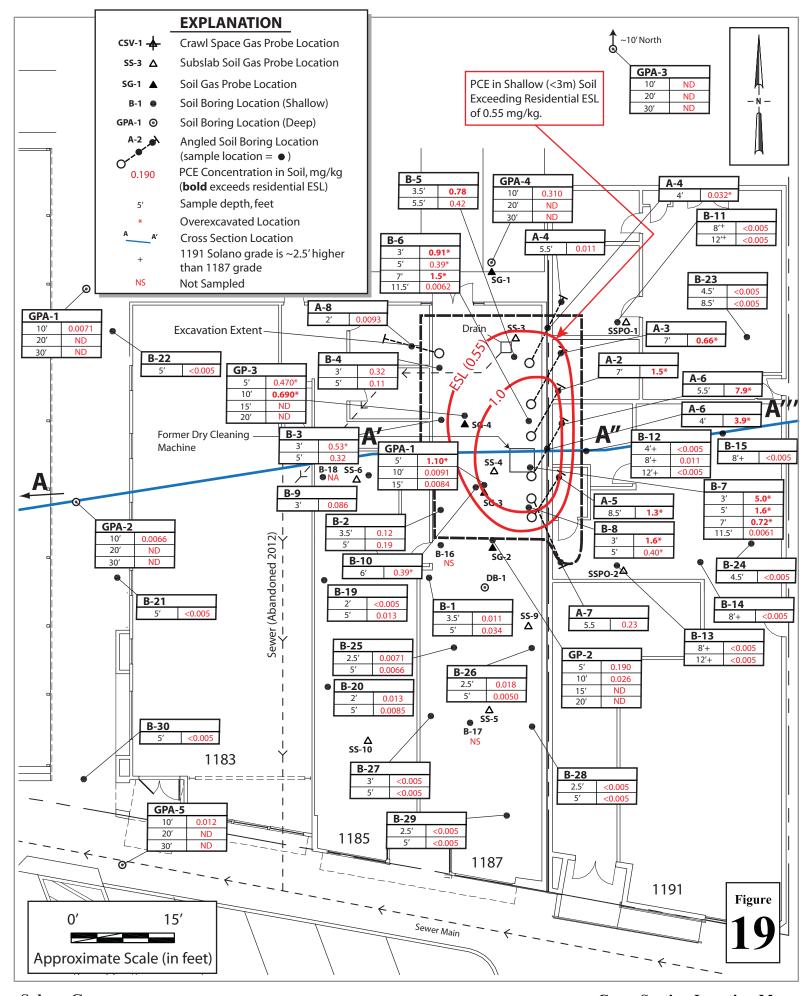


PCE in Final Excavation Compliance Samples (August/September 2013)

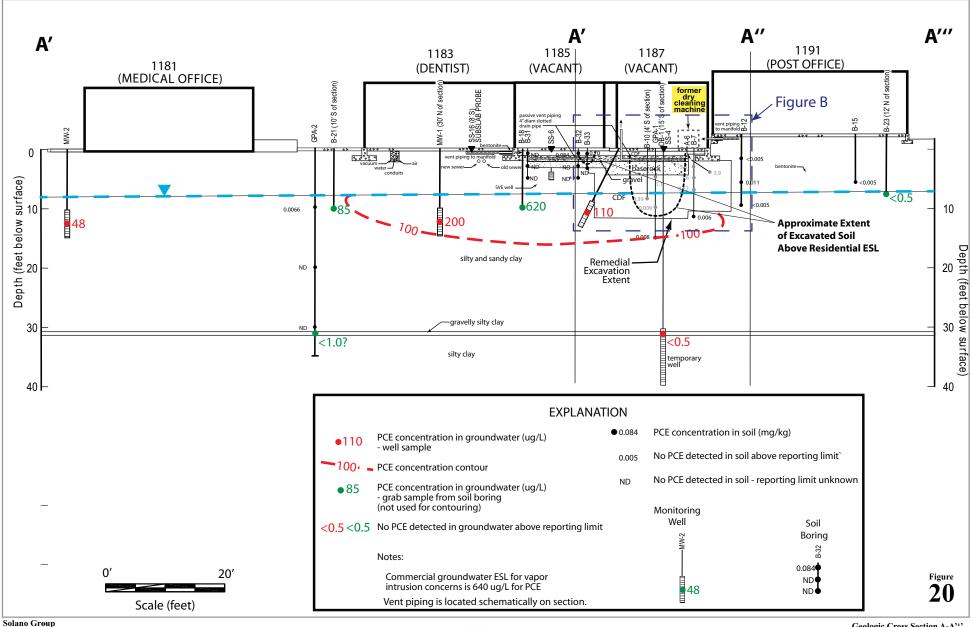




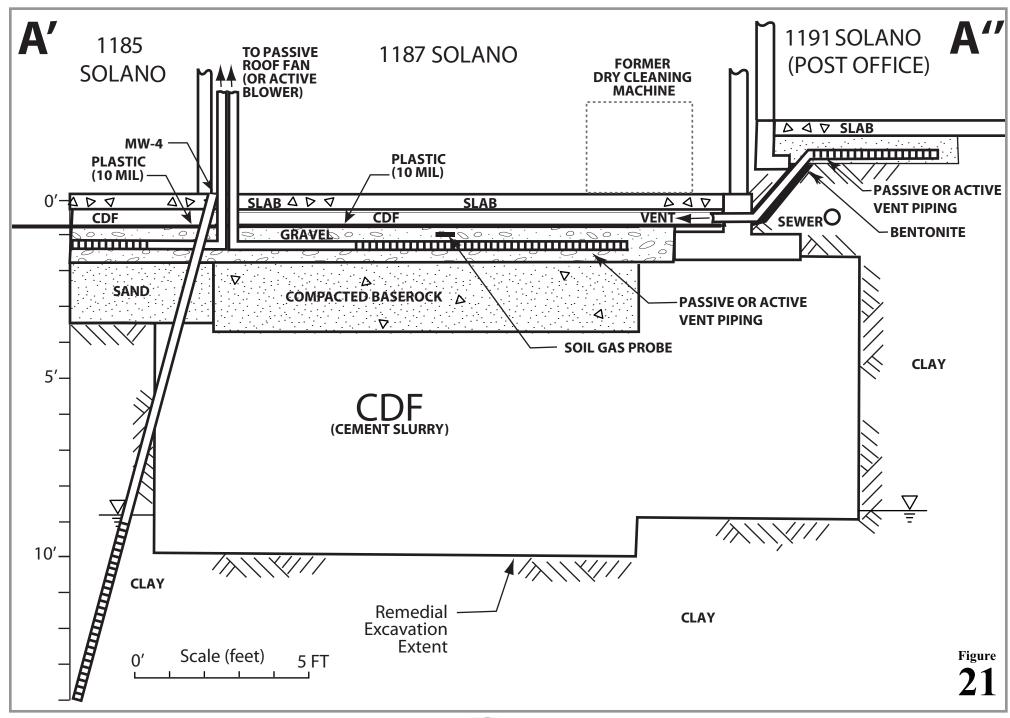
Final Interim Excavation Extent and Depth, August/September 2013

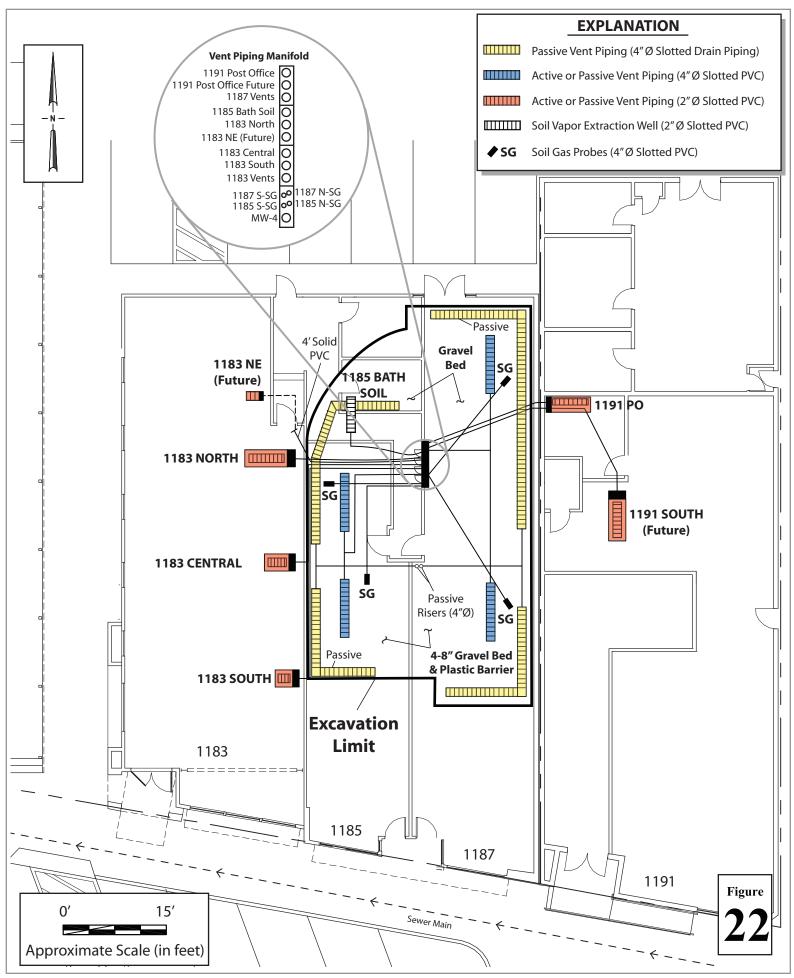






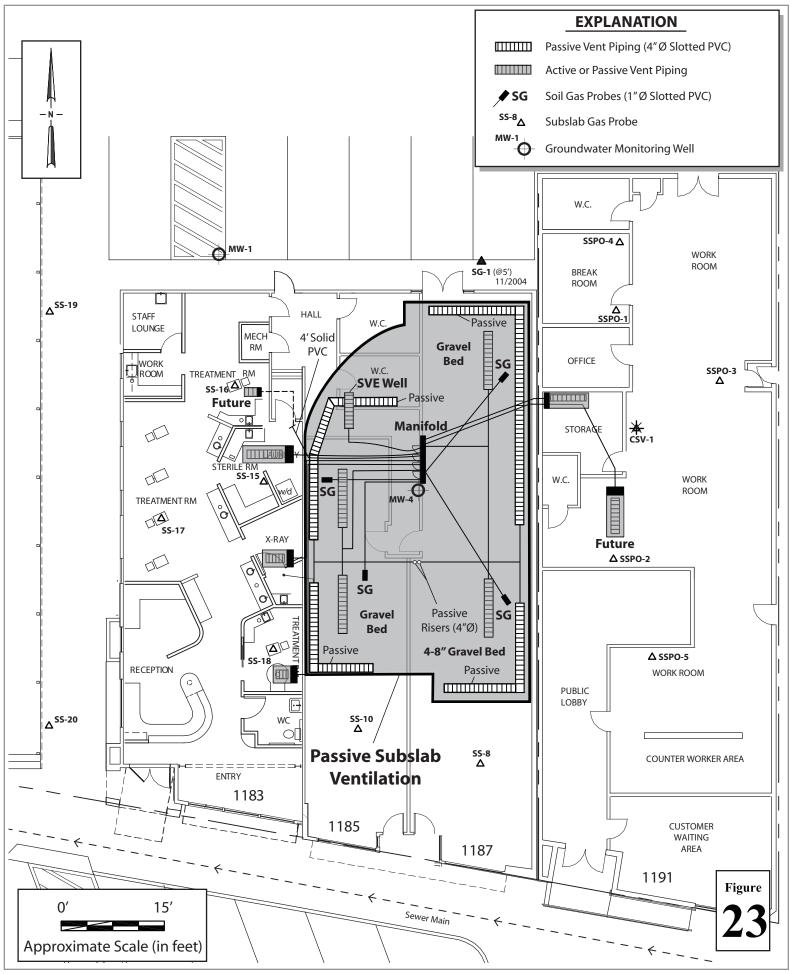






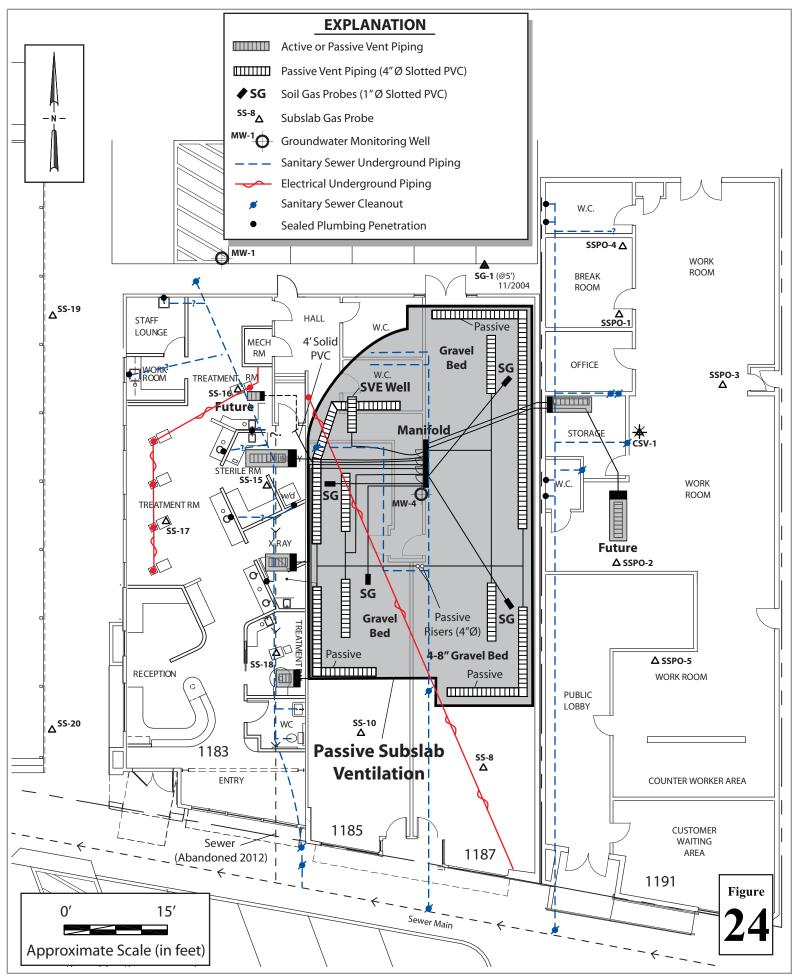


Passive Subslab Ventilation System, October 2013



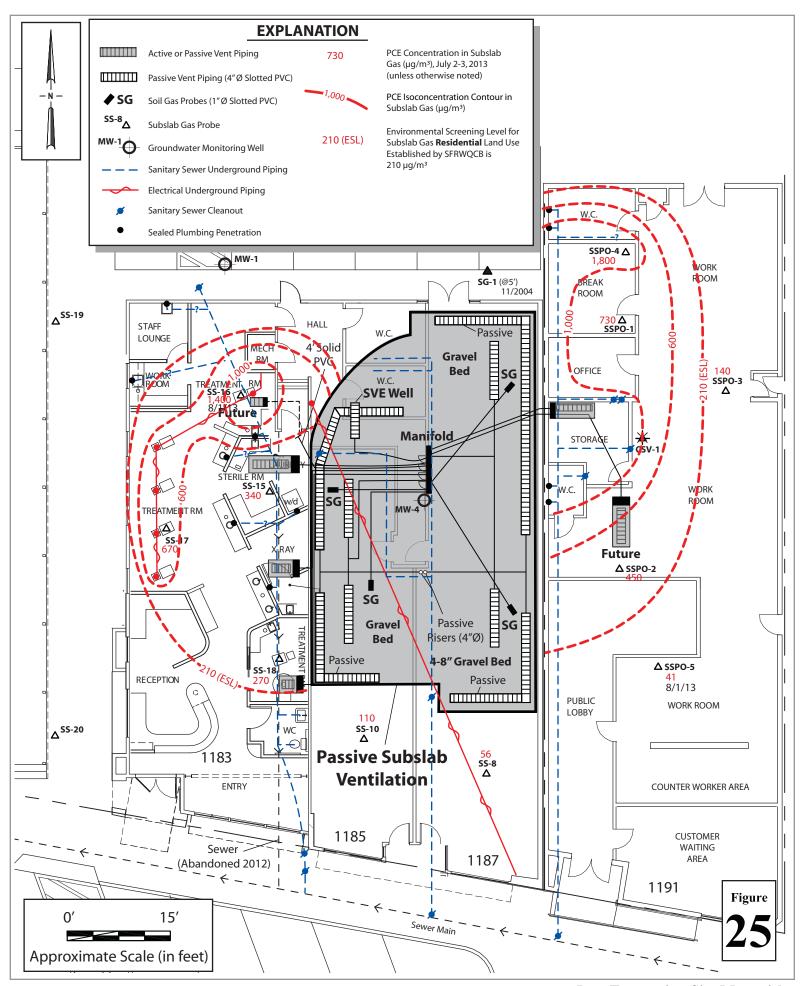


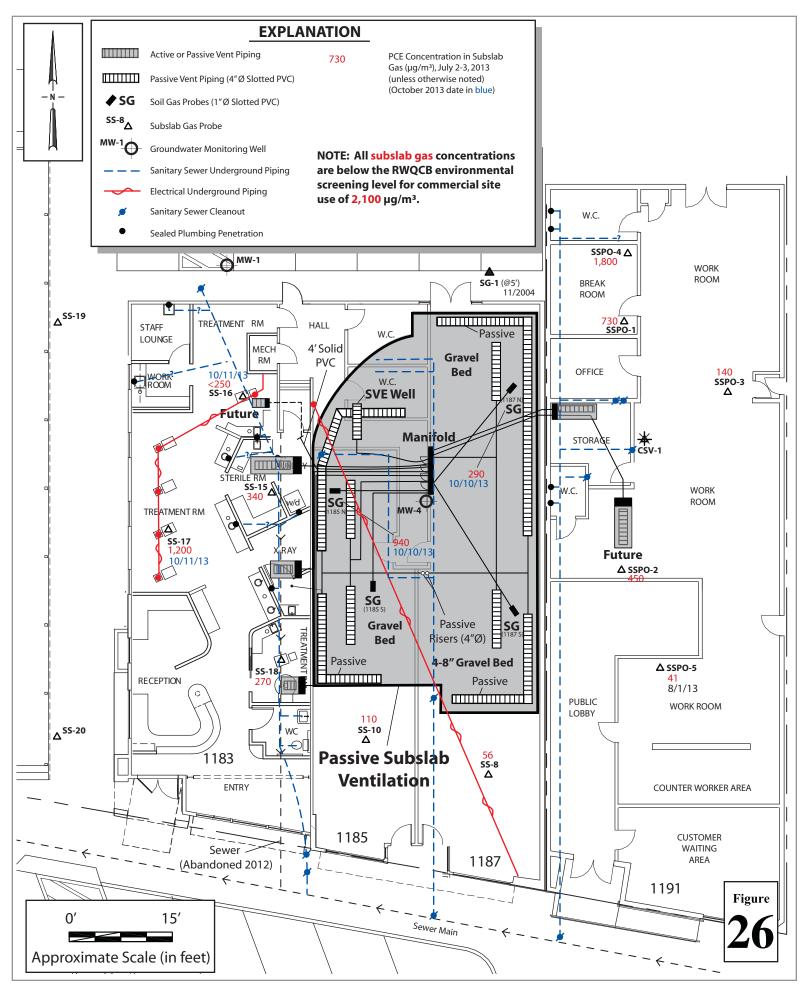
Post Excavation Site Map



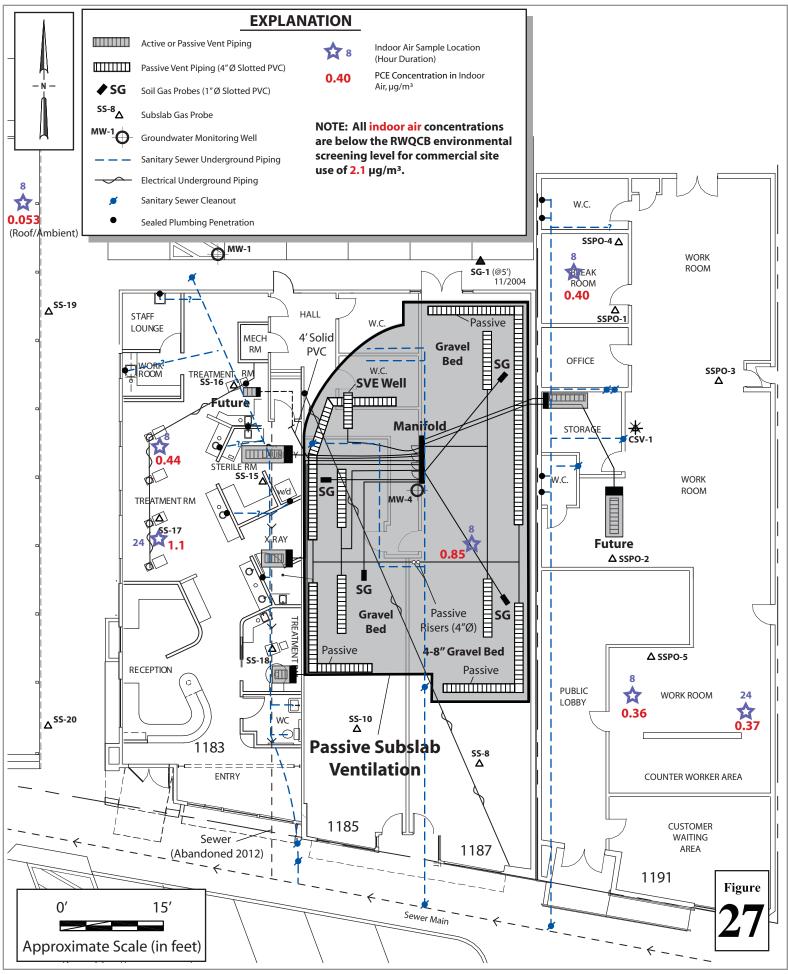


Post Excavation Site Map with Underground Utilities











B-3-5.5\*

1/10/2013

Table 1. Soil Analytical Data - 1187 Solano Ave, Albany, California

			PCE	TCE	cis-1,2-DCE	Other VOCs	Comments
Residential ESL shallow s	soil <b>dw</b> (<3 m bgs) Final E	ESL:	0.55	0.46	0.19	Varies	
Residential ESL shallow s	soil <b>non-dw</b> (<3 m bgs) Fi	inal ESL:	0.55	1.7	18	Varies	
Residential ESL shallow s	soil <b>dw&amp;non-dw</b> (<3 m b	gs) Direct Exp ESL:	0.55	1.7	160	Varies	
Commercial ESL shallow	soil dw (<3 m bgs) Final	ESL:	0.7	0.46	0.19	Varies	
Commercial ESL shallow	soil <b>non-dw</b> (<3 m bgs) l	Final ESL:	2.6	8.3	18	Varies	
Residential ESL deep soil	dw (>3 m bgs) Final ESI	_:	0.55	0.46	0.19	Varies	
Residential ESL deep soil	non-dw (>3 m bgs) Fina	l ESL:	0.55	1.7	18	Varies	
Commercial ESL deep soi	il <b>dw</b> (>3 m bgs) Final ES	iL:	0.7	0.46	0.19	Varies	
Commercial ESL deep soi	il <b>non-dw</b> (>3 m bgs) Fin	al ESL:	2.6	8.3	18	Varies	
Commercial ESL soil dw	& non-dw (>3 m bgs) Di	irect Exp. ESL:	2.6	8.3	2,000	Varies	
Boring/	Date	Sample Depth					
Sample ID	Sampled	(ft bgs)	•		mg/Kg	<b>—</b>	
2004 and 2005 Borings		5.0	1.10	0.0050	NID	NID	Overnovooveted
GP-1-5' GP-1-10'	11/2/2004 11/2/2004	5.0 10.0	<b>1.10</b> 0.0091	0.0059 ND	ND ND	ND ND	Overexcavated Overexcavated
GP-1-10' GP-1-15'	11/2/2004	15.0	0.0091	ND ND	ND ND	ND ND	Overexcavated
01-1-13	11/2/2004	13.0	0.0064	MD	ND	ND	
GP-2-5'	11/2/2004	5.0	0.190	0.0022	ND	ND	
GP-2-10'	11/2/2004	10.0	0.026	ND	ND	ND	
GP-2-15'	11/2/2004	15.0	ND	ND	ND	ND	
GP-2-20'	11/2/2004	20.0	ND	ND	ND	ND	
GP-3-5'	11/2/2004	5.0	0.470	ND	ND	ND	Overexcavated
GP-3-10'	11/2/2004	10.0	0.690	ND	ND	ND	Overexcavated
GP-3-15'	11/2/2004	15.0	ND	ND	ND	ND	
GP-3-20'	11/2/2004	20.0	ND	ND	ND	ND	
GPA-1-10'	4/20/2005	10.0	0.0071	ND	ND	ND	
GPA-1-20'	4/20/2005	20.0	ND	ND	ND	ND	
GPA-1-30'	4/20/2005	30.0	ND	ND	ND	ND	
GD 1 2 101	4/20/2005	10.0	0.0055	) ID	W	<b>N</b> TD	
GPA-2-10'	4/20/2005	10.0	0.0066	ND	ND	ND	
GPA-2-20'	4/20/2005	20.0 30.0	ND ND	ND ND	ND ND	ND ND	
GPA-2-30'	4/20/2005	30.0	ND	ND	ND	ND	
GPA-3-10'	4/20/2005	10.0	ND	ND	ND	ND	
GPA-3-20'	4/20/2005	20.0	ND	ND	ND	ND	
GPA-3-30'	4/20/2005	30.0	ND	ND	ND	ND	
GPA-4-10'	4/20/2005	10.0	0.310	ND	ND	ND	
GPA-4-20'	4/20/2005	20.0	ND	ND	ND	ND	
GPA-4-30'	4/20/2005	30.0	ND	ND	ND	ND	
					_		
GPA-5-10'	4/20/2005	10.0	0.012	ND	ND	ND	
GPA-5-20'	4/20/2005	20.0	ND	ND	ND	ND	
GPA-5-30'	4/20/2005	30.0	ND	ND	ND	ND	
January 2013 Borings							
B-1-3.5	1/10/2013	3.5-4.0	0.011	< 0.005	< 0.005	ND	
B-1-5.5	1/10/2013	5.0-5.5	0.034	0.0051	< 0.005	ND	
B-2-4*	1/10/2012	3.5-4.0	0.12	0.046	0.022	ND	Overexcavated
B-2-5.5*	1/10/2013 1/10/2013	5.0-5.5	0.12	0.046	0.022	ND ND	Overexcavated
220.0	1/10/2013	5.0-5.5	0.17	0.023	0.010	ND	O TELEACAVAICU
B-3-3.5*	1/10/2013	3.0-3.5	0.53	< 0.025	< 0.025	ND	Overexcavated
D 2 5 5*	1/10/2012	5055	0.22	<0.020	<0.020	ND	

0.32

< 0.020

< 0.020

ND

Overexcavated

5.0-5.5

Table 1. Soil Analytical Data - 1187 Solano Ave, Albany, California

			DCE	TCE	-i- 1.2 DCE	Od VOC-	C
Residential ESL shallow so	oil dw (<2 m bgs) Final F	CI.	9.55	TCE 0.46	0.19	Other VOCs Varies	Comments
Residential ESL shallow so			0.55	1.7	18	Varies	
Residential ESL shallow s			0.55	1.7	160	Varies	
Commercial ESL shallow			0.7	0.46	0.19	Varies	
Commercial ESL shallow			2.6	8.3	18	Varies	
Residential ESL deep soil	, ,		0.55	0.46	0.19	Varies	
Residential ESL deep soil			0.55	1.7	18	Varies	
Commercial ESL deep soi	, , ,		0.7	0.46	0.19	Varies	
Commercial ESL deep soi			2.6	8.3	18	Varies	
Commercial ESL soil dw			2.6	8.3	2,000	Varies	
Boring/	Date	Sample Depth			•		
Sample ID	Sampled	(ft bgs)	<b>~</b>		mg/Kg ———	<b></b>	
•	•						
B-4-3.5*	1/10/2013	3.0-3.5	0.32	< 0.020	< 0.020	ND	Overexcavated
B-4-5.5*	1/10/2013	5.0-5.5	0.11	< 0.005	< 0.005	ND	Overexcavated
B-5-3.5*	1/10/2013	3.0-3.5	0.78	< 0.050	< 0.050	ND	Overexcavated
B-5-5.5*	1/10/2013	5.0-5.5	0.42	< 0.033	< 0.033	ND	Overexcavated
B-6-3.5*	1/10/2013	3.0-3.5	0.91	< 0.10	< 0.10	ND	Overexcavated
B-6-5.5*	1/10/2013	5.0-5.5	0.39	< 0.025	< 0.025	ND	Overexcavated
B-6-7.5*	1/10/2013	7.0-7.5	1.5	< 0.20	< 0.20	ND	Overexcavated
B-6-12*	1/18/2013	11.5-12.0	0.0062	< 0.005	< 0.005	ND	
B-7-3.5*	1/10/2013	3.0-3.5	5.0	< 0.20	< 0.20	ND	Overexcavated
B-7-5.5*	1/10/2013	5.0-5.5	1.6	< 0.10	< 0.10	ND	Overexcavated
B-7-7.5*	1/10/2013	7.0-7.5	0.72	< 0.10	< 0.10	ND	Overexcavated
B-7-12	1/18/2013	11.5-12.0	0.0061	< 0.005	< 0.005	ND	
B-8-3.5*	1/10/2013	3.0-3.5	1.6	< 0.10	< 0.10	ND	Overexcavated
B-8-5.5*	1/10/2013	5.0-5.5	0.40	< 0.025	< 0.025	ND	Overexcavated
B-9-3	1/10/2013	2.5-3.0	0.086	< 0.005	< 0.005	ND	1185 Solano
B-10-6*	1/10/2013	5.5-6.0	0.39	< 0.033	< 0.033	ND	Overexcavated
B-11-8	1/18/2013	7.5-8.0 <sup>+</sup>	< 0.005	< 0.005	< 0.005	ND	1191 Solano
B-11-8 B-11-12	1/18/2013	11.5-12.0 <sup>+</sup>	<0.005	< 0.005	< 0.005	ND ND	1191 Solano
D-11-12	1/16/2015	11.5-12.0	<0.003	<0.003	<0.003	ND	1191 Solalio
B-12-4	1/18/2013	3.5-4.0 <sup>+</sup>	< 0.005	< 0.005	< 0.005	ND	1191 Solano
B-12-8	1/18/2013	7.5-8.0 <sup>+</sup>	0.011	< 0.005	< 0.005	ND	1191 Solano
B-12-12	1/18/2013	11.5-12.0 <sup>+</sup>	< 0.005	< 0.005	< 0.005	ND	1191 Solano
	-, -, -, -, -, -, -, -, -, -, -, -, -, -						
B-13-8	1/18/2013	$7.5 - 8.0^{+}$	< 0.005	< 0.005	< 0.005	ND	1191 Solano
B-13-12	1/18/2013	11.5-12.0 <sup>+</sup>	< 0.005	< 0.005	< 0.005	ND	1191 Solano
B-14-8	1/18/2013	$7.5 - 8.0^{+}$	< 0.005	< 0.005	< 0.005	ND	1191 Solano
B-15-8	1/18/2013	$7.5 - 8.0^{+}$	< 0.005	< 0.005	< 0.005	ND	1191 Solano
Fahrung 2046 7 .	(Amalastila I 199 "						
February 2013 Borings	· -			0.10	0.10	NID	0 (1
A-2-11*	2/1/2013	7.0	1.5	< 0.10	< 0.10	ND	Overexcavated
A-3-11*	2/1/2013	7.0	0.66	< 0.20	< 0.20	ND	Overexcavated
****	2/1/2013	7.0	0.00	NO.20	V0.20	110	O . C. CACHTUICU
A-4-6*	2/1/2013	4.0	0.032	0.013	< 0.005	ND	Overexcavated
A-4-9*	2/8/2013	5.5	0.011	0.005	< 0.005	ND	

Table 1. Soil Analytical Data - 1187 Solano Ave, Albany, California

			POF	mor.		04 7722	
Pasidontial ESI shall	oil dw (<2 m bos) Eig-1 F	201.	9CE 0.55	TCE 0.46	0.19	Other VOCs Varies	Comments
Residential ESL shallow so Residential ESL shallow so			0.55	1.7	18	Varies	
Residential ESL shallow so			0.55	1.7	160	Varies	
Commercial ESL shallow			0.7	0.46	0.19	Varies	
Commercial ESL shallow	, , ,		2.6	8.3	18	Varies	
	, , ,						
Residential ESL deep soil Residential ESL deep soil			0.55 <b>0.55</b>	0.46 <b>1.7</b>	0.19	Varies Varies	
Commercial ESL deep soil			0.7	0.46	0.19		
Commercial ESL deep soi	` &,		2.6	8.3	18	Varies Varies	
Commercial ESL soil dw	` ' ' '		2.6	8.3	2,000	Varies	
Boring/	Date	Sample Depth	2.0	6.5	2,000	varies	
<u> </u>	Sample ID Sampled		-		mg/Kg —	<b></b>	
Sample 1D	Sampled	(ft bgs)			mg/Kg		
A-5-13*	2/1/2013	8.5	1.3	< 0.05	< 0.05	ND	Overexcavated
A-6-6*	2/1/2013	4.0	3.9	< 0.2	< 0.2	ND	Overexcavated
A-6-10*	2/1/2013	5.5	7.9	<0.5	<0.5	ND	Overexcavated
A-7-9*	2/8/2013	5.5	0.23	< 0.010	< 0.010	ND	Overexcavated
February and March 20	013 Excavation Bound	dary					
EX-SE-5	2/15/2013	5.0	0.012	< 0.005	< 0.005	ND	
EX-SE2-6	2/18/2013	6.0	< 0.005	< 0.005	< 0.005	ND	
EX-E-7	2/18/2013	7.0	0.055	< 0.005	< 0.005	ND	
EX-N-8	2/22/2013	8.0	< 0.005	< 0.005	< 0.005	ND	
EX-F1-11	3/5/2013	11.0	0.083	< 0.005	< 0.005	ND	
EX-F2-7	3/5/2013	7.0	0.025	< 0.005	< 0.005	ND	
SW-1-4	3/5/2013	4.0	0.021	< 0.005	< 0.005	ND	
EX-F3-6	3/6/2013	6.0	0.57	< 0.005	< 0.005	ND	Overexcavated
EX-F3-8	3/12/2013	8.0	0.36	< 0.005	< 0.005	ND	
EX-F4-6	3/6/2013	6.0	0.20	< 0.005	< 0.005	ND	
EX-F5-9	3/7/2013	9.0	0.0077	< 0.005	< 0.005	ND	
EX-F6-12	3/7/2013	12.0	0.0066	< 0.005	< 0.005	ND	
EX-F7-4	3/8/2013	4.0	0.15	< 0.005	< 0.005	ND	
SW-2-4	3/11/2013	4.0	0.16	< 0.005	< 0.005	ND	
SW-3-4	3/11/2013	4.0	0.10	< 0.005	< 0.005	ND	
EX-F8-11	3/13/2013	11.0	0.059	< 0.005	< 0.005	ND	
EX-F9-11	3/14/2013	11.0	0.026	< 0.005	< 0.005	ND	
SW-4-5	3/14/2013	5.0	0.016	< 0.005	< 0.005	ND	
SW-5-2	3/14/2013	2.0	0.12	< 0.005	< 0.005	ND	
SW-6-2	3/14/2013	2.0	0.12	< 0.005	< 0.005	ND	
SW-7-5	3/14/2013	5.0	0.047	< 0.005	< 0.005	ND	
SW-8-1	3/16/2013	1.0	0.12	< 0.005	< 0.005	ND	
SW-9-1	3/16/2013	1.0	0.096	< 0.005	< 0.005	ND	
Sewer-1-1	3/16/2013	1.0	0.34	< 0.005	< 0.005	ND	
Sewer-2-1	3/16/2013	1.0	0.34	< 0.005	< 0.005	ND	

Table 1. Soil Analytical Data - 1187 Solano Ave, Albany, California

			<u> </u>	T	T .	T _	
D - 1 - 2 1 FGT - 1 II	71 (2 1 ) 77 17	or.	PCE	TCE	cis-1,2-DCE	Other VOCs	Comments
Residential ESL shallow s			0.55	0.46	0.19	Varies	
Residential ESL shallows			0.55	1.7	18	Varies	
Residential ESL shallow s			0.55	1.7	160	Varies	
Commercial ESL shallow Commercial ESL shallow			0.7	0.46	0.19	Varies	
	, ,		2.6	8.3	18	Varies	
Residential ESL deep soil	, ,		0.55	0.46	0.19	Varies	
Residential ESL deep soil	<del>_</del>		0.55	1.7	18	Varies	
Commercial ESL deep soi	` 0,		0.7	0.46	0.19	Varies	
Commercial ESL deep soil Commercial ESL soil dw	, ,		2.6	8.3	18	Varies	
Boring/	<del>_</del>		2.6	8.3	2,000	Varies	
ě	Date	Sample Depth	<b>←</b>		ma/Va		
Sample ID	Sampled	(ft bgs)			mg/Kg		
March and April Boring	ne 2013						
B-19-2	3/20/2013	1.5-2.0	< 0.005	< 0.005	< 0.005	ND	Overexcavated
B-19-5	3/20/2013	4.5-5.0	0.013	< 0.005	< 0.005	ND	Overexcavateu
<b>B</b> 17 3	3/20/2013	4.5-5.0	0.013	<0.003	<0.003	ND	
B-20-2	3/20/2013	1.5-2.0	0.013	< 0.005	< 0.005	ND	Overexcavated
B-20-5	3/20/2013	4.5-5.0	0.0085	< 0.005	< 0.005	ND	Overexcavated
B 20 3	3/20/2013	4.5-5.0	0.0003	₹0.005	<0.003	ND	
B-21-5	4/25/2013	4.5-5.0	< 0.005	< 0.005	< 0.005	ND	
B-22-5	4/25/2013	4.5-5.0	< 0.005	< 0.005	< 0.005	ND	
B-23-4.5	4/25/2013	4.0-4.5	< 0.005	< 0.005	< 0.005	ND	
B-23-8.5	4/25/2013	8.0-8.5	< 0.005	< 0.005	< 0.005	ND	
B-24-4.5	4/25/2013	4.0-4.5	< 0.005	< 0.005	< 0.005	ND	
B-25-2.5	4/25/2013	2.0-2.5	0.0071	< 0.005	< 0.005	ND	
B-25-5	4/25/2013	4.5-5.0	0.0066	< 0.005	< 0.005	ND	
B-26-2.5	4/25/2013	2.0-2.5	0.008	< 0.005	< 0.005	ND ND	
B-26-5							
B-27-3	4/25/2013	4.5-5.0 2.5-3.0	0.0050 <0.005	<0.005 <0.005	<0.005 <0.005	ND ND	
B-27-5	4/25/2013						
	4/25/2013	4.5-5.0	< 0.005	< 0.005	<0.005	ND	
B-28-2.5	4/25/2013	2.0-2.5	< 0.005	<0.005	<0.005	ND	
B-28-5	4/25/2013	4.5-5.0	< 0.005	< 0.005	<0.005	ND	
B-29-2.5	4/25/2013	2.0-2.5	<0.005	< 0.005	<0.005	ND	
B-29-5 B-30-5	4/25/2013	4.5-5.0	< 0.005	< 0.005	<0.005	ND	
D-30-3	4/25/2013	4.5-5.0	< 0.005	< 0.005	< 0.005	ND	
May 2013 Boring (Angl	lad Undar Bathroom at	t 1185 Solano)					
A-8-5	5/24/2013	2.0	0.0093	< 0.005	< 0.005	ND	
11 0 3	3/24/2013	2.0	0.0073	<0.005	<0.003	ND	
July 2013 Vertical Bori	ing (1185 Solano)						
B-31-1	7/2/2013	1.0-1.5	< 0.005	< 0.005	< 0.005	ND	Overexcavated
B-31-3	7/2/2013	3.0-3.5	< 0.005	< 0.005	< 0.005	ND	Overexcavated
B-31-5	7/2/2013	4.5-5.0	< 0.005	< 0.005	< 0.005	ND	
B-32-1	7/2/2013	1.0-1.5	0.084	< 0.005	< 0.005	ND	Overexcavated
B-32-3	7/2/2013	3.0-3.5	< 0.005	< 0.005	< 0.005	ND	Overexcavated
B-32-5	7/2/2013	4.5-5.0	< 0.005	< 0.005	< 0.005	ND	
B-33-1	7/2/2013	1.0-1.5	0.70	0.16	< 0.050	ND	Overexcavated
B-33-3	7/2/2013	3.0-3.5	< 0.005	< 0.005	< 0.005	ND	Overexcavated
B-34-1	7/2/2013	1.0-1.5	0.011	< 0.005	< 0.005	ND	Overexcavated
B-34-3	7/2/2013	3.0-3.5	< 0.005	< 0.005	< 0.005	ND	Overexcavated
B-34-5	7/2/2013	4.5-5.0	< 0.005	< 0.005	< 0.005	ND	o . c. ccu · uicu
July 2013 Boring (Ang	led Under Wall onto 11	185 Solano)					
A-9-3	7/2/2013	1.5	0.041	< 0.005	< 0.005	ND	Overexcavated
A-9-9	7/2/2013	3.0	< 0.005	< 0.005	< 0.005	ND	Overexcavated
A-9-12	7/2/2013	4.5	< 0.005	< 0.005	< 0.005	ND	
A-10-3	7/2/2013	1.0	0.045	< 0.005	< 0.005	ND	Overexcavated
A-10-6.5	7/2/2013	2.0	0.0079	< 0.005	< 0.005	ND	Overexcavated
		•					

Table 1. Soil Analytical Data - 1187 Solano Ave, Albany, California

			PCE	TCE	cis-1,2-DCE	Other VOCs	Comments
Residential ESL shallow so	oil <b>dw</b> (<3 m bgs) Final E	SSL:	0.55	0.46	0.19	Varies	
Residential ESL shallow so	oil <b>non-dw</b> (<3 m bgs) Fi	nal ESL:	0.55	1.7	18	Varies	
Residential ESL shallow so	oil <b>dw&amp;non-dw</b> (<3 m b	gs) Direct Exp ESL:	0.55	1.7	160	Varies	
Commercial ESL shallow	soil dw (<3 m bgs) Final	ESL:	0.7	0.46	0.19	Varies	
Commercial ESL shallow	soil <b>non-dw</b> (<3 m bgs) I	Final ESL:	2.6	8.3	18	Varies	
Residential ESL deep soil	dw (>3 m bgs) Final ESL	<i>:</i>	0.55	0.46	0.19	Varies	
Residential ESL deep soil	non-dw (>3 m bgs) Final	ESL:	0.55	1.7	18	Varies	
Commercial ESL deep soi	l dw (>3 m bgs) Final ES	L:	0.7	0.46	0.19	Varies	
Commercial ESL deep soi	l <b>non-dw</b> (>3 m bgs) Fina	al ESL:	2.6	8.3	18	Varies	
Commercial ESL soil dw	& non-dw (>3 m bgs) Di	rect Exp. ESL:	2.6	8.3	2,000	Varies	
Boring/	Date	Sample Depth					
Sample ID	Sampled	(ft bgs)	←		mg/Kg —	<b></b>	
A-10-12	7/2/2013	3.0	< 0.005	< 0.005	< 0.005	ND	Overexcavated
A-11-3	7/2/2013	2.0	< 0.005	< 0.005	< 0.005	ND	Overexcavated
A-11-8	7/3/2013	5.5	< 0.005	< 0.005	< 0.005	ND	
A-12-5	7/3/2013	2.5	< 0.005	< 0.005	< 0.005	ND	Overexcavated
A-12-8	7/3/2013	4.0	< 0.005	< 0.005	< 0.005	ND	
A-13-3	7/3/2013	1.5	< 0.005	< 0.005	< 0.005	ND	Overexcavated
A-13-8	7/3/2013	4.0	< 0.005	< 0.005	< 0.005	ND	
August and September	r 2013 Excavation Bou	undary					
F-1-2	8/7/2013	2.0	0.0075	< 0.005	< 0.005	ND	
F-2-2.5	8/7/2013	2.5	0.014	< 0.005	< 0.005	ND	
SW-N1-2	8/15/2013	2.0	0.016	< 0.005	< 0.005	ND	
SW-N2-1	8/15/2013	1.0	0.017	< 0.005	< 0.005	ND	
SW-W-1	8/15/2013	1.0	0.015	< 0.005	< 0.005	ND	
F-3-3	8/15/2013	3.0	< 0.005	< 0.005	< 0.005	ND	
F-4-3	8/15/2013	3.0	< 0.005	< 0.005	< 0.005	ND	
F-5-2.5	8/19/2013	2.5	< 0.005	< 0.005	< 0.005	ND	
	0.001.001.0						
SW-W2-1	8/21/2013	1.0	< 0.005	<0.005	< 0.005	ND	
F-5-3	8/21/2013	3.0	0.015	<0.005	<0.005	ND	
F-6-3	8/21/2013	3.0	0.036	< 0.005	< 0.005	ND	
F-7-2.5	9/20/2012	2.5	<0.005	<0.005	<0.005	ND	
F-7-2.5 F-8-4	8/29/2013		<0.005	<0.005	<0.005	ND	
	8/29/2013	4.0	< 0.005	<0.005	< 0.005	ND	
SW-SW-2.5 SW-W-2.5	8/29/2013	2.5	< 0.005	< 0.005	<0.005	ND ND	
	8/29/2013	2.5	< 0.005	< 0.005	<0.005 <0.005	ND	
SW-NW-2.5	8/29/2013	2.5	< 0.005	< 0.005	<0.003	ND	
F-9-3	9/5/2013	3.0	< 0.005	< 0.005	< 0.005	ND	
F-10-3	9/5/2013	3.0	0.023	< 0.005	< 0.005	ND	
F-11-2	9/5/2013	2.0	< 0.005	< 0.005	< 0.005	ND	
F-12-2.5	9/5/2013	2.5	< 0.005	< 0.005	< 0.005	ND	
F-13-2.5	9/5/2013	2.5	< 0.005	< 0.005	< 0.005	ND	
F-14-2.5	9/5/2013	2.5	< 0.005	< 0.005	< 0.005	ND	
F-15-2.5	9/5/2013	2.5	< 0.005	< 0.005	< 0.005	ND	
SW-S1-3		3.0	< 0.005				
SW-S1-3 SW-S2-3	9/5/2013 9/5/2013	3.0	< 0.005	<0.005 <0.005	<0.005 <0.005	ND ND	
SW-E-4	9/5/2013	4.0	0.005	<0.005	<0.005	ND ND	
D W -E-4	7/3/2013	4.0	0.31	₹0.020	₹0.020	ND	
August and September	r 2013 Borinas						
HA-1-3	8/29/2013	3.0	< 0.005	< 0.005	< 0.005	ND	
HA-1-5	8/29/2013	5.0	< 0.005	< 0.005	< 0.005	ND	
HA-2-3	8/29/2013	3.0	< 0.005	< 0.005	< 0.005	ND	
HA-2-5	8/29/2013	5.0	< 0.005	< 0.005	< 0.005	ND	
-		***			<del></del>	•	

Table 1. Soil Analytical Data - 1187 Solano Ave, Albany, California

			PCE	TCE	cis-1,2-DCE	Other VOCs	Comments
Residential ESL shallow	soil dw (<3 m bgs) Final ESL:		0.55	0.46	0.19	Varies	
Residential ESL shallow	soil <b>non-dw</b> (<3 m bgs) Final ESI	L:	0.55	1.7	18	Varies	
Residential ESL shallow s	soil dw&non-dw (<3 m bgs) Dire	ect Exp ESL:	0.55	1.7	160	Varies	
Commercial ESL shallow		0.7	0.46	0.19	Varies		
Commercial ESL shallow	2.6	8.3	18	Varies			
Residential ESL deep soil	dw (>3 m bgs) Final ESL:		0.55	0.46	0.19	Varies	
Residential ESL deep soil	non-dw (>3 m bgs) Final ESL:		0.55	1.7	18	Varies	
Commercial ESL deep so	il <b>dw</b> (>3 m bgs) Final ESL:		0.7	0.46	0.19	Varies	
Commercial ESL deep so	2.6	8.3	18	Varies			
Commercial ESL soil dw & non-dw (>3 m bgs) Direct Exp. ESL:			2.6	8.3	2,000	Varies	_
Boring/	Date	Sample Depth					

Boring/	Date	Sample Depth					
Sample ID	Sampled	(ft bgs)	<b>←</b>	ı	mg/Kg —	<b>→</b>	
HA-3-NW-3	8/29/2013	3.0	< 0.005	< 0.005	< 0.005	ND	
SS-1183-1	8/29/2013	1.0	< 0.005	< 0.005	< 0.005	ND	
HA-2D-1ss	8/30/2013	1.0	< 0.005	< 0.005	< 0.005	ND	
1183 North-2	9/2/2013	2.0	< 0.005	< 0.005	< 0.005	ND	
1183 Cental N-4	9/2/2013	4.0	< 0.005	< 0.005	< 0.005	ND	
1183 Cental N-6	9/2/2013	6.0	< 0.005	< 0.005	< 0.005	ND	

#### **Explanation:**

mg/Kg = milligrams per Kilogram

ft bgs = Depth below ground surface (bgs) in feet.

< n = Chemical not present at a concentration in excess of detection limit shown.

ESL = Environmental Screening Level for Shallow/Deep Soil with Residential and Commercial/Industrial Land Use, Groundwater is/is not a current or potential source of drinking water. (Table A/Table B/Table D/Table K-1/Table K-2).

ESL established by the SFBRWQCB, Interim Final - November 2007 and amended in May 2013.

 $\mathbf{non\text{-}dw} = \mathbf{groundwater} \ is \ not \ a \ current \ or \ potential \ source \ of \ drinking \ water.$ 

 $\label{eq:dw} \boldsymbol{dw} = \text{groundwater is a current or potential source of drinking water}.$ 

 $Other\ VOCs = Volatile\ Organic\ Compounds\ besides\ PCE,\ TCE\ and\ cis-1,2-DCA\ by\ EPA\ Method\ 8010.$ 

TCE = Trichloroethane by EPA Method 8010.

PCE = Tetrachloroethene by EPA Method 8010.

cis-1,2-DCE = cis-1,2 - Dichloroethene

Bold concentrations exceed residential ESL where groundwater is a current or potential source of drinking water.

 $ND = Not\ Detected\ above\ laboratory\ reporting\ limits.$ 

<sup>\* =</sup> Sample location overexcavated.

<sup>\* =</sup> Slab elevation is about 2.5 ft higher in Post Office building than adjacent units at 1185 and 1187 Solano.

<sup>-- =</sup> Not analyzed or not available.

Table 2. Groundwater Analytical Data - 1187 Solano Ave, Albany, California

				PCE	TCE	cis-1,2-DCE	BTEX	Other VOCs	Comments
Final ESL for	groundwater, dw:		•	5.0	5.0	6.0	Varies	Varies	_
Final ESL for	groundwater, non-	dw:		63	130	590	Varies	Varies	
Residential ES	L GW to Indoor A	ir:		63	130				
Commercial E	SL GW to Indoor	Air (fine - coarse):		640	1,300				
Boring/	Date	Sample Depth	Depth to Water						
Sample ID	Sampled	(ft bgs)	(ft bgs)	<b>←</b>		— μg/L —			
2004 and 200	5 Rorings								
GPA-1	4/20/2005			ND (<1.0?)	ND	ND		ND	
GPA-2	4/20/2005			ND (<1.0?)	ND	ND		ND	
GPA-3	4/20/2005			ND (<1.0?)	ND	ND		ND	
GPA-4	4/20/2005			ND (<1.0?)	ND	ND		ND	
GPA-5	4/21/2005			ND (<1.0)	ND	ND		ND	
Pangea Asse	soment 2012								
EX-SE	2/18/2013	9.0	9.0	93	<2.5	<2.5		ND	
EX-SE EX-N-GW	2/25/2013	9.0	9.0	8.3	1.4	0.71		ND	
EX-N-GW EX-E-GW	2/25/2013	9.0	9.0	750	<25	<25		ND ND	
EA-E-GW	2/23/2013	9.0	9.0	730	<23	<23		ND	
B-16	3/8/2013	8.5	8.5	520	< 0.5	< 0.5		ND	
B-17	3/8/2013	9.0	9.0	25	< 0.5	< 0.5		ND	
B-18	3/20/2013	9.0	9.0	620	<50	<50		ND	
B-19	3/20/2013	9.0	9.0	440	<50	<50		ND	
B-20	3/20/2013	9.4	9.4	190	7.0	<0.5		ND	
DB-1	2/20/2012	30-40	32.0	<0.5	< 0.5	<0.5		ND	
DB-1	3/20/2013	30-40	32.0	<0.5	<0.5	<0.5		ND	
B-21	4/25/2013	10.0	10.0	85	< 2.5	<2.5		ND	
B-22	4/25/2013	10.0	10.0	820	< 50	< 50		ND	
B-23	4/25/2013	12.0	12.0	< 0.5	< 0.5	< 0.5		ND	
B-24	4/25/2013	12.0	12.0	< 0.5	< 0.5	< 0.5		ND	
B-30	4/25/2013	10.0	10.0	290	<10	<10		ND	
Monitoring W	/ells								
MW-1	6/10/2013	9-14	13.6	200	42	<10		ND	Little water
MW-2	5/22/2013	10-15	14.0	48	<1.2	<1.2		<1.2	Little water
MW-3	5/24/2013	9-14	12.9	92	2.9	<2.5		<2.5	Little water
MW-4	9/27/2013	9-14	9.0	110	<5.0	<5.0	<5.0	ND	

#### **Explanation:**

 $\mu g/L = Micrograms \ per \ Liter$ 

ft bgs = Depth below ground surface (bgs) in feet.

ESL = Environmental Screening Level for Groundwater, groundwater is a current or potential source of drinking water. (Table F-1a).

ESL = Environmental Screening Level for groundwater, groundwater is not a current or potential source of drinking water. (Table F-1b).

ESL = Environmental Screening Level for groundwater to indoor air for residential/commercial land use. (Table E-1).

 $ESL\ established\ by\ the\ SFBRWQCB,\ Interim\ Final-November\ 2007\ and\ amended\ in\ May\ 2013.$ 

non-dw = groundwater is not a current or potential source of drinking water.

 $\boldsymbol{dw} = \text{groundwater}$  is a current or potential source of drinking water.

Other VOCs = Volatile Organic Compounds besides PCE, TCE and cis-1,2-DCA by EPA Method 8010 or 8260.

TCE = Trichloroethane by EPA Method 8010 or 8260.

 $\label{eq:PCE} PCE = Tetrachloroethene \ by \ EPA \ Method \ 8010 \ or \ 8260.$ 

cis-1,2-DCE = cis-1,2 - Dichloroethene by EPA Method 8010 or 8260.

BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260.

Bold concentrations exceed ESL protective of indoor air (commercial).

ND = Not Detected above laboratory reporting limits.

<sup>&</sup>lt; n = Chemical not present at a concentration in excess of detection limit shown.

<sup>-- =</sup> Not analyzed or not available.

 Table 3. Subslab and Soil Gas Analytical Data - 1185 - 1191 Solano Avenue, Albany, California

							· .	, ,		,
			Terrent process	Trichlinether	(A)	Toom on the state of the state	Palls Asia			
							· /			
Boring/	Date	Sample Depth			/ 3	1 3			Helium	
Sample ID	Sampled	(ft bgs)	/ <sup>©</sup>	/ &	/ ්රිug/n	/ & <sup>2</sup>	/ & /	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u>/ ॐ</u> ▼ %	Notes
-			•		ug/II	1		<b></b>	70	_
SUBSLAB [	DEPRESSI	JRIZATION	SYSTEM							
INF	4/8/13	0.5	5,000	510	<250	<250		<250		Day 3 (1st). 1185N+S&PO
INF	4/10/13	0.5	4,400	290	<250	<250		<250		Day 5 (1st). 1185N+S&PO
INF	5/2/13	0.5	1,900	<250	<250	<250		<250		Day 4 (2nd). 1185N+S&PO
INF-PO	4/10/13	0.5	700	<250	<250	<250		<250		Devi 1 DO Only Test
INF-PO INF-PO	4/10/13	0.5	370	<250	<250	<250		<250		Day 1 - PO Only Test Day 5 - PO Only Test
111 10	4/13/13	0.5	370	1250	(250	(230		1230		Day 5 To Omy Test
INF-V-1185N	5/13/13	0.5	1,300	<250	<250	<250		<250		Short Test 1185N Only
SUBSLAB (	GAS (Imme	ediately Und	er Concrete	e Slab)						
1183 Solano Ave	nue									
SS-15	07/02/13	0.5	340	<250	<250	<250	<500	<250		
SS-16	07/02/13	0.5	<250	<250	<250	<250	< 500	<250		
	08/01/13	0.5	1,400	<11	< 8.1	< 8.1	<27*	(Q)		<6.5 ug/m <sup>3</sup> benzene for TO-15.
	10/11/13	0.5	<250	<250	<250	<250	<250	ND		
99.17	07/02/12	0.5	670	.11	.0.1	.0.1	.07*	<i>a</i> >		
SS-17	07/03/13 10/11/13	0.5 0.5	670 1,200	<11 <250	<8.1 <250	<8.1 <250	<27* <250	(L) ND		
	10/11/13	0.5	1,200	<230	<230	<230	<230	ND		
SS-18	07/03/13	0.5	270	<11	<8.1	<8.1	<27*	(M)		
1185 Solano Aver	nue									
SS-6	01/17/13	0.5	120,000	9,100	270	71	7.2 (A)	(A)		Before excavation and venting
	04/25/13	0.5	40,000	10,000	<250	<250		<250		7 days after vent test end
	05/17/13	0.5	19,000	3,800	<250	<250		<250		Short test
	07/02/13	0.5	18,000	3,100	<250	<250	<500	<250		
SS-7	01/17/13	0.5	54,000	1,600	22	29	<27*	(B)	0.086	Before excavation and venting
	04/25/13	0.5	2,000	<250	<250	<250		<250		7 days after vent test end
	07/02/13	0.5	680	<250	<250	<250	< 500	<250		
SS-10	04/25/13	0.5	<250	<250	<250	<250		<250		7 days after vent test end
	07/03/13	0.5	110	<11	<8.1	<8.1	<27*	(J)		
SS-11	07/02/13	0.5	1,500	<250	<250	<250	<500	<250		
SS-12	07/02/13	0.5	120,000	15,000	<2,500	<2,500	<5,000	<2,500		
SS-13	07/02/13	0.5	22,000	18,000	3,500	<500	<1,000	<500		
SS-14	07/02/13	0.5	6,300	310	<250	<250	<500	<250		
1185 Hall	07/02/13	0.5	14,000	740	<250	<250	<500	<250		
1185 Bath	07/02/13	0.5	2,700	<250	<250	<250	<500	<250		
SG-1185N	10/10/13	1.5	940	<0.25	< 0.25	< 0.25	<500	ND		Within Passive Subslab Vent Area
1187 Solano Ave	nue									
SS-3	01/17/13	0.5	27,000	2,600	590	92	<27*	(C)	0.041	North - Before excavation
SS-4	01/17/13	0.5	770,000	60,000	2,200	1,000	28 (D)	(D)		At Former Machine - Before exc.
SS-5	01/17/13	0.5	190,000	6,300	81	56	<27*	ND		South - Before excavation

 Table 3. Subslab and Soil Gas Analytical Data - 1185 - 1191 Solano Avenue, Albany, California

Bacing   Date   Sample Depth	-					,			<del></del>		
SS-8   07/03/13   0.5   56   <11   <8.1   <8.1   <27°   (K)   0.21   7 days after vent test end					D. J.		on other	ouocomo /			
SS-8   07/03/13   0.5   56   <11   <8.1   <8.1   <27°   (K)   0.21   7 days after vent test end		_		J Joseph					/ 🕉	/ =	
SS-8   07/03/13   0.5   56   <11   <8.1   <8.1   <27°   (K)   0.21   7 days after vent test end					J. J	/ 3					
\$\$-9	Sample ID	Sampled	(It bgs)	/ ~	/ ~	/ ° nah	/ &	/ 🜣	<u> </u>	<u>~</u> ~	Notes
SS-9						ug/1	<u> </u>			70	1
SS-9											
SG-1187N   10/10/13   1.5   4,800   75   <8.1   <8.1   <27°   ND	SS-8	07/03/13	0.5	56	<11	<8.1	<8.1	<27*	(K)	0.21	7 days after vent test end
SG-1187N   10/10/13   1.5   4,800   75   <8.1   <8.1   <27°   ND	SS-9	04/25/13	0.5	<250	<250	<250	<250		<250		7 days after vent test end
SG-1187N   10/10/13   1.5   290   <0.25   <0.25   <0.25   <500   ND     Within Passive Subslab Vent Area		08/01/13	1.5	4,800	75	<8.1	<8.1	<27*	ND		,
SS-PO-1											
SS-PO-1	SG-1187N	10/10/13	1.5	290	< 0.25	< 0.25	< 0.25	< 500	ND		Within Passive Subslab Vent Area
SS-PO-1											
04/25/13   0.5   860   250   250   250   350		enue									
SS-PO-2 01/17/13 0.5 750	SS-PO-1										•
SS-PO-2			0.5	860	<250	<250	<250		<250		7 days after vent test end
04/25/13   0.5   <250   <250   <250   <250   <250   <		07/02/13	0.5	730	<250	<250	<250	< 500	<250		
04/25/13   0.5   <250   <250   <250   <250   <250   <	00.00.0	0.4 14 = 14.0		= -0		0.4	•0		-		
SS-PO-3   07/03/13   0.5   450   <11   <8.1   <8.1   <27*   (N)	SS-PO-2										
SS-PO-3 07/03/13 0.5 140 <11 <8.1 <8.1 <27* (O)  SS-PO-4 07/03/13 0.5 1,800 <11 <8.1 <8.1 <27* (P)  SS-PO-5 08/01/13 0.5 41 <11 <8.1 <8.1 <27* ND  CSV-1 01/17/13 0.2 <14 <11 <8.1 <8.1 <9.1 19 (G) (G) Crawl Space  Courtyard West of 1191 Solano Avenue  SS-19 07/03/13 0.5 34 <11 <8.1 <8.1 15 (I) (I) Courtyard  SS-20 07/03/13 0.5 59 <11 <8.1 <8.1 <8.1 <27* (H) Courtyard  Residential ESL for subslab gas: 2,100 3,000 260,000 Varies Varies NA  ION Residential ESL for subslab gas: 2,100 3,000 310,000 Varies Varies NA  Residential CHHSL for subslab gas: 13.86 40.8 1,020 2,040 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA											7 days after vent test end
SS-PO-4 07/03/13 0.5 1,800 <11 <8.1 <8.1 <27* (P)  SS-PO-5 08/01/13 0.5 41 <11 <8.1 <8.1 <27* ND  CSV-1 01/17/13 0.2 <14 <11 <8.1 <8.1 19 (G) (G) Crawl Space  Courtyard West of 1191 Solano Avenue  SS-19 07/03/13 0.5 34 <11 <8.1 <8.1 15 (I) (I) Courtyard  SS-20 07/03/13 0.5 59 <11 <8.1 <8.1 <8.1 27* (H) Courtyard  Residential ESL for subslab gas: 210 300 31,000 Varies Varies NA  10X Residential ESL for subslab gas: 2,100 3,000 260,000 Varies Varies NA  Residential CHHSL for subslab gas: 13.86 40.8 1,020 2,040 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA		07/03/13	0.5	450	<11	<8.1	<8.1	<27*	(N)		
SS-PO-4 07/03/13 0.5 1,800 <11 <8.1 <8.1 <27* (P)  SS-PO-5 08/01/13 0.5 41 <11 <8.1 <8.1 <27* ND  CSV-1 01/17/13 0.2 <14 <11 <8.1 <8.1   19 (G) (G) Crawl Space  Courtyard West of 1191 Solano Avenue  SS-19 07/03/13 0.5 34 <11 <8.1 <8.1   15 (I) (I) Courtyard  SS-20 07/03/13 0.5 59 <11 <8.1 <8.1 <27* (H) Courtyard  Residential ESL for subslab gas: 210   300     31,000   Varies   Varies   NA    10X Residential ESL for subslab gas: 2,100   3,000     310,000   Varies   Varies   NA    Residential CHHSL for subslab gas: 2,100   3,000     310,000   Varies   Varies   NA    Residential CHHSL for subslab gas: 13.86   40.8   1,020   2,040   Varies   Varies   NA    Residential CHHSL for indoor air: 0,412   1,22   36.5   73   Varies   Varies   NA    Residential CHHSL for indoor air: 0,412   1,22   36.5   73   Varies   Varies   NA	SS-PO-3	07/03/13	0.5	140	∠11	< 8.1	< 8.1	<27*	(0)		
SS-PO-5 08/01/13 0.5 41 <11 <8.1 <8.1 <27* ND  CSV-1 01/17/13 0.2 <14 <11 <8.1 <8.1 19 (G) (G) Crawl Space  Courtyard West of 1191 Solano Avenue SS-19 07/03/13 0.5 34 <11 <8.1 <8.1 15 (I) (I) Courtyard  SS-20 07/03/13 0.5 59 <11 <8.1 <8.1 <27* (H) Courtyard  Residential ESL for subslab gas: 210 300 31,000 Varies Varies NA  Commercial ESL for subslab gas: 2,100 3,000 260,000 Varies Varies NA  10X Residential ESL for subslab gas: 8.24 24 730 1,460 Varies Varies NA  Residential CHHSL for subslab gas: 13.86 40.8 1,020 2,040 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA	55 10 5	07/03/13	0.5	140	\11	VO.1	VO.1	\27	(0)		
SS-PO-5 08/01/13 0.5 41 <11 <8.1 <8.1 <27* ND  CSV-1 01/17/13 0.2 <14 <11 <8.1 <8.1 19 (G) (G) Crawl Space  Courtyard West of 1191 Solano Avenue SS-19 07/03/13 0.5 34 <11 <8.1 <8.1 15 (I) (I) Courtyard  SS-20 07/03/13 0.5 59 <11 <8.1 <8.1 <8.1 <27* (H) Courtyard  Residential ESL for subslab gas: 210 300 31,000 Varies Varies NA  Commercial ESL for subslab gas: 2,100 3,000 260,000 Varies Varies NA  10X Residential ESL for subslab gas: 8.24 24 730 1,460 Varies Varies NA  Residential CHHSL for subslab gas: 13.86 40.8 1,020 2,040 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA	SS-PO-4	07/03/13	0.5	1,800	<11	<8.1	<8.1	<27*	(P)		
CSV-1 01/17/13 0.2 <14 <11 <8.1 <8.1 19 (G) (G) Crawl Space  Courtyard West of 1191 Solano Avenue SS-19 07/03/13 0.5 34 <11 <8.1 <8.1 15 (I) (I) Courtyard  SS-20 07/03/13 0.5 59 <11 <8.1 <8.1 <27* (H) Courtyard  Residential ESL for subslab gas: 210 300 31,000 Varies Varies NA  Commercial ESL for subslab gas: 2,100 3,000 260,000 Varies Varies NA  10X Residential ESL for subslab gas: 2,100 3,000 310,000 Varies Varies NA  Residential CHHSL for subslab gas: 8.24 24 730 1,460 Varies Varies NA  Commercial CHHSL for subslab gas: 13.86 40.8 1,020 2,040 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA											
Courtyard West of 1191 Solano Avenue   SS-19   07/03/13   0.5   34   <11   <8.1   <8.1   <8.1   15 (I)   (I)     Courtyard	SS-PO-5	08/01/13	0.5	41	<11	< 8.1	< 8.1	<27*	ND		
Courtyard West of 1191 Solano Avenue   SS-19   07/03/13   0.5   34   <11   <8.1   <8.1   <8.1   15 (I)   (I)     Courtyard											
SS-19   07/03/13   0.5   34   <11   <8.1   <8.1   <8.1   15 (I) (I) Courtyard	CSV-1	01/17/13	0.2	<14	<11	<8.1	<8.1	19 (G)	(G)		Crawl Space
SS-19   07/03/13   0.5   34   <11   <8.1   <8.1   <8.1   15 (I) (I) Courtyard											
Residential ESL for subslab gas:   210   300     31,000   Varies   Varies   NA									_		
Residential ESL for subslab gas:         210         300          31,000         Varies         Varies         NA           Commercial ESL for subslab gas:         2,100         3,000          260,000         Varies         Varies         NA           10X Residential ESL for subslab gas:         2,100         3,000          310,000         Varies         Varies         NA           Residential CHHSL for subslab gas:         8.24         24         730         1,460         Varies         Varies         NA           Commercial CHHSL for subslab gas:         13.86         40.8         1,020         2,040         Varies         Varies         NA           Residential CHHSL for indoor air:         0.412         1.22         36.5         73         Varies         Varies         NA	SS-19	07/03/13	0.5	34	<11	<8.1	<8.1	15 (I)	(I)		Courtyard
Residential ESL for subslab gas:         210         300          31,000         Varies         Varies         NA           Commercial ESL for subslab gas:         2,100         3,000          260,000         Varies         Varies         NA           10X Residential ESL for subslab gas:         2,100         3,000          310,000         Varies         Varies         NA           Residential CHHSL for subslab gas:         8.24         24         730         1,460         Varies         Varies         NA           Commercial CHHSL for subslab gas:         13.86         40.8         1,020         2,040         Varies         Varies         NA           Residential CHHSL for indoor air:         0.412         1.22         36.5         73         Varies         Varies         NA	\$\$ 20	07/02/12	0.5	50	-11	۰0 1	۰0 1	-27*	(II)		Countries
Commercial ESL for subslab gas:         2,100         3,000          260,000         Varies         Varies         NA           10X Residential ESL for subslab gas:         2,100         3,000          310,000         Varies         Varies         NA           Residential CHHSL for subslab gas:         8.24         24         730         1,460         Varies         Varies         NA           Commercial CHHSL for subslab gas:         13.86         40.8         1,020         2,040         Varies         Varies         NA           Residential CHHSL for indoor air:         0.412         1.22         36.5         73         Varies         Varies         NA	33-20	07/03/13	0.5	59	<11	<8.1	<8.1	<27*	(H)		Courtyard
Commercial ESL for subslab gas:         2,100         3,000          260,000         Varies         Varies         NA           10X Residential ESL for subslab gas:         2,100         3,000          310,000         Varies         Varies         NA           Residential CHHSL for subslab gas:         8.24         24         730         1,460         Varies         Varies         NA           Commercial CHHSL for subslab gas:         13.86         40.8         1,020         2,040         Varies         Varies         NA           Residential CHHSL for indoor air:         0.412         1.22         36.5         73         Varies         Varies         NA	Residential ESL	for subslab gas:		210	300		31,000	Varies	Varies	NA	]
10X Residential ESL for subslab gas:2,1003,000310,000VariesVariesNAResidential CHHSL for subslab gas:8.24247301,460VariesVariesNACommercial CHHSL for subslab gas:13.8640.81,0202,040VariesVariesNAResidential CHHSL for indoor air:0.4121.2236.573VariesVariesNA	Š						1			İ	
Commercial CHHSL for subslab gas: 13.86 40.8 1,020 2,040 Varies Varies NA  Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA					3,000						1
Residential CHHSL for indoor air: 0.412 1.22 36.5 73 Varies Varies NA	Residential CHF	HSL for subslab §	gas:	8.24	24	730	1,460	Varies	Varies	NA	]
	-			13.86	40.8	1,020	2,040	Varies	Varies	NA	
Commercial CHHSL for indoor air: 0.693 2.04 51.1 102 Varies Varies NA	Residential CHI	HSL for indoor ai	ir:	0.412	1.22	36.5	73	Varies	Varies	NA	]
	Commercial CH	HSL for indoor a	air:	0.693	2.04	51.1	102	Varies	Varies	NA	]

# Pangea

Table 3. Subslab and Soil Gas Analytical Data - 1185 - 1191 Solano Avenue, Albany, California

Boring/ Sample ID	Date Sampled	Sample Depth (ft bgs)	Tentenhoroeu	Tichood and the Pick of the Pi	13 14 VO	Tellin,	Notes
			←	ug/m <sup>3</sup>	$\longrightarrow$	<b>(</b> %	

#### SOIL GAS (About 5 feet deep into site soil)

SG-1	11/02/04	5.0	390	ND	ND	ND	(R)	misc	 Outside
SG-2	11/02/04	5.0	90,000	10,000	100	390	(S)	misc	
SG-3	11/02/04	5.0	100,000	7,900	ND	ND	(T)	misc	
SG-4	11/02/04	5.0	170,000	5,500	ND	ND	(U)	misc	

Residential CHHSL for shallow soil gas:	180	528	15,900	31,900	Varies	Varies	NA
Commercial CHHSL for shallow soil gas:	600	1,770	44,400	88,700	Varies	Varies	NA
Residential ESL for shallow soil gas:	210	300		31,000	Varies	Varies	NA
Commercial ESL for shallow soil gas:	2,100	3,000		260,000	Varies	Varies	NA
10x Residential ESL shallow soil gas:	2,100	3,000		310,000	Varies	Varies	NA

#### Abbreviations:

Tetrachloroethene, Trichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, and Helium analyzed by Method TO-15 or EPA Method 8260 (sometimes 8010 report list).

BTEX = Benzene, toluene, ethylbenzene, and xylenes by Method TO-15 or EPA Method 8260.

Other VOCs = Volatile Organic Compounds except for Tetrachloroethene, Trichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene and Helium analyzed by Method TO-15 or EPA Method 8260 (sometimes only 8010 list).

ug/m<sup>3</sup> = Micrograms per cubic meter of air.

ft bgs = Depth interval below ground surface (bgs) in feet.

NA= not applicable

 $ND = \ not \ detected \ above \ laboratory \ reporting \ limits.$ 

< n = Chemical not present at a concentration in excess of detection limit shown.

CHHSL = California Human Health Screening Levels for Soil Gas below buildings constructed without engineered fill below sub-slab gravel with Commercial/Industrial Land Use Updated 9/23/2010. http://oehha.ca.gov/risk/chhsltable.html. Commercial CHHSL assumes 24 hr exposure, versus 8 hr exposure for commercial ESL.

CHHSL (subslab) = California Human Health Screening Levels for sublsab gas has an attenuation factor of 0.05 of indoor air screening levels per CalEPA/DTSC Vapor Intrusion Guidance Document, October 2011 (p 21).

ESL = Environmental Screening Level for Shallow Soil Gas for Evaluation of Potential Vapor Intrusion (Table E-2). Established by the SFBRWQCB, Interim Final - November 2007 (Revised May 2013).

Tetrachloroethene also referred to as Perchloroethene, PCE or Perc.

**Bold** concentrations exceed commercial CHHSL.

\* BTEX detection limits for TO-15 = Benzene 6.5 ug/m³, toluene 8.8 ug/m³, ethylbenzene 8.8 ug/m³, and xylenes 27 ug/m³. Highest detection limit shown above.

Note A: 7.2 ug/m<sup>3</sup> benzene and 13 ug/m<sup>3</sup> chloroform

Note B: 7.2 ug/m3 tetrahydrofuran and 32 ug/m3 ethyl acetate

Note C: 23 ug/m3 chloroform

Note D: 28 ug/m<sup>3</sup> benzene, 80 ug/m<sup>3</sup> chloroform, and 49 ug/m<sup>3</sup> 1,1-dichloroethene

Note E: 8.1 ug/m3 tetrahydrofuran and 9.1 ug/m3 vinyl chloride

Note F: 210  $\mbox{ug/m}^3$  ethanol and 14  $\mbox{ug/m}^3$  tetrahydrofuran

Note G: 290 ug/m<sup>3</sup> 4-methyl-2-pentanone and 19 ug/m<sup>3</sup> toluene (possibley associated with building materials).

Note H: 310 ug/m<sup>3</sup> acetone and 71 ug/m<sup>3</sup> tetraydrofuran

Note I:  $250 \text{ ug/m}^3$  acetone,  $51 \text{ ug/m}^3$  isopropyl alcohol,  $21 \text{ ug/m}^3$  styrene,  $15 \text{ ug/m}^3$  toluene,  $7.1 \text{ ug/m}^3$  carbon disulfide, and  $8.9 \text{ ug/m}^3$  4-methyl-2-pentanone

Note J: 390 ug/m<sup>3</sup> acetone, 13 ug/m<sup>3</sup> styrene, and 38 ug/m<sup>3</sup> tetrahydrofuran

Note K:  $320 \text{ ug/m}^3$  acetone and  $61 \text{ ug/m}^3$  tetrahydrofuran

Note L: 240  $ug/m^3$  acetone and 39  $ug/m^3$  tetrahydrofuran

Note M: 200 ug/m³ acetone, 9.0 ug/m³ carbon disulfide, and 22 ug/m³ tetrahydrofuran

Note N: 200 ug/m³ acetone, 20 ug/m³ carbon disulfide, and 29 ug/m³ tetrahydrofuran

Note O: 180 ug/m<sup>3</sup> acetone and 32 ug/m<sup>3</sup> tetrahydrofuran

Note P: 210 ug/m³ acetone, 51 ug/m³ ethyl acetate, and 35 ug/m³ tetrahydrofuran

Note Q: 350  $\mu g/m^3$  ethly acetate and 26,000  $\mu g/m^3$  ethanol

Note R: 650  $\mu g/m^3$  toluene, 170  $\mu g/m^3$  ethylbenzene, and 980  $\mu g/m^3$  xylenes

Note S:  $500~\mu g/m^3$  toluene,  $120~\mu g/m^3$  ethylbenzene, and  $650~\mu g/m^3$  xylenes

Note T:  $1,400 \mu g/m^3$  toluene and  $1,400 \mu g/m^3$  xylenes

Note U: 1,600  $\mu g/m^3$  toluene and 1,600  $\mu g/m^3$  xylenes

# Pangea

Table 4. Indoor Air - 1183 - 1191 Solano Avenue, Albany, California

Boring/ Sample ID	Date Sampled	lenang.	Tichnica,	100 mark (100)	Interior Interior	Tellipresheng Garban Terz	Acetine Acetine	Bromonen	on Managaria		Bentene	Filip Monge.		SHones	Thompson (1)	ome (80-)	LCA) The (1.2.)	, Silver IS	Notes
		←								ug/m³									<u> </u>
Residential ESL for Indoor		0.41	0.41		63	0.058	32,000	5.2	0.46	0.22	0.084	0.97	310	100	0.032	0.12	0.072	Varies	
Commercial ESL for Indoo		2.1	3.0		260	0.29	140,000	22	2.3	1.1	0.42	4.9	1,300	440	0.17	0.58	0.36	Varies	<u> </u>
Residential CHHSL for In	door Air:	0.412	1.22	36.5	73	0.0579					0.084		313	730		0.116	0.072	Varies	<u> </u>
10X Residential CHHSL f		4.12	12.2	365	730	0.579					0.84		3,130	7,300		1.16	0.72	Varies	
Commercial CHHSL for In	ndoor Air:	0.693	2.04	51.1	102	0.0973					0.141		438	1,020		0.195	0.12	Varies	
1183 Solano Avenue Air 1183 8hr Air 1183 24hr 1185 Solano Avenue Air 1185 8hr	10/03/13 10/03/13 FUTURE	0.44 1.1	0.027 0.048	<0.40 <0.40	<0.40 <0.40	0.54 <sup>(1,2)</sup> 0.53 <sup>(1,2)</sup>	45 46	0.89 0.72	0.28 0.19	0.078 0.06	0.39 0.29	1.9 2.3	1.3 1.9	11 14	0.023 0.02	1.1 1.7	0.61 <sup>(2)</sup> 0.51 <sup>(2)</sup>	Varies Varies	8 hr sample. Fan on. 24 hr sample. Fan on 8 hrs.
1187 Solano Avenue Air 1187	09/27/13	0.85	0.041	< 0.40	< 0.40	0.57 <sup>(1,2)</sup>	100	0.82	0.20	0.056	0.52 <sup>(2)</sup>	2.2	1.6	12	0.0086	0.084	0.25 <sup>(2)</sup>	Varies	8 hr sample
1191 Solano Avenue Air 1191 Break 8hr Air 1191 8hr Air 1191 24hr	10/03/13 10/03/13 10/03/13	0.40 0.36 0.37	0.023 0.020 0.021	<0.40 <0.40 <0.40	<0.40 <0.40 <0.40	$0.66^{(1,2)}$ $0.68^{(1,2)}$ $0.73^{(1,2)}$	30 36 37	0.82 0.74 0.81	0.30 0.41 0.41	0.14 0.15 0.16	0.37 0.39 0.39	0.92 1.1 1.8	4.1 7.7 6.3	4.7 5.7 9.4	0.015 0.014 0.013	0.093 0.12 0.15	0.39 <sup>(2)</sup> 0.38 <sup>(2)</sup> 0.46 <sup>(2)</sup>		8 hr sample 8 hr sample 24 hour sample
Background Air Background 8hr	10/03/13	0.053	< 0.0055	<0.40	<0.40	0.53 <sup>(1,2)</sup>	15	0.69	0.24	0.029	0.25	<0.44	0.47	<1.3	0.0093	0.038	0.16	Varies	Upwind 8 hr sample. On breezy roof.

#### Abbreviations:

1= Carbon tetrachloride presumably associated with refrigerant as compound is involved with refrigerant manufacturing and other refrigerants detected in sample (dichlorodifluoromethant and trichlorofluoromethane).

2= Result could be representative of background conditions due to similar concentration detected in ambient air and other indoor air samples.

 $\label{eq:PCE} PCE = Tetrachloroethene, also referred to as Perchloroethene or 'Perc'.$ 

TCE = 1,1,1-trichloroethene.

VOCs analyzed by Method TO-15

Other VOCs = Volatile Organic Compounds other than listed above as quantified by Method TO-15.

ug/m<sup>3</sup> = Micrograms per cubic meter of air.

NA= not applicable

ND = not detected above laboratory reporting limits.

< n = Chemical not present at a concentration in excess of detection limit shown.

CHHSL = California Human Health Screening Levels for Indoor Air Updated 9/23/2010. http://oehha.ca.gov/risk/chhsltable.html. Commercial CHHSL assumes 24 hr exposure, versus 8 hr exposure for commercial ESL.

ESL = Environmental Screening Level for Indoor Air (Table E-3). Established by the SFBRWQCB, Interim Final - November 2007 (Revised Feb 2013).

Bold concentrations exceed commercial ESL.

Table 5 - Cleanup Levels and Goals - Former Albany 1-Hr Cleaners, 1187 Solano Avenue, Albany, California

		Te	trachloroethene (PCE)	
Media	Current Maximum	Cleanup Goal	Cleanup Level	Current Estimated Risk and Comments
Soil	<b>0.31</b> mg/kg (GPA-4@10' and SW-EX-4@4')	<b>0.55</b> mg/kg (Residential Final ESL for Drinking Water Resource)	0.55 mg/kg (Same as Goal) (Met Goal: Residential and Commercial)	Risk <1 x 10 <sup>-6</sup> Residential and Commercial  All soil excavated to below RESIDENTIAL screening level (ESL).
Groundwater (Shallow, about 10')	200 ug/L (Well MW-1) 820 ug/L (Grab B-22)	640 ug/L (Commercial ESL protective of indoor air)  Alternate Goal: 63 ug/L (Residential ESL protective of indoor air)	640 ug/L (Same as Goal) (Met Goal: Commercial)  Alternate Level: 630 ug/L (10x Residential ESL protective - indoor air) (Met Proposed Cleanup Level for Residential Use) (Superceded by Subslab Gas and Indoor Air)	Risk <1 x 10 <sup>-6</sup> Commerical  Also Met Risk <10 x 10 <sup>-6</sup> Residential  Well data below commercial ESL protective of indoor air. Plume delineated to cleanup goal by site wells and grab data. Clayey site soil will limit upward migration of PCE vapor from groundwater. Expect attenuation now that source removed. Once plume deemed delineated and stable, subslab gas is the primary driver for mitigation and case closure.
Groundwater (Deeper, about 30')	<1 ug/L	5 ug/L	5 ug/L (Met Goal)	<b>No impact</b> detected in deeper groundwater (about 30 ft bgs).
Subslab Gas (Primary Cleanup Level)	940 ug/m³ (1185+1187 Solano @SG-1185N) 1,200 ug/m³ (1183 Solano @SS-17) 1,800 ug/m³ (1191 Solano @SSPO-4)	2,100 ug/m³ (Commercial ESL)  Alternate Goal: 210 ug/m³ (Residential ESL)	2,100 ug/m <sup>3</sup> (Same as Goal, and 10x Residential Goal) (Met Goal: Commerical) (Met Level: Residential)	Risk <1 x 10 <sup>-6</sup> Commerical  Also Met Risk <10 x 10 <sup>-6</sup> Residential  All subslab gas concentrations are below Commecial Goal (ESL). Passive subslab venting system is mitigation measure for additional safeguard for protection of indoor air.
Indoor Air	<b>0.85</b> ug/m <sup>3</sup> 1187 Solano 8 hr <b>1.1</b> ug/m <sup>3</sup> 1183 Solano 24 hr <b>0.40</b> ug/m <sup>3</sup> 1191 Solano 8 hr	2.1 ug/m³ (Commercial ESL)  Alternate Goal: 0.41 ug/m³ (Residential ESL)	2.1 ug/m³ (Same as Goal) (Met Goal: Commerical)  Alternate Level 1: 4.1 ug/m³ (10 x Residential ESL) (Met Proposed Cleanup Level for Residential Use)	Risk <1 x 10 <sup>-6</sup> Commerical (All Units)  1191 Solano: Risk is below 1 x 10 <sup>-6</sup> Residential Goal.  1185 and 1187 Solano: Risk expected to meet  Residential goal of 1 x 10 <sup>-6</sup> upon slab installation.  Passive subslab venting system adds safeguard.  1183 Solano: Risk slightly above 1 x 10 <sup>-6</sup> for residential use. Current risk of 10 x 10 <sup>-6</sup> is acceptable for residential use. Expect risk reduction and attenuation now that extensive source removal complete.

Notes and abbreviations:

Cleanup *Level* represents target concentration for remedial efforts, while Cleanup *Goal* represents long-term target concentration following natural attenuation of residual impact. ESL = Environmental Screening Level Established by the SFBRWQCB, Interim Final - November 2007 (Revised May 2013).

bgs = Below grade surface

# **APPENDIX A**

Site Photographs



6 - Initial Excavation under 1187 Solano

5 - Drain in Former Rear Boiler Area



7 - Initial Auger Excavation in Slots under 1191 Solano



8 - Forming Cement Slurry Slots under 1191 Solano



9 - Excavation Augering Between Slots under 1191 Solano



10 - Excavation Along Eastern Side of 1187 Solano After Slots



11 - Excavation Near Sewer in Rear of 1187 Solano



12 - Inspection of Sanitary Sewer Piping



13 - Excavating Middle of 1187 Solano



14 - Excavation Along Western Edge of 1187 Solano



15 - Compaction after Initial Backfilling in 1187 Solano



16 - Piping Manifold for Temporary Ventilation System (later removed)



17 - Temporary Vent Piping After Initial Excavation (later removed)



18 - Active or Passive Vent Pipe Configuration



19 - Excavation under 1185 Hallway



20 - Excavation under Hallway and Bathroom of 1185 Solano



21 - Sewer at Western Edge of 1185 Solano near 1183 Solano



22 - Gravel for Passive Venting System under 1185 and 1187 Solano



23 - Gravel Installation in 1185 Solano



24 - Vent Piping Installation after Backfilling with Sand in 1185 Solano



25 - Manifold of Vent Piping from All Units



26 - Passive Ventilation System in 1185 Solano



27 - Vent Piping for Active or Passive Extraction in 1185 Solano



28 - Initial Testing of Vent Under 1183 Solano



29 - New Sanitary Sewer Piping under 1185 and 1187 Solano



30 - New Sanitary Sewer Conduit in 1187 Solano



31 - Final Cement Slurry in 1187 Solano facing South (before Slab)

32 - Final Cement Slurry Surface in 1185 Solano (before Future Slab)



33 - 1191 Solano Bath and Storage



34 - 1191 Solano Vent Pipe before Seal and Sand



35 - 1191 Solano Vent Pipe with Bentonite Seal



36 - 1191 Solano Vent Pipe Plastic Barrier



37 - 1191 Solano Vent Pipe after Sand Backfill



38 - Sealing of Former Toilets and Water Supply in Storage Room in 1191 Solano



39 - Mechanical Room for 1183 Solano with Conduits Entering 1183 Subslab



40 - Sealing of Chair Utilities in 1183 Solano



41 - Sealing of Vent Piping Penetrations



42 - Slab Penetrations before Sealing in 1191 Solano



43 - Manifold Piping w probes and MW-4



44 - Soil Gas Probe in Gravel Layer before Final Connection



45 - Passive Vent Risers and Indoor Air Sampling



46 - Indoor Air Sampling in Work Room of 1191 Solano



47 - Large Work Area in 1191 Solano



48 - Large Work Room in 1191 Solano



49 - Indoor Air Sampling in Break room in 1191 Solano



50 - Subslab Probe SS-16 Under Chair in 1183 Solano



51 - Indoor Air Sampling in 1183 Solano



52 - Indoor Air Sampling in 1187 Solano



53 - Contingent Excavation Area at 1191 Solano



54 – View of Bathroom and Storage Entrances at 1191 Solano

# **APPENDIX B**

Boring and Well Permits



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

Application Approved on: 01/17/2013 By jamesy

Permit Numbers: W2013-0044 Permits Valid from 04/05/2013 to 04/08/2013

Application Id: 1358208615646 City of Project Site:Oakland

Site Location: 2910 Ford Street and 2909 Chapman Street

Project Start Date: 01/28/2013 Completion Date:01/29/2013

Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: L&W Construction Services, Inc - Jean Lindsay Phone: 707-766-9511

5200 Redwood Hwy. S., Petaluma, CA 94952

**Property Owner:** Edward Forgeron **Phone:** 213-943-1840

c/o Marcus & Millichap, 915 Wilshire Blvd, Los Angeles, CA 90017

Client: Arianne Dar Phone: 415-713-4519

PO Box 476, Bolinas, CA 94924

Contact: George Wilson Phone: 707-766-9511

**Cell:** 415-613-4840

**Total Due:** \$265.00

Receipt Number: WR2013-0020 Total Amount Paid: \$265.00
Payer Name: George J Wilson Paid By: MC PAID IN FULL

### **Works Requesting Permits:**

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 8 Boreholes

Driller: Environmental Control Associates - Lic #: 695970 - Method: DP Work Total: \$265.00

#### **Specifications**

 Permit
 Issued Dt
 Expire Dt
 #
 Hole Diam
 Max Depth

 Number
 Boreholes

 W2013 01/17/2013
 04/28/2013
 8
 2.00 in.
 15.00 ft

 0044

#### **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 Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org 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. 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.
- 8. 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.



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

Application Approved on: 03/13/2013 By jamesy

Permit Numbers: W2013-0202

Permits Valid from 04/25/2013 to 04/25/2013

City of Project Site: Albany Application Id: 1363129975477

Site Location: 1187 Solano Ave

**Project Start Date:** 03/20/2013 Completion Date: 03/20/2013

Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org Assigned Inspector:

Extension End Date: 04/25/2013 Extension Start Date: 04/25/2013 **Extension Count:** Extended By: priest

Pangea Environmental Services, Inc. - Morgan Applicant: Phone: 510-836-3700

1710 Franklin St, Suite 200, Oakland, CA 94612

Solano Group **Property Owner:** Phone: --

PO Box 9026, Berkeley, CA 94709 Client: same as Property Owner '

> **Total Due:** \$265.00

Receipt Number: WR2013-0097 **Total Amount Paid:** \$265.00

**PAID IN FULL** Payer Name : Robert Clark-Riddell Paid By: VISA

# **Works Requesting Permits:**

Borehole(s) for Investigation-Contamination Study - 15 Boreholes

Driller: Cascade Drilling - Lic #: 938110 - Method: DP Work Total: \$265.00

#### **Specifications**

Permit	Issued Dt	Expire Dt	#	<b>Hole Diam</b>	Max Depth
Number			Boreholes		
W2013-	03/13/2013	06/18/2013	15	3.25 in.	35.00 ft
0202					

### **Specific Work Permit Conditions**

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

- 5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 7. 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.



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

Application Approved on: 05/09/2013 By jamesy Permit Numbers: W2013-0343 to W2013-0345 Permits Valid from 05/17/2013 to 05/31/2013

Application Id: 1367619037010 City of Project Site: Albany

Site Location: 1187 Solano Ave
Project Start Date: 05/17/2013 Completion Date:05/31/2013

Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: Pangea Environmental Services, Inc. - Morgan Phone: 510-836-3700

Gillies

1710 Franklin St, Suite 200, Oakland, CA 94612

Property Owner: Solano Group Phone: --

PO Box 9026, Berkeley, CA 94709

\*\* same as Property Owner \*\*

Total Due: \$1191.00
Receipt Number: WR2013-0160 Total Amount Paid: \$1191.00

Payer Name : Robert Clark-Riddell Paid By: VISA PAID IN FULL

# **Works Requesting Permits:**

Well Construction-Monitoring-Monitoring - 3 Wells

Driller: Cascade Drilling - Lic #: 938110 - Method: DP Work Total: \$1191.00

#### **Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2013- 0343	05/09/2013	08/15/2013	MW-1	3.25 in.	0.75 in.	8.00 ft	14.00 ft
W2013- 0344	05/09/2013	08/15/2013	MW-2	3.25 in.	0.75 in.	8.00 ft	14.00 ft
W2013- 0345	05/09/2013	08/15/2013	MW-3	3.25 in.	0.75 in.	8.00 ft	14.00 ft

#### **Specific Work Permit Conditions**

- 1. 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.
- 2. 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.
- 3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

- 4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Include permit number and site map.
- 5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 6. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org 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.
- 7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
- 8. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
- 10. 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.



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

Application Approved on: 09/06/2013 By jamesy

Permit Numbers: W2013-0759
Permits Valid from 09/11/2013 to 09/11/2013

Application Id: 1378506139766 City of Project Site: Albany

Site Location: 1187 Solano Ave Project Start Date: 09/11/2013

09/11/2013 **Completion Date**:09/11/2013

Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

**Applicant:** Pangea Environmental Services, Inc. - Morgan **Phone:** 510-836-3700

Gillies

1710 Franklin St, Suite 200, Oakland, CA 94612

Property Owner: Solano Group Phone: --

PO Box 9026, Berkeley, CA 94709

Client: \*\* same as Property Owner \*\*

**Total Due:** \$397.00

Receipt Number: WR2013-0341 Total Amount Paid: \$397.00

Payer Name : Robert Clark-Riddell Paid By: VISA PAID IN FULL

# **Works Requesting Permits:**

Well Construction-Monitoring-Monitoring - 1 Wells

Driller: Confluence Environmental - Lic #: 913194 - Method: hstem Work Total: \$397.00

#### **Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2013- 0759	09/06/2013	12/10/2013	MW-4	3.25 in.	1.00 in.	8.00 ft	14.00 ft

#### **Specific Work Permit Conditions**

- 1. 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.
- 2. 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.
- 3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
- 4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and

mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Include permit number and site map.

- 5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 6. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org 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.
- 7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
- 8. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
- 10. 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.

# **APPENDIX C**

Standard Operating Procedures

# STANDARD FIELD PROCEDURES FOR EXCAVATION SAMPLING

During remedial excavation activities compliance sampling is typically required to assess the extent of the contamination remaining in site soil. Pangea has developed standard field procedures for compliance sampling and excavation to provide sample collection, handling and documentation in compliance with State and local regulatory agency regulations.

# **Soil Sampling**

Soil samples are typically collected from the bottom and sidewalls of the excavation. If water is present in the excavation, soil samples are typically collected from the soil/water interface. The soil samples are collected in steam-cleaned brass or steel tubes from either a driven split-spoon type sampler or the bucket of a backhoe or excavator. When a backhoe or excavator is used, approximately three inches of soil are scraped from the surface and the tube is driven into the exposed soil. The location and number of samples is determined by the environmental professional and/or regulatory agency representatives overseeing the excavation.

When required or requested before sample collection, Pangea field staff screen soil with a portable photo-ionization detector (PID) to qualitatively assess the presence or absence of volatile contaminants. Excavated soil is typically segregated based on contaminant concentration and stockpiled on site on plastic sheeting. When field observations and/or PID measurements indicate that the contaminant-bearing soil has been satisfactorily removed, Pangea collects soil samples from excavation sidewalls and floor for confirmatory analysis at a State-certified analytic laboratory.

# Stockpile Soil Sampling

To facilitate soil disposal at approved offsite facilities, Pangea typically collects one four-point composite soil samples for 200 cubic yards or less of stockpiled soil. If the soil stockpile volume is between 200 and 1,000 cubic yards, two four-point composite samples are typically collected. If soil is segregated based on field observations, at least one four-point composite soil sample is collected for each segregated stockpile. To generate a composite sample, Pangea collects four individual soil samples in steam-cleaned brass or steel tubes by hand, or from either a driven split-spoon type sampler or the bucket of a backhoe or excavator. The sample locations and depths are selected to obtain composite soil sample representative of the stockpile. The four individual soil tubes are composited by the state-certified laboratory. When hand sampling or backhoe/excavator is used, approximately three inches of soil are scraped from the surface and the tube is driven into the exposed soil. Additional stockpile sampling procedures may be required to facilitate reuse of soil onsite in accordance with regulatory oversight.

# **Grab Ground Water Sampling**

If groundwater enters the excavation, grab ground water samples are typically collected from the open excavation. Grab groundwater sample can be collected from excavator equipment, disposable Tygon<sup>®</sup> tubing placed into the excavation, or other appropriate sampling equipment placed into the water. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory.

# Sample Storage, Handling and Transport

Upon removal from the sampler or the backhoe, soil samples are trimmed flush, capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Groundwater samples in appropriate containers are labeled, placed in protective bags, and stored on crushed ice at or below 4°C. All samples are transported under chain-of-custody to a State-certified analytic laboratory.

# **Duplicates and Blanks**

Duplicate or blind duplicate samples can be collected, if requested. For water sampling, laboratory-supplied trip blanks can accompany samples to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory quality assurance/quality control (QA/QC) blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

# STANDARD OPERATING PROCEDURE FOR SUBSLAB VAPOR SAMPLING

#### 1.0 PURPOSE

This standard operating procedure (SOP) describes the procedures for collecting subslab vapor samples using evacuated stainless-steel Summa canisters for the purpose of assessing risk to building occupants. The SOP is modified from procedures and information presented in Cal/EPA 2012 (*Advisory-Active Soil Investigations*); Cal/EPA 2011; Cal/EPA 2010; U.S. EPA, 2006; and DiGiulio, 2003. This SOP includes (a) real-time leak-check procedures to evaluate integrity of the soil gas probe and sampling assembly during probe purging and post sampling, and (b) real-time field screening of soil gas concentrations during probe purging and post sampling.

# 2.0 REQUIRED EQUIPMENT

- Hammer drill with 1" bit and smaller bits (slightly larger than vapor probe tubing)
- Tubing for cleaning boring
- Stainless-steel or Teflon vapor probe tubing with Swagelok threaded compression fitting, vapor-tight cap, and valves.
- Rubber stopper or Teflon disk
- Granulated bentonite, bentonite pellets and cement
- Vacuum pump with adjustable rotameter for purging and leak testing
- 1-Liter Summa canister for each sample
- Stainless-steel sampling manifold with vacuum gauges and critical orifice flow restrictor (request that laboratory leak-check sampling manifold prior to mobilization)
- Leak-check compound (e.g. helium)
- Helium gas analyzer (calibrated)
- Calibrated photoionization detector (PID) or other organic vapor analyzer
- Isobutylene for PID calibration
- Tedlar bags (for helium measurement and vapor screening)
- Vacuum chamber (iron lung) for pre- and post-sampling leak-check
- Leak-check enclosure (bucket with hydrated bentonite pellets [or weather stripping] for sealing enclosure to surface and openings for vapor probe tubing, helium and for sampling enclosure atmosphere)
- Recordkeeping materials
- Latex or nitrile gloves

#### 3.0 PROCEDURES

# 3.1 Boring Clearance

Prior to installing subslab vapor probes, ensure that a utility clearance has been conducted to ensure that potential subsurface utility and rebar locations have been identified and marked.

# 3.2 Vapor Probe Construction

- 1. To protect interior surfaces, lay plastic sheeting around the probe location.
- 2. Use a rotary hammer drill to create an approximately 3-inch deep, 1 1/2 -inch diameter hole that *partially* penetrates the slab. Use a piece of flexible tubing to blow or vacuum concrete debris and dust from the hole. Do not blow or vacuum after the slab has been completely penetrated.
- 3. Drill a smaller diameter *inner hole* in the center of the outer hole, periodically blowing dust and debris from the hole until the slab is penetrated. The diameter of the inner hole should exceed the diameter of the vapor probe tubing by the minimum amount practicable. The inner hole should be drilled completely through the slab and 3 to 4 inches into the subslab material (baserock or soil) to form a cavity (**Figure 1**).
- 4. Insert the capped vapor probe tubing through a tightly fitting rubber stopper or a Teflon disk and insert the stopper or disk into the bottom of the outer hole. The purpose of the stopper is to stop moisture from the annular seal from leaking into subslab materials. The fitting may either be constructed flush, or may protrude above the slab, depending on location and susceptibility to damage. If a lubricant is needed, use only high-vacuum silicone grease.
- 5. Clean the concrete surfaces in the borehole with a dampened towel to increase the potential of a good seal. Fill the remainder of the hole with hydrated bentonite (temporary probe) or hydrated bentonite topped with expanding cement (semi-permanent probe). Place a protective cap (temporary probe) or flush mounted well box (semi-permanent probe) over the probe to protect it from damage.

# 3.3 Vapor Sampling

During vapor sampling, record all valve open/close times and canister/manifold vacuum readings at each step. Do not conduct sampling within **5 days following a significant rain event** (0.5 inches of rainfall during any 24-hour period) or signficant irrigation adjacent to the building.

# Setup

1. Calculate and record the volume of the sampling assembly, tubing, vapor probe and void space created in subslab material.

Volume = 
$$\pi * r^2 * L = 3.14 \times (1/2*ID) \times (1/2*ID) *L$$
,

where ID = cavity, tubing or manifold inside diameter and L = length of cavity or tubing/manifold segment.

- 2. Wear latex or nitrile gloves while handling sampling equipment. Change gloves whenever a new sample is collected and after handling leak-check compound.
- 3. Replace the vapor probe cap with a closed Swagelok valve. Connect the sampling manifold to the vapor probe, sample Summa canister and vacuum pump using Swagelok fittings and stainless-steel, Teflon or Tygon tubing. Check all fittings for tightness (do not overtighten).
- 4. Close all valves. Record pre-test vacuum readings on summa canister.

#### Manifold Shut-In Check

- 1. Open valve on vapor sampling manifold and open 3-way valve #1 so the vacuum pump of the purging assembly can evacuate the vapor sampling manifold assembly (keep valves #2 and #3 closed to the Tedlar bag/vacuum chamber of the vapor screening assembly) (**Figure 2**). Start the vacuum pump. Do *not* open #1 valve to the probe assembly, or the valve on the sample Summa canister. Allow manifold/tubing vacuum to stabilize at approximately 10" Hg.
- 2. Stop the vacuum pump, close 3-way valves #2 and #3 (to allow shut-in testing of vapor sampling manifold), and conduct a shut-in test by waiting at least **5 minutes** (if using 150 inches of water gauge) or **10 minutes** (if using 30 inches of mercury gauge). Monitor manifold vacuum gauge to test for leaks. If the vacuum decreases, rectify the leak before proceeding.

# Purge, Flow and Leak Check

- 1. Calculate purge volume and duration. Determine the desired total purge volume and purging duration for the equipment setup. A critical orifice flow restrictor is intended to limit the maximum purge and sampling flow rate (approximately 150 ml/min). If step testing is not required to better determine optimal purge volume, purge approximately 3 times the volume of the sampling assembly, tubing, vapor probe and void space or any probe/filter pack material below the concrete slab.
- 2. Leak-check enclosure. Place leak-check enclosure over vapor probe and seal to floor using hydrated bentonite or weather stripping. Introduce helium gas into the leak-check enclosure and monitor with the helium gas analyzer until it reads between 20% and 30% helium.
- **3. Conduct purging.** Start vacuum pump and open 3-way valve #1 (and 3-way valves #2 and #3) so the vacuum pump can evacuate the probe. Do *not* over-purge. Closely monitor the flow on the rotameter and the vacuum on the vacuum gauge. For most samples flow should be limited to 150mL/min or less. If the vacuum remains below approximately 7" Hg, then sufficient flow is present to collect a representative sample (Cal/EPA 2012) and continue purging for the planned purge duration.
- 4. If the probe-side vacuum exceeds approximately 7" Hg, then insufficient flow may be present to collect a representative sample and this condition should be noted. Evaluate probe integrity or consider re-installation of probe, especially if probe installed in coarse-grain material. If no significant flow is attained, the sampling line may be plugged or the vapor probe may be positioned in a low permeability or saturated layer. If the probe cap is opened for probe inspection, record the inspection procedures and duration. If purging and sampling is resumed after opening the probe cap, this information will help determine the representativeness of the sample. To sample subslab gas under low flow conditions, follow this alternate sampling method derived from Appendix D, Cal/EPA 2012. Make a reasonable attempt to purge one purge volume. After purging, open sample Summa canister until sampling manifold vacuum threshold is achieved, then close Summa sample valve until probe vacuum dissipates. Repeat this sampling procedure as necessary to sufficiently fill the sample Summa canister. Alternatively, consider installing a subslab gas probe with a larger probe annulus space, or employing passive soil gas sampling methods.
- **5.** When purge duration complete and ready to discontinue purging, close 3-way valve #1 so that the probe is connected to the sampling manifold, and then stop the vacuum pump.

**6.** Record helium reading for leak-check enclosure at least once every minute during purging and sampling.

# Sample Collection

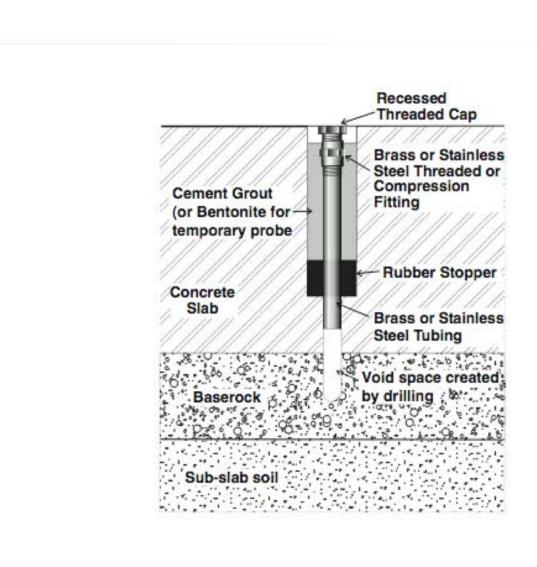
- 1. **Opening Sample Canister.** Once a helium reading of at least 20% has been reached, open sample canister valve. **Sampling takes approximately 5 minutes for a 1-liter Summa canister** (at 150 ml/min sampling flow rate).
- 2. Close sampling canister valve when vacuum decreases to 5" mercury. Do *not* allow vacuum to fall below this range.
- 3. **Post-Sample Vapor Screening.** After sampling, open 3-way valve #1 so that the vapor screening assembly is connected to the probe, turn on the vacuum pump, and open 3-way valves #2 and #3 to partially fill the Tedlar bag within the vacuum chamber (iron lung). When Tedlar bag is sufficiently filled, return valves #2 and #3 to purging position. Check Tedlar bag for indication of sampling leakage using the helium gas analyzer. If helium concentration is below 1% then sample is sufficiently representative. If helium concentration is above 1%, then the sample may not be sufficiently representative; the probe may need to be repaired or re-installed and re-sampled. Additionally, check the Tedlar bag for contaminants using the PID for qualitative contaminant assessment (optional).
- 4. **Shroud Sample.** To confirm helium meter readings collect one shroud sample per day to analyze for percent helium. Connect the shroud sample summa canister and manifold to a port near the bottom of the shroud and open the canister valve at the beginning of sampling. Close sampling canister valve when vacuum decreases to 5" mercury. Do *not* allow vacuum to fall below this range. Disassemble sampling assembly, and cap (or remove and restore) vapor sampling point.
- 5. Analyses. Fill out chain-of-custody form for analysis for chemicals of concern (i.e. TO-15), and for leak-check compound for at least 10% of samples. Analyze all samples for percent oxygen by ASTM D1946-90. Additionally, samples may be analyzed for percent methane and carbon dioxide by ASTM D1946-90 when in support of sensitive human health risk assessments for regulatory review. Include final vacuum reading and serial numbers of canister and flow restrictor on chain-of-custody form.
- 6. For vapor sampling in support of sensitive human health risk assessments for regulatory review, collect at least one *duplicate* sample per site per sampling event from the sampling point with the anticipated highest vapor concentrations. The duplicate sample should be collected by attaching a fresh sample canister following collection of the initial sample. If a new manifold is used, follow the same purging and sampling procedures used for the original sample. If the same manifold is used, collect a sample without further purging, using the same sampling procedures used for the original sample.

#### Decontamination and Decommissioning

- 1. Use a decontaminated sampling manifold and new tubing for each sample location. Return equipment to laboratory for decontamination.
- 2. Backfill any open soil vapor probe holes with bentonite slurry or Portland cement and cap with concrete or other surface material to match the area.
- 3. To retain the subslab probe for future sampling, cap the Swagelock fitting and cover the probe with a small vault or other protective device.

### **REFERENCES**

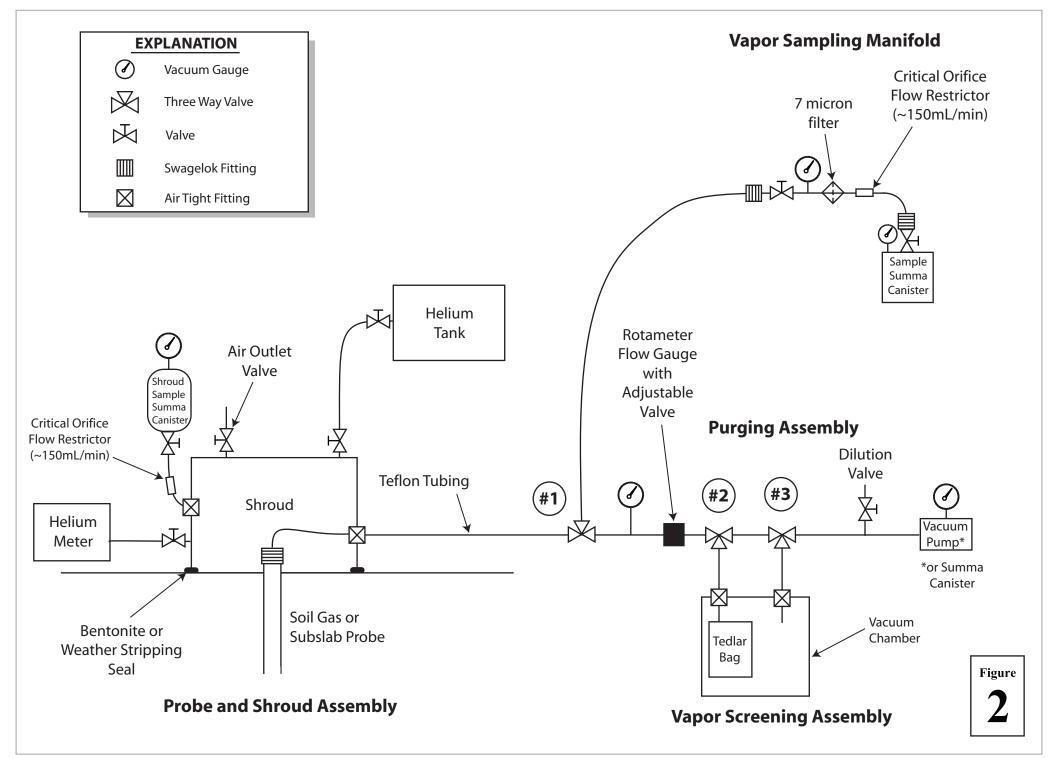
- Cal/EPA, 2012, Advisory-Active Soil Gas Investigation, California Environmental Protection Agency, Department of Toxic Substances Control, Los Angeles Regional Water Quality Control Board, San Francisco Regional Water Quality Control Board, April.
- Cal/EPA, 2011, Guidance for the evaluation and mitigation of subsurface vapor intrusion to indoor air (vapor intrusion guidance), California Environmental Protection Agency, Department of Toxic Substances Control, October).
- Cal/EPA, 2004, Interim final guidance for the evaluation and mitigation of subsurface vapor intrusion to indoor air, California Environmental Protection Agency, Department of Toxic Substances Control, December 15 (revised February 7, 2005).
- U.S. EPA, 2006,Office Of Research and Development, National Risk Management Research Laboratory, Cincinnati, OH, Assessment of vapor intrusion in homes near the Raymark Superfund Site using basement and sub-slab air samples, March.
- Dominic DiGiulio, 2003, Standard Operating Procedure (SOP) for installation of sub-slab vapor probes and sampling using EPA Method TO-15 to support vapor intrusion investigations, U.S. Environmental Protection Agency, Office of Research and Development, National Risk Management Research Laboratory, Ground-Water and Ecosystem Restoration Division, Ada, Oklahoma (included as Appendix C of Colorado Department of Public Health and Environment, 2004, Draft Indoor Air Guidance, Hazardous Materials and Waste Division), September.



Figure

1







#### STANDARD FIELD PROCEDURES FOR SOIL BORINGS

This document describes Pangea Environmental Services' standard field methods for drilling and sampling soil borings. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

### **Objectives**

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate ground water depth and quality, and to submit samples for chemical analysis.

### Soil Classification/Logging

All soil samples are classified according to the Unified Soil Classification System by a trained geologist, scientist or engineer working under the supervision of a California Registered Engineer, California Registered Geologist (RG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e. sand, silt, clay or gravel)
- Approximate percentage of each grain size category,
- Color
- Approximate water or product saturation percentage,
- Observed odor and/or discoloration,
- Other significant observations (i.e. cementation, presence of marker horizons, mineralogy), and
- Estimated permeability.

#### Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or hydraulic-push technologies. At least one and one half ft of the soil column is collected for every five ft of drilled depth. Additional soil samples are collected near the water table and at lithologic changes. With hollow-stem drilling, samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the borehole. With hydraulic-push drilling, samples are typically collected using acetate liners. The vertical location of each soil sample is determined by measuring the distance from the middle of the soil sample tube to the end of the drive rod used to advance the split barrel sampler or the acetate tube. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

#### Sample Storage, Handling and Transport

Sampling tubes or cut acetate liners chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

### **Field Screening**

Soil samples collected during drilling will be analyzed in the field for ionizable organic compounds using a photo-ionization detector (PID) with a 10.2 eV lamp. The screening procedure will involve placing an undisturbed soil sample in a sealed container (either a zip-lock bag, glass jar, or a capped soil tube). The container will be set aside, preferably in the sun or warm location. After approximately fifteen minutes, the head space within the container will be tested for total organic vapor, measured in parts per million on a volume to volume basis (ppmv) by the PID. The PID instrument will be calibrated prior to boring using hexane or isobutylene. PID measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

# **Water Sampling**

Water samples collected from borings are either collected from the open borehole, from within screened PVC inserted into the borehole, or from a driven Hydropunch-type sampler. Groundwater is typically extracted using a bailer, check valve and/or a peristaltic pump. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

Pangea often performs electrical conductivity (EC) logging and/or continuous coring to identify potential water-bearing zones. Hydropunch-type sampling is then performed to provide discrete-depth grab groundwater sampling within potential water-bearing zones for vertical contaminant delineation. Hydropunch-type sampling typically involves driving a cylindrical sheath of hardened steel with an expendable drive point to the desired depth within undisturbed soil. The sheath is retracted to expose a stainless steel or PVC screen that is sealed inside the sheath with Neoprene O-rings to prevent infiltration of formation fluids until the desired depth is attained. The groundwater is extracted using tubing inserted down the center of the rods into the screened sampler.

# **Duplicates and Blanks**

Blind duplicate water samples are collected usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells sampled. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory QA/QC blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

# Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

#### **Waste Handling and Disposal**

Soil cuttings from drilling activities are usually stockpiled onsite on top of and covered by plastic sheeting. At least four individual soil samples are collected from the stockpiles for later compositing at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Ground water removed during sampling and/or rinsate generated during decontamination procedures are stored onsite in sealed 55 gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Disposal of the water is based on the analytic results for the well samples. The water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

#### STANDARD FIELD PROCEDURES FOR HAND-AUGER SOIL BORINGS

This document describes Pangea Environmental Services' standard field methods for drilling and sampling soil borings using a hand-auger. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

### **Objectives**

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate ground water depth and quality, and to submit samples for chemical analysis.

# Soil Classification/Logging

All soil samples are classified according to the Unified Soil Classification System by a trained geologist or engineer working under the supervision of a California Registered Geologist (RG), Certified Engineering Geologist (CEG), or Professional Engineer. The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e. sand, silt, clay or gravel)
- Approximate percentage of each grain size category,
- Color.
- Approximate water or product saturation percentage,
- Observed odor and/or discoloration,
- Other significant observations (i.e. cementation, presence of marker horizons, mineralogy), and
- Estimated permeability.

#### Soil Boring and Sampling

Hand-auger borings are typically drilled using a hand-held bucket auger to remove soil to the desired sampling depth. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the augered hole. The vertical location of each soil sample is determined using a tape measure. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

Augering and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

#### Sample Storage, Handling and Transport

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

# Pangea

### Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

### **Water Sampling**

Water samples, if they are collected from the boring, are collected from the open borehole using bailers. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

# **Duplicates and Blanks**

Blind duplicate water samples are collected usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells sampled. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory QA/QC blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

#### Grouting

The borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

#### **Waste Handling and Disposal**

Soil cuttings from drilling activities are usually stockpiled onsite on top of and covered by plastic sheeting. At least four individual soil samples are collected from the stockpiles for later compositing at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Ground water removed during sampling and/or rinsate generated during decontamination procedures are stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Disposal of the water is based on the analytic results for the well samples. The water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

### STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document describes Pangea Environmental Services' standard field methods for drilling, installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

#### Well Construction and Surveying

Groundwater monitoring wells are installed in soil borings to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

#### **Well Development**

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. Wells may be surged prior to installation of the well seal to ensure that there are no voids in the sand pack. Development occurs 48 to 72 hours after seal installation to ensure that the Portland cement has set up correctly. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 72 hours after they are developed.

#### **Groundwater Sampling**

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

### STANDARD FIELD PROCEDURES FOR PRE-PACK GEOPROBE® MONITORING WELLS

This document describes Pangea Environmental Services' standard field methods for drilling, installing, developing and sampling pre-pack Geoprobe® groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

#### Well Construction and Surveying

Monitoring wells are installed in soil borings to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 5 to 10 feet below and up to 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Pre-pack Geoprobe® groundwater monitoring wells are usually installed with 3.25-inch or 3.5-inch diameter direct-push dual wall tooling with an expendable drive point. The outer casing and inner sampler are advanced to the desired depth and after the inner sampler is removed the pre-packed well is constructed with the desired screen length and lowered into the open outer casing. Pre-pack wells can range from ¾-inch inner diameter (ID) to 2-inch ID and are supplied with a rinsed and graded sand pack wrapped around the screened section. At the top of the screened interval additional sand may be added to prevent bentonite from entering the filter pack and 1 to 2 ft of bentonite is added to seal the well. A surface seal of Portland type I, II cement is poured into the open borehole or through a tremmi-pipe to complete the annular seal. As each section of the annular space is filled the outer casing is incrementally removed from the borehole. Well casing and screen are typically flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

### **Well Development**

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. Wells may be surged prior to installation of the well seal to ensure that there are no voids in the sand pack. Development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

## Pangea

### **Groundwater Sampling**

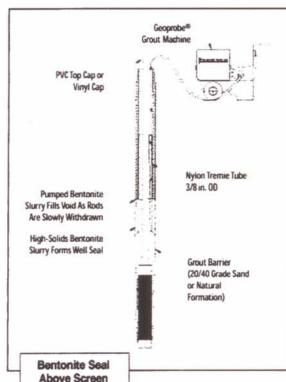
Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves or sealed plastic bags, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

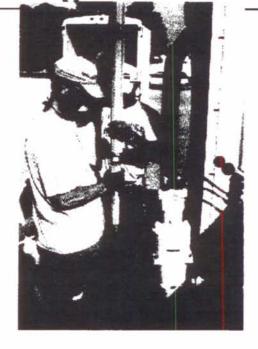
Prepack Screen Monitoring Wells



Well covers and locking and non-locking well plugs are available to "cap" off monitoring well projects.







Geoprobe® Prepack Screen Monitoring Wells are available in the following sizes (counterclockwise)

- 0.5 in. x 1.4 in.
- 1.0 in. x 2.5 in.
- 0.75 in. x 1.4 in.
  1.5 in. x 2.5 in.

**ACTUAL SIZE** 

www.geoprobe.com • info@geoprobe.com

Geoprobe Systems
Designing A Better Way
1-800-436-7762

# Prepack Screen Monitoring Wells

### The environmental industry relies on Geoprobe® prepacks!

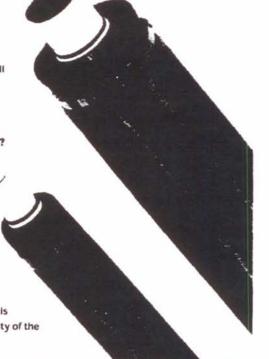
The most cost effective method for installing permanent monitoring wells!

- Available in sizes ranging from 0.5-inch through 1.5-inch ID.
- Manufactured using PVC and high quality stainless steel screens to assure high integrity samples.
- Assures accurate placement of filter media across desired interval.
- · Fully groutable design protects the environment.
- Installation through cased borehole provides high integrity well construction and sample quality.
- Use with Geoprobe® Pneumatic Bladder Pump for collection of high integrity water quality samples.

What are the advantages of Geoprobe® prepack monitoring wells?

- Meets new ASTM Standard D6725 for Direct Push Monitoring Well Installation.
- · Meets basic EPA and RCRA construction requirements.
- Direct push (DP) methods for installing monitoring wells are being accepted by many state regulatory agencies.
- DOD and EPA studies reveal no statistically significant difference between water quality samples collected from paired DP and conventionally drilled wells.
- Recently published research shows even small diameter DP wells can be slug tested to accurately determine hydraulic conductivity of the formation.

Look for the new ASTM Practice (D 6725) for installation of direct push prepack screen monitoring wells published by the American Society for Testing and Materials (ASTM).



	SLOTTED PIPE	SAND PACK	LENGTH	ROD SI		PART NO
	min. I.D.			O.D.	LD.	
	0.5 in. Sch. 80 PVC	20/40 grade sand	3 feet	2.125 in.	1.5 in.	GW2010
	0.010 in. slots	factory packed	1 m	54 mm	38 mm	
	0.5 in. Sch. 80 PVC	20/40 grade sand	5 feet	2.125 in.	1.5 in.	GW2020
	0.010 in slots	factory packed	1.5 m	54 mm	38 mm	
	0.75 in. Sch. 40 PVC	20/40 grade sand	3 feet	2.125 in.	1.5 in.	11678
	0.010 in. slots	factory packed	1 m	54 mm	38 mm	
	0.75 in. Sch. 40 PVC	20/40 grade sand	5 feet	2.125 in.	1.5 in.	17466
	0.010 in. slots	factory packed	1.5 m	54 mm	38 mm	
	1.0 in. Sch. 40 PVC	20/40 grade sand	5 feet	3.25 in	2.625 in.	17467
8	0.010 in slots	factory packed	1.5 m	83 mm	67 mm	0.00000
	1.0 in. Sch. 40 PVC	20/40 grade sand	5 feet	3.25 in.	2.625 in	11679
7	0.010 in. slots	field packed	1.5 m	83 mm	67 mm	
1	1.5 in. Sch. 40 PVC	20/40 grade sand	5 feet	3.25 in.	2.625 in.	17401
9	0.010 in. slots	factory packed	1.5 m	83 mm	67 mm	

## **APPENDIX D**

Boring Logs and Well Construction Diagram

## WELL NUMBER MW-1

PAGE 1 OF 1

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, CA 94612

CLIEN	T Solano Gr	oup						PROJECT NAME 1187 Solano	
PROJE	CT NUMBER	R <u>14</u>							<u>ie                                      </u>
								GROUND ELEVATION	
DRILLI	ING CONTRA	сто	<b>R</b> _C	asca	de			GROUND WATER LEVELS:	
DRILLI	ING METHOD	<u>Di</u>	rect P	ush				AT TIME OF DRILLING	
LOGG	ED BY Morg	gan G	illies			CHEC	CKED BY Bob Clark-Riddell	AT END OF DRILLING	
NOTES	Cored asp	halt; I	Hand	Auge	er to 5	5'.		AFTER DRILLING	
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC		MA	TERIAL DESCRIPTION	WELL DIAGRAM
						0.5	Asphalt.		M M Caranta
. ]					W	1.0	Baserock.		Concrete
  5				CL			Silty Clay (CL); black; 100 stiff; moist.	9% medium to high plasticity fines; medium	- Cement
· _							@6' Brown and trace-5% f  Silty Clay (CL); brown; 10 stiff: moist.	ine to coarse sand.  0% medium to high plasticity fines; medium	#- Bentonite  #- Sand (#2/12)
10							@9.5' Soft.  Sandy Clay (CL); brown; 5 coarse sand; 5-10% fine gr	50-70% medium plasticity fines; 20-30% fine to avel; moist.	
· -						14.0	@12' Hard drilling.	ream borehole with 3.25" diameter hand auge	Screen
							to 14'.)		,
							Во	ttom of hole at 14.0 feet.	

# WELL NUMBER MW-2 PAGE 1 OF 1



TOTAL WELL LOG SOLANO MW-2.GPJ GINT US.GDT 6/4/13

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200

S.	Oaklan	id, C	A 946	512				
CLIENT	Solano Gro	oup					PROJECT NAME 1187 Solano	
PROJEC	CT NUMBER	_14	35.00	)2			PROJECT LOCATION 1187 Solano Avenu	e
DATE S	STARTED 5	/17/1	3			<b>COMPLETED</b> <u>5/17/13</u>	GROUND ELEVATION H	HOLE SIZE 2.25"
DRILLIN	NG CONTRAC	СТО	<b>R</b> _C	asca	de		GROUND WATER LEVELS:	
DRILLIN	NG METHOD	_Dir	ect P	ush			AT TIME OF DRILLING	
LOGGE	D BY Morga	an G	illies			CHECKED BY Bob Clark-Riddell	AT END OF DRILLING	
NOTES	Hand Auger	r to 5	5', Co	ncret	e Cor	ed.	AFTER DRILLING	
	Ш							
DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MAT	ERIAL DESCRIPTION	WELL DIAGRAM
0					P. 10	0.5 Concrete.		MM
					K///	1.0 Baserock.		Concrete
5 10 15				CL		Silty Clay (CL); black; 1000 coarse sand; medium stiff; recoarse sand; medium stiff; recoarse sand; coarse sand; loose; dry.  Silty Clay (CL); brown; 100  Sandy Clay (CL); brown and stiff; moist.  @14.5' Soft.  @15' Stiff.  @16.5' Soft.  @17' Stiff.	brown.  0-70% medium plasticity fines; 30-40% fine to 0% medium to high plasticity fines; stiff; moist.  prown; 70-80% medium plasticity fines; trace fine gravel; moist.  tan; 100% medium to high plasticity fines;	- Bentonite
†					1		om of hole at 18.0 feet.	

### **WELL NUMBER MW-3**

PAGE 1 OF 1

TOTAL WELL LOG SOLANO MW-3.GPJ GINT US.GDT 6/4/13

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, CA 94612

CLIEN	<b>T</b> Solano Gro	auc					PROJECT NAME 1187 Solano	
							GROUND ELEVATION	
						CHECKED BY Bob Clark-Riddell		
						·		
	-	,		3-				
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MAT	ERIAL DESCRIPTION	WELL DIAGRAM
-					PANA	0.5 Concrete.		M M a
					<del>1777</del>	<sub>1.0</sub> Baserock.		Concrete
 				CL		Silty Clay (CL); black; 100	% medium to high plasticity fines; moist.	
5						@4.5' Dark brown; trace gr Silty Clay (CL); dark browr fine to coarse sand; mediun	n; 95-100% medium plasticity fines; trace-5%	Cement
						@8' Increasing sand 5-15%	6.	► Bentonite ► Sand (#2/12)
						fine to coarse sand; moist. @12.5' Moist to wet.	wn; 70-80% medium plasticity fines; 20-30% n; 100% medium to high plasticity fines; very	Pre-pack Well Screen
						(Remove drilling rods and r to 14'.)	eam borehole with 3.25" diameter hand auger from of hole at 15.0 feet.	

# WELL NUMBER MW-4 PAGE 1 OF 1

SEA	
	Pangea Environmental Services, Inc.
	1710 Franklin Street, Suite 200
	Oakland, CA 94612

	Solano Gro					PROJECT NAME 1187 Solano  PROJECT LOCATION 1187 Solano Avenue, Albany			
				C	OMPLETED 9/10/13		•		
					nvironmental				
					HECKED BY Bob Clark-Riddell				
IOTES _						AFTER DRILLING			
O (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MAT	ERIAL DESCRIPTION	BORING DIAGRAM		
5			CL			% low to medium plasticity fines; moist.	Cement  Bentonite  Sand (#2/12)		
-				14	fines; 10-20% fine to coarse	cL); light brown; 50-60% medium plasticity e sand; 10-20% fine gravel; wet.	0.01" Slotted 1" Schedule 40 PV		

_		
	PANGEA	Ī
ĺ	500	ı
Ш		İ

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200

# BORING NUMBER

				PROJECT NAME Solute Group				
OJECT NUMBER		•		PROJECT LOCATION HOLE SIZE				
			OMPLETED					
				AT THE AT ADD 1 414				
ALLING METHOD _ GGED BY			HECKED BY					
TES		`		AFTER DRILLING		•		
(ff bgs) SAMPLE TYPE NUMBER	PID (ppm) U.S.C.S.	GRAPHIC LOG	MA	TERIAL DESCRIPTION	BOR	ING DIAGRAM		
B-6-9 (2) 1800 (3) 1800 (4) 1810		@ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @ @	7 Silty Chay Co med plisticity moist; med str Flashicity fine Moist; Stiff 11 Silty Chay; ton fires; very s	(i). Brown, 90-100 fines, trace-1000 ff Brown: 50-600 s, 40-500 f- co ardine, loar med, stiff	f swed, and same	el:		
0-6-19 0mm 01820			DOH015			y		



Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, CA 94612

# BORING NUMBER 2 PAGE 1 OF 1

CLIENT	Fax: 51	0-836-3				PROJECT NAME Solar	ia Graci	0-118756		
	T NUMBER					PROJECT LOCATION	7			
	TARTED	-		COMPLETED		GROUND ELEVATION	HOLE	SIZE		
	IG CONTRAC					GROUND WATER LEVELS:				
	IG METHOD					AT TIME OF DRILLING				
				CHECKED BY						
						AFTER DRILLING				
	-			[		<u> </u>				
o DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S. GRAPHIC LOG		MAT	ERIAL DESCRIPTION		BORING DIAGRAM		
5										
10	B-7-	730	, 6	07,5 Clayey 90-50 08,5 mes 9 5 mes 20-30	good; to reassing to	tou 50-6000 f-1 Apristraty fines sand (wet) + soft our; 70-8000 and course sand; no	ned som	d;		
	8-7-17 10000 Cl 73	5				10000 med plaste				
15	6-7-1 100002 Oi 74i									
20				20.0			•			

PANGEA CLIENT PROJEC	1710 Fr Oakland Telepho Fax: 51	ranklin d, CA 9 one: 5 10-836	Street 4612 10-836 -3709	t, Suite 5-3700		PROJECT NAME Salume Group PROJECT LOCATION			
DRILLINI DRILLINI LOGGEE	G CONTRAC G METHOD D BY	TOR _			CHECKED BY	GROUND WATER LEVELS:  AT TIME OF DRILLING  AT END OF DRILLING			
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION		BORING DIAGRAM	
5	B-11-1 MUSS (0)160	+		3	Brown Silty Cla fives; ned st	g(a) ical redp	lasticity		
	B-11-	8				negra cel / 100/00			
10	8-11-1 2004 C1621	2			@10 Sandy (le med plasticity gard; tran @12 olive +9 m stiff	y (CL); brown; To y tones; 20-300/ ce grand (fine) ry Silty Chy as e	70-80d °F-can © 3ex	e se cept	

Refusal @ 15.5

BH COPY BLANK (2).GPJ GINT US.GDT 4/24/09

PANGE	1710 Fi Oakland Telepho Fax: 51	ranklin S d. CA 94 one: 510 10-836-3	Street, St 1612 0-836-37 3709	700	PROJECT NAME Sola	BORING NUMBER & PAGE 1 0		
DATE S DRILLIN	TARTED IG CONTRAC IG METHOD D BY	CTOR_		CHECKED BY	GROUND ELEVATION GROUND WATER LEVELS: AT TIME OF DRILLING AT END OF DRILLING	GROUND ELEVATION HOLE SIZE  GROUND WATER LEVELS:  AT TIME OF DRILLING		
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S. GRAPHIC	907	MATERIAL DESCRIPTION	BORING DIAGRAM		
5	B-12-1 <b>mun</b> G-150	* (E	0.6)	3' Tan Silty plication 5-10	(ly (Ci) to 90 950 ity fines; mediane sto	ned FF HFF		
10	3-12- 20152	\$ (C	2.7	@10 Sandy ned 11k	(leg(Cl); braun; 80. struty fires: 10 - 2006 nediur stift	-900/2 f-med saud;		
,	@152	26	2.5	010.5 Cly Sand 40 Med st	ex Soul (SC); brown of So -50010 ned plasticity f	thes; waist		

@11 as @ 10' @12 as @ 3'

@ 14 olives prouve

ATE STA	ARTED/ CONTRAC METHOD BY//	// <b>/</b>		CHECKED BY	GROUND WATER LEVELS:  AT TIME OF DRILLING			
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S. GRAPHIC LOG		MATERIAL DESCRIPTION		BORING DIAGRAM	
-	B-13-9 1040 B-17-7 1111000000000000000000000000000000	(3 2.1)		Tanclay; red	stiff; very expansive	clas		
10	6-13-1 12-13-1 13-13-1 13-13-1 13-13-1 13-13-1	1.0		fto cratic on five growel; m @ 195 an soft, @ 14.0 Charey so	of gravel, tan; 40-500 and 20-3000 chy; 10-3000 chy; 10-3	209		

PANGEA Pangea Environmen 1710 Franklin Stree Oakland, CA 94612 Telephone: 510-83	et, Suite 200 !	<b>.</b>	PAGE 1 OF 1
Fax: 510-836-3708 CLIENT Sking ( PROJECT NUMBER	)	PROJECT NAME Sking Esc	up - 118750 kms A
DATE STARTED  DRILLING CONTRACTOR  DRILLING METHOD  LOGGED BY  NOTES  ONLY  NOTES	COMPLETED  CHECKED BY  CHECKED BY  CHECKED BY  CHECKED BY	GROUND ELEVATION  GROUND WATER LEVELS:  AT TIME OF DRILLING  AT END OF DRILLING	HOLE SIZE
<u>u</u>	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
3-14-4 207 5 8-14-6 0.4 21205 0.4 21205 0.1 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21210 0.2 21220 0.2 21	Sady  55,5 Silt of  20-3010 f  Fine gravel;  Sandy  ON Standy Chy  med plastice  010 Tan Sitty Chy  fires; train	(ci)  y; real stiff execusive  tan  -coarse sound, trace - 10  city; loose  days brown (Cl); 50-640  ity fives; 40-5000 f -coarse  (by; 95-100,10 med plo  ce-540 five grows; mo  y us@ 8 w/ trace grave/  ng growel (100)	sticity stiff
20	20 0		

PANGEA	1710 Fr Oakland Telepho	Environmen ranklin Street d, CA 94612 one: 510-836 0-836-3709			ORING NUMBER B-PAGE 1 OF 1
DATE ST DRILLING DRILLING LOGGEO	TARTED G CONTRAC G METHOD D,BY MU	ton fe	complete checker	GROUND WATER LEVELS:  420 AT TIME OF DRILLING	HOLE SIZE
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
5	B-15- 1900 140	50.5	Tan	illy Clay; medstiff	
10	B-15-1 E142 B-15-1 E143	10.	L ne	welly Clay (U) tan; 40-500 ady the afformation for five sound; plasticity fives 30-4000 five sound;	10.> f
15	B-15- 2017 C1441	6:	San no	and (SP) tun; 95-1000/° five 1, trace-500 ned plasticity five	



## **DAILY LOG**

Date: 2/1	Site Address: 1/87 Solano
Task/Purpose:	Project Name:
Log Notes By (Name):	Project Number:

NOTES	
-Auger	
- Go under tocting w/ Auger	
- Die parallel to tecting 4 - Mand digundes tooting	
- 7-3' under tooting ( - At least 2 unler tooting	
- dalba suil @ 3-4 important	
- snitt soil & The wester tooting	
- Dig to 10 pegate to wall. Then we are es	
To treat up will.	
915 Surple A-1-4- B 22 from back well, 4 below	
top of slab@ 200 angle beneath footing.	
A-1 PIRE 5' = 40 ppg (no bag Box PID = 13-4	
015 Suyle A-2-60 19 from back wall, & below	,
top of slab @ 130 angle beneath Footing. FID= 14	<u>ا</u>
4/6/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/	
1025 Surgle A-4-6 0 to transpack wall, 6 below	2
top of slay a not anyle butter Forting III=2	5
020 Sample A-3-5@ 12 from back wall, 5 below tos	
6-20 angle beneath forting VIVE 5.4	
005 Surple A-3-6 @ 12 from back wall, 6 below tos	
On some beneath too truy. DP-5.3	
30	
Single A.5-4 @ 33 From backwall, 4 below tos	
a ~ 35° angle benefit forting PIV = 32.	6
145 Sample A-5-6 @ 33 From south wall, 6 holow tos	
a 195° angle beneath tooting. PID = 34	•
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
15 Garple A-6-6 @ 24 from backwall, 6 below tos @~, 20° angle beneath footing @ 30° angle from N forwards E PDP 130 Surgle A-6-10@ 20' from backwall, 10' below tos @~ 20° angle hereath footing @ 30° angle from N towards E PTP:	1-110
130 Sample A-6-100 20 From backwall 10' blow the	-110
B - 20° angle beneath forting O 30° quale from N towards I PTN:	-161
	101



## **DAILY LOG**

Date: 7/1	Site Address: 1875
Task/Purpose:	Project Name:
Log Notes By (Name):	Project Number:
Log Notes By (Name).	1 Toject (vuintier.
NOTES AN	
A-6 wall 1	love in pother execution
tou t	
to Leading 3	20° down angle
1150 - 4-5-80	19 from backwall, 8 below tos
" on 45° angl	le bruenth footing @ 30° angle from 1 towned
1040 1 7 12 00	7/1 Fr. 1 1 1/1 A/7/11/11 MEAC
77 /2	to For backwill, AC JUAL 11545
1 vews	tos @ 30° angle from N towards E.
1 10NCH	157-11
Lui-i,	
1350 - A-2-11 @ 14	From backwall 11 below tos
a 30° angle	bereath fatin @ 30° anoke from RAP=43
	PE.
1410-A-3-11@7	From backwall Il before tos
@ 30° augle b	enath tooting @ 20° augle from Nto E.
	PIV=13.6
· · · · · · · · · · · · · · · · · · ·	
·	
	,
	· ·



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# BORING NUMBER PAGE 1 OF 1

	Telepho Fax: 51			-3700		PROJECT NAME Solavo Group				
CLENT	T NUMBER					PROJECT LOCATION				
					COMPLETED		HOLE SE	<b>7</b> E		
	G CONTRAC					GROUND WATER LEVELS:				
	G METHOD	-				AT TIME OF DRILLING				
					CHECKED BY					
NOTES						AFTER DRILLING				
				1						
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PiD (ppm)	U.S.C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION		BORING DIAGRAM		
	B-18-2 @ 1115			(3)	werete buench Silty Clay (CC); da fiver, mist Black	webrown; 10 aloned phit	in F			
5	B-18-5 CIIIO	-								
10				(1)	Silty Clay as @ 1,	brown, 80-900 ned plast carse sand; trace fine, but with trace fine gra	e/			
15					BOH(12) Tustall PV	to coorse sand; Mois  Lu/5/Screen, rem	·			
20					20.0					



Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, CA 94612

# BORING NUMBER PAGE 1 OF 1

17	Telepho Fax: 51	ne. 51	10-836	-3700				B-21		
LIENT		lare	0	roup	2	PROJECT NAME				
ROJEC	TNUMBER					PROJECT LOCATION				
ATE S	TARTED				COMPLETED	GROUND ELEVATION HOLE SIZE 2.25 GROUND WATER LEVELS:				
RILLIN	G CONTRAC	TOR _	20							
	G METHOD	1	1			AT TIME OF DRILLING				
OGGE	D BY	<u> </u>			CHECKED BY	AT END OF DRILLING				
IOTES						AFTER DRILLING				
(# bgs)	SAMPLE TYPE NUMBER	PID (ppm)	USCS	GRAPHIC LOG	MA	TERIAL DESCRIPTION		BORING DIAGRAM		
	B-19-2			(r)	convete laseroff (by (CL); de med phskity fix Moist	eskbown: 95-1000 estre-500 fine	o sand no	d stiff		
5	B-19-5		,							
0						Poth brown: 70-800 , 0-300 fine to com	red e save			
			Andread destruction of the control o	(11)	Sordy Clay as @ Silfy Clay as @ Bot [12] fuh to 12 ft,	194. Nembortedisposalla	usfall			
5		en en en en en en en en en en en en en e	Andread and the state of the st		pvc w/ 5 30 water infiltra	tion Section + action > re-	wie			

PANGEA					i, Inc.	BORING I	
	1710 Fr			Suite 21			PAGE 1 OF 1
500	Telepho	-		3700			B-21
	Fax: 51	9-836-	3709	/			· ·
CLIENT	$-\mathcal{L}_{0}$	ano	<u> </u>	2100	PROJECT NAME	,	,
PROJEC	TNUMBER				PROJECT LOCATION		
DATE ST	TARTED			C	APLETED GROUND ELEVATION	HOLE SIZE	3,25
	G CONTRAC	TOP	100				
				Air			1
	G METHOD	1//	<u>ua</u>			. , ,	·i
LOGGED		my.			CKED BY AT END OF DRILLING $-S$		
NOTES	ىيىن ك	rer	20	ure	AFTER DRILLING		
	111						
	<del>3</del> ~	æ	ا نــا	o			
DEPTH (ft bgs)	SAMPLE TYPE NUMBER	(mdd) Ole	U.S.C.S.	GRAPHIC	MATERIAL DESCRIPTION	80	RING DIAGRAM
L H	⊒ <u>₹</u>	٥	S	₹2	WATERIAL DESCRIPTION		CING DIAGRAM
	ŽΖ	ᆵ	ا رـ ا	Ö		<del>j</del>	
	Ø						
				- (	nevel		
			ć	15	16. (i. Sci) · Wale 100de med - hoch		
<b>†</b> †		[			The contract to a section of		
			] ]		Mesticity times wearst	•	
F +					ilty Clay(Ci) black 1000 med-high pasticity fines involved tace course sand	}	
				1	14000000		
<b> </b>					·		
				<b>.</b>	1.4.72.	<del> </del>	
<b> </b>			_	4	ight Brown	] [	
Į į	F-1-5			Ĭ,			
_5	min	10,	6/				
	0945				•		
					lorowing coarse sand		
		2			190019 and a second		
				[	•		
				İ			
1		1	1	أمثد	while lader - 1 state - an anien	1	
			اسيرا	્ <sup>/</sup> હો.	voycay (co), -4.4 prowu, 80 -409 20		
		1	0.9	/	way Clay (Ci); Light brown: 80-9000 me plusticity fines; 10-2040 med conse Soud (SP); Tan: 80-9000 fine - med so let 10-2000 med plasticity fines; roist	2 \$avol	
		(	V.	40	Sudicely To an energy the		
10		`	$\mathbf{r}$	i i	search, lan 80 - toar time - ned so	uci.	
		1		CY.	10-2000 med plasticity trues; roist	"bluet	
		ĺ		<i>X</i>	CIUZUL AVI MENTE	<del></del>	
F 1					Lustall by discret for 13/ 17/ter;	such	
	}				and collect surple up new milker	Historia	
t 1		Ì		1 13	the take tubica the water		
				-	Enstall 34" dianeter PVC w/ filter; and collect sample w/ new polyes Halloff tubing the relationships + peri pump @1015	-	
+ +				Ì	+15-1 1000 7 000	[ [	
+ +	1	}	1			Į Į	
8		1					
15						]	
BH COPY BLANK (2) OPJ GINT US GOT	1						
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품 20			1	L	0		

PANGEA	Pangea 1710 Fo Oaktand Telepho Fax: 51	anklin : i, CA 9 ne: 51	Street, 4612 10-836	Suite	rices, Inc. 200		BOR	RING NUMBER PAGE 1 OF 1 B-22
CLENT	Silar			rocy	2	PROJECT NAME		
PROJECT	T NUMBER					PROJECT LOCATION		
		4/2			COMPLETED	GROUND ELEVATION	HOI	E SIZE 3.25
	CONTRAC					GROUND WATER LEVELS:		
DRILLING	METHOD	1fa	wl	prige	<u> </u>	AT TIME OF DRILLING	<u> </u>	
	BY M		- 846		CHECKED BY	AT END OF DRILLING	<u>-5</u>	
NOTES _	cour	je i	COR			AFTER DRILLING		
HT. gs)	E TYPE BER	ppm)	S. C.	S HE S		MATERIAL DESCRIPTION		
DEPTH (# bgs)	SAMPLE TYF NUMBER	PID (ppm	U.S.C.S.	GRAPHIC LOG	<b>.</b> .	MATERIAL DESCRIPTION	ļ	BORING DIAGRAM
10 15 15 15 15 15 15 15 15 15 15 15 15 15	B-22-5 20232 © 1049		2	(9)	Sandy Chy (CL)  First ity free  increasing sained  Sandy Chy (CL),  Fires; 20-3  o. Her 10ft.  Tustall 34"  reollect 9  fubrig + cl	black + dark brane; to their fires; raist  -coarse sand  brown 85-951° me  5.5-1500 f-coarse  brown 70-800° m  apo f-'coarse sun  dianeter PVC w/ fill  acc sample cof nen  ean check valued  mel @ 2,5-3  3 + consete core	ed-hiply Sound sound ber such polyet 21/30	-

PANGEA	PANGEA Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, CA 94612 Telephone: 510-836-3700 Fax: 510-836-3709					BORING	NUMBER BAGE 19 B-2
CLIENT	5. lo			sup.	PROJECT NAME		
-	NUMBER				PROJECT LOCATION		
				COMPLETED	GROUND ELEVATION		
DRILLING CONTRACTOR							
	METHOD					LLING	
				CHECKED BY		LING —	
						<b></b>	
	មា		"				
DEPTH (ft bgs)	SAMPLE TYPE NUMBER	РІД (ррт)	U.S.C.S.	901	MATERIAL DESCRIPTION	6	ORING DIAGRAM
0			(0	Silty Clay CL	); black - 1000 red	plasticity files,	
5	8-23-1 1000000 @ 1630	t.5		3) brown			
10	B-23- @ 164	8.5		Sandy Clay CC	(); knwu; 70-8	- odo neel platic.	Sher
			4	B.040 12			
15							
· · ·			VIII) — An Adresson Anne Alberton (de 1919 de 1919) de 1919 de 1919 de 1919 de 1919 de 1919 de 1919 de 1919 de				
20				20.0			

PANGEA		anklin S , CA 9	Street, 4612	Suite 200		PAGE 1 OF 1
	Fax: 51	9-836-	3709	mus	nno mar usur	
PROJECT	T NUMBER	unco		7	PROJECT NAME  PROJECT LOCATION (187)	So lano Are
DATE ST		4/2	15	CO	MPLETED GROUND ELEVATION	HOLE SIZE 2.125
DRILLING	CONTRAC	TOR _		aza	de ground water levels:	_
DRILLIN	G METHOD ,	, Н	auc	& Aug.	AT TIME OF DRILLING	
LOGGED	BY M	<u>l-</u>	//		ECKED BY AT END OF DRILLING	
NOTES	Hole Sc	w t	Tire	wood	Coucrete drilled AFTER DRILLING -	
O (ft bgs)	SAMPLE TYPE NUMBER	PiD (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
5	8-24-4 119577 @ 1449	55		(1) (3)	oucrete 5ilty Clay (CL); black, 1000p med-light plasticity fines; roist brown	
10			Andreas and the state of the st	(11)	and Clay (CL); brown; 90-9000 med plastice et 10-2001 f-coarse sand; more oilty Clay (CL); brown; 90-10000 med plast trace - 10010 f-coarse sand B.O. H. 12 Sand, Clay (CL) brown; 7 med plasticity fines; 20-3000 f- sand; wet	ticks fires;
20		The second secon		20	.0	

PANG	1710 Fr	anklin Stre	et, Suite .			DURING	PAGE 1 OF 1
5		l, CA 94612 ne: 510-81					B-30
	_ ^ /	0-836-370					
CLIEN		eno G	rocy		PROJECT NAME	7 Solario	
-	ECT NUMBER . STARTED	11/25		COMPLETED	PROJECT LOCATION/_/_ GROUND ELEVATION		2.125
	STARTED	TOP /			GROUND WATER LEVELS:	ROLE SEE	
	ING METHOD	Hum	Arge	.r	_ AT TIME OF DRILLING _	_9.5	
	ED BY		/ .	CHECKED BY BCR	_ AT END OF DRILLING	-9	
NOTE	s Corus	rete e	Lores	J	AFTER DRILLING		
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	GRAPHIC LOG	MA	ITERIAL DESCRIPTION	E	BORING DIAGRAM
25 10 10 10 10 10 10 10 10 10 10 10 10 10	B-30-19 C1218	<b>4 Q 7</b>	(9.5)	Brown  trave-540f-corr  10-2000 f-cocre  onet  Tustell 34" pre  + collect 600	brown; 80-900p med rese sand; noist brown; 60-700p med brown; 60-700p med e sand; 10-200p me dianeter PVC w/ sample w/ new p value @ 1255	plasticity for five growth filler sector	ves,
SH COPY BLAN				20.0			

PANGEA	1710 F Oaklan Teleph Fax: 5	ranklin 5 d, CA 9 one: 51 10-836-	Street, S 4612 0-836-3 3709		ne.	BORING NUMBER PAGE 1 OF 9  DB-T  PROJECT NAME 1187 So kino Ave.			
CLIENT _	Sola							· • · · · · · · · · · · · · · · · · · ·	
PROJECT		142	<u>15,0</u>	02		PROJECT LOCATION 1/27			
DATE STA	_	2/2	D.	_	LETE0	GROUND ELEVATION	HOLE !	SIZE 2.25	
DRILLING		$\overline{a}$	<del>/</del>	oure	- 1/	_ GROUND WATER LEVELS:		•	
DRILLING				Dial L	Uall	_ AT TIME OF DRILLING _	<del>-</del>		
LOGGED E	BY _ <i>H[]</i>	<u> </u>		CHEC	KED BY	AT END OF DRILLING			
NOTES						AFTER DRILLING 24	rs - 32.	U	
DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	US.C.S	LOG	MA	TERIAL DESCRIPTION		BORING DIAGRAM	
5 10				(1) San 22 M (1) San 22 M (1) San 22 M (1) San 22 M (1) San 22 M	yey Gravel (GC), yey Gravel (GC), tour chy (GL); tour five - west coist to west of the chy as a conse sand of the chy chy chy chy chy chy chy chy chy chy	in, 90-1000 ned;  1010 fine sand;  ticity fines; mist  Ift  1 ft but tan and  ticity files; 10-2  y  (CL); 10000 ned;	egravel, it is grown or five	16341	
20				20.0					

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CLIENT	
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Pangea Environmental Services, Inc.

RORING NUMBER

1710 Franklin Street, Suite 200	<u> </u>	OKING MONIDEK
Oakland, CA 94612	4	PAGEZ OFZ
Telephone: 510-836-3700		DB-I
Fax: 510-836-3709		VB-1
Selano Grup	PROJECT NAME	
N NADED	PPO JECT LOCATION	

PROJE	CT NUMBER					PROJECT LOCATION				
DATES	STARTED				COMPLETED	GROUND ELEVATION HOLE SIZE GROUND WATER LEVELS:				
ŀ	NG CONTRAC	•		_						
DRILLI	NG METHOD	<u>, P</u>	$\nu_{\perp}$			AT TIME OF DRILLING				
LOGGE	ED BY	<u> </u>	·············		CHECKED BY	AT END OF DRILLING	<del></del>			
NOTES						AFTER DRILLING				
C DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MAT	ERIAL DESCRIPTION	BORING DIAGRAM			
		Andrews (Antrews (Ant	er kan de de de de de de de de de de de de de	(24)	taux light brown	·				
2_5				(26)	Bu light tan					
30			(	(30)	Lt. Brown Silt(MY; reddish by plasticity fives; in Silty Chy; (CY bro fives; very stiff	rown, 95-10000 low trace - 50 five gravel, who, 1000 red plasticity	dry			
3 <u>35</u>				(39)	tan bowin	ustall puc w/ 10' screen back outer casing to to await conterjustita				
					,					

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, CA 94612 Telephone: 510-836-3700

BORING PAGE 1 OF 1

	. 43 4				~							
CLIENT SOLANO GROUP								-				
DATE STARTED 7213 COMPLETED								PROJECT LOCATION				
1			•							ULE SIZE	2,45	
1								ROUND WATER LEVELS				
DRILL	ING METHOD							AT TIME OF DRILLI				
					CHECKED	BY			-			
NOTE	<u> </u>		_		<del></del>			AFTER DRILLING		T		
OEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	COUNTS	U.S.C.S. GRAPHIC		<del></del>	MATER	RIAL DESCRIPTION		W	ELL DIAGRAM	
5	B-31-1 1100 B-31-3 1108 B-31-5	1 i v.8			PZ	(int) (IL) s and o	ROWN	t GREY 85-9  ! fine sand  ! \$ very stiff  nds & H bro  LT BROWN;  L SANC!				
10 15 15 15 15 15 15 15 15 15 15 15 15 15												
74 20					20.0							

Pangea Environmental Services, Inc. WELL NUMBER B-2 1710 Franklin Street, Suite 200 Oakland, CA 94612 Telephone: 510-836-3700 Fax: 510-836-3709 SOLANO GROUP PROJECT NAME PROJECT NUMBER PROJECT LOCATION HOLE SIZE 3,25 DATE STARTED 7213 COMPLETED GROUND ELEVATION DRILLING CONTRACTOR 600 FLUENCE **GROUND WATER LEVELS:** DRILLING METHOD HAND AUGER AT TIME OF DRILLING \_---AT END OF DRILLING \_---AFTER DRILLING \_---NOTES PID (ppm) BLOW COUNTS U.S.C.S. SRAPHIC LOG MATERIAL DESCRIPTION WELL DIAGRAM SANDY CLAY (DARK GREY; 85-90% med plast fines and 13-32-1 18 10 to %. f.m. sin

(1) SILTY CLAY(CL); DARK BROWN; 90-95% med plast fires and

5-10% fine sand; Stiff

(3) It brown

(4) SANDY CLAY(CL); IT BROWN; 70-75%, med plast fines

and 25-35%. fine & Sand B 32-5

10

GINT US.GDT

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, CA 94612

BORING PAGE 1 OF 1

PROJECT NUM DATE STARTE DRILLING COM DRILLING MET	BER	GRE 13 COL	NFL	•	GROUND WATER LEVELS: AT TIME OF DRILLING	···	HOLE SIZE 3.25 /T		
NOTES			_ `	CHECKED BY	AT END OF DRILLING				
O DEPTH (ft bgs) SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS U.S.C.S.	GRAPHIC LOG	MAT	TERIAL DESCRIPTION		V	VELL DIAGRAM	
B-3	3.3 0. 2 0. 5 0.	5 2 1		(3) LT BROWN & IN	ex GREY; 80-85%, med; stiff accensing fine sands it Brown; 75-80 file sand	<b>,</b>			

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200

WELL NUMBER 13 34

T.	Oakland Telepho Fax: 5	one:	510	836-3	3700				BORING	PAGE 1 UF 1
CLIENT	<u> 501</u>				ยอบ	<u>P</u>		PROJECT NAME		
	NUMBER	.1 15				•		PROJECT LOCATION		
		7	12	13	(	OMPLETED	***************************************	GROUND ELEVATION	HOLE SIZE	·2×5 3.25
								GROUND WATER LEVELS:		
						IGER				
								AT END OF DRILLING		
LOGGED BY CHECKED BY								AFTER DRILLING		
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW	U.S.C.S.	GRAPHIC LOG		MAT	ERIAL DESCRIPTION		WELL DIAGRAM
5	34-1 1000 1010 1010	911	1.4		2	plast fines of SILTY CLAY ( and 5-107)  2 3' mediu  2 4' LT B	(cr) is fine for st. fi record	DARK BROWN, 80-85 17.20 fine servel ARK BROWN, 90-95 Sand, VCH Stiff	57. medium	it fines
10										
15										

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200

-- WELL NUMBER A

Oakland, CA 94612 Telephone: 510-836-3700 Fax: 510-836-3709 SOLAND GROUP PROJECT NAME SOLAN & PROJECT NUMBER 1435.002 PROJECT LOCATION HOLE SIZE 6" DATE STARTED 7/2/13 COMPLETED GROUND ELEVATION DRILLING CONTRACTOR S.T. GROUND WATER LEVELS: DRILLING METHOD HAND AUGTER AT TIME OF DRILLING ---\_\_\_\_\_CHECKED BY \_\_\_ AT END OF DRILLING \_\_\_\_ NOTES 30° ANGUE AFTER DRILLING \_--PID (ppm)
BLOW
COUNTS
U.S.C.S
GRAPHIC
LOG MATERIAL DESCRIPTION WELL DIAGRAM 25 SILTY CLAY (CL), DARK BROWN, 95-100% MEDIUM PLASTICITY FINES AND TRACE-5% FINE SAND 4-9-3 Q4.5' INCREASING FINE SANDS (5) SANDY CLAY (CL) LT. BROWN; 65-707, MEDIUM PLASTICITY FINES AND 30-35% FINE TO MED SAND 0.2 Q6' DARK BROWN A-9-1 (7) SANDY CLAY (CL) LT. BROWN GO-65% MED PLASTICITY THES AND 35-40 Y. FINE SAND A-9-9 10 12 CLAYEY SANDYSCY, LT. BREWN, 65-60% FINE TO MED SAND, 35-40% LOW PLASTICITY FINES, AND 5-10% FINE GRAVEL A-9-12 1. @ 12.5' REFUSAL (POSSIBLY CONCRETE) TOTAL WELL LOG BLANK (2),GPJ GINT US.GDT 15

DATE S	1710 F Oaklar Teleph Fax: 5	rank id, Ca one: 10-8 0LA	lin Str A 946 510-6 36-37 Je	eet, Suit 12 836-370 09 (A)20	COMPLETED	PROJECT NAME  PROJECT LOCATION  GROUND ELEVATION  GROUND WATER LEVELS:	PAGE 1 OF 1  BOKENCY  PAGE 1 OF 1
DRILLI	NG METHOD	i	AA	א מי	NUCHER	AT TIME OF DRILLING	411-
	0° A				CHECKED BY	AT END OF DRILLING AFTER DRILLING	
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	M		U.S.C.S.	S) M/	ATTER DRILLING	WELL DIAGRAM
TOTAL WELL LOG BLANK (2) GPJ GNT US GDT 8/108	A-10-3 10-45 1127 A-10-12 1352 A-10-13 1410	0.1	5 5	1	SANDY CLAY (Cy); 125-30% fine H Q6.5' trace fine Q9' increasing SANOY CLAY (EL) and 35-40%. 2 Same as at	five sands of LT BROWN; LO-65 five sand	on plast fines,

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V	Oaklan Teleph Fax: 5	one:	510-8	36-3700				t	OCIUM		
CLIEN	τ			_	ROUP		PROJECT NAME				
PROJI	ECT NUMBER						PROJECT LOCATION				
	STARTED				COMPLETED	733	=	но	" ما DLE SIZE		
	ING CONTRA					***********	GROUND WATER LEVELS:				
					GER		AT TIME OF DRILLING				
					CHECKED BY						
NOTE	s <u>45°</u>	A	ngle				AFTER DRILLING				
O DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	SEOW	GRAPHIC		MA	TERIAL DESCRIPTION	WELL DIAGR	GRAM		
5	A-11-3 1345 A-11-5 17155	0.	0		10-15% SANDY	<b>r</b> .	# BROWN 75-80				
15						•					

## **APPENDIX E**

Field Forms for Subslab Gas Sampling

			Soil	Vapor Pr	obe Purç	jing/Sam	pling Lo	g			
Pr	oject Name:	Solano Grou	D				Sub-Sla	b Probe ID:	55-PO-1		
J	lob Number:	143511	002		Suma Can Serial #: 6/69						
	Date:	1/16/2013			Flow Controller #: 845						
		Scott Polsto					Initi	ial Vacuum:	3011		
Sample II	D and Time:	55-	1-0-1-	-1530		-	Fin	al Vacuum:	4.54		
	Notes:	Hell	) //	0" 1/20	Vine F	or Sm	ww.				
		(Brea	kRoom	-)							
Spe	ecifications					Purge Volu	me Calcula	ition			
			cm			Purge volum	ne = tubing +	sandpack			
	The state of the s		cm				Pi * (inner di		length		
Borii	ng diameter:		cm			=		cm3			
Sand	pack height:		cm			Sandpack =	Pi * (boring	diameter/2)2	* sandpack height * porosity		
			cm			=		cm3	1531		
	be diameter:		cm			irge volume:		cm <sup>3</sup>	Start Time: 1526		
	ma flow rate:		mL/min		purge volume				Purge Time: huw		
Pur	rge flow rate:		mL/min	PI =		1 inch = 2.54 1 ml = 1 cm <sup>2</sup>		Est. ma	ax. porosity = 0.375		
	He Delivery	He in		He in							
Time	Pressure	Shroud	Purge Time (min./sec.)	Purge Sample	VOCs (ppmv)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH₄ (%)	Comments		
	(psi)	(% or ppm)	(11111137000.7)	(% or ppm)	(PP)	(70)	(70)	(70)			
1526	No	3070	0	& No	NA						
1527	1	29,990	1	0%	1.000	_					
T											
1531		29.8									
1532		29.8									
1534		29,5									
1536		29.83									
1538		28.9									
1000											
·ma				£ 07							
1539		28.6		6%	· 7ppn						
						be:					
7											
				1 1							
				1							

				Vapor Pr	obe Purg	ing/Sam	pling L	og	SS-P0-Z			
		Solano Grou							1750			
		1435,0	102					an Serial #:				
		1/16/2013						Controller #:				
		Scott Polsto		1601				tial Vacuum:				
Sample I		55-P	15011	1601	For 3	7	Fi	nal Vacuum:	<i></i>			
	Notes:	11 POBO		VAC	For 3	, w/w						
	ecifications				Purge Volume Calculation  Purge volume = tubing + sandpack							
	Tubing length:cm						The second second	Total Control of the				
	Tubing inner diameter:cm						Pi " (inner d	diameter/2) <sup>2</sup> *	length			
						=	D: + /hi	cm3	2			
			cm				Pi " (boring		2 * sandpack height * porosity			
			cm		Cinala au	=	1,9	cm3 cm³	Start Time: 1600			
	be diameter: ma flow rate:		cm	Total	purge volume				Purge Time:			
			mL/min mL/min			1 inch = 2.5			ax. porosity = 0.375			
Pui	rge flow rate:		mL/min			1 ml = 1 cm		ESt. Ma	ax. porosity = 0.375			
Time	He Delivery Pressure (psi)	He in Shroud (% or ppm)	Purge Time (min./sec.)	He in Purge Sample (% or ppm)	VOCs (ppmv)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH₄ (%)	Comments			
1559	N/s	30%	Ø	N/2	NIA							
1600		29.9		0%	15							
1601		29.7										
1603		24.6										
1605		24.3										
1607		28.6										
1608		28.3	sta.									
N.C. A		(1 )		-7	7							
1609		28.0		0%	·7 pp							
						7			,			
	3											

			Soil	Vapor Pro	be Purg	jing/San			
Pr	roject Name:	Solano Grou	ip				Sub-Sla	ab Probe ID:	55-3
	Job Number:	1435	1002				Suma C	an Serial #:	6302
	Date:	4/16/2013	1/17/	3.			Flow	Controller #:	666
	Sampler(s):	Scott Polsto	n, mor	Cron			Init	ial Vacuum:	-30
Sample I		61 7	1001	•					
	Notes:	Hei	0 70	4 H20	Virc	For	3mm		
Sp	ecifications					Purge Volu	ume Calcula	ation	
Tu	ubing length:		cm			Purge volur	me = tubing -	sandpack	
						Tubing =	Pi * (inner d	liameter/2)2 *	length
	Boring diameter: cm					-		cm3	
Sand	pack height:		cm		- 100	Sandpack =	Pi * (boring	diameter/2)2	* sandpack height * porosity
F	Probe length:		cm			=	-	cm3	
Pro	be diameter:		cm		Single pu	rge volume:	10	cm <sup>3</sup>	Start Time: 1003
Sumi	ma flow rate:	150	mL/min	Total p	urge volume	es extracted:	2/19	Total	Purge Time:
Pur	rge flow rate:	25	mL/min	Pi = 3	3.1416	1 inch = 2.5	64 cm	Est. ma	x. porosity = 0.375
						1 ml = 1 cm	13		
	He Delivery		Purge Time	He in Purge	VOCs	O <sub>2</sub>	CO <sub>2</sub>	CH₄	Comments
Time	Pressure	Shroud	(min./sec.)	Sample	(ppmv)	(%)	(%)	(%)	
1002	(psi)	(% or ppm)	B	(% or ppm)	N				
	IV (IS	,	×	200	10				
1003	V	28,0		700	28				
1006		26.6						fich B	
1008		25.8							
1009		24.8							
inla		23.6							
iolo		05.0							
[01]				0%	55,6				post somple
									pos sur you
				46					
				Transfer I					
								2	

			Soil	Vapor Pi	robe Pur	ging/San	npling Lo	og	
Pr	roject Name:	Solano Grou	ıp				Sub-Sla	ab Probe ID:	55-4
	The state of the s	14351							7519
			1/17/1	3					680
			n, mon						
Sample I	D and Time:	95-1	1 10	34			Fir	nal Vacuum:	- 29
	Notes:	Hei	0 15	-0" at	VAC	For 3	3 Min		
	ecifications								
							me = tubing +		
							Pi * (inner d		* length
		-				-		cm3	2
			cm			Sandpack =	Pi * (boring		<sup>2</sup> * sandpack height * porosity
					/	-	17	cm3	1020
	be diameter:		cm						Start Time: 1028
	ma flow rate:		mL/min			es extracted:			Purge Time:
Pui	rge flow rate:	25	mL/min	Pi =	3.1416	1 inch = 2.5 1 ml = 1 cm		Est. m	ax. porosity = 0.375
	He Delivery	He in	D T:	He in	V/00-			CH	0
Time	Pressure (psi)	Shroud (% or ppm)	Purge Time (min./sec.)	Purge Sample (% or ppm)	VOCs (ppmv)	O <sub>2</sub> (%)	(%)	CH <sub>4</sub> (%)	Comments
1028	NIA	24.0	0	NA	NIM			N. S	
1031		23,2	1	0	185				
1034		21,1							ADDED He
1036		27.0							
1038		26.6							
1039		25.8							
					9055				
1042				0%	565				
			-						

			Soil	Vapor Pr	obe Purg	ing/Sam	100	-				
Pr	roject Name:	Solano Grou	ір				Sub-Sla	b Probe ID:	55-5			
J	Job Number:	1435.	002					an Serial #:				
		1/16/2013		013			Flow	Controller #:	763			
	Sampler(s):	Scott Polsto	n, mon	in	Initial Vacuum: -30							
Sample I	D and Time:	55-5	-110	5			Fir	nal Vacuum:	-4			
	Notes:	55-5 17ec	) 13	o" of	420 V	ar For	3n	N				
Specifications Tubing length:cm Tubing inner diameter:cm					Purge Volume Calculation  Purge volume = tubing + sandpack  Tubing = Pi * (inner diameter/2) <sup>2</sup> * length							
Bori	Boring diameter:cm					=		cm3				
Sand	lpack height:		cm			Sandpack =	Pi * (boring	diameter/2)2	* sandpack height * porosity			
F	Probe length:		cm			=	10	cm3	1100			
	be diameter:		cm						Start Time: 1100			
	ma flow rate:		mL/min						Purge Time:			
Pur	rge flow rate:	25	mL/min	Pi =	3.1416	1 inch = 2.54	4 cm	Est. ma	x. porosity = 0.375			
				He in		1 ml = 1 cm	3					
Time	He Delivery Pressure (psi)	He in Shroud (% or ppm)	Purge Time (min./sec.)	Purge Sample (% or pom)	VOCs (ppmv)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH₄ (%)	Comments			
1100	NIA	28.4	Ø	Nh	NIA							
1103		2810		0%	73,0							
1106		26.7										
1108		2600										
1110		25.2										
in		24.4										
1114		23.8										
11/6		23.2		0%	12.0							
Val. No.												

			Soil	Vapor Pr	obe Purg	ging/Sam	pling Lo	og	
Pr	oject Name:	Solano Grou	р				Sub-Sla	ab Probe ID:	55-6
		143					Suma C	an Serial#:	6423
		1/16/2013		13			Flow	Controller #:	678
	Sampler(s):	Scott Polsto	n men	con			Init	ial Vacuum:	-30
Sample I	D and Time:	53,-6	-113	56	120	0	7 Fir	nal Vacuum: _	-4
	Notes:	iten	カフラ	" of	120	for.	Smm		
Sp	ecifications					Purge Volu	ıme Calcula	ation	
						Purge volun	100		
								liameter/2)2 *	length
Boring diameter:cm Sandpack height:cm					=		cm3	* sandpack height * porosity	
						Sandpack =	Pi (boring	cm3	sandpack neight porosity
	be diameter:		cm		Single nu	irae volume	1.7		Start Time: 1\31
	ma flow rate:		mL/min	Total	purge volume			Total	Purge Time:
	rge flow rate:		mL/min		3.1416				x. porosity = 0.375
						1 ml = 1 cm	3		
	He Delivery		Purge Time	He in Purge	VOCs	O <sub>2</sub>	CO <sub>2</sub>	CH₄	Comments
Time	Pressure (psi)	Shroud (% or ppm)	(min./sec.)	Sample	(ppmv)	(%)	(%)	(%)	
1131	(1-1)	29.7	B	(% or ppm)	NA				
1134		28.1	1	0%	37				
N O				- 1.0					
1137		267							
1138		2615							
1140		25,9							
1142		24.8							
1146		7		07	28 91	~			
					rı				

			Soil	Vapor Pr	obe Purg	ging/Sam	pling Lo	g		
Pr	roiect Name	Solano Grou						b Probe ID:	65-7	
		1495			Suma Can Serial #: 757-6					
		1/10/2013 ,		3	Flow Controller #: 1726					
		Scott Polsto		rian						
Sample I		95-	1 - 12	54			Fin	al Vacuum:	-3 <i>o</i> - 4	
oumpio i	Notes:		105	-11 of	t20	43m	W			
Sp	ecifications					Purge Volu	The same of the sa			
						Purge volum				
								iameter/2) <sup>2</sup> *	length	
						=		cm3		
	lpack height:		cm			Sandpack =			2 * sandpack height * porosity	
	Probe length:		cm		0: 1			cm3	17=1	
	be diameter:		cm	Tatal		irge volume: es extracted:			Start Time: 1251 Purge Time: 1 www	
	ma flow rate: rge flow rate:		mL/min mL/min		3.1416	1 inch = 2.5			ax. porosity = 0.375	
Pul	ige now rate.		THE/IIIII	F1-	3.1410	1 ml = 1 cm		ESt. IIIe	ix. porosity – 0.373	
	He Delivery	He in		He in						
Time	Pressure	Shroud	Purge Time (min./sec.)	Purge	VOCs	O <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	Comments	
	(psi)	(% or ppm)	(min./sec.)	Sample (% or ppm)	(ppmv)	(%)	(%)	(%)		
1251	Nh	26%	Ø	ENL	+ N/A					
1252		25.4	1	0%	11.5					
1256		23.8								
1257		23.6								
1258		23.0								
1259		21.3								
1301		2010								
1303				0%	9.8					



### **DAILY LOG**

Date: 7/3/13	Site Address: 1187 Solano Ac-
Task/Purpose: Substate Gas Scupling	Project Name: Solono Group
Log Notes By (Name):	Project Number:

**NOTES** -> 2Tyl x 3vokres = 8/4L 25)(25) 2 = 0.4 in 3 -> 6 st × 3 volues = 18 Cheefe Shut in Test @ 61 H20 99 OK still @ 61" 45,0 834 Summe vacuur = 28,5, Start sample, = 21.10° , Introduce rore He = 25.410 837 He= 24.76 838 He= 23.8 879 He= 23, 20, Stop Sample @ 4.5"He Shut in Test Survey# 6203, Man. 316 Shut in Test Olk reen 100ml, Check by Offer the 1025-55-10 Shut in Test 66 H2 D, Scorn #5805-736 Mart 316-767 He = 39.70/0 1030 - Sput in Test OK 1032 - Puge ~ 100 ML , Check boy Ool He W34- He= 29.7do, Sovina Vaccount = 29.7" Start sample 10 25 - He = 28,7 dq 10 36 = 28,2, 1037 = 27,4, 1038 = 26,90 Page 1 of 3



### **DAILY LOG**

Date: 7/3/13	Site Address: 1187 So knie
	Project Name:
Log Notes By (Name): Mc	Project Number:

**NOTES** 5\$-10 (Cont'd) 1040, He=25.200, Stop Souple Vac = 3", Post sarple He Check = 000, PID screen = 1.2 ppm in Test -Surara = A 75-13, Man = 1213=1910/210=20.8%, 1211=20.54 1213=1910/0,1214=21,400,1215=20.90 Stop saugle @ 4.5" Hg start sample @ 30" H 1210 = 20.8%, 1211 = 20,540 - Shot in Test Man 316-672, Can 524-872, 5/N A7524 22 do, hoge in 100 orl, He in Bog = 0 Start sarghe the = 20.300, 1339 = 19.100, 1340 = 19.0, 1341 = 18.50 He = 18.0, 1343 = 17.400 Sarahe Check He = O of PID = 66" HzD, He = 21.70% - Shut in OK, Purge ~ 100 ml, He in Brg = Odo, PIP=1.6 1 - Stort Sangle, Survey = 294 Hg, Survey = 6419, Man = 724 He= 19,3do, 1405 = 20,8%, 1400 = 20,340, 1407=19,940 1408-Stop Sample @ 4.5" 44 Fort Sample Check Hes OP, PIDO 0.6ppm Page 2 of 3



## DAILY LOG

Date: 7/3/13	Site Address: 187 So kano
Task/Purpose: Sabs ab Gas Sorple	Project Name:
Log Notes By (Name):	Project Number:

	NOTES	
14	15- Stop Souple @ 55-9, No vapor collected.	
4	500-2	
19	2 WELLIN 1681 79 173 U. HP 221	
19	42° Man # 830, Sarra# 6420, 30 Hg	
	He=22.46°,	
144		
1/1	1452 = 20.6, 1453 = 19.9, 1454 - 19.64 1855 = 19.00	
17	56 = Stop Sonple	
	Post Gargle Bug He = Odo, PID = 2,1 ppr	
45	10-3	
19	11 Shutin test 65" Hs. O. He = 22.10"	
15	16 Man 316-669, Can #6307, Sowing Hg = 28,5 Hg.	
	Proge ~ 100 nl Bag Screen He = Odo, PID=1.0	
15	19 Start sample, He = 2017, 1520 = 20.3, 1521 = 19.900	
11	1522-21.7%, 1523=21.3%	
13	Post Sarple Bag He = Ode PID = 6.8 ppu	
1	Post Sargle Bag He = Ode, PID = 0.8 ppm	
5	00-4 Shut in test 72" 420,	
i	530	X 1
14	535 - Sintin Testok, Man 665, Simila 7521, Stort 30"He	,
	Purge in 100 ml, Bay Screen He = 040, PID=1.4	py
15	540 Start South He = 22.56 1541 = 22.8% 1542 = 22.3	10
	1543=21.7%, 1544=21.0%, 1545=20,1%	
	Post Surple By He = ON, PID= 1.8 ppm	
	rost swy e og ne et plane noppri	
1	PID readings from boring water Hall Bothroom areas of	1185
	A-11-5-0.0 ppn A-12-3-0-2pm A-13-3-0.2pm	Ry
	A-11-8-0,2pm A-12-5-0,1pm A-13-5-0,0pp	4
	A-12-8-0,3 A-13-8-0.64	n

58-8-7 He

Page 3 of 3

			Soil	Vapor Pr	obe Purg	ing/Sam	pling Lo	g				
P	roject Name:	Solano Grou	IP.				Sub-Sla	b Probe ID:	1185 NORTH-SG			
		1435,0						an Serial#:				
		10/10/1			Flow Controller#:							
		BOB C	The second second second	DDELL		Initial Vacuum:						
Sample I	D and Time:	1185 N	DOTH 11	130 AM			Fin	al Vacuum:				
	Notes:	. ((0,5 K	OKIN			1.			·			
			à									
Sp	ecifications					Purge Volu	me Calcula	ntion				
Tı	ubing length:	609.6	cm			Purge volum	ne = tubing +	sandpack				
Tubing inn	ner diameter:	0.32	cm			Tubing =	Pi * (inner di	iameter/2)2 *	length			
Bori	ng diameter:		cm			=		cm3				
ENGLISH STRONG RIVER			cm			Bandpack =	Pi * (boring	diameter/2)2	* sandpack height * porosity			
F	Probe length:		cm			-		cm3				
Pro	be diameter.		cm		Single pu	rge volume:	49	cm <sup>3</sup>	Start Time:			
	ma flow rate:	-	mL/min	Total	purge volume	s extracted:	41_	Total	Purge Time:			
			mL/min	Pi =	3.1416	1 inch = 2.5	4 cm		ox. porosity = 0.375			
						1 ml = 1 cm	3					
Time	He Delivery Pressure	He in Shroud	Purge Time	Purge	Soc	02	CO₂	CH <sub>4</sub>	Comments			
	(psi)	(% or ppm)	(min./sec.)	Sample (% or pom)	(ppmv)	(%)	(%)	(%)				
	TOTA	L PUR	GE ~	2.0 L				1				
11:30	SAMPO	E TIM	E									
,												
		<u> </u>			The state of the s							
				4								
			and the second second									
	-											
								-21				
	1	P										
	-											

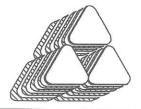
			Soil	Vapor Pi	robe Purg	ing/San	npling Lo	og	
F	roject Name:	Solano Grou	ip .				Sub-Sla	b Probe ID:	1187 NORTH - SG
	Job Number:							an Serial#:	
		10							
	Sampler(s):	BOB C	LARK-R	HODELL			Init	ial Vacuum:	
Sample	ID and Time:						Fir	nal Vacuum:	7
	Notes:					1.			
			<u> </u>						
1000000	oecifications					Purge Volu	ıme Calcula	ation	
A CONTRACTOR OF THE PARTY OF TH	ubing length:						ne = tubing +		
Tubing in	ner diameter:	0.32	cm			Tubing =	Pi * (inner d	iameter/2)2 *	length
Bor	ring diameter:		cm			=		cm3	
San	dpack height:		cm			Sandpack =	Pi * (boring	diameter/2)	* sandpack height * porosity
	Probe length:		cm			=		cm3	
	obe diameter:		A CONTRACTOR OF THE PARTY OF TH			rge volume:	49	cm <sup>3</sup>	Start Time:
	nma flow rate:	PERSONAL PROPERTY AND ADDRESS OF THE PARTY O	Caro reduct a sur la caro		purge volume				Purge Time:
Pu	rge flow rate:		mL/min	Pi =	3.1416	1 inch = 2.5	4 cm	Est. ma	ix. porosity = 0.375
				Hein		1 ml = 1 cm	3		
Time	He Delivery Pressure (psi)	He in Shroud (% or ppm)	Purge Time (min./sec.)	Purge Sample (% or pom)	VOCs (ppmv)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH₄ (%)	Comments .
	TOTA	I PUP	GE ~						
11:25		PLE TIM							
7.00									
							THE STATE OF		
•									
						-			
	1								
						1			

Project Name: Solation Group   Sub-State Prote ID   Sum Can Serial #   Flow Controller #   Initial Vacuum   Final Vacuum   F				Soil	Vapor Pi	robe Purg	ing/San	The state of the s	-	
Sumpler(s):  Sampler(s):  Sampler(s):  Some Catality - Robert Cata	Pr	roject Name:	Solano Grou	IP .				Sub-Sla	ab Probe ID:	55-16
Sampler(s): Rob CdARK - RIDDELL  Sampler(s): Rob CdARK - RIDDELL  Sample ID and Time: S5-/6 12:10 PM					with the same			Suma C	an Serial #:	
Sample ID and Time: SS-16 12:10 PM ' Final Vacuum:  Notes:    Specifications   Purge Volume Calculation								Flow	Controller #:	
Sample ID and Time: \$5-16					IDDELL	_		Init	ial Vacuum:	
Specifications   Purge Volume Calculation	Sample I	D and Time:	55-16	12:10	PM 1			Fir	nal Vacuum:	
Specifications Tubing length: 60.94 cm  Tubing inner diameter:							1.			
Tubing length: 60.9 cm  Purge volume = tubing + sandpack  Tubing inner diameter:				ù						
Tubing length: 60.9 cm  Purge volume = tubing + sandpack  Tubing inner diameter:										
Tubing inner diameter: 32 cm  Boring diameter: cm  Sandpack height: cm  Probe length: cm  Single purge volume: 49 cm³  Start Time:  Summa flow rate: mL/min  Purge flow rate: mL/min  Time Pressure (psi)  He Delivery Pressure (psi)  Purge Time Purge Time (min./sec.)  Sandpack = Pi * (inner diameter/2)² * length  cm  Sandpack = Pi * (boring diameter/2)² * sandpack height * porosity  cm  Single purge volume: 49 cm³  Start Time:  Total purge Time:  Purge Time Purge  Sample (ppmv)  (% or ppm)  TOTAL PURGE  O 55										
Boring diameter: cm = cm3  Sandpack height: cm Sandpack = Pi * (boring diameter/2)² * sandpack height * porosity  Probe length: cm = cm3  Probe diameter: cm Single purge volume: 4.9 cm³ Start Time:  Summa flow rate: ml./min Total purge volumes extracted: 10.7 Total Purge Time:  Purge flow rate: ml./min Pi = 3.1416 1 inch = 2.54 cm Est. max. porosity = 0.375  1 ml = 1 cm3  Time Pressure Shroud (% or ppm) Purge Time Purge (ppmv) (%) (%) (%) (%)  TOTAL PURGE ~ 0.55			Charles of the Control of the Contro							
Sandpack height: cm Sandpack = Pi * (boring diameter/2)² * sandpack height * porosity		Control of the second s					Tubing =	Pi * (inner d	liameter/2)2	length
Probe length: cm	Bori	ng diameter:		cm			-		cm3	
Probe diameter: cm	Sand	lpack height:		cm			Sandpack =	Pi * (boring	diameter/2)	2 * sandpack height * porosity
Summa flow rate: mL/min Total purge volumes extracted: 107 Total Purge Time:  Purge flow rate: mL/min Pi = 3.1416 1 inch = 2.54 cm Est. max. porosity = 0.375  1 ml = 1 cm3  Time Pressure (psi) He in Shroud (% or ppm) Purge Time (min./sec.) Sample (ppmv) (%) (%) (%) (%)  TOTAL PURGE ~ 0.51							-			
Summa flow rate:mL/min		The state of the s		cm						Start Time:
Time   He Delivery   He in   Shroud   (% or ppm)   Purge   Time   Purge   Sample   (% or ppm)   TOTAL PURGE   1 ml = 1 cm3   1			Chronic Co. Policina Acres 1211 V.							Purge Time:
Time He Delivery Pressure (psi) He in Shroud (% or ppm) Purge Sample (% or ppm	Pur	rge flow rate:		mL/min	Pi =	3.1416	1 inch = 2.5	54 cm	Est. ma	ax. porosity = 0.375
Time Pressure (psi) Shroud (% or ppm) Purge Sample (min./sec.) Sample (% or ppm) (% or ppm) Purge Sample (% or ppm) (% or					He in	-	1 ml = 1 cm	13		
TOTAL PURGE ~ 0.54	Time	Pressure	Shroud		Purge Sample					Comments .
		TOTA		- n			( Value V			
LIO SAMPLE TIME	1001-	Access to the last			000					The state of the s
	12:10	SAMPL	E TIME							
	, <u>'</u>									
								luig		
	-	1000000								
								-		

			Soil	Vapor Pr	obe Purg	ing/San	npling Lo	g	
Pr	oiect Name:	Solano Grou	ID GI				Sub-Sia	b Probe ID:	55-17
		1435,0						an Serial #:	
	A STATE OF THE PARTY OF THE PAR	10 11		KK- 1+					
			ARK- RIC	DEIL					
							mu	ar vacuum.	
Sample II			12:05 F	701		Mark	Fir	al Vacuum:	
	Notes:		4			1.			
Spe	ecifications					Purge Volu	ume Calcula	ntion	
Tu	bing length:	60.96	cm			Purge volur	ne = tubing +	sandpack	
REPORT OF THE PARTY OF THE PARTY OF	The Designation of the Control of th	.32					Pi * (inner d		lenath
						=		cm3	
The second second						Dandonsk -			* sandpack height * porosity
						- Daniupaux	The second second		sandpack neight porosity
					Cinata au	eno veli-er		cm <sup>3</sup>	Start Time:
	e diameter:		cm	*	origie pu	ige volume:	100		Start Time:
250 au 100 200 200 200 200 200 200 200 200 200		THE RESERVE AND ADDRESS OF THE PARTY.	mL/min		purge volume 3.1416				Purge Time:
Pur	ge now rate:		miumin	PI=		1 inch = 2.5		EST. M	ax. porosity = 0.375
				Hein		1 ml = 1 cm	13		r
Time	He Delivery Pressure (psi)	He in Shroud (% or ppm)	Purge Time (min./sec.)	Purge Sample (% or pom)	(ppmv)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	CH <sub>4</sub> (%)	Comments .
	TOTAL	- PURG	E M_						
12:05	Commence of the Commence of th	PLE TU							
1600	JAM.	LE II	ME						
- 1									<b> </b>
								Mark a market	
							1 1 1 1 1 1 1		
-		- 100 -							
			A SECTION						
									n in

### **APPENDIX F**

Structural Engineering Drawings



## J.M. TURNER ENGINEERING, INC. **CONSULTING ENGINEERS**

CIVIL, STRUCTURAL, & CONSTRUCTION ENGINEERING

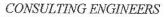
1325 College Avenue

Santa Rosa, CA 95404

# E-MAIL TRANSMITTAL COVER SHEET

TO: COMPANY: PHONE: E-MAIL:	Bob Clark-Riddell Pangea Environmental Srvcs 510-435-8664 briddell@pangeaenv.com	FROM: DATE: PAGES: RE:	Hans Vermeulen 02/22/2012 03 including cover she Excavation Plan	eet
		E-MAILED BY:	_LS TIME: _1:	15 PM
MESSAGE	≣:			
CC: james@	sustainabletech.cc			
Please note t	hat mailed copies can be provided	Lipon rock toot		
Thank you.	inat malieu copies can be provideu	uporrrequest.		
C:\MyComputer\FrontOffice\T	emplates\Fax1		Revision	n Date: (11/1/97)

#### J.M. TURNER ENGINEERING, INC.





CIVIL ENGINEERING STRUCTURAL ENGINEERING CONSTRUCTION ENGINEERING

Mr. Bob Clark-Riddell Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland, CA 94612

February 22, 2013

Re: 1187 Solano Avenue Soil Remediation

Albany, CA Excavation Plan

Attn: Mr. Clark-Riddell,

## This letter serves to address the following requests from Pangea Environmental Services:

- 1. To widen the Stage 1 slots from 4' to 6' max.
- 2. To clarify the acceptable backfill.
- 3. To combine Stage 2 and Stage 3 excavations.
- 4. To use 3-1/2 sack CDF for the backfill of Stage 1 excavation in lieu of 2 sack cement slurry as stated in the Excavation Plan.

#### The following are J.M. Turner Engineering's responses to the above requests:

- 1. Due to the conditions of the site it is acceptable to widen the Stage 1 slots to a maximum of 6'.
- 2. Crushed rock is an acceptable backfill material provided compaction via vibration equipment is used at approximately 4' lifts. Verify backfill & compaction requirements with the City of Albany Standards or Geotechnical requirements.
- 3. It is acceptable to combine Stage 2 and Stage 3 excavations provided the maximum excavation depth does not exceed 10'.
- **4.** It is acceptable to use 3-1/2 sack CDF that meets EBMUD specifications in lieu of 2 sack cement slurry.

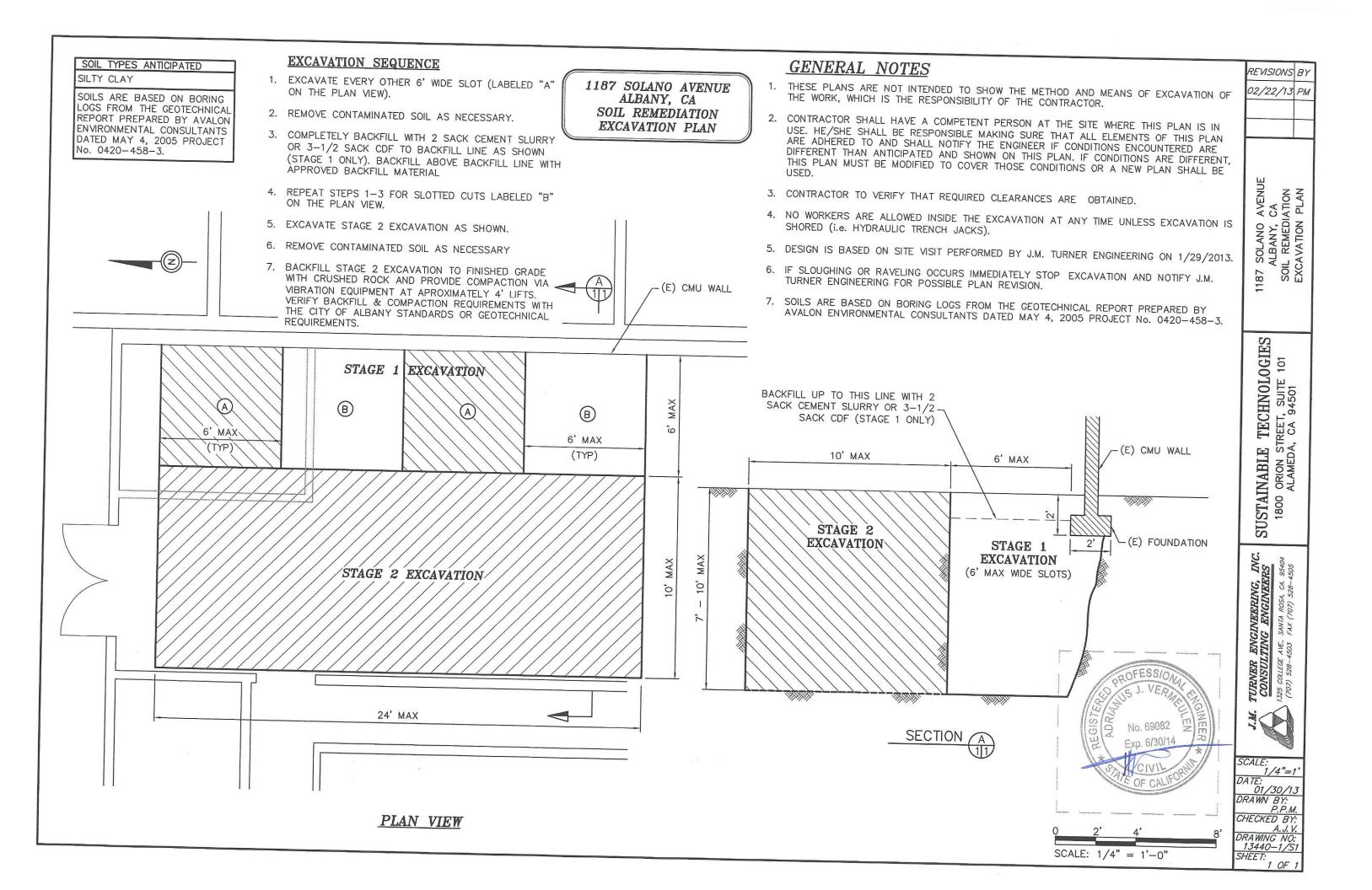
The excavation plan drawings have been revised to reflect these changes.

Please call with any questions or comments.

Sincerely,

Adrianus Vermeulen, P.E. J.M. Turner Engineering, Inc.





## **APPENDIX G**

Soil Disposal Manifests

#### Solano Group Job Proposal # 7072

Class I Non RCRA Profile # CH611673B May 09 2013

<u>Manifest</u>	Date Rec'd	Weight Tag #	Gross Weight	Tare Weight	Net Weight	Net Tons
7397752JJK	Feb 15 2013	252089	75920	31540	44380	22.19
7397754JJK	Feb 15 2013	252084	77760	35600	42160	21.08
7397751JJK	Feb 15 2013	252056	62140	34460	27680	13.84
6096422JJK	Feb 18 2013	252165	64500	41980	22520	11.26
6096417JJK	Feb 20 2013	252355	63340	30560	24780	12.39
6096421JJK	Feb 21 2013	252409	65260	39460	25800	12.90
5937007JJK	Feb 22 2013	252526	64960	<u>32420</u>	32540	16.27
5937014JJK	Feb 22 2013	252517	60520	33060	27460	13.73
6096418JJK	Feb 22 2013	252518	63580	38780	24800	12.40
6096420JJK	Feb 22 2013	252520	64980	40380	24600	12.30
6096419JJK	Feb 25 2013	252613	65120	41040	24080	12.04
5937008JJK	Feb 26 2013	252732	57020	35600	21420	10.71
5937013JJK	Feb 27 2013	252817	61480	39200	22280	11.14
5937012JJK	Feb 28 2013	252886	62140	39620	22520	11.26
5937011JJK	Mar 01 2013	252975	63080	39400	23680	11.84
5937009JJK	Mar 06 2013	253224	70760	42120	28640	14.32
5937010JJK	Mar 07 2013	253316	64300	40800	23500	11.75
5937054JJK.	MaR 08 2013	253372	67420	40760	26660	13.33
5937055JJK	Mar 11 2013	253467	66480	40740	25740	12.87
5937062JJK	Mar 12 2013	253583	66680	40460	26040	13.02
5937063JJK	Mar 13 2013	253623	69720	42420	27300	13.65
5937061JJK	Mar 14 2013	253742	79560	33260	46300	23.15
5937056JJK	Mar 15 2013	253777	79220	33320	45900	22.95
5937057JJK	Mar 19 2013	254005	79980	31380	48600	24.30
5937059JJK	Apr 11 2013	255534	43180	31000	12180	6.09
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A. Special Hysting Instruction Sept Additional Information  WASTE PROPILE: CH611673B SALES ORDER NUMBER:D.MAGR2175 DENBESTE QB NUMBER: DB12633 ERG: 171  WEAR ALL: APPROPRIATE CH611673B SALES ORDER NUMBER:D.MAGR2175 DENBESTE QB NUMBER: DB12633 ERG: 171  SECRIFIANT ORDER OF CH611673B SALES ORDER NUMBER:D.MAGR2175 DENBESTE QB NUMBER: DB12633 ERG: 171  WEAR ALL: APPROPRIATE CH611673B SALES ORDER NUMBER:D.MAGR2175 DENBESTE QB NUMBER: DB12633 ERG: 171  SECRIFIANT ORDER OF CH611673B SALES ORDER NUMBER:D.MAGR2175 DENBESTE QB NUMBER: DB12633 ERG: 171  SECRIFIANT ORDER OF CH611673B SALES ORDER NUMBER:D.MAGR2175 DENBESTE QB NUMBER: DB12633 ERG: 171  SECRIFIANT ORDER OF CH611673B SALES ORDER NUMBER:D.MAGR2175 DENBESTE QB NUMBER: DB12633 ERG: 171  SECRIFIANT ORDER OF CH611673B SALES ORDER NUMBER:D.MAGR2175 DENBESTE QB NUMBER: DB12633 ERG: 171  SECRIFIANT ORDER OF CH611673B SALES ORDER ORD	<b>1.</b>	NA3077HAZ	ARDOUS WASTI PROETHYLENE)	E, SØLIDS) ,9,PGIII	NO S.			3. 1	TO THE WEST	18		F002	<b>611</b> ;	F 00
MASTE PROFILE: CH011673B SALES ORDER NUMBER: D.M.992175 DENBESTE JOB NUMBER: DB12633 ERG: 171  WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL  5. GENERATORS/SKYFERORS SERTIFICATION: Inverty declare that the contents of this consignment are stay and accurately described above by the proper ahipping name, and are described, packaged, marked and desire/blocarded, and are in all respects in proceedings for transport according to againstable international and national governmental regulations. If support shipment and I am the Primary Except that the contents of this consignment confirms to the terms of the attached EPA-Acknowledgment of Consent.  Locally that the contents of this consignment confirm to the terms of the attached EPA-Acknowledgment of Consent.  Locally that the value international administration of consent.  Locally that the value international described in 1647 882 27(a) (if I am a large quantity speciately of priff am a small quantity generator) is true.  Month Day You Consent of the support to U.S.  Described Signature of the support on the Signature of the support to U.S.  Port of entrylects  Transporter (Paristad Typed Name  Signature  Month Day You  A Residue  Partial Rejection:  Month Day You  Residue Facility (or Generator)  Religions Reference Number:  U.S. EPAID Number  Signature  Month Day You  Name of Partial Rejection or the Signature of Aller and Allermate Facility (or Generator)  Religions of Allermate Facility (or Generator)  A Horith Day You  Properties Printed Typed Manue  Residue Facility Owner or Operator. Certification of receipt of hazardous wester transfers accord as noted in Item 18a  Note of the Signature of Allermate Facility Owner or Operator. Certification of receipt of hazardous wester transfers accord as noted in Item 18a  Note of the Signature of Allermate Facility (or Generator)  A Month Day You  Properties Printed Typed Number:  Signature of Allermate Facility (or Generator)  A Month Day You  Note of the Allermate Facility (or Generator)  A Month Day You  Note of the	2.		<del>S</del>		*	The same of								-
WASTE PROFILE: CH011673B SALES ORDER NUMBER: DA4982175 DENBESTE IOB NUMBER: DB12633 ERG; 171  WEAR ALI: APPROPRIATE PPE WHEN HANDLING MATERIAL  6. GENERATOR; SIQFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and salesidiplecarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipping name, and are classified, packaged, marked and salesidiplecarded, and are in all respects in proper of this consignment conform to the terms of the attached EPA-Accordedyment of Consent.  Loretty that the waste minimization satement identified in 40 CPL 282.27(6) (if I am a large quantity generator) or prift am a small quantity generator) is true.  Signalized Signa	3.		: :		<b>š</b>									
WASTE PROFILE: CH011673B SALES ORDER NUMBER: DA4982175 DENBESTE IOB NUMBER: DB12633 ERG; 171  WEAR ALI: APPROPRIATE PPE WHEN HANDLING MATERIAL  6. GENERATOR; SIQFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and salesidiplecarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipping name, and are classified, packaged, marked and salesidiplecarded, and are in all respects in proper of this consignment conform to the terms of the attached EPA-Accordedyment of Consent.  Loretty that the waste minimization satement identified in 40 CPL 282.27(6) (if I am a large quantity generator) or prift am a small quantity generator) is true.  Signalized Signa	<del></del>				<del>}</del>	•								
WASTE PROFILE: CH011673B SALES ORDER NUMBER: DJ4902175 DENBESTE IOB NUMBER: DB12033 ERG; 171  WEAR ALL: APPROPRIATE PPE WHEN HANDLING MATERIAL  5. GENERATOS/ISIQFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and fabries/discounted and fabries/ interested and fabries/ the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and fabries/ the the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and fabries/ the through of the contents of this consignment of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked of this consignment of this consignment of this consignment of the statched EPA Acknowledgment of Consent.  Legislation Shipping Indication Shipping name, and are classified, packaged, marked the state of the statched EPA Acknowledgment of Consent.  Signature Shipping name, and are classified, packaged name and or allowed properties of the state	4.	· ·									1 . 1 . 1	ŀ	1	
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Transporter signature (for exports only):  Transporter Acknowledgment of Receipt of Materials;  Transporter Printed/Typed Name    Aktive   Signature	5. GENEI marked Exporte I certify	ASTE PROFILE  EAR ALL APPRI  RATOR'S/OFFEROR  d and labeled/placard  er, I certify that the co  y that the waste minim	CH611673B  OPRIATE PPE V S CERTIFICATION: 11 ad, and are in all respectitents of this consignment identification statement identification.	SALES ORD WHEN HAND hereby declare the dec	DER NUMBE DLING MATI hat the contents dition for transport the arms of the a	ERIAL of this consignme ort according to ap ttached EPA Ackn a large quantity g	ent are fully a plicable inter owledgment renerator) or	BESTE LOS	L NUMBE	by the proper si	hinning mame	e, and are cla ipment and I	am the Prin	nary / Ye
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Description Space Quantity Type Residue Partial Rejection Full Rejection Wantifest Reference Number: U.S. EPA ID Number U.S. EPA ID Number U.S. EPA ID Number U.S. Signature of Alternate Facility (or Generator) Month Day You Learn the Codes (i.e., codes for hazardous waste treatment, disposal, and recycling spetimes)  1. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling spetimes)  2. 3. 4. Month Day You was a control of receipt of hazardous materials covered by the manifest except as noted in Item 18a Signature  1. Month Day You was a control of the Codes (i.e., codes for hazardous materials covered by the manifest except as noted in Item 18a Signature)	5. GENEI marked Exporte I certify experator of the control of the	ASTE PROFILE  RATOR'S/OFFEROR' d and labeled/placarde er, i certify that the co y that the waste minim lofferor's Priviled/Type  Court onal Shipments' signature (for exports ther Acknowledgment of 1 Printed/Typed Name  AKHVIR	CH811673B  OPRIATE PPE V  S CERTIFICATION: II ad, and are in all respection statement identity and Name On E  Salgy  Import to U.S. only):  Receipt of Materials;	SALES ORD WHEN HAND hereby declare the test in proper concent conform to the fifted in 40 CFR 2  De half to five a first or fi	DER NUMBE NUMBER MATT hat the contents dition for transpo the transpo the a 62.27(a) (if I am	of this consignment according to aptracted EPA Ackin a large quantity g	int are fully applicable inter owledgment generator) or Signature in U.S.	nd accurately des mational and natio of Consent. (b) (1) am a small	I NUMBE	by the proper si	hinning mame	o, and are claipment and I	onth Day	Y Ye
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orm 8700-22 (Rev. 3-05) Previous editions are obsolete.	5. GENEI marked Exports   Certify   Generator's / Cert	ASTE PROFILE  EAR ALL APPRI  RATOR SOFFEROR d and labeled/placand er, I certify hiptocand er, I certify hiptocand er, I certify hiptocand for the waste minim Offeror's Protect/Type  Labeled Type  Carlot P. Conal Shipments signature (for exports ther Acknowledgment of Printed/Typed Name ACHY R  2 Printed/Typed Name ancy Indication Space the Facility (or Generate the Carlot Protect one: The of Alternate Facility as Waste Report Mana and Statemate Facility as W	CH811673B  COPRIATE PPE VI  S CERTIFICATION: II ad, and are in all respective in the sconsignment identity of this consignment identity of the constant identity in the constant identity in the constant identity in the constant identity is considered in the constant identity in the constant identity is constant in the constant identity in the constant identity is constant in the constant identity in the constant identity is constant in the constant identity in the constant identity is constant in the const	SALES ORD WHEN HAND hereby declare the state in proper concent conform to the fifted in 40 CFR 2  See had for the state of	DER NUMBE  ILING MATT  hat the contents diffion for transpor te terms of the a 62.27(a) (if I am  OT  Type	e treatment, dispos	ant are fully au plicable inter owledgment enerator) or Signature  Signature  Ma	IRESTE LOSS  and accurately des mational and nation of Consent. (b) (if) am a small  Port of enti Date leavin  Residue  cling speterns)	in NUMBE scribed above anal government quantity ger anylexit:	p by the proper significant relations in true.  Partial Relations  U.S. EPA ID	hipping name. If export sh	Mo	nth Day  North Day  Full Rej	Yes
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WASTE MANIFEST CAPAROZ344/8		0-838-1477	7 .		593	701	4 J.	JK
5. Generator's Name and Mailing Address ALBANY L-HOUR CLEANERS 162 SHANNON BAY POINT, CA 94585 USA Generator's Phone: 925-261-9607	11 194 April 1	Site Address ( 1197 SOL) ALBANY (	ANO AVE		) () (s) (s) (s) (s) (s) (s) (s) (s) (s)			
6. Transporter 1 Company Name  DEMBESTE TRANSPORTATION INC.				U.S. EPA ID	· · · · · ·	ARUO	31405	147
7. Transporter 2 Company Name	tune.			U.S. EPAID N	white	13632		
8. Designated Facility Name and Site Address CLEAN HARBORS ENVIRONMENTAL 2500 WEST LOKERN RD				U.S. EPA ID N	Number 1099067	5276		
BUTTONWILLOW, CA 93/206 USA Facility's Phone: 661-762-6200	ž.			. 1	:	A S		
9a. 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Contain	ers Type	11. Total Quantity	12. Unit Wt./Vol.	13.	Waste Code	es
NA3077 HAZARDOLE WASTE, SOLIDS NOS.	a 16, ".	4 g1	OF	18.	· • <b>Y</b>	F002	611	F001
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4. Special Handling Instructions and Additional Information						1.7.	-	
WASTE PROFILE: CH611673B SALES ORDER NUMBER: DJ46921 WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL				R: DB12633				
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8. Discrepancy			<u>·                                     </u>	g.,							<u>''</u>
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8b. Alternate Facility (or Gen	erator)			Manife	st Referenc	e Number:	U.S. EPA ID	Number	<del></del>		*********
acility's Phone: 8c. Signature of Alternate Fa	olitu (or Connected				:	:			_		
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9. Hazardous Waste Report	Management Method Codes (i.e., code:	s for hazardous waste ti	reatment, dispos 3.	al, and recyclin	g systems)		4	,			
1 1	or Operator: Certification of receipt of i			·		· · · · · · · · · · · · · · · · · · ·					

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. V	VASTE MANIFEST	1. Generator ID Number CAPG00234476	2. Page 1	8	gency Response 00-838-1477	•	00	Tracking N	641		<u>2030-003</u> JK
		Addres Cur Cleaners CN , CA 94585 USA 55-261-9607		Generale	or's Site Address ( 1187 SOLA ALBANY, C	NO AVE	n mailing addre	SS)			
6. Tr	ransporter 1 Company Nam DENBESTE	RANSPORTATION INC				· · · · · · · · · · · · · · · · · · ·	U.S. EPA ID		9020	•	<del></del>
	ansporter 2 Company Nam					<del></del>	U.S. EPA ID	AD98251 Number	3032		<del></del>
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Faci		31-762-6200				·	1	•			
9a. HM	9b. U.S. DOT Description and Packing Group (If a	on (including Proper Shipping Name, Hazard ( my))	Class, ID Number,	_	10. Contain	ers Type	11. Total Quantity	12. Unit Wt./vol.	13.1	Vaste Code	
5	1. NA3077,HA	ZARDOUS WASTE, SOLIDS,N.C	).S.			9.			F002	611	
	(IETRACHL	OROETHYLENE), 9, PGIII			1	@kv	1,0	S.A	FOUL		
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18. D	iscrepancy			>				<del>-</del>	Mont	h Day	Year
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18b. /	Alternate Facility (or Genera	ior)		Ma	nifest Reference N	lumber:	U.S. EPA ID N	lumber	***************************************	i	
	y's Phone: Signature of Alternate Facilit	y (or Generator)					3	<i>t</i>	Mon	th Day	Year
19. Ha	azardous Waste Report Mar	nagement Method Codes (i.e., codes for haza	rdous waste treatment, dispo	sal, and recy	ling systems)			~			<u></u>
1.	H) ??	2.	3				4.			······································	
20. De	signated Facility Owner or d/Typed Name	Operator: Certification of receipt of hazardous			as noted in Item 1	18a	t		÷.	;	· · · · · · · · · · · · · · · · · · ·
		J.m GRH	<u></u>	Signature		V)	الم يا	4.E	Mont	h Day	Year
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		UNIFORM HAZARDOUS 1. Generator II WASTE MANIFEST CA	Number P000234476	2. Page 1 of 1		ency Response 00-838-1477		4. Manifest	Tracking Nu	7008		JK
	-	5. Generator's Name and Walling Address ALBAN 1-IROUR CLE 162 SHANNON BAY POINT, CA 9456 925-261-960	5 USA 4		Generator	's Site Address ( 1187'SOLJ ALBANY, (	NO AVE	-	88)			
		6. Transporter 1 Company Name						U.S. EPA ID	Number_			
	L	DENBESTE TRANSPO 7. Transporter 2 Company Name	RTATION INC				<u>.</u>	<u>.l</u>	AD98251	3632		-
	ı	4					-	U.S. EPAID (	MUITION?			
		8. Designated Facility Name, and Site Address, CLEAN HARBORS EN 2500 WEST LOKERN BUTTONWILLOW, CA Facility's Drone: 681-762-620	RD 93208 USA					U.S. EPAID CA	Number AD98067:	5276		
	l	Sa. 9b. U.S. DOT Description (including Pr	per Shipping Name, Hazard Class, ID Number,			10. Contain	619	11. Total	12. Unit	13.1	Waste Code	ná:
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		marked and tabeled/placarded, and are in Exporter, I certify that the contents of this	all respects in proper condition for transport acc consignment conform to the terms of the attache ent identified in 40 CFR 262.27(a) (if I am a larg	cording to applied EPA Acknow	licable inter wiedament	mational and nati of Consent.	onal governm	ental regulation	s. If export st	e, and and i	em the Pri	mary
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		20. Designated Facility Owner or Operator: Cer	fication of receipt of hazardous materials cover	ed by the mai	nifest excep	nt as nated in the	n 18a					
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8	3. Desi	BUTTONW	T LOKERN RD ALLOW, CA 83:			·					lumber 10990676			
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UNIFORM HAZARDOUS WASTE MANIFEST	ned for use on elite (12-pitch) types  1. Generator ID Number  CAPONO234476		2. Page 1 of 3. E	mergency Respons		4. Manifes	t Tracking N	n Approved. umber		
5. Generator's Name and Mailing ALBANY 1-F 162 SHANNA	Address IOUR CLEANERS			rator's Site Address	=	an mailing addr	<u>593</u>	/U1	<u>2</u> J	<u>JK</u>
3 1 1	CA 94565 USA 5-261-9607	•		ALBANY,	CA 94706	USA				4.
	TRANSPORTATION INC						CAD9825	1 <b>363</b> 2		**
8. Designated Facility Name and	Sile Address BORS ENVIRONMENTAL		·····			U.S. EPA ID				
2000 VVES ( BUTTONAVIL Facility's Phone: 66	LOKERN RD LOW, CA 83206 USA 1-762-6206						AD990676	5276	**	
9a. 9b. U.S. DOT Description and Packing Group (if an	(including Proper Shipping Name, Haz y))	ard Class, ID Number,		10. Contain	ners Type	11. Total Quantity	12. Unit WL/Vol.	13.\	Naste Code	es
NA3077,HAZ (TETRACHLO	ARDOUS WASTE, SOLIDS, DROETHYLENE), 9, PGIII	NOS,		1	CH	18	*	F002	611	Four
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14. Special Handling Instructions							\$100 pt		and additional section of the State of the S	
WEAR ALL APPRO	CH611673B SALES ORE	LING MATERIAL	•	NBESTE JOE				171		
Exporter, I certify that the con I certify that the waste minimi	S CERTIFICATION: I hereby declare to d, and are in all respects in proper con- tents of this consignment conform to the zation statement identified in 40 CFR 20	a larma of the attacked C	DA A	COLUMN TOTAL COLUMN TESTING	ısaı Anaeliktisti	itai reguladons.	ipping name, If export ship	and are class ment and I a	ified, pack in the Prim	aged, ary
Frenth Th	Labelt Chan	Emp	Signature		J//	2		Monti	Day	Year
Transporter signature (for exports of 17. Transporter Acknowledgment of			port from U.S.	Port of entr Date leavin						
16. International Shipments Transporter signature (for exports of the state of the	PRINGER		Signature	<b>4</b> _	~	)		Month	Day	Year
18. Discrepancy			Signature					Month		Year
18a. Discrepancy Indication Space	Quantity	Туре	Ę	Residue	.[	Partial Reje	ction.	Е	Full Reje	ction
18b. Alternate Facility (or Generator)		12	W	anifest Reference N		U.S. EPA ID N	umber	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
Facility's Prione: 18c. Signature of Alternate Facility (o	r Generator)				<u> </u>	, Contraction of the second	3	Month	Cour	Vaca
19. Hazardous Waste Report Manag	ement Method Codes (i.e., codes for he	ezardous waste treatmen	t, disposal, and rec	cling systems)			<b>)</b>		Day	Year
20. Designated Facility Owner or Ook	erator: Certification of receipt of hazardo	Ous materiale covered to	the manifest	loo and die d		4.		7		
Printed Typed Name A Form 8700-22 (Rev. 3-05) Previo	Bactro	materials covered by	signature	as noted in item 18	38	2		Month (2)	Day	Year /

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e print or type. (Form designed for use on elite (12-pite	ch) typewriter.)						Form	Approved.	OMB No.	
UNIFORM HAZARDOUS 1. Generator ID Number CAP0002344	1	2. Page 1 of 1	3. Em	ergency Response 800-838-1477	1	4. Manifest	Tracking No.	7.01:	4	JK
5. Generator's Name and Mailine Address ALBANY 1-ROUR CLEANERS 162 SHANNON BAY. POINT, CA 94565 USA			Gener	ttor's Site Address ( 1187 SOL ALBANY, (	NO AVE	n mailing addre	88)	1		/ K
Generator's Phone: 925-261-9607  5. Transporter 1 Company Name	<u> </u>			·			V			
DENBESTE TRANSPORTATION 7. Transporter 2 Company Name	INC !		1	:	<u> </u>	U.S. EPA ID	CAD98251	13632		
8. Designated Facility Name and Site Address						U.S. EPAID				
CLÉAN HARBORS ÉINVIRONMEI 2500 WEST LOKERN RD BUTTONMILLOW, CA 93206 US Facility's Phone: 661-762-6200	1	ar spin. Sar					AD98067:	527 <b>6</b> 1	•	
98. 9b. U.S. DOT Description (including Proper Shipping Plant and Packing Group (if any))	Varne, Hazard Class, ID N	umber,		10. Contain	ets Type	11. Total Quantity	12. Unit	13. \	Waste Code:	
1. NA3077,HAZARDOUS WASTE, S (TETRACHLOROETHYLENE),8,1	SOLIDS,N,O.S, PGIII			1	CM	18	Υ	F002	611	Fool
2.	ŧ .		<u> </u>							
3,	<u> </u>		!							1
					1			-		
4.	1									
14. Special Handling Instructions and Additional Information WASTE PROFILE: CH8116738 SAL	EC ODDED AS INCO	PISOAS	792							<u> </u>
WEAR ALL APPROPRIATE PPE WHE	•		) Di	ENBESTE JOE	NUMBE	K: UB12633	ERG:	: 1/1		
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereb marked and labeled/placarded, and are in all respects in Exporter, I certify that the contents of this consignment or l'certify that the waste minimization statement identified in	proper condition for transponders	port according to appli attached EPA Acknow	icable in Medama	temational and nation	mél governm	ental regulations	hipping name i. If export sh	e, and are classification and i	ssified, pack am the Prim	aged, ary
Generator's Offeror's Printed/Typed Name Sage Aprel-Minotti	ON Benal	Coconol C	gnature )\	20	(0)	P C C C C C C C C C C C C C C C C C C C		Mor	nth Day	Year
16. International Shipments Import to U.S. Transporter signature (for exports only):	+	Export from	U.S.	Port of ent Date leaving					<u> </u>	112
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name	İ	Sic	onature		ļ	1.		ł Mor	nth Day	Year
Transporter 2 Printed/Typed Nailho	<u>-</u> -		gnature	Ben	1 9		Š	Mor	3.1.1	<u> 113</u>
18. Discrepancy	<u> </u>		·	•	1			4		
18a. Discrepancy Indication Space Quantity	□ r,	pe		Residue		Partial Re	jection	:	Full Rej	ection
18b. Alternate Facility (or Generator) Facility's Phone:				Manifest Reference	NUHOOT.	U.S. EPAID	Number	İ		
CHIMIN & FROM	<u>i</u>			<u> </u>				Mo	onth Deg	Year
18c. Signature of Alternate Facility (or Generator)	-			<u> </u>	_1				I	
18c. Signature of Alternate Facility (or Generator)  19. Hazardous Waste Report Management Melthod Codes (i.e. 1. /: 2.	, codes for hazardous wa	ste treatment, disposi	al, and n	ecycling systems)		4.	•	1		
18c. Signature of Alternate Facility (or Generator) I 19. Hazardous Waste Report Management Melthod Codes (i.e.	:	3.		]	1 18a	14.				
18c. Signature of Alternate Facility (or Generator)  19. Hazardous Waste Report Management Method Codes (i.e.  1.	eipt of hazardous material	3. is covered by the man		ept as noted in item	18a	a ·	<u> </u>	   	nth Day	•

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1		FORM HAZARDOUS 1. Generator ID Number 2. VASTE MANIFEST CAPO00234476	Page 1 of 3. E	mergency Response 800-838-147		4. Manifest	Tracking Nur 593	מליק מיליק	) <u>.</u> 1.	JK
		enerator's Name and Mailing Address ALBANY_1-HOUR CLEANERS		rator's Site Address	· ,				<u>, U</u>	717
		162 SHANNON		1187 SOL	ANO AVE CA 94706	IISA				
		BAY POINT, CA 94565 USA 925-261-9607	1	PALENTI I	₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩	JUN				
		erator's Phone: 920-201-9007 ransporter 1 Company Name		<u> </u>		U.S. EPA ID	Number		·····	
	L	DENBESTE TRANSPORTATION INC			4	•	CAD98251	3632		
	7. Tr	ransporter 2 Company Neme				U.S. EPA ID	Number			
	8. De	esignated Facility Name and Site Address			· · · · · · · · · · · · · · · · · · ·	U.S. EPA ID	Mumhae		·····	
		CLEAN HARBORS ENVIRONMENTAL 2500 WEST LOKERN RD					Number Ä <b>D98067</b> 5	276		
		BUTTONWILLOW, CA 93206 USA				•				
		Thy's Phone: 661-762-6200			· · ·	<u> </u>	<del>, , , , , , , , , , , , , , , , , , , </del>	· ·		-
	9a. HM			10. Contair	ners Type	11. Total Quantity	12. Unit WL/Vol.	13. V	Vaste Code	*
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12	ľ	NA3077,HAZARDOUS WASTE, SOLIDS,N.O.S, (TETRACHLOROETHYLENE),9,PGIII		1	-07/	PY 18	Y	, 402	w11	F00
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H	14.	Special Handling Instructions and Additional Information	·		<u> </u>				······································	1
$\parallel$		WASTE PROFILE: CH611673B SALES ORDER NUMBER:DJ4	1992175	DENBESTE JO	B NUMBER	: D81263	3 ERG:	171		
	-	WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL	ATS	0457	92					en Line
	15.	GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this co	nsignment are fi	illy and accurately de	scribed above	y the propers	hippina name	, and are cles	sified ner	kaged.
		marked and labeled/placarded, and are in all respects in proper condition for transport accord Exporter, I certify that the contents of this consignment conform to the terms of the attached E	ing to applicable PA Acknowledor	international and nat nent of Consent.	ional governme	ntai regulation	s. If export shi	pment and I	in the Prin	máry
	Gar	I cartify that the waste minimization statement identified in 40 CFR 282.27(a) (if I am a large of	uantity generato Signatur	r) or (b) (if I am grams	all quantity gene	erator) is trug.				
	2	xul After Minorti Saono orrow		A	W			Mon T		I/Z
臣	16.	International Shipments	xport from U.S.	Port of ear	ntrv/exit:				<u> </u>	
N		neporter signature (for exports only);			ing U.S.:					<u>}`</u>
	17. Tran	Transporter Acknowledgment of Receipt of Materials sporter 1.Printed@yped Name	Signatur	<i>~</i>		,	1	Mon	th Da	y Voar
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E	_	Demogra		•			····			ل_
11.	-	Discrepancy Discrepancy Indication Space	•	<u> </u>		<u> </u>	<del></del>	·	_	-
		QuantityType		Residue		Partial R	ejection	Ĺ	Full Ri	ejection
	101	Allamete Castite for Companies		Manifest Reference	Number:	.10			·	
	100.	. Alternate Facility (or Generator)	-			U.S. EPA ID	Mumber			
FAC	Faci	ility's Phone:				1				
	18c.	Signature of Alternate Facility (or Generator)						Mo	nth D	y Year
DESIGNATED FACILITY	10	Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatme	nal disease c-							<u>.  </u>
DES	1.	PARTIES TOOLS TOOKS TOOKS TO THE WELL COURS (I.S., COURS TO THE ZHOULS WASK TREATED L. 177	ant, disposal, and 3.	i recycling systems)	***	4.	1 1		<del></del>	<del>-,</del> -
	L	<b>TUL</b>		<u> </u>						·
		Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered led/Tyes) Name			n 18a					
	L. IN	THE MAIS DO STATE	Signatur		1	*	<u> </u>	Ö	* \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	Year
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1	UNIFORM HAZARDOUS 1. Generator ID Number WASTE MANIFEST CAP000234476		3. Emergency Respons	e Phone	4. Manifest	Form	Approved		
	5. Generator's Name and Walling Office CLEANERS	<u> </u>	Generator's Site Address	•	O U U I mailing adding	593°	/U1	U J	JK'
H	162 SHANNON BAY POINT, CA 94565 USA	1	1187 SOI ALBANY,	CA 94706	USA				
	Generator's Phone: 925-261-9607 8. Transporter 1 Company Name					- North			
ŀ	DENBESTE TRANSPORTATION INC	1			U.S. EPAID	Number AD98251	3632		*******
	7. Transporter 2 Company Name	1			U.S. EPAID				<del>• • • • • • •</del>
	8. Designated Facility Name and Site Address CLEAN HARBORS ENVIRONMENTAL 2500 WEST LOKERN RD	1		•	U.S. EPA ID				
	BUTTONWILLOW, CA 93206 USA Facility's Phone: 661-762-6200	Ì			C.	\D960675	278		
	ga. 95. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number HM and Packing Group (if any))	r.'	10. Contai	iners	11. Total	12. Unit	19	Wasta Cad	
2	1.	1:	No.	Type	Quantity	WL/Vol.		Waste Code	<del>.</del>
GENERATOR	(TETRACHLOROETHYLENE), 9, PGIII	1	1	CM	18	۲	F002	611	Fool
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$\ \cdot\ $	14. Special Handling Instructions and Additional Information	_:							
	WASTE PROFILE: CH611673B _SALES ORDER NUMBER:	: DJ4992175	DENBESTE JO	B NUMBÉR	: DB12633	ERG:	171		1-
	WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERI	AL				۵.٠٠.	•		
	15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of the marked and labeled/placarded, and are in all respects in proper condition for transport as Exporter. I certify that the contents of the constant of the contents of the con			scribed above i	by the proper st	lpping name,	and are clas	ssified, paci	raged,
	certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a la					if export ship	pment and I	am the Prin	1 <b>84</b> 9
1.	Generator's Offeror's Printed/Typed Name  Force Triment on Line F Salamos	+ Sign	ature	1	·	<del></del>	Mor	th Day	Year
F	16. International Shipments  I Import to U.S.  Transporter signature (for exports only):	Export from U	.S. Port of en	try/exit:	• - 7	•	<u>ځانځ</u>	2 1-2	<u> </u>
		1.	Date leavi	ng U.S.:					
POR	Transporter 1 Printed Typed Name Can 405 Son Zalez	.r. Sign	ature July	MA	21		Mon	_	Year
TRANSPORTER	Transporter 2 Printed/Typed Name	Sign	ature	////	211/4		Mor		Year
<u>+</u>	18. Discrepancy	<u>- 1 </u>							
	18a. Discrepancy Indication Space Quantity . Type		Residue		Partial Roje	ection	Ē	Full Rej	ection
È	18b. Alternate Facility (or Generator)	•	Manifest Reference	Number:	U.S. EPAID N	lumber		W	-
ξ	Facility's Phone;				ŧ				
DESIGNATED FACILITY	18c. Signature of Alternate Facility (or Generator)			**	<u> </u>		Mod	nth Day	/ Year
SIGN	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste tree	·) alment, disposal;	and recycling systems)			1			<u>-1 - </u>
ā	1 H132 2	3.			4.				
	20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials cover PrintedTypeg Name			18a	<u> </u>			=	
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	W	FORM HAZARDOUS ASTE MANIFEST	CA	P000234476			3. Emergen			4. Manifest	Tracking Ni	mber	OMB No.	
Ш	5. Ga	neretor's Name and Mail	<b>WHOCH CLEA</b>	NERS		<u> </u>	Generator's	Site Addres	s (if different th	an mailine adda	<u>ひしつ</u>	<u>, nā, </u>	4 10	<u>JK</u>
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Ш	9a. HM	9b. U.S. DOT Descripti and Packing Group (ff a	nu (kuchanud 1.10b) Maring 1.10b)	or Snipping Name, Haz	zard Class, ID Number	•	<u> </u>	10. Conta	iners	11. Total	12. Unit	42	Waste Codes	
	-	4				<u>·                                      </u>		No.	Туре	Quantity	Wr.Not.	10,	18889 COOK	
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K#284 VP71828 Please print or type. (Form designed for use on elite Form Approved. OMB No. 2050-0039 1. Generator ID Number UNIFORM HAZARDOUS 2. Page 1 of 3. Emergency Response Phone 4. Manifest Tracking Numi CAP000234478 800-838-1477 005937055 **WASTE MANIFEST** JJK i. Generator's Name and Mailing Address ALBANY 1-HOUR CLEANERS. Generator's Site Address (if different than mailing address) 1187 SOLANO AVE ALBANY, CA 94706 USA 162 SHANNON BAY POINT, CA 94565 USA 925-261-9607 Generator's Phone: 6. Transporter 1 Company Name U.S. EPA ID Number DENBESTE TRANSPORTATION INC CAD982513632 7. Transporter 2 Company Name U.S. EPA ID Number 8. Designated Facility Name and Ste Address
CLEAN HARBORS ENVIRONMENTAL U.S. EPA ID Number 2500 WEST LOKERN RD CAD980675276 BUTTONWILLOW, CA 93206 USA 861-762-6200 Facility's Phone: 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, 10. Containers 11. Total 12. Unit and Packing Group (if any)) 13. Waste Codes HM No. Type Quantity Wt./Vol. HOO NA3077, HAZARDOUS WASTE, SOLIDS, N.O.S, (TETRACHLOROETHYLENE), 9, PGIII F002 611 ERATOR 1 Y COM SEN 14. Special Handling Instructions and Additional Information WASTE PROFILE: CH611673B SALES ORDER NUMBER: DJ4992175 DENBESTE JOB NUMBER: DB12833 WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper stripping name, and are classified; packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if i am a large quantity generator) or (b) (if i am a small quantity generator) is true. linotti behalf of Solamo 1-1598A 11 Export from U.S. \_] Import to U.S. Port of entry/exit rsporter signature (for exports only); Date leaving U.S.: 17. Transporter Acknowledgment of Receipt of Materials ransporter 1 Printed/Typed Name Month Caxlos ransporter 2 Printed/Typed Name 18. Discrepancy 18a. Discrepancy Indication Space Type Residue Full Rejection Partial Rejection Manifest Reference Number: 18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: 18c. Signature of Alternate Facility (or Generator) Month Day

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Rang 18a

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DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

84 VP71828 Please print or type. (Form designed for use on elite (12-pitch) to Form Approved, OMB No. 2050-0039 UNIFORM HAZARDOUS 1. Generator ID Number CAP000234476 2. Page 1 of 3. Emergency Response Phone 800-838-1477 4. Manifest Tracking Number 00593706 WASTE MANIFEST Generator's Name 2014 Selection CLEANERS Generator's Site Address (if different than mailing address) 1187 SOLANO AVE ALBANY, CA 94708 USA 162 SHANNON BAY POINT, CA 94565 USA 925-261-9607 Generator's Phone 6. Transporter 1 Company Name U.S. EPAID Number DENBESTE TRANSPORTATION INC CAD982513632 7. Transporter 2 Company Name U.S. EPA ID Number 8. Designated Facility Name and Sile Address VIRONMENTAL 2500 WEST LOKERN RD , U.S. EPA ID Number CAD980675276 BUTTONWILLOW, CA 93206 USA 661-762-6200 Facility's Phone 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, 10. Containers 9a. 11. Total 12. Unit and Packing Group (if any)) 13. Waste Codes HM Quantity Wt./Vol. No. Type NA3077, HAZARDOUS WASTE, SOLIDS, N.O.S, (TETRACHLOROETHYLENE), 9, PGIII F002 611 Fool GENERATOR 1 ĐŦ СМ 14. Special Handling Instructions and Additional Information WASTE PROFILE: CH611673B SALES ORDER NUMBER: DJ4992175 DENBESTE JOB NUMBER: DB12633 WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby deciare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary marked and labeled/placarded, and are in all respects in proper condition for transport according to application in the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.

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Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. Generator's/Offeror's Printed/Typed Name Day -Month Year. ON Behave of Port of entry/exit Import to U.S. Export from L Transporter signature (for exports only): Date leaving U.S. 17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Month Day Year arlos Ga 18. Discrepancy 18a. Discrepancy Indication Space Турв \_\_ Residue Partial Rejection Full Rejection ☐ Quantity Manifest Reference Number 18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: 16c. Signature of Alternate Facility (or Generator) Month Day Year

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

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Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039 1. Generator ID Number 4. Manifest Tracking Numi 3. Emergency Response Phone UNIFORM HAZARDOUS CAP000234476 800-838-1477 00593706 **WASTE MANIFEST** 5. Generator's Name and Malling Address CLEANERS Generator's Site Address (if different than mailing address) 1187 SOLANO AVE ALBANY, CA-94706 USA 162 SHANNON BAY POINT, CA 94565 USA 925-261-9607 Generator's Phone: 6. Transporter 1 Company Name U.S. EPA ID Number **DENBESTE TRANSPORTATION INC** CAD982513632 7. Transporter 2 Company Name U.S. EPA ID Number 8. Designated Fedile ARPAIR BORS PERVIRONMENTAL U.S. EPA ID Number CAD980675276 2500 WEST LOKERN RD BUTTONWILLOW, CA 93206 USA 661-762-6200 Facilit 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, 10. Containers 94 11. Total 12. Unit 13. Waste Codes and Packing Group (if any)) HM Na. Type Quantity WL/Vol. F002 611 NA3077, HAZARDOUS WASTE, SOLIDS, N.O.S, 6001 ĐT 18 (TETRACHLOROETHYLENE), 9. PGIII S 14. Special Handling Instructions and Additional Information WASTE PROFILE: CH611673B SALES ORDER NUMBER:DJ4992175 DENBESTE JOB NUMBER: DB12633 WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a CACHELMINOHI 0 ڪ ort of entry/exit \_\_i Import to U.S. \_\_ Export from U.S. nsporter signature (for exports only): 17. Transporter Acknowledgment of Receipt of Materials Printed/Typed Name Month - Day . Transporter 2 Printed/Typed Name Signature Day. 18. Discrepancy 18a. Discrepancy Indication Space Residue Quantity Partial Rejection Ful Rejection Manifest Reference Number: 18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: 18c. Signature of Alternate Facility (or Generator) DESIGNATED Day 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a yped Name

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UNIFORM HAZARDO WASTE MANIFES	ous 1. Gen	erator ID Number CAP000234476		1 ,		838-147	7		<u> 5937</u>		3 J.	JK
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7. Transporter 2 Compar	y Name							U.S. EPA ID N	lumber	<u> </u>	-	-
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Transporter 2 Printed/T	yped Name			Si	ignature					M	onth- Da	y Year
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18a. Discrepancy Indic	anon Spaca	Quantity ·	Ll Type			Residue est Referenc	e Number	Pertial R	ejection		Full Ri	ejection
18b. Alternate Facility (	or Generator)				111000			U.S. EPAID	Number			
Facility's Phone:  18c. Signature of Alter  19. Hazardous Waste 1  1.	ate Facility (or	Generator)		<u> </u>				·1			Aonth D	ay Yea
19. Hazardous Waste F	Report Manage	ement Method Codes (i.e., codes	for hazardous waste trea	atment, dispos	sai, and recycl	ng systems)		14.	· .			
1 +115	2_			]3.		,	····		·	·····		
20. Designated Facility Printed/Typid Name	Owner or Ope	evalor: Certification of receipt of he	zardous materials cover		nifest except a	s noted in lite	em 18a	2	2		Ionth Da	y Year
PA Fortal 8700-22 (Rev.	3-05) Previ	ous editions are obsolete.			DESIGN	ATED F	ACILITY	TO DESTI	NATION	STATE	(IF RE	DUIRE

Albany Cleaners Solano Group Sept 16 2013 CH6116738

<u>Date</u>	Profile #	<u>Ticket</u>	Net Wt.	<u>Tons</u>
9/11/2013	011240894JJK 011240895JJK 011240605JJK 011240606JJK 011240607JJK	33562589 3358259 3356947 3356948 3356949	48700 39400 47020 48800 48400 49240	24.35 19.70 23.51 24.40 24.20 24.62
Totals	011240608JJK	3356588 6	281560	140.78

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<b>↑</b>		HAZARDOUS MANIFEST	1. Generator ID Nui CAPO	nber 10234476		ľ	1	ergency Response 800-838-147	7	01	Tracking No.		4 J.	JK
		102 SHANNO BAY POINT,	IOUR CLEANE ON CA 94585 U				Genera	tor's Site Address 1127 SOL ALBANY,	ANO AVE	•	ss)			
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	8. Designate	2500 WEST	Site Address BORS ENVIRO LOKERN RD LOW, CA 93							U.S. EPAID	Number 10980675	276		
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DESIGNATED FACILITY	Facility's Pho 18c. Signatu	re of Alternate Facili					lanagal and	moline autome)				Mo	onth Da	y Year
- DESIG	)	us Waste Report Ma H13 Z		2.			3.			4.				
	20. Designat Printed/Type	ed Facility Owner or d Name	Operator: Certifica	_	,		s manifest exc Signature	ept as noted in Ite				Ma  C	onth Day	Year

## Land Disposal Restriction Notification Form

Page:1 of1

Lean		•			Printed 0	ato :Feb 15, 2013
MANIFEST IN	FORMATION		*****		Menifest Tracking	Info.
General Addri	ior: Albany 1-House 1187 Solano Albany,CA	Avenue	•	01/24	10894 JJK	
EPA II	O#: CAPOOO			Subse	Order No. DJ7	841210
	FORMATION				R Disposal Categor	
Line Nem:	Page No:	Profile Nik:	Treatability Grou			mets atd. (with listed
7.	1	CH8116738	NON-WASTEW	(TER	manious waste only	)
EPA Waste C				PA Wards	SANCHERRY	
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			LPR.Chemical.	Underlying Hazardous	Constituents	Conteminents Subject to Treatment
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Title:	6.P4501	AVERY	Date:	9-11	-113/	; 

# CLEANHARBORS BUT WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed in Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agiculture.

WEIGHMASTER CLEANHARBORS BUTTONWILLOW, LLC

REVISED (3/10)					
DATE: BY:	MOVE BIN TO:				
FULL:	BIN DROP FU				
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				133	OTHER:
3:	COMMENTS:	1 7	1.	80	+
BER: 35567587	FLASH 20% DRUM NUMBER:	CYA OX FL	SUL	ΡΗ	VIS
BIN TRACKING	BIN NUMBERS: E/D 386				
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# CLEANHARBORS BUTTONWILLOW, LLC WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed in Chapter 7 (commencing with Section12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of

						Food and	Agicultur	e.		·	WEIGHNAOTED OF SANITADDODG DUTTONWILLOW GC
REG.	9 pm 09 (88)					PROFIL	E NO.	ett Wilu77B	 		WEIGHMASTER CLEANHARBORS BUTTONWILLOW, LLC  DATE  GROSS WT. BY: DEPUTY 84/12/17.
INBU	JND 70	:28U 10				DISPO	SAL LOC	CATION 75-64	24-1	5	TARE WT. BY: DEPUTY W/1/m
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# CleanHarhore

## Land Disposal Restriction Notification Form

Page: 1 of 1

[Icallian noi				Printed Dat	9 :F6D 15, 2013
MANIFEST INFORMATION			·		
Generator: Albany 1-H	our Cleaners		<u> </u>	Manifest Tracking In	10.
Address: Albany,CA	10 Avenue		01		
EPAID#: CAPOO			Sel	es Order No: DJ78	41210
LINE ITEM INFORMATION Line Item: Page No:	TProfile No:	Treatability Grou	ip:	LDR Disposal Category	
Line Item:   Page No:	CH611673B	NON-WASTEW	ATER	7 (Alternate Soli Std-med hazardous waste only))	ets std. (with listed
EPA Waste Code	- i		EPA Wa	ste SubCategory	
F001F002 CWC61T					
		UR Chemical	Underlying Hazardous Constituents		Contaminants Subject to Treatment
Chemical TETRACHLOROETHYLENE			N N	Y	N N
TRICHLOROETHYLENE	 Q	ertification			Applies to Manifest Line I Items
This contaminated soil does on hazardous waste and complied universal treatment standards	S WITH THE SOII TIES!	united it are stated to a second	reconally bay	a examined and am	
universal treatment standards familiar with the waste through certification that the waste con believe that the information I significant penalties for subm	mplies with the trea	iment standards sp	ecified in 40 ats. I am awa	CFR part 268 subpart D. are that there are a fine and imprisonment.	L
waste analysis data, where s Signature:	vallaide, is attacht	id. 1 Print N	lame J	. Anthony l	Kershau
Title: 6. Pay 2	AVD 6V	Date:		9/11/13	) 
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# CLEANHARBORS BUTTONWILLOW, LLC WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed in Chapter 7 (commencing with Section12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agiculture.

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REB.						PROFIL	E NO.	chulla	טרון			GRO	SS WT. BY	HX	St	DEPUTY	DATE MY 17.
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		162 SHANNO BAY POINT,	our Cleaners On Ca 94585 USA		Ger I	nerator's Site Address 1187 SOLA ALBANY, (	ANO AVE		ss)			
		ator's Phone: 92 nsporter 1 Company Name	5-261-9607		L			U.S. EPAID	Number	uu O	00	<u>.a</u>
		, , ,	TRANSPORTATION IN	= 7 N	CI	YN CID	10	CAR	500	1778	De	7,
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	9 Doc	ignated Facility Name and	Site Address				, w	U.S. EPA ID I	Number			
ı	o. Des	CLEAN HAR	BORS ENVIRONMENT	AL .					D980675	276		
			LOKERN RD LOW, CA 93206 USA							410		
١	Facilit	/s Phone: 66	1-762-6200					<u> </u>	ĭ			
	9a. HM	9b. U.S. DOT Description and Packing Group (if an	n (Including Proper Shipping Nan ny))	ne, Hazard Class, ID Number,		10, Contair No.	Type	11. Total Quantity	12, Unit Wt./Vol.	13. W	aste Code	s
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	14. Sp	ecial Handling Instructions	and Additional Information									
		WASTE PROFILE	:: CH611673B SALES	ORDER NUMBER:D	J <b>784</b> 1210	DENBESTE JOB	NUMBER	R: DB12633	ERG:	171		•
			OPRIATE PPE WHEN									
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E F	Facilit	y's Phone: Signature of Alternate Facili	ty (or Generator)					- <del></del>	-	Mon	th Day	y Year
DESIGNATED	1										L	
Sign	19. H	azardous Waste Report Ma	nagement Method Codes (i.e., c	odes for hazardous waste tre	atment, disposal, ar	nd recycling systems)		4.				
ᆸ	1.	41772	2.	-	]"							
	20. D	esignated Facility Owner or	r Operator: Certification of receip	t of hazardous materials cove	red by the manifest	except as noted in Iter	m 18a			Mon	th Day	Year
	Printe	d/Typed Name			Signat	LC S	$Q_{\angle}$	<b>D</b>		MOII A	2.   13	เท
EP/	A Form	8700-22 (Rev 3-05) P	revious editions are obsolete	э.	DE	SGNATED FA	CILITY	TO DESTI	NATION	STATE (	FREC	

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## Land Disposal Restriction Notification Form

Page: 1 of 1

HVIRONMENTAL ANIFEST INFOR	SENAICEZ.				Printed U	ate :Feb 15, 2013
	Albany 1-Ho	ur Cleaners		T	Manifest Tracking	info.
Address:	1187 Solano Albany,CA	Avenue		1		
EPA ID #:	CAPDOO	234476		Sak	es Order No: DJ7	841210
INE ITEM INFOR			- TE - C.T 2.7		LDR Disposal Calegor	
ne kem: Pa	ge No:	Profile No: CH611673B	Treatability Gro		7 (Alternate Soil Std-m	eets std. (with liste
بنوح حرب		<u></u>	_	FPA Wa	ste SubCategory	
PA Waste Code 001F002 CWC	ศา			NONE		
			LDR Chemical	Data		
				Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
Chemical ETRACHLOROE	ALIAI ENE			N	Y	N
RICHLOROETHY				N	<u>`</u>	<u> </u>
		Çe	entification			Applies to Manifest Line Items
azardous waste a iniversal treatmen emiliar with the wa eartification that the	and complies of the standards. It is standards. It is standards the standards are submitted in the standard are submitted in the s	with the soil treats certify under per malysis and testin dies with the treat omitted is true, ac ng a false certific distre, is attached	nelty of law that I pang or through know treent standards spourate, and completion, including the different N	provided by 4 ersonally have ledge of the w ecified in 40 ( ets.   am awa possibility of a	e examined and am easte to support this CFR part 268 subpart D	
Title: 6.4	2/20/	AVD 6V	Date:		9-11116	3

NO. 265381

# CLEANHARBORS BUTTONWILLOW, LLC WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed in Chapter 7 (commencing with Section12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agiculture.

	rood and Agiculture.	WEIGHMASTER CLEANHARBORS BUTTONWILLOW, LLC
3:50 pm 09/11/13 REG. ( 88) INBOUND 79160 lb	PROFILE NO. CHUNUTAR	GROSS WT. BY: DEPUTY 0/11/17.
	DISPOSAL LOCATION 7504 24-H-L	TARE WT. BY: DEPUTY 64/1/13
4:06 pm 09/11/13	DRIVER'S NAME AND DO	WEIGHING 2500 W. LOKERN ROAD LOCATION: BUTTONWILLOW, CA 93206
REG. (88)	DRIVER'S NAME SIGNATURE	GENERATOR Alland 1-Hour chantrs
79160 1b GROSS 30360 1b TARE 48800 1b NET	TRACTOR NO.	TRANSPORTER TO
	TRACTOR 9883006	MANIFEST NO. 0112409UL JJK
☐ FOLL OFF ☐ FLAT BED ☐	TRAILER LIC. NO. 4CD2396	SERVICE ORDER NO. 15741410
	BIN NUMBERS:	BIN TRACKING
VIS pH SUL CYA OX FL	FLASH 20% DRUM NUM	BER: 33543948
+	COMMENTS	<u>:</u>
OTHER:		
IC CR PR B.W. LAB SOLII	WORK LAND W.T. MAN- RE- SHEET TRACK SCAN SCAN SCAN	
	BIN DROP F	ULL:
	MOVE BIN TO:	DATE: BY:

Ple	ase pr	rint or type. (Form design			writer.)							n Approved	. OMB No	. 2050-003
1	W	VASTE MANIFEST		lumber 000234476		2. Page 1 of	8	gency Respons 100-838-147	7	01	Tracking N	090	7 J	JK
	Gene	erator's Phone: 92	OUR CLEAN ON CA 94565 5-261-9607				Generato		ANO AVE		958)			
		ansporter 1 Company Name  DENBESTE  ansporter 2 Company Name	TRANSPOR	FATION INC	ZAVA	<i>A</i>	11	wol	119	U.S. EAA	Number COO <sub>5</sub>		000	5
		esignated Facility Name and									Number			
		CLEAN HAR 2500 WEST BUTTONWIL	BORS ENVI							U.S. EPAIDI	Number <b>\D980675</b>	5276		
	9a. HM	9b. U.S. DOT Description and Packing Group (if an	(including Prope	r Shipping Name, Ha	zard Class, ID Number,	·		10. Contai No.	ners Type	11. Total Quantity	12. Unit Wt./Vol.	13.	Waste Code	98
GENERATOR -		(TETRACHLE	ARDOUS W.	ASTE, SOLIDS ENE), 9, PGIH	,N.O.S,			1	DT	18	Υ	F001	F002	611
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		4.												
	15. <b>G</b>	waste profile  Waste profile  Wear all appro  Generator's offeror  marked and labeled/placard  exporter, I certify that the co-	: CH6116738 OPRIATE PF S CERTIFICATION ad, and are in all r	SALES ORI PE WHEN HAND DN: I hereby declare espects in proper con	DLING MATERIA that the contents of this addition for transport acco	Consignment ording to applic	are fully an	d accurately des	scribed above	R: DB12633 by the proper sh ental regulations.	ERG: ipping name If export shi	, and are clas	sified, pack um the Prim	aged, ary
	Gener	certify that the waste minimator's/Offeror's Printed/Type	ization statement	identified in 40 CFR	262.27(a) (if I am a large	e quantity gen			quantity gen	erator) is true.		Mon	th Day	Year
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NATED		ignature of Alternale Facility	(or Generator)							-		Moi	nth Day	Year
8	19. Ha	azardous Waste Report Man	agement Method	Codes (i.e., codes fo	r hazardous waste treati		, and recy	cling systems)						
٦	1.	H132		2.		3.				4.		······································	·	·
		esignated Facility Owner or (	Operator: Certifica	tion of receipt of haz	ardous materials covere		lest except	as noted in Item	18a		-	- Mor	ith Day	Year
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PA.	Form	8700-22 (Rev. 3-05) Pro	evious editions	are odsoiéte.		ם	ESIGN	IATED FA	CILITY T	O DESTIN	ATION S	STATE (	ır REQ	UIRED)

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## leanHarh ENVIRONMENTAL SERVIC

#### Land Disposal Restriction Notification Form

Page: 1 of 1

Printed Date: Feb 15, 2013 MANIFEST INFORMATION Manifest Tracking Info. Generator: Albany 1-Hour Cleaners 1187 Solano Avenue Address: Albany,CA 94706 Sales Order No: DJ7841210 EPAID#: CAP000234476 LINE ITEM INFORMATION LDR Disposal Category Profile No: Treatability Group: Page No: Line Item: 7 (Alternate Soil Std-meets std. (with listed CH611673B NON-WASTEWATER hazardous waste only)) EPA Waste SubCategory **EPA Waste Cod** F001F002 CWC611 NONE OR Chemical Data Underlying Constituents Subject to Hazardous nf Treatment Constituents Concern Chemical TETRACHLOROETHYLENE TRICHLOROETHYLENE Applies to Certification Manifest Line liems. This contaminated soil does contain listed hazardous waste and does not exhibit a characteristic of hazardous waste and complies with the soil treatment standards as provided by 40 CFR 268.49(c) or the universal treatment standards. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR part 268 subpart D. believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonmen Waste analysis data, w Signature:

# CLEANHARBORS BUTTONWILLOW, LLC WEIGHMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed in Chapter 7 (commencing with Section12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Adiculture.

	Food and Agiculture.	· · · · · · · · · · · · · · · · · · ·
3:31 pm 09/11/13 RES. ( 85) INBOUND 78020 10	PROFILE NO. 64611673B	GROSS WT. BY GOLD BEPUTY 89-11-1
1490040 19020 18	DISPOSAL LOCATION 35-4 26-A	A-C TARE WT. BY: DEPUTY 04/11/13
7-E0 mm 00/11/13	DRIVER'S NAME PRINTED	WEIGHING 2500 W. LOKERN ROAD BUTTONWILLOW, CA 93206
3:58 pm 09/11/13 REG. ( 85)	DRIVER'S NAME SIGNATURE / NOW C/ CO	CCK GENERATOR ALBANY
78820 1b GROSS 30420 1b TARE 48400 1b NET	TRACTOR NO.	TRANSPORTER ZAVAJA TAK
40400 ID 1821	TRACTOR UC. NO.	MANIFEST NO. 01/240907 JK
MEND DUMP □ TRANSFER □ VACUUM □ VAN □ ROLL OFF - □ □ FLAT BED □ □ □	TRAILER LIC. NO. 9032 F	MANIFEST NO. 01/240907 JK SERVICE ORDER NO. D5 7841210
	BIN NUMBERS:	BIN TRACKING
		RUM NUMBER: 33563949
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		orter 1 Company Name	25-261-9607 •							U.S. EPAIR	Kac	015	445	7-6
Н		DENBESTE	TRANSPORTA	TION INC		PE	REZ	TRO	CKW	<b>6</b>	TRUBBE	3632		
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╟	8 Design	ated Facility Name and	Site Address						· · · · · · · · · · · · · · · · · · ·	U.S. EPA ID	Number			
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		gnated Facility Owner		tion of receipt of	hazardous materi	als covered by	the manifest exc	ept as noted in Ite	em 18a			<u> </u>	onth De	ay Year
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# **CleanHarb**

#### Land Disposal Restriction Notification Form

Page: 1 of 1

Printed Date :Feb 15, 2013 MANIFEST INFORMATION Manifest Tracking Info. Generator: Albany 1-Hour Cleaners 1187 Solano Avenue Address: Albany,CA 94706 Sales Order No: D77841210 EPAID#: CAP000234476 LINE ITEM INFORMATION LDR Disposal Category Treatability Group: Profile No: Line Item: Page No: 7 (Alternate Soil Std-meets std. (with listed NON-WASTEWATER CH611673B hazardous waste only)) EPA Waste Code NONE F001F002 DR Chemical Data **Contaminants** Underlying Subject to of Hazardous Treatment Concern Constituents TETRACHLOROETHYLENE TRICHLOROETHYLENE Applies to Certification Manifest Line Items This contaminated soil does contain listed hazardous wasts and does not exhibit a characteristic of hazardous waste and complies with the soil treatment standards as provided by 40 CFR 268.49(c) or the universal treatment standards. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR part 268 subpart D. believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment Waste analysis data, Signature :

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						Food and	Agiculture	<b>)</b> .			ŕ	MEIOLINA	STER CLEANHARBOI	SE BUTTON	NAMILLONAL LLC
	3 pm 09 ( 68) JND 78	/11/13 680 lb				PROFIL				731		GROSS WT. BY:		<b>—</b>	DATE  DATE  DATE
						DISPOS	SAL LOC	ATION	35-7	26	<u> </u>	TARE WT. BY:		DEPUTY	59/11/13
2:33	5 pm 09.	/11/13				DRIVEF PRINTE	R'S NAMI	Fi	ASO	Cle	Somor	WEIGHING LOCATION:	2500 W. LOKI BUTTONWILI	ERN ROAL OW, CAS	D 93206
	( 68) 3680 Ib	22092				DRIVEI SIGNA	R'S NAM TURE	Ti	-Ava	o (=	out	GENERATOR	Albany		
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## **APPENDIX H**

Soil Compaction Test Report



## **Inspection Services, Inc.** 1798 University Ave.

Berkeley, CA 94703 Phone: 415-243-3265

Phone: 415-243-3265 Fax: 415-243-3266

# GENERAL INSPECTION REPORT

Inspector:		Stocke		ISI Project No.:	6101-001.0
Date:	3-22			ISI Project Name:	1187 Solano Ano
Day (check one):	☐ Mon ☐ Tue	☐ Wed ☐ Thu	■ Fri □ Sat □ Sun	Address:	Albanx Ava
Time arrived at ISI lab for pick-up (if applicable)	12130		□ AM / □ PM	OSHPD/Permit#: Other:	b # 72450
Time arrived at jobsite:	1:00		□ AM / □ PM	Met with:	Emosto
Time departed jobsite:	4:00		□ AM / □ PM	Parking:	Tolls:
Time departed ISI lab after drop-off (if applicable)	4:30		□ AM / □ PM	Travel Time: Noon Break (hrs):	Mileage: 24
Hours Worked:	Y ST O	T DT	NS NSOT	Service Code(s):	2701
Work Shift (check one):		Swing Grav	<del></del>	Re-inspection:	☐ Yes / ■ No
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Any NCR's?					If any NCR, Fax to ISI office
Any attachments to this rep Person notified of inspection		Nirelast Da	sity Tosts, Map		
Copy of hand-written report		☐ Yes	No		
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the applicable building of		u <b>≡</b> uoes/∐00	bes not (check one)	comply with the ap	proved drawings, specifications and
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Reviewed by ISI Super	rvisor:			ISI Inspector S	ignature

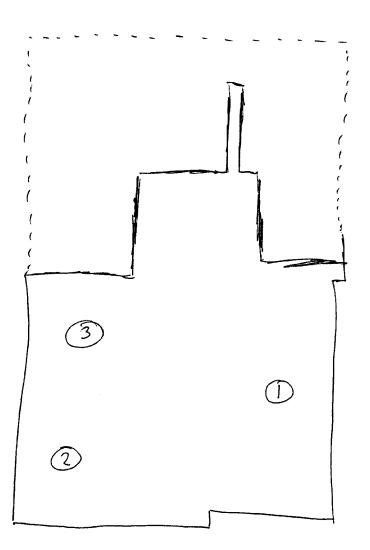
Copy of inspector's/technician's handwritten daily reports are left at the jobsite (or shop) as a convenience to the contractor, owner's representative and/or other ISI inspectors. Official reporting of such daily reports will be submitted to the approved distribution, in a timely manner, after review/edit/clarification by ISI managers and/or professional engineers. This procedure may not be followed to its full extent if copy machine is not available at the jobsite for use.



Inspection Services, Inc. 1798 University Ave Berkeley, CA 94703 Phone: 415-243-3265 / Fax:415-243-3266

## **NUCLEAR GAUGE FIELD DENSITY TEST**

In a m = = 4 = =		C. +10-240-3203 / 1 6	10-2-0	3200		n. 1				ISI Project No.:		4161	_	
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Hours Wo		•	•	Y ST		OT D	T	NS	NSOT	Noon Break (hrs):				
Work Shi	ft (circle one	):	•	(Day)	Swing	Graveyard			-	Service Code (s):		2701 (Soils/Aggr.) 2	801 (AC)	
Travel Tir			Mileage:		21					Re-inspection (hrs	):			· · · · · · · · · · · · · · · · · · ·
LOCATIO BF-Backfi BP-Buildin ELC-Elec	ill ng Pad	ST-Station EXC-Excavation FTG-Footing		ewer Line orm Drain ench	WL-W WTL-N RT-Re	Water Line		ELEVATION I SG-Subgrade FG-Finish Gra AB-Aggregate	ade	TOPC-Top of Pi TOP-Top of Pi FSG-Finish Si	ipe .	FAB-Finish Aggregat BTM-Bottom BTP-Below Top of Pi		
Test#	Test Date		Ger	eral Locatio	n			Elevation	Moisture [%]	Dry Density [pcf]	Reference Curve	Rel. Compaction [%]	Specified Comp. [%]	Probe Depth [in.]
1	3-22	Location	a 1				- 1	Sand	12.1	166.9	LS2026A	92	29	12
2	3-22	Location	٦ ك					tr.	12.5	107.2	11	92	lη	ι,
3	3-22	Locah'a	n 3					l+	12.0	105.6	lı	90	tt	ш
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		etermined by bum-back ness corrected accordingly	method				TES			E SPECIFIED COM TO MEET SPECIFII		REMENTS EXCEPT AS N	IOTED	<del></del>
Laborato	ry Standard:			Re	ference Cur	rve#				escription		Max. Dry Density [pcf]	Opt. Mc	oisture [%]
Field Tes	t Method:	(0-2922) D	-3017	LS	2026	A Roy	rclod.	Sand				116.8	13.2	
Standard	Density Co	<del></del>												
	Moisture Co		(											/
Gauge Mo	odel and S/N, u	inderline one:		T344	10:4650	T3440:4749	MC-1	DR-P: 4474	# MC-	1 DR-P: 5302	MC-3 6761	MC-1 DR-P: 8293		//1
	15	SI Inspector Signature			Person no	otified of inspe	ction res	sults: <u> </u>	most	2	Review	ed by ISI Supervisor: 👱	pol	1-h
Rep	ort/times	reviewed by client/co	ntractor						c	opy of hand-writt	en results left :	at jobsite Yes	No	



6101-001.0 1187 Solano Avo Albany, CA 3-22-13

## **APPENDIX I**

Retro-Coat™ Literature





## **Vapor Intrusion Coating System for Existing Structures**

#### **Product Description**

The Retro-Coat™ (patent pending) Vapor Intrusion Coating System is a complete product line that consists of chemically resistant materials to properly protect existing structures from the threat of contaminant vapor intrusion without the need for additional concrete protection. Developed by the R&D team of Land Science Technologies™, the Retro-Coat system has been subjected to rigorous testing procedures to prove its ability to combat the most aggressive chemical vapors. The main component of the Retro-Coat system is the Retro-Coat coating which is a two part, odorless, no VOC, 100% solids coating.

**Retro-Coat** finishes to a high gloss, easy-to-clean surface that is impervious to vapor and moisture transmission. Available in a variety of colors, **Retro-Coat** can be applied on damp as well as dry concrete, concrete masonry units, tile, brick and metal. For enhanced slip resistance, a suitable aggregate can be added. In addition, other additives or materials can be utilized to achieve a desired performance or aesthetic look.

#### Typical Application

Retro-Coat is suitable as a barrier to block contaminated vapors from entering existing structures. Particular uses include coating the horizontal surfaces of existing structures where contamination under, or adjacent to, a structure can potentially migrate inside the structure and create a vapor encroachment condition. This condition is most commonly found when the existing structure was operated as a dry cleaner, gas station, manufacturing facility or located in close proximity to any structure where carcinogenic chemicals were utilized.

A typical application consists of a minimum 20 mil thick system; consisting of two 10 mil coats of **Retro-Coat** at 160 SF/gallon per coat and is recommended along with a 6 mil coat of **Retro-Coat PRIMER.** The typical 20 mil application can withstand forklift traffic, other machinery and even act as secondary containment. However, if **Retro-Coat** may be exposed to more harsh conditions over a longer period of time, thicker applications ranging from 60 mil to ½ -inch may be more suitable.

In either application, **Retro-Coat** is a traffic bearing surface and does not need a protective course placed over it.

#### Retro-Coat Advantages

- Our R&D team developed all of the Retro-Coat system components specifically for vapor intrusion protection in existing structures
- Retro-Coat is resistant to both TCE and PCE, the vast majority of coatings cringe at such aggressive chemicals
- Retro-Coat is a wearing surface, meaning no additional concrete protection is necessary
- No odor and fast cure time reduce building downtime
- Carpet, tile, linoleum or other floor coverings can be applied directly over Retro-Coat, if desired
- Eliminates the need to remove the existing slab and when combined with in-situ treatment, lowers overall remediation cost
- Retro-Coat can increase the performance of an existing active subslab depressurization system
- Retro-Coat can aid in the retiring of existing active systems
- Available and installed by Land Science Technologies certified contractors



Completed surface preparation consisting of shot blasting, Retro-Coat PREP to fill joints and cracks and a 6 mil application of Retro-Coat PRIMER



Application of Retro-Coat SEALANT to a 20 mil total thickness

#### Installation

Particular care must be taken to follow those instructions precisely to assure proper installation. These instructions pertain to a standard 20 mil application; please contact us if the desired application is different.

- 1. New concrete should be allowed to cure a minimum of 28 days and/or be checked with a rubber mat or plastic sheet to ensure adequate curing time has occurred.
- 2. All surfaces to be covered should be power washed, shot blasted, acid etched, scarified or sanded to present a clean, sound substrate to which to bond to. The prepared surface should have a ph of 7.
- 3. Any bugholes and cracks wider than 1/8" should be filled with **Retro-Coat PREP** and allowed to dry before coating. More severely damaged concrete or other special conditions will require the proper **Retro-Coat** product.
- 4. When installing the standard 20 mil application of **Retro-Coat**, apply a 6 mil coat of **Retro-Coat PRIMER** and allow to dry prior to applying the initial coat of **Retro-Coat**. Priming may not be necessary when **Retro-Coat** is applied to a thickness greater than 20 mils. On new concrete or old concrete with an open porosity and on wood surfaces apply **Retro-Coat PRIMER** and allow to dry.
- 5. The two **Retro-Coat** ingredients should be mixed in the prescribed ratios, using a low speed "jiffy-style" mixer, (maximum 750 rpm). Mix Part A for about 1 minute then, add Part B and mix until uniform in color and consistency (at least one additional minute.)
- 6. Do not mix less than the prescribed amount of any ingredient or add any solvent to the mix.
- 7. Apply the mixed **Retro-Coat** material with a short nap roller, a squeegee or a brush. Apply approximately 160 SF per gallon per coat to achieve 10 mils of coating.
- 8. Apply a second coat while the first coat is still tacky if using spike shoes or dry enough to walk on, but before 7 hours at 75°F. If the first coat has set and is no longer tacky then the first coat should be sanded before recoating.
- 9. A suitable aggregate may be broadcast onto the surface after backrolling to provide more anti-slip profile to the finished surface. It is advisable to test various types and sizes of aggregate to achieve the desired finished profile.

#### **Product Specification**

The specified area shall receive an application of **Retro-Coat** as manufactured by **Land Science Technologies**, **San Clemente**, **California**. The material shall be installed by precisely following the manufacturer's published recommendations pertaining to surface preparation, mixing and application. The material shall be a low odor, two part, solvent free 100% solids, high gloss flexibilized system with good resilience to resist thermal and mechanical shock. It should be able to be roller applied at a minimum of 10 mils thickness per coat on vertical surfaces without sagging (at ambient conditions). The system must adhere to damp as well as dry concrete, wood, metal tile, terrazzo and sound existing epoxy and urethane coatings. It shall have tensile elongation of at least 6.0% when tested under ASTM-638. Its bond strength to quarry tile shall exceed 1000 psi when tested with an Elcometer pull test. Its hardness shall not exceed 83, as measured on the Shore D scale. The system shall be unaffected by oils and greases and shall withstand chemical attack for at least 72 hours against 98% sulfuric, 50% hydrofluoric acid, glacial acetic acid and acrylonitrile.

#### **Precautions**

- This is a fast reacting product; immediately pour onto floor after mixing and spread with notched squeegee. Recoat window without sanding at 70°F: 8 hours
- 2. A severe skin and eye irritant; check MSDS before use
- 3. Do not apply below 50°F

Note: Failure to follow the above instruction, unless expressly authorized by a Land Science Technologies Representative, will void our material warranty.

#### Chemical Resistance

**Retro-Coat™** is considered chemically resistant to neat concentrated acids, caustics and solvents. For permeation or diffusion coefficients please contact Land Science Technologies.

#### **Physical Properties**

(ASTM D-638) Bond Strength to Quarry Tile : >1000 psi Tensile Strength : 9800 psi Tensile Elongation (D-638) Vapor Transmission Rate (E-96) : .027 perms : 6.0% Flexural Strength (D-790) : 7035 psi Water Absorption (D-570) : 0.2% in 24hrs. Hardness, Shore D (D-2240) : 83 Taber Abrasion (D-1044) : 86 mg loss. Gardner Impact Strength (D-2794) 60° Gloss : 80 in. lbs. : 100

#### **Physical Characteristics**

Density, lbs/gal.	Mixing Ratios	By Volume	By Weight	
Pt. A : 11.0	Pt. A: Pt. B	2:1	2.3:1	
Pt. B : 8.9				
A&B Mixed: 9.3	Curing Times @	50° F	77°F	90°F
Viscosity @ 77°F, cps	Pot Life	35 min.	30 min.	20 min.
Pt. A : 18,400	Working Times	20 min.	20 min.	15 min.
Pt. B : 500	Hard, Foot Traffic	14 hrs.	7 hrs.	3 ½ hrs.
A&B Mixed : 4800	Maximum hardness and o	chemical resistan	ce are achieved a	fter 7 days at 77°F

#### **Color Availability**

#### Packaging and Coverage Rates (for 20 mil coverage)

Standard colors: beige, black, blue, dark gray, 4 Gallon Kit : 320 SF green, gray, red, white, yellow 20 Gallon Kit : 1600 SF **Shelf Life:** 1 Year at 77°F in unopened containers 100 Gallon Kit : 8,000 SF

The data, statements and recommendations set forth in this product information sheet are based on testing, research and other development work which has been carefully conducted by Land Science Technologies, and we believe such data, statements and recommendations will serve as reliable guidelines. However, this product is subject to numerable uses under varying conditions over which we have no control, and accordingly, we do NOT warrant that this product is suitable for any particular use. Users are advised to test the product in advance to make certain it is suitable for their particular production conditions and particular use or uses.

WARRANTY - All products manufactured by us are warranted to be first class material and free from defects in material and workmanship.

Liability under this warranty is limited to the net purchase price of any such products proven defective or, at our option, to the repair or replacement of said products upon their return to us transportation prepaid. All claims hereunder on defective products must be made in writing within 30 days after the receipt of such products in your plant and prior to further processing or combining with other materials and products. WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE SUITABILITY OF ANY OF OUR PRODUCTS FOR ANY PARTICULAR USE, AND WE SHALL NOT BE SUBJECT TO LIABILITY FROM ANY DAMAGES RESULTING FROM THEIR USE IN OPERATIONS NOT UNDER OUR DIRECT CONTROL.

THIS WARRANTY IS EXCLUSIVE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND NO REPRESENTATIVE OF OURS OR ANY OTHER PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF OUR PRODUCTS.



# PRODUCT DATA SHEET

## **Retro-Coat™ CAULK**

#### **Product Description**

Retro-Coat CAULK™ is a single component silicone sealant with a broad range of chemical resistance to acids, caustics and solvents under splash/spill conditions. It can withstand movement either in tension or compression of 50% provided proper expansion joint design is practiced. Retro-Coat CAULK stays elastic down to -65°F. It bonds to concrete, metal, wood and plastic surfaces without use of a primer. It possesses excellent weatherability. Under normal atmospheric conditions, Retro-Coat CAULK dries tack free in 2 hours and dries hard in 24 hrs.

#### **Product Application**

Retro-Coat CAULK is primarily used for sealing moving cracks, expansion joints and providing the initial seal around penetration though the slab. With excellent sag resistance and available in 10 oz. cartridges, it can be applied in vertical, as well as horizontal joints. For areas with heavy traffic, or areas where more significant repair is needed, contact Land Science Technologies for the necessary product information.

#### **Physical Properties**

Tensile Strength (D-412) : 150 psi Joint Movement Capability :  $\pm$  50% Tensile Elongation (D-412) : 550% Durometer Hardness, Shore A : 28 Tear Strength, ASTM D-624 : 27 psi Weatherability : Remai

(Die B)

Adhesion, Peel Strength : 20 psi

Weatherability : Remains (1500 hours in Atlas Weatherometer) : Elastomeric

#### Physical Characteristics

Specific Gravity 1.5 Curing Times (@ 50% R.H>, 77°F):

Flow (slump)

0.1 inches

Working Time
Skinover Time
2-3 hours
Cure Time (1/8" thickness)

24 hours

Full Cure 14 days

#### Color Availability

Black, Gray, and Red

**Shelf Life:** 6 months at 77° in unopened containers. Avoid contact with moisture prior to use.

#### Packaging and Coverage Rates (for ½ x ½" joint)

10.3 ounce cartridges : 6 LF 2 gallon pails : 150 LF

The data, statements and recommendations set forth in this product information sheet are based on testing, research and other development work which has been carefully conducted by Land Science Technologies, and we believe such data, statements and recommendations will serve as reliable guidelines. However, this product is subject to numerable uses under varying conditions over which we have no control, and accordingly, we do NOT warrant that this product is suitable for any particular use. Users are advised to test the product in advance to make certain it is suitable for their particular production conditions and particular use or uses.

WARRANTY - All products manufactured by us are warranted to be first class material and free from defects in material and workmanship.

Liability under this warranty is limited to the net purchase price of any such products proven defective or, at our option, to the repair or replacement of said products upon their return to us transportation prepaid. All claims hereunder on defective products must be made in writing within 30 days after the receipt of such products in your plant and prior to further processing or combining with other materials and products. WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE SUITABILITY OF ANY OF OUR PRODUCTS FOR ANY PARTICULAR USE, AND WE SHALL NOT BE SUBJECT TO LIABILITY FROM ANY DAMAGES RESULTING FROM THEIR USE IN OPERATIONS NOT UNDER OUR DIRECT CONTROL.

THIS WARRANTY IS EXCLUSIVE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND NO REPRESENTATIVE OF OURS OR ANY OTHER PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF OUR PRODUCTS.

**APPENDIX J** 

Tabular SCM

#### SITE CONCEPTUAL MODEL

The following table presents the site conceptual model (SCM) in tabular format. Attached Table 5 summarizes the risk summary for PCE at this site, providing detailed media-specific numerical concentration goals and a numerical assessment of progress in achieving those goals. Since PCE is the primary risk driver, assessment of the PCE goals alone provides a valid assessment of human health risks at the site. For further details on secondary site contaminants, please refer to the body of the report and the complete tables of analytical results (Tables 1 through 4). Post-remediation site conditions for groundwater, soil, subslab gas, and indoor air are best summarized by attached Figures 7, 18, 26 and 27, respectively. Cross-sections are shown on Figures 20 and 21, which show the subslab venting system.

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
<b>Site Description</b>				
Land Use and Site History	The subject site consists of a vacant, one-story commercial unit at 1187 Solano Avenue (Figures 1 and 2). Dry cleaning operations occurred at Albany 1-Hour Cleaners at the subject site from approximately 1986 to 2011. In 2004, hydrocarbon-based cleaning equipment was installed to replace equipment that had used tetrachloroethene, also known as perchloroethene (PCE).	None	NA	NA
	The subject site represents one unit of an entire commercial block of single-story units/buildings along Solano Avenue, for which the responsible party (Solano Group) owns the north side of the block. Parcel number 66.2801-22-1 includes 1175 Solano (pizza restaurant), 1181 Solano (medical offices), 1183 Solano (dentist office), and 1185 Solano (vacant and immediately adjacent subject site). Parcel number 66.2801-20 is 1191 Solano (U.S. Post Office). A parking lot lies immediately north of the site. Properties north and northwest of the parking lot are residential. Facing properties along the south side of Solano Avenue are also commercial. Properties to the south of Solano Avenue are residential. Cornell Elementary School is present about 150 ft southeast (upgradient) of the site.			
Nearby Sites	Based on Geotracker information, the only nearby sites are leaking underground tank sites associated with existing and prior gasoline stations or automobile workshops. The nearest of those sites is approximately 1,000 feet to the northwest of the site at the intersection of San Pablo Avenue and Washington Avenue.	None	NA	NA

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City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
Building Characteristics	The Site is part of a dual-unit single-story commercial building that consists of 1185, and 1187 Solano Avenue. These addresses were previously separate businesses, but the partition wall has recently been removed between 1185 and 1187 to create a larger single space. 1183 remains a separate dentist's office and this unit was constructed subsequent to 1185/1187 Solano. A wall separates 1183 from 1185 Solano. These buildings are of slab-on-grade construction. During drilling and partial demolition of the floors in 1185 and 1187, it was observed that the slabs were underlain with several inches of coarse baserock. In addition, the dentist's office contains a large number of slab penetrations and shallow subsurface vaults that accommodate dental chair penetrations and plumbing for numerous sinks (penetrations were subsequently sealed). The floor slabs in 1185 and 1187 have been demolished and replacement has not yet been completed.	None	NA	NA
	Adjoining the Site building to the east is 1191 Solano Avenue (US Post Office). This is a separate, primarily slab-on-grade building with a floor level approximately 2.5 ft higher than the Site property. A portion of the front section of the post office has a perimeter foundation and crawlspace. To the west of the Site building is a wide alleyway, and then a single-story medical office building (1181 Solano) of unknown construction type.			
	The original sanitary sewer piping beneath the Site building ran westwards from the rear of the 1187 Solano unit beneath the 1185 Solano unit, into the 1183 Solano unit. The piping then turns south and exits into Solano Avenue (Figures 1 and 2). The piping was approximately 1 ft under the slab at the rear of the 1187 Solano unit and was apparently surrounded by a few inches of backfill material. In 2001, a new sewer was installed for use by the tenant at 1183 Solano. This sewer was subsequently abandoned in November 2012 and is no longer used. Installation of a new sewer for 1185 and 1187 Solano is currently underway. A video inspection of the original sanitary sewer was conducted in February 15, 2013 and indicated that the piping is cast-iron and appears to be in very good condition,			

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
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SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
	with no observed cracks, low points, or ponded water that could increase the potential for leakage. Unions were observed at approximately five foot or greater intervals.			
	An abandoned sewer line was discovered about 6 ft south of, and at a slightly shallower depth than, the primary sanitary sewer in the 1185 and 1187 units. The second line ran at an angle of approximately 45 degrees to the 1187 Solano western wall and ended about 3 ft under the wall beneath 1185 Solano, based on observations by the excavation contractor. A tee was observed in the primary sewer line a few feet away, which may have previously connected to this second sewer line.			
Geology and Hyd	drogeology			L
Regional	The site lies at an elevation of approximately 60 feet above mean sea level on the relatively flat-lying area east of San Francisco Bay (Figure 1). This area is generally referred to as the East Bay Plain, and is underlain by Pleistocene to Holocene alluvial fan deposits interfingering westward with estuarine deposits, and which lie atop older bedrock of the Mesozoic Franciscan Complex. Albany Hill, a bedrock outcrop, lies approximately ½ mile northwest of the Site. The site is located at distal edge of the alluvial fans that border the eastern edge of the San Francisco Basin, a deep Tertiary marine to nonmarine depocenter (Figuers, 1998). Cross sections by Figuers indicate that the Tertiary deposits beneath the site are generally less than 100 feet thick. The Hayward Fault, a major active regional fault of the San Andreas fault system, lies 1.25 miles east of the site.	None	NA	NA

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
Local Geology	The near-surface geology described below is based on logs of soil borings beneath the Site and several neighboring properties, and visual inspection of excavations made at the Site during interim corrective actions. The maximum depth of exploration of the soil borings was 35 feet. Beneath the layer of subslab baserock described above, subsurface soil consists primarily of silty to sandy clay to the total depth of exploration. However, a thin (0.5 to 1 foot) layer of silty gravel was encountered at a depth of approximately 30 to 31 feet in all of the deep borings at the site. Site geology is also shown on cross section A-A' (Figure 20).	None - Soil logged to 35 ft bgs and ND for soil and groundwater.	NA	NA
Local Hydrogeology	Groundwater has generally been encountered between 12 to 19 ft bgs during drilling of soil borings at the site, and groundwater entered the remedial excavation in 1187 Solano at a depth of approximately 9 to 10 feet bgs. Stabilized depth to groundwater in shallow monitoring wells has ranged from approximately 8.5 to 13.2 ft. Four shallow wells have been installed at the site with screen intervals within the range of 9' to 15' bgs (Figure 7). Well yields are very low, indicating very low hydraulic conductivities consistent with the high clay content of shallow soils at the site. The wells have yet to be surveyed so the groundwater gradient is unknown, although it is likely westward to southwestward parallel to surface water flow. Given the low permeability soil types present at the site, and the generally low groundwater gradients in the general area of the site, groundwater velocities are expected to be very low.	Data Gap 1: Insufficient data on shallow groundwater gradient	Plan 1: Survey wells and monitor water levels and COC concentrations until plume stable.	Accurate groundwater elevation measurements will provide gradient information. Future sampling will provide plume stability and seasonal information
	No apparent discrete confining layers or significant aquifers were encountered in borings drilled in the upper 35 feet of soil, although the thin silty gravel layer at approximately 30 feet bgs is probably a preferential flow pathway. Groundwater was observed to rise to approximately 26 feet in borings that penetrated the silty gravel layer, suggesting semi-confined or confined conditions.			

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
Surface Water	Based on the Codornices Creek Watershed Map distributed by the Oakland Museum, the two creeks closest to the site are Middle Creek, which lies three blocks (approximately 1,500 feet) north of the site and Marin Creek, which lies one block (approximately 1,200 feet) south of the site. Both of the creeks run primarily in underground culverts, though a short section of Middle Creek northeast of the site is mapped as running on the surface. Both creeks flow westwards towards San Pablo Bay.	None	NA	NA
<b>Contaminant So</b>	urce and Release Information		1	1
Source/ Release Information	Dry cleaning operations at the site started in 1986, and use of PCE as a dry cleaning solvent apparently ceased in 2004 after conversion of cleaning equipment to use so-called "hydrocarbon" cleaners which consist of isoalkanes or isoparaffins and do not contain chlorinated hydrocarbons such as PCE. This history brackets the release age to the 18-year period between 1986 and 2004. During investigation and remediation of the site the maximum levels of contamination were found beneath the location of the dry cleaning machine, indicating that this was the primary release point.	None	NA	NA
Chemicals of Concern	The primary chemical of concern (COC) at the site is PCE. The secondary COCs are the potential toxic degradation products of PCE, which include trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene (1,1-DCE), and vinyl chloride. The COCs detected in soil, groundwater and/or soil vapor at concentrations exceeding commercial ESLs have been PCE, TCE and cis-1,2-DCE, with PCE exceedences at least an order of magnitude over those for TCE and cis-1,2-DCE in most samples. BTEX and other compounds previously detected in subslab gas, soil, or groundwater do not appear to be COCs following soil excavation.	None	NA	NA
Scope	Subsurface assessment was performed in 2004 and (Avalon, 2004 and 2005). The assessment included soil gas sampling from 5 ft depth in four temporary probes, soil sampling from three 5-ft borings and five 30-ft borings, and groundwater sampling from approximately 30 ft depth within the five deeper borings. The results	None	NA	NA

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
	were presented in the Soil Gas Investigation and Health Risk Assessment dated June 8, 2006 (Avalon, 2006).  Additional subsurface assessment was performed by Pangea in 2013 to evaluate site conditions prior to site improvements by the future tenant, and to help facilitate future case closure with unrestricted land use (and without a deed restriction). The additional assessment included soil compling from 504 horizont groundwater compline.			
	included soil sampling from 50+ borings; groundwater sampling within four monitoring wells, 11 borings and 3 excavation locations; and subslab soil gas sampling from 26 probes.			
Soil	A summary of soil sampling data prior to remediation is shown on Figure 9. Soil sampling data are tabulated in Table 1. The maximum levels of soil contamination were located immediately beneath the former location of the dry cleaning machine (near boring B-7), indicating that leaks or spills at this location, which most likely leached downwards through cracks in the concrete slab, were the most likely source of releases to the underlying soil.	None	NA	NA
	PCE may have also breached the concrete floor or the southern sanitary sewer piping near the former washing equipment (near boring B-3). To a presumed lesser extent, PCE may have migrated along preferential pathways/conduits under the floor in vapor phase, or in aqueous phase aided by reported extensive water flooding at the 1187 Solano unit. Potential preferential pathways include the sanitary sewer, sanitary sewer backfill material, and subslab baserock, as well as the underground electrical conduit exiting near the rear of 1185 Solano and subsequent electrical conduit/backfill extending under specialty chairs in the dental office in 1183 Solano.			
	PCE concentrations in soil exceeding the commercial ESLs (for direct contact and drinking water impacts) was limited to the northern part of 1187 Solano at depths less than 11.5 ft, prior to excavation. The lack of impacts beneath this depth, even immediately beneath the release location, is a significant observation. Since this depth is fairly close to the depth of the capillary fringe, it indicates that dense non-aqueous phase liquid			

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City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
	(DNAPL) leaching downwards from the release point was of insufficient thickness to overcome soil capillary pressures and displace groundwater in the capillary fringe to impact soils beneath this level. Therefore, the DNAPL apparently spread laterally away from the release point at the capillary fringe, rather than penetrating into deeper soils. This observation is consistent with the predominantly silty clay soil type at the site, which generally requires DNAPL thicknesses of tens of feet to overcome capillary forces. The very low levels of soil contamination below 11.5 ft are likely due to gradual diffusion of dissolved contaminants through groundwater.  During excavation beneath 1185 Solano, PID screening of site soils showed that the highest levels of residual contamination were present adjacent to the sanitary sewer line and within the thin layer of baserock immediately underlying the concrete slab. This observation, combined with the soil impact observations discussed in the preseding paragraph suggest that DNAPL scening through the			
	in the preceding paragraph suggest that DNAPL seeping through the slab migrated laterally along two horizons. First, DNAPL seeped downward through the vadose zone beneath the source and encountered the capillary fringe, whereupon it flowed laterally due to insufficient pressure to overcome capillary pressure at the capillary fringe. Upon saturating vadose zone soil immediately beneath the source, it also seeped laterally through the baserock lying above the relatively dry silty clay native soil. Since the upper section of soil was unsaturated, the DNAPL also seeped downwards into the upper portion of the site soil from the baserock layer over a relatively broad area.			
Groundwater	A summary of groundwater grab sampling data is shown on Figure 6. Groundwater sampling data are tabulated in Table 2. Note that all data on the figure were collected prior to remediation except for EX-E GW, which was collected from groundwater that collected into the remedial excavation. PCE concentrations in grab groundwater exceeding the commercial ESL for the vapor intrusion pathway were present beneath 1183, 1185 and 1187 Solano, and beyond the	None	See below	NA

Site Address:	1187 Solano Ave	ACEH Case No. Regulator:		RO0002857
City:	Albany			Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
	northwest corner of 1183 Solano. (Post-remediation groundwater is below ESLs as shown on Figure 7).			
Soil and Subslab Gas	A summary of pre-remediation soil gas and subslab gas sampling data is shown on Figures 5 and Figure 10, respectively. Soil gas and subslab gas sampling data are tabulated in Table 3. Prior to remediation, PCE concentrations substantially exceeded the commercial and/or residential ESLs for vapor intrusion in all samples collected (except for SG-1 located in the parking lot north of the building and a crawl space gas probe within 1191 Solano). The lateral extent of soil gas impact was not defined at that time, though subsequent sampling has delineated the extent of PCE in subslab gas.	See below	See below	NA
Remediation Act	ivities	I	· ·	
Soil	Soil remediation (excavation of over 500 tons) was performed under most of the former dry cleaning unit at 1187 Solano and also underneath the adjacent units at 1185 and 1191 Solano. All identified soil with COC concentrations exceeding residential ESLs for direct contact or drinking water impacts was removed and disposed offsite. The excavation cavity was primarily backfilled with controlled density fill (CDF). Excavation was conducted in two stages. Figure 12 shows the geometry of the initial excavation stage and the concentrations of PCE detected in confirmation samples collected following excavation. Following this excavation, additional soil and soil gas samples were collected that showed elevated soil gas concentrations beneath much of the northern part of 1185 Solano (and one soil sample above residential ESLs). Therefore, an additional stage of excavation was conducted in this area to remove very shallow soils that were suspected to have become contaminated by the former washing equipment area, by lateral flow of contaminants beneath the unit through subslab baserock and along sanitary sewer backfill. Figure 17 shows the geometry of the final excavation stage and the concentrations of PCE detected in confirmation samples collected following that excavation. Figure 18 shows the final geometry of both excavations.	None	See below	NA

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
Groundwater	Groundwater seeped into the excavation pit during the initial excavation stage. A grab sample collected from this groundwater contained 750 µg/L PCE, slightly greater than the commercial ESL for vapor intrusion. The groundwater was pumped out of the pit and disposed of offsite, and contaminated soil in equilibrium with the groundwater was also excavated.	See below	See below	NA
Soil and Subslab	To mitigate potential intrusion of PCE vapors, extensive soil	See below	See below	NA
Gas	excavation was performed, and a passive subslab venting system was installed beneath most of 1185 and 1187 Solano. The passive subslab venting system includes a gravel layer, slotted piping, a 10 mil plastic overlying layer, two 4" diameter riser pipes to the passive turbine roof fan. The future slab will provide further mitigation. Additional slotted piping was installed to allow passive or active venting of subslab vapor beneath all units (1183, 1185, 1187 and 1191 Solano. The layout of the passive and additional venting piping is shown on Figures 22 and 23. A cross-section schematically illustrating construction details is shown on Figure 21. Several five-day tests were performed on a temporary venting system, which was replaced during excavation activities.  In addition, one soil vapor extraction (SVE) well was installed beneath the restroom area at the north end of 1185 Solano. This area was not accessible to excavation and it is possible that undetected soil contamination associated with migration along the sanitary saver line still remains in this area so the SVE well was installed as			
	sewer line still remains in this area, so the SVE well was installed as			
	a precautionary measure in case additional soil vapor remediation is merited in this area.			
Post-Remediation	n Investigation	·	·	•
Scope	Following completion of the remedial excavation, excavation confirmation wall and floor samples were collected to delineate the extent of residual soil contamination.	None	NA	NA
	A shallow groundwater well (MW-4) was installed immediately downgradient of the excavation.			
	Four subslab vapor probes have also been installed within the gravel			

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
	backfill of passive subslab venting system to facilitate monitoring of subslab gas concentrations. Subslab gas probes located outside the remedial excavation area have been sampled. Testing of the additional passive/active venting piping can be performed for additional evaluation of subslab gas.			
Soil	Excavation confirmation samples were collected from the floors and walls of the remedial excavations. As shown on Figures 12 and 17, and tabulated on Table 1, all confirmation sample COC concentrations were less than both residential and commercial ESLs.	None	NA	NA
Groundwater	Four groundwater monitoring wells were installed to further delineate the extent of PCE in shallow groundwater, to allow collection of periodic groundwater data, and to estimate the groundwater flow direction. As shown on Figure 7, data from these wells has provided additional delineation of source area impact and the downgradient extent of PCE in shallow groundwater. Detected PCE concentrations in groundwater wells are lower than those in nearby grab groundwater samples. For example, 200 µg/L in source area well MW-1 is lower than 820 µg/L in nearby grab sample from B-22. The PCE concentration of 110 µg/L in source area well MW-4 suggests that the PCE source contributing to the nearby higher grab sample results (750 µg/L at EX-E-GW and 620 µg/L at B-18) has been significantly removed by site excavation.	Data Gap 2. Groundwater plume stability unknown.  Data Gap 3. Confirmation that BTEX and naphthalene no COCs in groundwater.	Plan 2: Future sampling of monitoring wells. Plan 3: Analyze samples for full list VOCs by EPA Method 8260, to confirm lack of BTEX and naphthalene concern. Future analysis by EPA Method 8010 to control cost.	Additional sampling to establish plume stability per Low Threat Solvent Site Closure Tool. Confirm COCs in groundwater.
	The PCE concentrations in shallow groundwater exceed the final ESLs protective of drinking water (5 $\mu g/L$ ), but since site water is not used as a drinking water resource, this ESL is not applicable to the subject site. Given the fine-grain soil, the applicable ESL for groundwater is the ESL protective of vapor intrusion into indoor air of 640 $\mu g/L$ for commercial use (63 $\mu g/L$ for residential use). The predominantly shallow clayey soil and the controlled density fill (CDF) backfill overlying the PCE impact should effectively mitigate upward vapor migration to sufficiently safeguard indoor air quality. PCE concentrations in groundwater monitoring wells (maximum of 200 $\mu g/L$ ) is below the applicable ESL for commercial site use.			

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
Subslab Gas	Subslab gas was resampled in select probes following completion of the remedial excavations and passive subslab venting system installation. As shown on Figure 26, all subslab gas concentrations are below commercial ESLs (and 10x residential ESLs). Residual PCE concentrations below commercial ESLs are primarily located beneath 1183 Solano along the electrical conduit preferential, and beneath 1191 Solano along the sanitary sewer preferential pathway.	Data Gap 4: Stabilized subslab gas concentrations are unknown	Plan 4: Conduct additional sampling in late winter 2013 or early spring 2014, and subsequently in late summer 2014.  Short testing from vent piping will evaluate the potential benefit of contingent active or passive ventilation of vents installed under 1183 and 1191 Solano.	Conduct sampling same time as indoor air sampling to correlate with indoor air trends (see Data Gap 5 below).
Indoor Air	Indoor air concentration data for each of the units sampled and for an ambient air sample collected from a rooftop at (1181 Solano) approximately 40 ft upwind (northwest) of the closest sample at 1183 Solano and approximately 70 ft upwind of the sample at 1187 Solano (the prevailing wind was from the north or northwest during sampling). Results are shown on Figure 27 and tabulated in Table 4. All COC concentrations were lower than commercial ESLs in the sampled units and at negligible levels in the ambient air sample. Concentrations of PCE in 1183 and 1187 Solano did slightly exceed the residential ESL in the 8-hr work day sample, and the 24-hr sample in 1183 Solano was slightly more than double the residential ESL. The higher level for the 24-hr 1183 Solano sample is likely due to the fact that the HVAC system, which produces a slight positive pressure, was shut down for the period following the work day, thus allowing increased intrusion rates during the period that it was not occupied. The 24-hr sample in 1191 Solano was comparable to the 8-hr sample.	Data Gap 5: Longer term post-remediation and seasonal indoor air concentration trends are not known.	Plan 5: Conduct additional sampling in late winter 2013 or early spring 2014, and subsequently in late summer 2014.	Seasonal sampling as described is recommended under Step 9 of the DTSC Final Vapor Intrusion Guidance.

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
Risk Pathways				
Prior Risk Evaluation	Prior to the remediation activities conducted by Pangea in 2013, Avalon, Inc. prepared a risk assessment (Avalon, 2006) indicating that the risk posed by the identified contaminants at the site was within acceptable levels for commercial site use and recommended no further action for the site. In a letter dated July 5, 2006, the Alameda County Environmental Health (ACEH) concurred with the report findings and requested a closure request for commercial land use with a draft deed restriction limiting future land use. The ACEH provides oversight for this SLIC case file number RO0002857. The ACEH required additional action to allow case closure with unrestricted land use and avoid a deed restriction.  Pangea's review of the Avalon risk assessment has indicated that the risk assessment calculations were based on the assumption that contaminants were located beneath several feet of clean overburden. That assumption was not warranted based on the observed site conditions and location of the contaminant release point. Therefore, the results of that study were not valid, meriting the completed interim remediation to mitigate potential human health risks.	None	NA	NA
Risk Pathway Summary	<ul> <li>Based on the characterization data provided under the Pre- and Post-Remediation Investigation SCM Elements above, the following risk pathways are considered to be potentially complete for the Site:</li> <li>Soil: <ul> <li>Vapor intrusion to indoor air</li> <li>Migration of contaminants to groundwater through leaching and vapor flow.</li> <li>Direct exposure to construction workers or to potential future residents and biota.</li> <li>Gross contamination concerns (primarily odors)</li> </ul> </li> <li>Direct exposure for other human receptors or biota is not considered a concern for the current land use (commercial) because soil</li> </ul>	See below	See below	NA

Site Address:	1187 Solano Ave	ACEH Case No.		RO0002857
City:	Albany	Regulator:		Dilan Roe
SCM Element/ Sub-Element	Description	Data Gap No. and Description	Proposed Investigation	Rationale
	contamination is restricted to soil beneath the building slab and therefore is inaccessible to those receptors. Also, unrestricted use of the property (i.e. residential conversion) could be deemed acceptable since (1) soil impact exceeding residential ESLs has been removed, and (2) residual subslab and groundwater impact does not represent a significant risk to future residents, since such future development would likely not occur for many years when residual PCE will have further attenuated and building construction (e.g., slab) would provide additional mitigation of potential risks.			
	<ul> <li>Vapor intrusion to indoor air</li> <li>Ingestion of groundwater impacting wells, sumps or basements at nearby properties</li> <li>Impacts to aquatic biota in surface water bodies</li> <li>Groundwater gross contamination or impacts to commercial use are not considered a concern at this site because maximum concentrations of all COCs were below ESL ceiling values both prior to and following remediation.</li> <li>The potential risk pathways identified above are addressed in the CSM Sub-Elements below.</li> </ul>			
Soil	As shown on Figure 18, Table 1, and Table 5 (Attached SCM Risk Summary for PCE), excavation confirmation sampling conducted by Pangea indicates that all soil containing COCs at concentrations greater than residential or commercial ESLs for direct contact or impacts to drinking water sources has been excavated from the site, so no potential risks associated with soil contamination are present for site workers, groundwater quality, or potential future residents or biota.  The vapor intrusion pathway is discussed below under the soil gas and indoor air SCM sub-elements.	None	NA	NA

Groundwater	The primary risk pathway for groundwater is the vapor intrusion	See Data Gap 2 for	See Plan 2 above.	Additional
	pathway. As shown on Figure 7, Table 2, and Table 5 (Attached	determination of		effort due to
	SCM Risk Summary for PCE), COC concentrations in shallow	groundwater flow	Plan 5: Conduct a	nearby
	(approximately 9 to 15 ft) groundwater beneath the site are less than	direction and plume	door-to-door survey to	residences.
	commercial ESLs for indoor air impacts with the exception of a grab	stability.	identify any water wells	The residential
	sample from boring B-22 at the northwest corner of 1183 Solano and		or other sensitive	ESL for vapor
	grab sample EX-E GW from within the remedial excavation (Figure	Data Gap 5: Sensitive	receptors (e.g.,	intrusion is
	6). Both of these samples only slightly exceed the commercial	receptor survey within	basements or other	substantially
	ESLs. Grab sample EX-E-GW is no longer considered	250 ft of site in cross-	subgrade development)	lower than the
	representative of site conditions because the excavation deepened	gradient and down-	within approximately	commercial
	and widened to remove contaminated soil in equilibrium with the	gradient direction.	250 ft of the site in the	ESL.
	groundwater at this location. A f subsequent sample collected from		crossgradient and	Subslab/soil
	nearby monitoring well MW-4 had substantially lower		downgraident	gas sampling is
	concentrations. Representative groundwater conditions from		directions. If receptors	a more reliable
	monitoring wells are shown on Figure 7. In addition, the sample		identified, consider	indicator of
	from B-22 is located near subslab probes that show that subslab		additional grab	vapor intrusion
	COC concentrations are substantially below commercial vapor		groundwater sampling	impacts than
	intrusion ESLs so no impacts are likely. This is expected since site		or subslab gas sampling	groundwater
	soils are less permeable than the default soil type that the		near receptor.	sampling.
	groundwater ESLs are based on.			
	As noted in the East Bay Plain Beneficial Use Evaluation Report			
	(Water Board, 1999), the Site lies within the Berkeley/Albany			
	Groundwater Management Zone part of Zone B, which identifies			
	areas where groundwater is unlikely to be used as a drinking water			
	resource. In addition, shallow groundwater lies in very low			
	permeability soils that are highly unlikely to be able to yield			
	sufficient water to constitute a potential drinking water resource as			
	defined in State Water Resources Control Board Resolution 88-63.			
	Therefore, risks to groundwater beneficial uses are likely to be non-			
	existent. However, it is possible that sumps, basements or wells are			
	present in the downgradient areas of the plume and that accidental			
	ingestion of groundwater could potentially occur within any area			
	where groundwater concentrations exceed ESLs for drinking water.			
	The nearest surface water bodies are located more than 1,000 feet			
	crossgradient of the site, so it is very unlikely that any impacts to			

Subslab and Soil Vapor	No COCs were detected in the 30-ft deep water-bearing zone in any of the five grab samples collected beneath and adjacent to the site. And lack of soil contamination below 15 ft depth in the source area or elsewhere suggests no potential for future impacts to this zone.  As shown on Figure 26, Table 3, and Table 5 (Attached SCM Risk Summary for PCE), sampling immediately following remediation shows concentrations of all COCs are lower than commercial ESLs.	See Data Gaps 4 and 5 above.	See Data Gaps 4 and 5 above.
Indoor Air	As shown on Figure 27, Table 4, and Table 5(Attached SCM Risk Summary for PCE), sampling immediately following remediation shows concentrations of all COCs are lower than commercial ESLs, so no significant risks to current workers are present. Potential risks for hypothetical future residents at the site are present, although concentrations and associated risks are anticipated to drop because contaminant sources have been removed and passive subslab venting will provide additional attenuation of residual COCs.	Data Gap 6: Longer term post-remediation and seasonal indoor air concentrations not determined.	Plan 6: Conduct additional indoor air (and subslab gas monitoring) to determine if additional mitigation (e.g., active venting and/or vapor barrier) merited. See Data Gaps 4 and 5.

Table 5 - Cleanup Levels and Goals - Former Albany 1-Hr Cleaners, 1187 Solano Avenue, Albany, California

		Te	trachloroethene (PCE)	
Media	Current Maximum	Cleanup Goal	Cleanup Level	Current Estimated Risk and Comments
Soil	<b>0.31</b> mg/kg (GPA-4@10' and SW-EX-4@4')	0.55 mg/kg (Residential Final ESL for Drinking Water Resource)	0.55 mg/kg (Same as Goal) (Met Goal: Residential and Commercial)	Risk <1 x 10 <sup>-6</sup> Residential and Commercial  All soil excavated to below RESIDENTIAL screening level (ESL).
Groundwater (Shallow, about 10')	200 ug/L (Well MW-1) 820 ug/L (Grab B-22)	640 ug/L (Commercial ESL protective of indoor air)  Alternate Goal: 63 ug/L (Residential ESL protective of indoor air)	640 ug/L (Same as Goal) (Met Goal: Commercial)  Alternate Level: 630 ug/L (10x Residential ESL protective - indoor air) (Met Proposed Cleanup Level for Residential Use) (Superceded by Subslab Gas and Indoor Air)	Risk <1 x 10 <sup>-6</sup> Commerical  Also Met Risk <10 x 10 <sup>-6</sup> Residential  Well data below commercial ESL protective of indoor air. Plume delineated to cleanup goal by site wells and grab data. Clayey site soil will limit upward migration of PCE vapor from groundwater. Expect attenuation now that source removed. Once plume deemed delineated and stable, subslab gas is the primary driver for mitigation and case closure.
Groundwater (Deeper, about 30')	<1 ug/L	5 ug/L	5 ug/L (Met Goal)	<b>No impact</b> detected in deeper groundwater (about 30 ft bgs).
Subslab Gas (Primary Cleanup Level)	940 ug/m³ (1185+1187 Solano @SG-1185N) 1,200 ug/m³ (1183 Solano @SS-17) 1,800 ug/m³ (1191 Solano @SSPO-4)	2,100 ug/m³ (Commercial ESL)  Alternate Goal: 210 ug/m³ (Residential ESL)	2,100 ug/m <sup>3</sup> (Same as Goal, and 10x Residential Goal) (Met Goal: Commerical) (Met Level: Residential)	Risk <1 x 10 <sup>-6</sup> Commerical  Also Met Risk <10 x 10 <sup>-6</sup> Residential  All subslab gas concentrations are below Commecial Goal (ESL). Passive subslab venting system is mitigation measure for additional safeguard for protection of indoor air.
Indoor Air	<b>0.85</b> ug/m <sup>3</sup> 1187 Solano 8 hr <b>1.1</b> ug/m <sup>3</sup> 1183 Solano 24 hr <b>0.40</b> ug/m <sup>3</sup> 1191 Solano 8 hr	2.1 ug/m³ (Commercial ESL)  Alternate Goal: 0.41 ug/m³ (Residential ESL)	2.1 ug/m³ (Same as Goal) (Met Goal: Commerical)  Alternate Level 1: 4.1 ug/m³ (10 x Residential ESL) (Met Proposed Cleanup Level for Residential Use)	Risk <1 x 10 <sup>-6</sup> Commerical (All Units)  1191 Solano: Risk is below 1 x 10 <sup>-6</sup> Residential Goal.  1185 and 1187 Solano: Risk expected to meet  Residential goal of 1 x 10 <sup>-6</sup> upon slab installation.  Passive subslab venting system adds safeguard.  1183 Solano: Risk slightly above 1 x 10 <sup>-6</sup> for residential use. Current risk of 10 x 10 <sup>-6</sup> is acceptable for residential use. Expect risk reduction and attenuation now that extensive source removal complete.

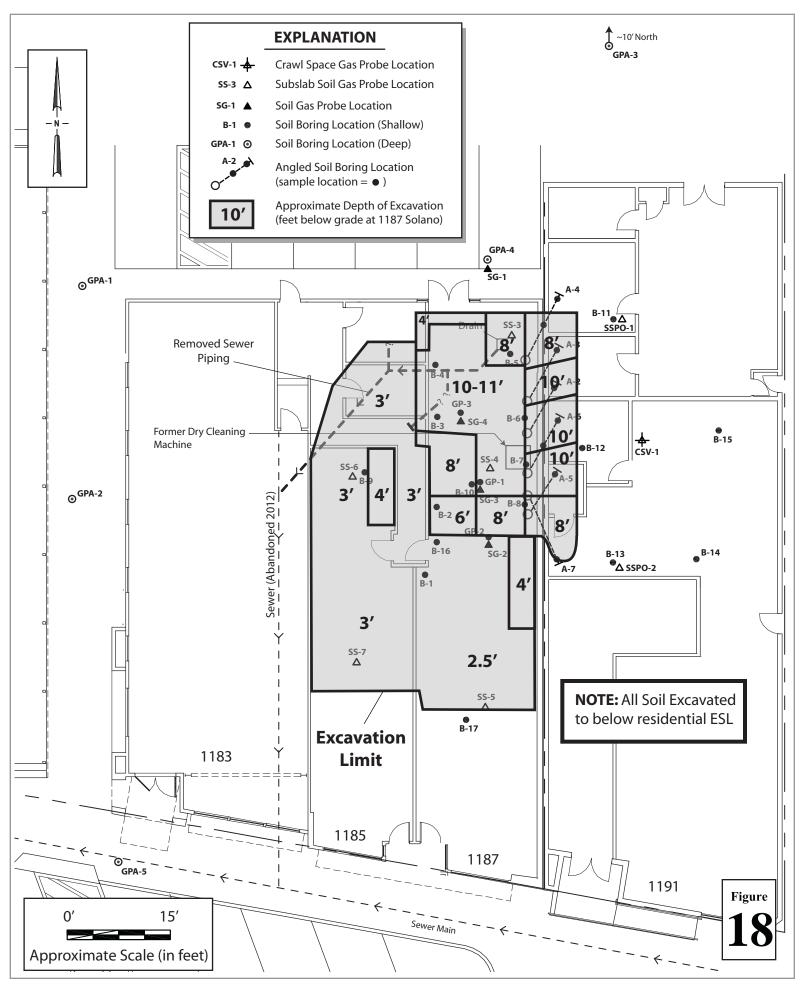
Notes and abbreviations:

Cleanup *Level* represents target concentration for remedial efforts, while Cleanup *Goal* represents long-term target concentration following natural attenuation of residual impact. ESL = Environmental Screening Level Established by the SFBRWQCB, Interim Final - November 2007 (Revised May 2013).

bgs = Below grade surface



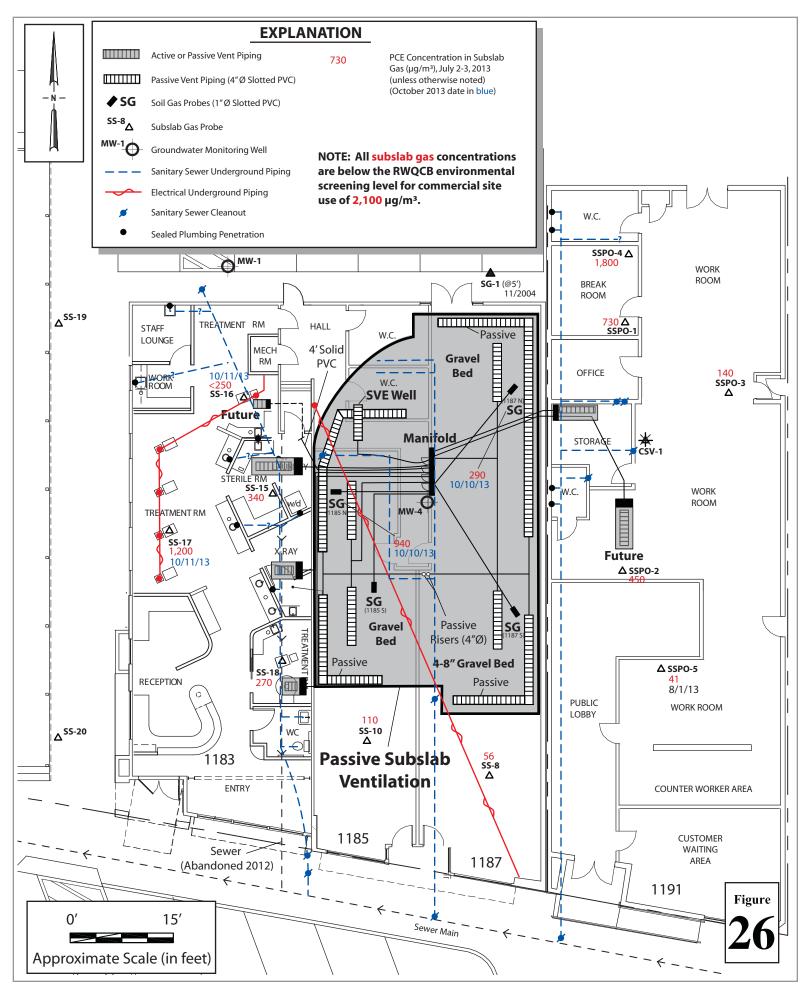




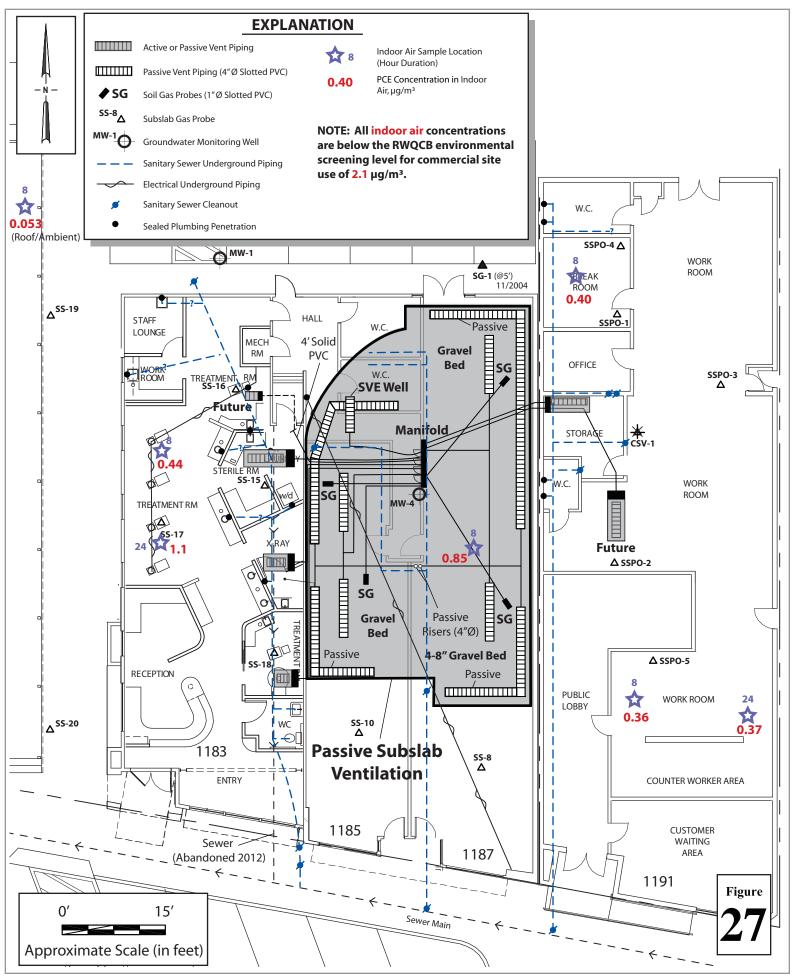
**Solano Group** 1187 Solano Avenue Albany, California



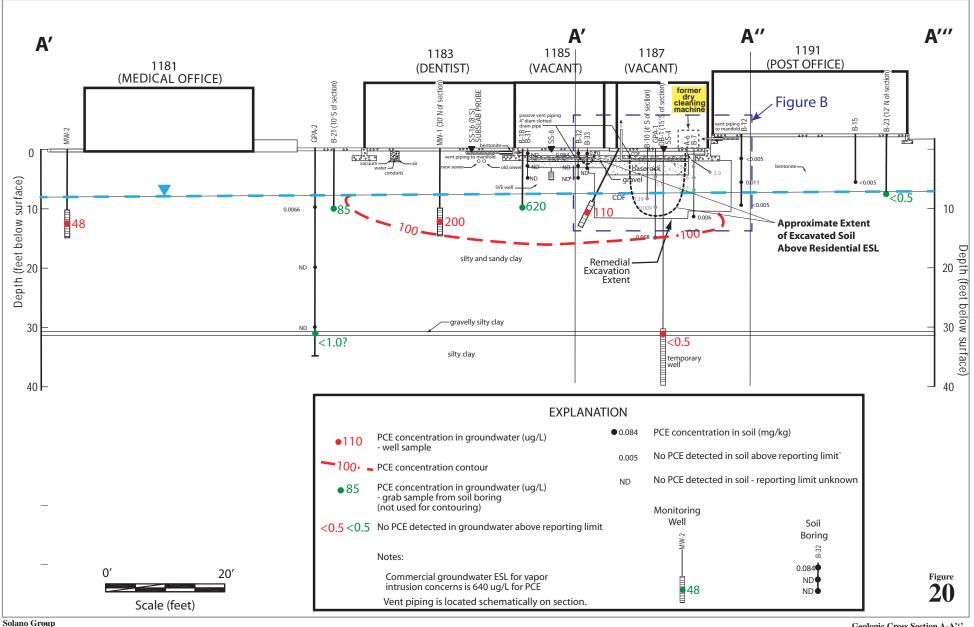
Final Interim Excavation Extent and Depth, August/September 2013



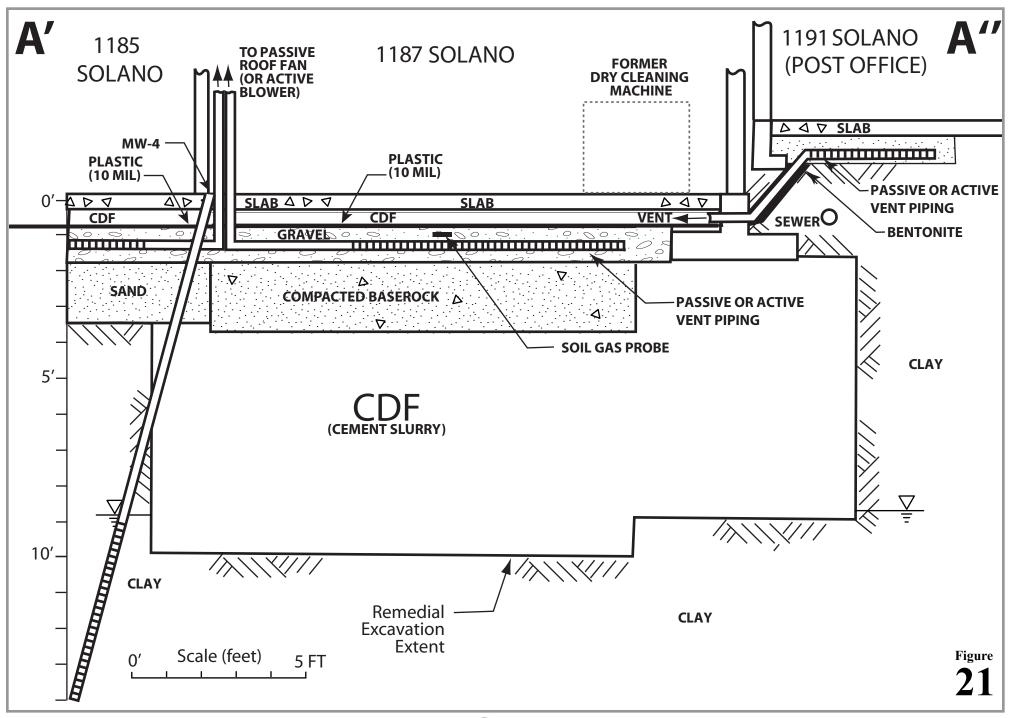












## **APPENDIX K**

Laboratory Analytical Reports

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Hamain Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 01/15/13
Oakland, CA 94612	Client P.O.:	Date Completed: 01/15/13

WorkOrder: 1301234

January 15, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 20 analyzed samples from your project: Kershaw,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1361234

	Web	site: www.mcc	ampbell.	ANAI Villow Pass ourg, CA 94 com Ema	Y7 Road 1565 il: ma	ain@n	icca	mpbe (925)	II.co	m		S								HA ND				٩	RUS	H	OI 24 /rite	⊒ HR		48 H	i I	72 HI	R 5 DAY
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-	Tele: (510) 836-3	702	Fax: (510) 836-3709										Method 8260		analysis:																		
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	SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sindoe	Other	ICE	HCL	HNO3	Other	TPHg/BTEX/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601(8010)	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA	CAM-17 Metals (6010 /	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Five fuel oxygenates		
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#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 RUSH 72 HR 5 DAY 24 HR 48 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) Write On (DW) Fax: (925) 252-9269 Telephone: (925) 252-9262 Other Comments Report To: Morgan Gillies Bill To: Pangea Analysis Request Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Method 8260 se (5520 E&F/B&F) Samples 625 / 8270 / 8310 E-Mail: mgillies@pangeaenv.com for Metals Fax: (510) 836-3709 Tele: (510) 836-3702 analysis: Project Name: Kershaw Project #: Yes / No BTEX ONLY (EPA 602 / 8020) by EPA EPA 608 / 8082 PCB's ONLY CAM-17 Metals (6010 / 6020) Project Location: 1187 Solane Ave, Albany Lead (200.8 / 200.9 / 6010) Sampler Signature: Fotal Petroleum Oil & Gres EPA 524.2 / 624 / 8260 EPA 601 8010 8021 METHOD EPA 525 / 625 / 8270 SAMPLING MATRIX Type Containers FPHg/BTEX/MTBE PRESERVED EPA 8140 / 8141 EPA 8150 / 8151 Containers EPA 608 / 8081 LOCATION SAMPLE ID (Field Point HNO3 Other Name) Date Time ICE Relinquished By: Time: Received By: ICE/t° COMMENTS: GOOD CONDITION HEAD SPACE ABSENT Relinquished By: Received By: Date: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

B-4-3.5

B-4-5.5

B-5-3.5

B-5-5.5

B-8-3.5

B-8-5.5

B-7-3.5

B-7-5.5

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1301234

Page 1 of 2

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

☐ WaterTrax ☐ WriteOn □ EDF Excel **EQuIS** ✓ Email ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 1 day Morgan Gillies mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Email: Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 01/10/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: Kershaw Oakland, CA 94612 Date Printed: 01/10/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 8 2 3 5 Lab ID Client ID Matrix Collection Date Hold 4 10 11 12 1301234-001 B-1-3.5 1/10/2013 9:20 Soil Α 1301234-002 B-1-5.5 Soil 1/10/2013 9:30 Α 1301234-003 B-2-4 Soil 1/10/2013 9:50 Α 1301234-004 Α B-2-5.5 Soil 1/10/2013 10:10 1301234-005 B-3-3.5 1/10/2013 10:30 Soil 1301234-006 B-3-5.5 1/10/2013 10:40 Α Soil

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# 1301234-014 **Test Legend:**

1301234-007

1301234-008

1301234-009

1301234-010

1301234-011

1301234-012

1301234-013

1 8010BMS_S	2	3	4	5
6	7	8	9	10
11	12			

1/10/2013 11:15

1/10/2013 11:20

1/10/2013 12:20

1/10/2013 12:30

1/10/2013 14:20

1/10/2013 14:35

1/10/2013 15:00

1/10/2013 15:20

Soil

Soil

Soil

Soil

Soil

Soil

Soil

Soil

Prepared by: Zoraida Cortez

Comments: 24hr/72hr

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

Page 2 of 2

1534 Willow Pass Rd (925) 252-9262

Pittsburg, CA 94565-1701 WorkOrder: 1301234

	WaterTrax	WriteOn	∐EDF	Excel	EQuIS	<b>✓</b> Email	HardC	Copy I hirdParty	y J-flag
eport to:				В	ill to:			Requested TAT:	1 day
Morgan Gillies	Email:	mgillies@pange	aenv.com; tdelafu	ente@pa	Bob Clark-Ric	ldell			
Pangea Environmental Svcs., Inc.	cc:				Pangea Envir	onmental Svcs	., Inc.		
1710 Franklin Street, Ste. 200	PO:				1710 Franklin	Street, Ste. 20	00	Date Received:	01/10/2013
Oakland, CA 94612	ProjectNo:	Kershaw			Oakland, CA	94612		Date Printed:	01/10/2013
(510) 836-3700 FAX: (510) 836-3709									

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1301234-015	B-7-7.5	Soil	1/10/2013 15:45		Α											<u> </u>
1301234-016	B-6-3.5	Soil	1/10/2013 16:00		Α											
1301234-017	B-6-5.5	Soil	1/10/2013 16:10		Α											
1301234-018	B-6-7.5	Soil	1/10/2013 16:40		Α											
1301234-019	B-9-3	Soil	1/10/2013 17:35		Α											
1301234-020	B-10-6	Soil	1/10/2013 18:40		Α											

#### Test Legend:

1	8010BMS_S	2	3	4	5
6		7	8	9	10
11		12			

Prepared by: Zoraida Cortez

**Comments:** 24hr/72hr

> NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

### **Sample Receipt Checklist**

Client Name:	Pangea Environmental Svcs., Inc.			Date a	nd Time Received:	1/10/2013 8:00:53 PM
Project Name:	Kershaw			LogIn F	Reviewed by:	Zoraida Cortez
WorkOrder N°:	<b>1301234</b> Matrix: <u>Soil</u>			Carrier	: Client Drop-In	
	<u>Chai</u>	n of Cւ	ustody (CO	C) Informati	<u>ion</u>	
Chain of custody	present?	Yes	<b>✓</b>	No 🗌		
Chain of custody	signed when relinquished and received?	Yes	<b>✓</b>	No 🗌		
Chain of custody	agrees with sample labels?	Yes	<b>✓</b>	No 🗌		
Sample IDs noted	d by Client on COC?	Yes	<b>✓</b>	No 🗌		
Date and Time of	collection noted by Client on COC?	Yes	<b>✓</b>	No 🗌		
Sampler's name	noted on COC?	Yes	<b>✓</b>	No 🗌		
	<u> </u>	Sample	Receipt In	<u>formation</u>		
Custody seals int	act on shipping container/cooler?	Yes		No 🗌		NA 🗹
Shipping containe	er/cooler in good condition?	Yes	<b>✓</b>	No 🗌		
Samples in prope	er containers/bottles?	Yes	<b>✓</b>	No 🗌		
Sample container	rs intact?	Yes	<b>✓</b>	No 🗌		
Sufficient sample	volume for indicated test?	Yes	<b>✓</b>	No $\square$		
	Sample Preso	ervatio	n and Hold	Time (HT) I	<u>Information</u>	
All samples recei	ved within holding time?	Yes	<b>✓</b>	No $\square$		
Container/Temp I	Blank temperature	Coole	er Temp: 3	.2°C		NA 🗌
Water - VOA vials	s have zero headspace / no bubbles?	Yes		No 🗌	No VOA vials submit	tted 🗹
Sample labels ch	ecked for correct preservation?	Yes	<b>✓</b>	No 🗌		
Metal - pH accept	table upon receipt (pH<2)?	Yes		No 🗌		NA 🗹
Samples Receive		Yes	<b>✓</b>	No 🗌		
	(Ice Type	e: WE	TICE )			
* NOTE: If the "N	o" box is checked, see comments below.					
				====		

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/10/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID		1301234-002A					
Client ID		B-1-5.5					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.034	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	0.0051	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)					
%SS1:	96	%SS2:	102		
%SS3: 79					
Commonts					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/10/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID		1301234-004A					
Client ID		B-2-5.5					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	0.010	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.19	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	0.025	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)					
%SS1:	93	%SS2:	105		
%SS3:	85				
Comments					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID		1301234-006A					
Client ID		B-3-5.5					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.020	4.0	0.005	Bromoform	ND<0.020	4.0	0.005
Bromomethane	ND<0.020	4.0	0.005	Carbon Tetrachloride	ND<0.020	4.0	0.005
Chlorobenzene	ND<0.020	4.0	0.005	Chloroethane	ND<0.020	4.0	0.005
Chloroform	ND<0.020	4.0	0.005	Chloromethane	ND<0.020	4.0	0.005
Dibromochloromethane	ND<0.020	4.0	0.005	1,2-Dibromoethane (EDB)	ND<0.016	4.0	0.004
1,2-Dichlorobenzene	ND<0.020	4.0	0.005	1,3-Dichlorobenzene	ND<0.020	4.0	0.005
1,4-Dichlorobenzene	ND<0.020	4.0	0.005	Dichlorodifluoromethane	ND<0.020	4.0	0.005
1,1-Dichloroethane	ND<0.020	4.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.016	4.0	0.004
1,1-Dichloroethene	ND<0.020	4.0	0.005	cis-1,2-Dichloroethene	ND<0.020	4.0	0.005
trans-1,2-Dichloroethene	ND<0.020	4.0	0.005	1,2-Dichloropropane	ND<0.020	4.0	0.005
cis-1,3-Dichloropropene	ND<0.020	4.0	0.005	trans-1,3-Dichloropropene	ND<0.020	4.0	0.005
Freon 113	ND<0.40	4.0	0.1	Methylene chloride	ND<0.020	4.0	0.005
1,1,1,2-Tetrachloroethane	ND<0.020	4.0	0.005	1,1,2,2-Tetrachloroethane	ND<0.020	4.0	0.005
Tetrachloroethene	0.32	4.0	0.005	1,1,1-Trichloroethane	ND<0.020	4.0	0.005
1,1,2-Trichloroethane	ND<0.020	4.0	0.005	Trichloroethene	ND<0.020	4.0	0.005
Trichlorofluoromethane	ND<0.020	4.0	0.005	Vinyl Chloride	ND<0.020	4.0	0.005

Surrogate Recoveries (%)					
%SS1:	96	%SS2:	100		
%SS3:	99				
Comments					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/10/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID		1301234-008A					
Client ID		B-4-5.5					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.11	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)					
%SS1:	94	%SS2:	101		
%SS3: 87					
Comments					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-010A						
Client ID	B-5-5.5						
Matrix	Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.033	6.7	0.005	Bromoform	ND<0.033	6.7	0.005
Bromomethane	ND<0.033	6.7	0.005	Carbon Tetrachloride	ND<0.033	6.7	0.005
Chlorobenzene	ND<0.033	6.7	0.005	Chloroethane	ND<0.033	6.7	0.005
Chloroform	ND<0.033	6.7	0.005	Chloromethane	ND<0.033	6.7	0.005
Dibromochloromethane	ND<0.033	6.7	0.005	1,2-Dibromoethane (EDB)	ND<0.027	6.7	0.004
1,2-Dichlorobenzene	ND<0.033	6.7	0.005	1,3-Dichlorobenzene	ND<0.033	6.7	0.005
1,4-Dichlorobenzene	ND<0.033	6.7	0.005	Dichlorodifluoromethane	ND<0.033	6.7	0.005
1,1-Dichloroethane	ND<0.033	6.7	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.027	6.7	0.004
1,1-Dichloroethene	ND<0.033	6.7	0.005	cis-1,2-Dichloroethene	ND<0.033	6.7	0.005
trans-1,2-Dichloroethene	ND<0.033	6.7	0.005	1,2-Dichloropropane	ND<0.033	6.7	0.005
cis-1,3-Dichloropropene	ND<0.033	6.7	0.005	trans-1,3-Dichloropropene	ND<0.033	6.7	0.005
Freon 113	ND<0.67	6.7	0.1	Methylene chloride	ND<0.033	6.7	0.005
1,1,1,2-Tetrachloroethane	ND<0.033	6.7	0.005	1,1,2,2-Tetrachloroethane	ND<0.033	6.7	0.005
Tetrachloroethene	0.42	6.7	0.005	1,1,1-Trichloroethane	ND<0.033	6.7	0.005
1,1,2-Trichloroethane	ND<0.033	6.7	0.005	Trichloroethene	ND<0.033	6.7	0.005
Trichlorofluoromethane	ND<0.033	6.7	0.005	Vinyl Chloride	ND<0.033	6.7	0.005

Surrogate Recoveries (%)						
%SS1:	99	%SS2:	101			
%SS3:	99					
Commonts						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-012A						
Client ID	B-8-5.5						
Matrix	Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.025	5.0	0.005	Bromoform	ND<0.025	5.0	0.005
Bromomethane	ND<0.025	5.0	0.005	Carbon Tetrachloride	ND<0.025	5.0	0.005
Chlorobenzene	ND<0.025	5.0	0.005	Chloroethane	ND<0.025	5.0	0.005
Chloroform	ND<0.025	5.0	0.005	Chloromethane	ND<0.025	5.0	0.005
Dibromochloromethane	ND<0.025	5.0	0.005	1,2-Dibromoethane (EDB)	ND<0.020	5.0	0.004
1,2-Dichlorobenzene	ND<0.025	5.0	0.005	1,3-Dichlorobenzene	ND<0.025	5.0	0.005
1,4-Dichlorobenzene	ND<0.025	5.0	0.005	Dichlorodifluoromethane	ND<0.025	5.0	0.005
1,1-Dichloroethane	ND<0.025	5.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.020	5.0	0.004
1,1-Dichloroethene	ND<0.025	5.0	0.005	cis-1,2-Dichloroethene	ND<0.025	5.0	0.005
trans-1,2-Dichloroethene	ND<0.025	5.0	0.005	1,2-Dichloropropane	ND<0.025	5.0	0.005
cis-1,3-Dichloropropene	ND<0.025	5.0	0.005	trans-1,3-Dichloropropene	ND<0.025	5.0	0.005
Freon 113	ND<0.50	5.0	0.1	Methylene chloride	ND<0.025	5.0	0.005
1,1,1,2-Tetrachloroethane	ND<0.025	5.0	0.005	1,1,2,2-Tetrachloroethane	ND<0.025	5.0	0.005
Tetrachloroethene	0.40	5.0	0.005	1,1,1-Trichloroethane	ND<0.025	5.0	0.005
1,1,2-Trichloroethane	ND<0.025	5.0	0.005	Trichloroethene	ND<0.025	5.0	0.005
Trichlorofluoromethane	ND<0.025	5.0	0.005	Vinyl Chloride	ND<0.025	5.0	0.005

Surrogate Recoveries (%)						
%SS1:	98	%SS2:	101			
%SS3:	102					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-014A						
Client ID		B-7-5.5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.10	20	0.005	Bromoform	ND<0.10	20	0.005
Bromomethane	ND<0.10	20	0.005	Carbon Tetrachloride	ND<0.10	20	0.005
Chlorobenzene	ND<0.10	20	0.005	Chloroethane	ND<0.10	20	0.005
Chloroform	ND<0.10	20	0.005	Chloromethane	ND<0.10	20	0.005
Dibromochloromethane	ND<0.10	20	0.005	1,2-Dibromoethane (EDB)	ND<0.080	20	0.004
1,2-Dichlorobenzene	ND<0.10	20	0.005	1,3-Dichlorobenzene	ND<0.10	20	0.005
1,4-Dichlorobenzene	ND<0.10	20	0.005	Dichlorodifluoromethane	ND<0.10	20	0.005
1,1-Dichloroethane	ND<0.10	20	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.080	20	0.004
1,1-Dichloroethene	ND<0.10	20	0.005	cis-1,2-Dichloroethene	ND<0.10	20	0.005
trans-1,2-Dichloroethene	ND<0.10	20	0.005	1,2-Dichloropropane	ND<0.10	20	0.005
cis-1,3-Dichloropropene	ND<0.10	20	0.005	trans-1,3-Dichloropropene	ND<0.10	20	0.005
Freon 113	ND<2.0	20	0.1	Methylene chloride	ND<0.10	20	0.005
1,1,1,2-Tetrachloroethane	ND<0.10	20	0.005	1,1,2,2-Tetrachloroethane	ND<0.10	20	0.005
Tetrachloroethene	1.6	20	0.005	1,1,1-Trichloroethane	ND<0.10	20	0.005
1,1,2-Trichloroethane	ND<0.10	20	0.005	Trichloroethene	ND<0.10	20	0.005
Trichlorofluoromethane	ND<0.10	20	0.005	Vinyl Chloride	ND<0.10	20	0.005

Surrogate Recoveries (%)						
%SS1:	103	%SS2:	92			
%SS3:	86					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-017A						
Client ID		B-6-5.5					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.025	5.0	0.005	Bromoform	ND<0.025	5.0	0.005
Bromomethane	ND<0.025	5.0	0.005	Carbon Tetrachloride	ND<0.025	5.0	0.005
Chlorobenzene	ND<0.025	5.0	0.005	Chloroethane	ND<0.025	5.0	0.005
Chloroform	ND<0.025	5.0	0.005	Chloromethane	ND<0.025	5.0	0.005
Dibromochloromethane	ND<0.025	5.0	0.005	1,2-Dibromoethane (EDB)	ND<0.020	5.0	0.004
1,2-Dichlorobenzene	ND<0.025	5.0	0.005	1,3-Dichlorobenzene	ND<0.025	5.0	0.005
1,4-Dichlorobenzene	ND<0.025	5.0	0.005	Dichlorodifluoromethane	ND<0.025	5.0	0.005
1,1-Dichloroethane	ND<0.025	5.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.020	5.0	0.004
1,1-Dichloroethene	ND<0.025	5.0	0.005	cis-1,2-Dichloroethene	ND<0.025	5.0	0.005
trans-1,2-Dichloroethene	ND<0.025	5.0	0.005	1,2-Dichloropropane	ND<0.025	5.0	0.005
cis-1,3-Dichloropropene	ND<0.025	5.0	0.005	trans-1,3-Dichloropropene	ND<0.025	5.0	0.005
Freon 113	ND<0.50	5.0	0.1	Methylene chloride	ND<0.025	5.0	0.005
1,1,1,2-Tetrachloroethane	ND<0.025	5.0	0.005	1,1,2,2-Tetrachloroethane	ND<0.025	5.0	0.005
Tetrachloroethene	0.39	5.0	0.005	1,1,1-Trichloroethane	ND<0.025	5.0	0.005
1,1,2-Trichloroethane	ND<0.025	5.0	0.005	Trichloroethene	ND<0.025	5.0	0.005
Trichlorofluoromethane	ND<0.025	5.0	0.005	Vinyl Chloride	ND<0.025	5.0	0.005

Surrogate Recoveries (%)						
%SS1:	103	%SS2:	92			
%SS3:	87					
Community						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-019A						
Client ID		B-9-3					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.086	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	95	%SS2:	103			
%SS3:	86					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID		1301234-020A					
Client ID		B-10-6					
Matrix				Soil	_		la di
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.033	6.7	0.005	Bromoform	ND<0.033	6.7	0.005
Bromomethane	ND<0.033	6.7	0.005	Carbon Tetrachloride	ND<0.033	6.7	0.005
Chlorobenzene	ND<0.033	6.7	0.005	Chloroethane	ND<0.033	6.7	0.005
Chloroform	ND<0.033	6.7	0.005	Chloromethane	ND<0.033	6.7	0.005
Dibromochloromethane	ND<0.033	6.7	0.005	1,2-Dibromoethane (EDB)	ND<0.027	6.7	0.004
1,2-Dichlorobenzene	ND<0.033	6.7	0.005	1,3-Dichlorobenzene	ND<0.033	6.7	0.005
1,4-Dichlorobenzene	ND<0.033	6.7	0.005	Dichlorodifluoromethane	ND<0.033	6.7	0.005
1,1-Dichloroethane	ND<0.033	6.7	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.027	6.7	0.004
1,1-Dichloroethene	ND<0.033	6.7	0.005	cis-1,2-Dichloroethene	ND<0.033	6.7	0.005
trans-1,2-Dichloroethene	ND<0.033	6.7	0.005	1,2-Dichloropropane	ND<0.033	6.7	0.005
cis-1,3-Dichloropropene	ND<0.033	6.7	0.005	trans-1,3-Dichloropropene	ND<0.033	6.7	0.005
Freon 113	ND<0.67	6.7	0.1	Methylene chloride	ND<0.033	6.7	0.005
1,1,1,2-Tetrachloroethane	ND<0.033	6.7	0.005	1,1,2,2-Tetrachloroethane	ND<0.033	6.7	0.005
Tetrachloroethene	0.39	6.7	0.005	1,1,1-Trichloroethane	ND<0.033	6.7	0.005
1,1,2-Trichloroethane	ND<0.033	6.7	0.005	Trichloroethene	ND<0.033	6.7	0.005
Trichlorofluoromethane	ND<0.033	6.7	0.005	Vinyl Chloride	ND<0.033	6.7	0.005

Surrogate Recoveries (%)						
%SS1:	103	%SS2:	93			
%SS3:	85					
Community						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-001A						
Client ID		B-1-3.5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.011	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	96	%SS2:	109			
%SS3:	110					
Community						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-003A						
Client ID		B-2-4					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	0.022	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.12	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	0.046	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	97	%SS2:	105			
%SS3:	81					
Community						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-005A						
Client ID		B-3-3.5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.025	5.0	0.005	Bromoform	ND<0.025	5.0	0.005
Bromomethane	ND<0.025	5.0	0.005	Carbon Tetrachloride	ND<0.025	5.0	0.005
Chlorobenzene	ND<0.025	5.0	0.005	Chloroethane	ND<0.025	5.0	0.005
Chloroform	ND<0.025	5.0	0.005	Chloromethane	ND<0.025	5.0	0.005
Dibromochloromethane	ND<0.025	5.0	0.005	1,2-Dibromoethane (EDB)	ND<0.020	5.0	0.004
1,2-Dichlorobenzene	ND<0.025	5.0	0.005	1,3-Dichlorobenzene	ND<0.025	5.0	0.005
1,4-Dichlorobenzene	ND<0.025	5.0	0.005	Dichlorodifluoromethane	ND<0.025	5.0	0.005
1,1-Dichloroethane	ND<0.025	5.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.020	5.0	0.004
1,1-Dichloroethene	ND<0.025	5.0	0.005	cis-1,2-Dichloroethene	ND<0.025	5.0	0.005
trans-1,2-Dichloroethene	ND<0.025	5.0	0.005	1,2-Dichloropropane	ND<0.025	5.0	0.005
cis-1,3-Dichloropropene	ND<0.025	5.0	0.005	trans-1,3-Dichloropropene	ND<0.025	5.0	0.005
Freon 113	ND<0.50	5.0	0.1	Methylene chloride	ND<0.025	5.0	0.005
1,1,1,2-Tetrachloroethane	ND<0.025	5.0	0.005	1,1,2,2-Tetrachloroethane	ND<0.025	5.0	0.005
Tetrachloroethene	0.53	5.0	0.005	1,1,1-Trichloroethane	ND<0.025	5.0	0.005
1,1,2-Trichloroethane	ND<0.025	5.0	0.005	Trichloroethene	ND<0.025	5.0	0.005
Trichlorofluoromethane	ND<0.025	5.0	0.005	Vinyl Chloride	ND<0.025	5.0	0.005

Surrogate Recoveries (%)						
%SS1:	99	%SS2:	99			
%SS3:	99					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-007A						
Client ID				B-4-3.5			
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.020	4.0	0.005	Bromoform	ND<0.020	4.0	0.005
Bromomethane	ND<0.020	4.0	0.005	Carbon Tetrachloride	ND<0.020	4.0	0.005
Chlorobenzene	ND<0.020	4.0	0.005	Chloroethane	ND<0.020	4.0	0.005
Chloroform	ND<0.020	4.0	0.005	Chloromethane	ND<0.020	4.0	0.005
Dibromochloromethane	ND<0.020	4.0	0.005	1,2-Dibromoethane (EDB)	ND<0.016	4.0	0.004
1,2-Dichlorobenzene	ND<0.020	4.0	0.005	1,3-Dichlorobenzene	ND<0.020	4.0	0.005
1,4-Dichlorobenzene	ND<0.020	4.0	0.005	Dichlorodifluoromethane	ND<0.020	4.0	0.005
1,1-Dichloroethane	ND<0.020	4.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.016	4.0	0.004
1,1-Dichloroethene	ND<0.020	4.0	0.005	cis-1,2-Dichloroethene	ND<0.020	4.0	0.005
trans-1,2-Dichloroethene	ND<0.020	4.0	0.005	1,2-Dichloropropane	ND<0.020	4.0	0.005
cis-1,3-Dichloropropene	ND<0.020	4.0	0.005	trans-1,3-Dichloropropene	ND<0.020	4.0	0.005
Freon 113	ND<0.40	4.0	0.1	Methylene chloride	ND<0.020	4.0	0.005
1,1,1,2-Tetrachloroethane	ND<0.020	4.0	0.005	1,1,2,2-Tetrachloroethane	ND<0.020	4.0	0.005
Tetrachloroethene	0.32	4.0	0.005	1,1,1-Trichloroethane	ND<0.020	4.0	0.005
1,1,2-Trichloroethane	ND<0.020	4.0	0.005	Trichloroethene	ND<0.020	4.0	0.005
Trichlorofluoromethane	ND<0.020	4.0	0.005	Vinyl Chloride	ND<0.020	4.0	0.005

Surrogate Recoveries (%)						
%SS1:	103	%SS2:	93			
%SS3:	86					
Community						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-009A						
Client ID		B-5-3.5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.050	10	0.005	Bromoform	ND<0.050	10	0.005
Bromomethane	ND<0.050	10	0.005	Carbon Tetrachloride	ND<0.050	10	0.005
Chlorobenzene	ND<0.050	10	0.005	Chloroethane	ND<0.050	10	0.005
Chloroform	ND<0.050	10	0.005	Chloromethane	ND<0.050	10	0.005
Dibromochloromethane	ND<0.050	10	0.005	1,2-Dibromoethane (EDB)	ND<0.040	10	0.004
1,2-Dichlorobenzene	ND<0.050	10	0.005	1,3-Dichlorobenzene	ND<0.050	10	0.005
1,4-Dichlorobenzene	ND<0.050	10	0.005	Dichlorodifluoromethane	ND<0.050	10	0.005
1,1-Dichloroethane	ND<0.050	10	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.040	10	0.004
1,1-Dichloroethene	ND<0.050	10	0.005	cis-1,2-Dichloroethene	ND<0.050	10	0.005
trans-1,2-Dichloroethene	ND<0.050	10	0.005	1,2-Dichloropropane	ND<0.050	10	0.005
cis-1,3-Dichloropropene	ND<0.050	10	0.005	trans-1,3-Dichloropropene	ND<0.050	10	0.005
Freon 113	ND<1.0	10	0.1	Methylene chloride	ND<0.050	10	0.005
1,1,1,2-Tetrachloroethane	ND<0.050	10	0.005	1,1,2,2-Tetrachloroethane	ND<0.050	10	0.005
Tetrachloroethene	0.78	10	0.005	1,1,1-Trichloroethane	ND<0.050	10	0.005
1,1,2-Trichloroethane	ND<0.050	10	0.005	Trichloroethene	ND<0.050	10	0.005
Trichlorofluoromethane	ND<0.050	10	0.005	Vinyl Chloride	ND<0.050	10	0.005

Surrogate Recoveries (%)						
%SS1:	99	%SS2:	99			
%SS3:	98					
Commonts						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-011A						
Client ID		B-8-3.5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.10	20	0.005	Bromoform	ND<0.10	20	0.005
Bromomethane	ND<0.10	20	0.005	Carbon Tetrachloride	ND<0.10	20	0.005
Chlorobenzene	ND<0.10	20	0.005	Chloroethane	ND<0.10	20	0.005
Chloroform	ND<0.10	20	0.005	Chloromethane	ND<0.10	20	0.005
Dibromochloromethane	ND<0.10	20	0.005	1,2-Dibromoethane (EDB)	ND<0.080	20	0.004
1,2-Dichlorobenzene	ND<0.10	20	0.005	1,3-Dichlorobenzene	ND<0.10	20	0.005
1,4-Dichlorobenzene	ND<0.10	20	0.005	Dichlorodifluoromethane	ND<0.10	20	0.005
1,1-Dichloroethane	ND<0.10	20	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.080	20	0.004
1,1-Dichloroethene	ND<0.10	20	0.005	cis-1,2-Dichloroethene	ND<0.10	20	0.005
trans-1,2-Dichloroethene	ND<0.10	20	0.005	1,2-Dichloropropane	ND<0.10	20	0.005
cis-1,3-Dichloropropene	ND<0.10	20	0.005	trans-1,3-Dichloropropene	ND<0.10	20	0.005
Freon 113	ND<2.0	20	0.1	Methylene chloride	ND<0.10	20	0.005
1,1,1,2-Tetrachloroethane	ND<0.10	20	0.005	1,1,2,2-Tetrachloroethane	ND<0.10	20	0.005
Tetrachloroethene	1.6	20	0.005	1,1,1-Trichloroethane	ND<0.10	20	0.005
1,1,2-Trichloroethane	ND<0.10	20	0.005	Trichloroethene	ND<0.10	20	0.005
Trichlorofluoromethane	ND<0.10	20	0.005	Vinyl Chloride	ND<0.10	20	0.005

Surrogate Recoveries (%)						
%SS1:	99	%SS2:	99			
%SS3: 98						
Commonts						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-013A						
Client ID		B-7-3.5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.20	40	0.005	Bromoform	ND<0.20	40	0.005
Bromomethane	ND<0.20	40	0.005	Carbon Tetrachloride	ND<0.20	40	0.005
Chlorobenzene	ND<0.20	40	0.005	Chloroethane	ND<0.20	40	0.005
Chloroform	ND<0.20	40	0.005	Chloromethane	ND<0.20	40	0.005
Dibromochloromethane	ND<0.20	40	0.005	1,2-Dibromoethane (EDB)	ND<0.16	40	0.004
1,2-Dichlorobenzene	ND<0.20	40	0.005	1,3-Dichlorobenzene	ND<0.20	40	0.005
1,4-Dichlorobenzene	ND<0.20	40	0.005	Dichlorodifluoromethane	ND<0.20	40	0.005
1,1-Dichloroethane	ND<0.20	40	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.16	40	0.004
1,1-Dichloroethene	ND<0.20	40	0.005	cis-1,2-Dichloroethene	ND<0.20	40	0.005
trans-1,2-Dichloroethene	ND<0.20	40	0.005	1,2-Dichloropropane	ND<0.20	40	0.005
cis-1,3-Dichloropropene	ND<0.20	40	0.005	trans-1,3-Dichloropropene	ND<0.20	40	0.005
Freon 113	ND<4.0	40	0.1	Methylene chloride	ND<0.20	40	0.005
1,1,1,2-Tetrachloroethane	ND<0.20	40	0.005	1,1,2,2-Tetrachloroethane	ND<0.20	40	0.005
Tetrachloroethene	5.0	40	0.005	1,1,1-Trichloroethane	ND<0.20	40	0.005
1,1,2-Trichloroethane	ND<0.20	40	0.005	Trichloroethene	ND<0.20	40	0.005
Trichlorofluoromethane	ND<0.20	40	0.005	Vinyl Chloride	ND<0.20	40	0.005

Surrogate Recoveries (%)						
%SS1:	105	%SS2:	91			
%SS3:	87					
Commonts						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13
1710 Franklin Street, Ste. 200		Date Received: 01/10/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID	1301234-015A						
Client ID		B-7-7.5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.10	20	0.005	Bromoform	ND<0.10	20	0.005
Bromomethane	ND<0.10	20	0.005	Carbon Tetrachloride	ND<0.10	20	0.005
Chlorobenzene	ND<0.10	20	0.005	Chloroethane	ND<0.10	20	0.005
Chloroform	ND<0.10	20	0.005	Chloromethane	ND<0.10	20	0.005
Dibromochloromethane	ND<0.10	20	0.005	1,2-Dibromoethane (EDB)	ND<0.080	20	0.004
1,2-Dichlorobenzene	ND<0.10	20	0.005	1,3-Dichlorobenzene	ND<0.10	20	0.005
1,4-Dichlorobenzene	ND<0.10	20	0.005	Dichlorodifluoromethane	ND<0.10	20	0.005
1,1-Dichloroethane	ND<0.10	20	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.080	20	0.004
1,1-Dichloroethene	ND<0.10	20	0.005	cis-1,2-Dichloroethene	ND<0.10	20	0.005
trans-1,2-Dichloroethene	ND<0.10	20	0.005	1,2-Dichloropropane	ND<0.10	20	0.005
cis-1,3-Dichloropropene	ND<0.10	20	0.005	trans-1,3-Dichloropropene	ND<0.10	20	0.005
Freon 113	ND<2.0	20	0.1	Methylene chloride	ND<0.10	20	0.005
1,1,1,2-Tetrachloroethane	ND<0.10	20	0.005	1,1,2,2-Tetrachloroethane	ND<0.10	20	0.005
Tetrachloroethene	0.72	20	0.005	1,1,1-Trichloroethane	ND<0.10	20	0.005
1,1,2-Trichloroethane	ND<0.10	20	0.005	Trichloroethene	ND<0.10	20	0.005
Trichlorofluoromethane	ND<0.10	20	0.005	Vinyl Chloride	ND<0.10	20	0.005

Surrogate Recoveries (%)						
%SS1:	102	%SS2:	91			
%SS3:	86					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13				
1710 Franklin Street, Ste. 200		Date Received: 01/10/13				
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13				
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13				

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID		1301234-016A											
Client ID				B-6-3.5									
Matrix				Soil									
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit						
Bromodichloromethane	ND<0.10	20	0.005	Bromoform	ND<0.10	20	0.005						
Bromomethane	ND<0.10	20	0.005	Carbon Tetrachloride	ND<0.10	20	0.005						
Chlorobenzene	ND<0.10	20	0.005	Chloroethane	ND<0.10	20	0.005						
Chloroform	ND<0.10	20	0.005	Chloromethane	ND<0.10	20	0.005						
Dibromochloromethane	ND<0.10	20	0.005	1,2-Dibromoethane (EDB)	ND<0.080	20	0.004						
1,2-Dichlorobenzene	ND<0.10	20	0.005	1,3-Dichlorobenzene	ND<0.10	20	0.005						
1,4-Dichlorobenzene	ND<0.10	20	0.005	Dichlorodifluoromethane	ND<0.10	20	0.005						
1,1-Dichloroethane	ND<0.10	20	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.080	20	0.004						
1,1-Dichloroethene	ND<0.10	20	0.005	cis-1,2-Dichloroethene	ND<0.10	20	0.005						
trans-1,2-Dichloroethene	ND<0.10	20	0.005	1,2-Dichloropropane	ND<0.10	20	0.005						
cis-1,3-Dichloropropene	ND<0.10	20	0.005	trans-1,3-Dichloropropene	ND<0.10	20	0.005						
Freon 113	ND<2.0	20	0.1	Methylene chloride	ND<0.10	20	0.005						
1,1,1,2-Tetrachloroethane	ND<0.10	20	0.005	1,1,2,2-Tetrachloroethane	ND<0.10	20	0.005						
Tetrachloroethene	0.91	20	0.005	1,1,1-Trichloroethane	ND<0.10	20	0.005						
1,1,2-Trichloroethane	ND<0.10	20	0.005	Trichloroethene	ND<0.10	20	0.005						
Trichlorofluoromethane	ND<0.10	20	0.005	Vinyl Chloride	ND<0.10	20	0.005						

Surrogate Recoveries (%)								
%SS1:	102	%SS2:	92					
%SS3:	86							
Commonta								

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Kershaw	Date Sampled: 01/10/13				
1710 Franklin Street, Ste. 200		Date Received: 01/10/13				
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/10/13				
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/11/13				

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301234

Lab ID				1301234-018A			
Client ID				B-6-7.5			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.20	40	0.005	Bromoform	ND<0.20	40	0.005
Bromomethane	ND<0.20	40	0.005	Carbon Tetrachloride	ND<0.20	40	0.005
Chlorobenzene	ND<0.20	40	0.005	Chloroethane	ND<0.20	40	0.005
Chloroform	ND<0.20	40	0.005	Chloromethane	ND<0.20	40	0.005
Dibromochloromethane	ND<0.20	40	0.005	1,2-Dibromoethane (EDB)	ND<0.16	40	0.004
1,2-Dichlorobenzene	ND<0.20	40	0.005	1,3-Dichlorobenzene	ND<0.20	40	0.005
1,4-Dichlorobenzene	ND<0.20	40	0.005	Dichlorodifluoromethane	ND<0.20	40	0.005
1,1-Dichloroethane	ND<0.20	40	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.16	40	0.004
1,1-Dichloroethene	ND<0.20	40	0.005	cis-1,2-Dichloroethene	ND<0.20	40	0.005
trans-1,2-Dichloroethene	ND<0.20	40	0.005	1,2-Dichloropropane	ND<0.20	40	0.005
cis-1,3-Dichloropropene	ND<0.20	40	0.005	trans-1,3-Dichloropropene	ND<0.20	40	0.005
Freon 113	ND<4.0	40	0.1	Methylene chloride	ND<0.20	40	0.005
1,1,1,2-Tetrachloroethane	ND<0.20	40	0.005	1,1,2,2-Tetrachloroethane	ND<0.20	40	0.005
Tetrachloroethene	1.5	40	0.005	1,1,1-Trichloroethane	ND<0.20	40	0.005
1,1,2-Trichloroethane	ND<0.20	40	0.005	Trichloroethene	ND<0.20	40	0.005
Trichlorofluoromethane	ND<0.20	40	0.005	Vinyl Chloride	ND<0.20	40	0.005

Surrogate Recoveries (%)								
%SS1:	103	%SS2:	91					
%SS3:	84							
Commonts								

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 73759 WorkOrder: 1301234

EPA Method: SW8260B Extraction: SW5030B Spiked Sample ID: 1301095-001									
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, a.a., c	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	97.4	93.4	4.17	93.1	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	97.5	94.4	3.26	93.5	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	93.8	89.7	4.47	88.8	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	96	92.6	3.60	93.7	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	99	94.2	4.95	96.4	60 - 116	30	70 - 130
%SS1:	96	0.12	99	98	1.38	99	70 - 130	30	70 - 130
%SS2:	102	0.12	113	111	1.73	113	70 - 130	30	70 - 130
%SS3:	97	0.012	114	114	0	115	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### **BATCH 73759 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301234-001A	01/10/13 9:20 AM	01/10/13	01/11/13 11:25 AM	1301234-002A	01/10/13 9:30 AM	01/10/13	01/10/13 9:38 PM
1301234-003A	01/10/13 9:50 AM	01/10/13	01/11/13 5:14 AM	1301234-004A	01/10/13 10:10 AM	01/10/13	01/10/13 10:18 PM
1301234-005A	01/10/13 10:30 AM	01/10/13	01/11/13 12:05 PM	1301234-006A	01/10/13 10:40 AM	01/10/13	01/11/13 9:22 AM
1301234-007A	01/10/13 11:15 AM	01/10/13	01/11/13 12:28 PM	1301234-008A	01/10/13 11:20 AM	01/10/13	01/10/13 11:41 PM
1301234-009A	01/10/13 12:20 PM	01/10/13	01/11/13 12:44 PM	1301234-010A	01/10/13 12:30 PM	01/10/13	01/11/13 10:03 AM
1301234-011A	01/10/13 2:20 PM	01/10/13	01/11/13 1:24 PM	1301234-012A	01/10/13 2:35 PM	01/10/13	01/11/13 10:43 AM
1301234-013A	01/10/13 3:00 PM	01/10/13	01/11/13 1:11 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 73891 WorkOrder: 1301234

EPA Method: SW8260B Extraction: SW5030B Spiked Sample									
Analyte	Sample	Spiked MS MSD MS-MSD LCS Acce				eptance Criteria (%)			
,,	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND<0.033	0.050	82.5	84.6	2.45	87.2	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND<0.027	0.050	87.4	90.4	3.30	94.6	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND<0.027	0.050	73.1	76.3	4.21	77	48 - 115	30	70 - 130
1,1-Dichloroethene	ND<0.033	0.050	87.4	90.6	3.66	96.4	46 - 111	30	70 - 130
Trichloroethene	ND<0.033	0.050	87.2	88.9	1.98	87.4	60 - 116	30	70 - 130
%SS1:	103	0.12	108	109	0.853	108	70 - 130	30	70 - 130
%SS2:	93	0.12	107	109	1.22	108	70 - 130	30	70 - 130
%SS3:	85	0.012	112	111	1.36	110	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 73891 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301234-014A	01/10/13 3:20 PM	01/10/13	01/11/13 11:47 AM	1301234-015A	01/10/13 3:45 PM	01/10/13	01/11/13 1:57 PM
1301234-016A	01/10/13 4:00 PM	01/10/13	01/11/13 2:38 PM	1301234-017A	01/10/13 4:10 PM	01/10/13	01/11/13 10:23 AM
1301234-018A	01/10/13 4:40 PM	01/10/13	01/11/13 3:20 PM	1301234-019A	01/10/13 5:35 PM	01/10/13	01/11/13 3:08 AM
1301234-020A	01/10/13 6:40 PM	01/10/13	01/11/13 11:05 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled:	01/16/13-01/17/13
1710 Franklin Street, Ste. 200		Date Received:	01/17/13
1710 1141141111 Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported:	01/22/13
Oakland, CA 94612	Client P.O.:	Date Completed:	01/22/13

WorkOrder: 1301397

January 22, 2013

### Dear Morgan:

### Enclosed within are:

- 1) The results of the 8 analyzed samples from your project: Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1301397 Bal

McCAMPBELL ANALYTICAL INC.  1534 WILLOW PASS ROAD / PITTSBURG, CA 94565-1701  Website: www.mccampbell.com / Email: main@mccampbell.com  Telephone: (877) 252-9262 / Fax: (925) 252-9269  Report To: Montan Gilles Bill To: Panters						CHAIN OF CUSTODY RECORD  TURN AROUND TIME  RUSH 24 HR 48 HR 72 HR 56AY  EDF Required? Coelt (Normal) No Write On (DW) No  Lab Use Only								
2		THE REAL PROPERTY.	Sues	erg	681 81 G. 3	ANGENTA			12 - CASSAS	P	ressurizati	on Gas		
TANCOR		Nino		20	Pressurized By				Date		CBSuitzate	1 0 10		
DAG!							in the s	A HULL			N2	He		
CACCIANO						Laste and a	Tar Indian	The state						
1					Helium S	hroud SN#:	At Mediantiaed	200 C326	10.000			200		
					Other:				7					
Project Location: (8	1 >9	LAN	o he All	SANT CA				-	00	100	+ 66			
Sampler Signature:	11	1/6	1		Notes:	72he Ti				76	1,00	102		
Field Sample ID	Colle	ection	Canistar SN# Manifo	Manifold / Sampler Kit SN#		CSU /	Indoor	Soil	Co	nistar Dra	ssure/Vacu			
(Location)	Date	Time		Kit SN#	Anaiys	is Requested	Air	Gas	Initial	Final	Receipt	Final (psi)		
SS-PO-1	1/10/13	1530	6169	845	To-	15		X	30	4.5	\$ 1 1 1 1 4 A			
35-PO-Z	L	1601	7509	664	1	/		V	30	4	*	te to		
			1 -1			±		7. 7			V7.			
55-31	1/11/13	1006	6302	6300-6		-15 He		X	-30	-5	-	Helt		
55-4		1034	7519	46668	0				-29	-3		* HOT		
55-5		1105	6164	763					- 30	-4				
55-6		1136	6423	678					-30	-4				
55-7		1254	7526	1226		, He			-30	4				
ESV-1	V	1416	A7514	B1228	V	An .		V	-30	-4				
Relinquished By	Date:	Time: 1553	Received By:		Marie Marie	7-1	Work Or <b>de</b> r	#:						
Relinquished By:	Date:	Time:	Received By:	V	Equipmen Condition									
Relinquished By:	Date:	Time:	Received By:		Shipped \	/ia:				- rosanii saa				

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1301397

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

**EQuIS** WriteOn □ EDF Excel ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 3 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 01/17/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: Solano Group Oakland, CA 94612 Date Printed: 01/17/2013 (510) 836-3700 FAX: (510) 836-3709

					Requested Tests (See legend below)												
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3		4	5	6	7	8	9	10	11	12
1001007 001	00.004	0 !! 0	1//0/00/10 / 5 00			T	1			T		1		1		I	
1301397-001	SS-PO-1	Soil Gas	1/16/2013 15:30	Ш	A												
1301397-002	SS-PO-2	Soil Gas	1/16/2013 16:01		Α												
1301397-003	SS-3	Soil Gas	1/17/2013 10:06			Α											
1301397-004	SS-4	Soil Gas	1/17/2013 10:34		Α												
1301397-005	SS-5	Soil Gas	1/17/2013 11:05		Α												
1301397-006	SS-6	Soil Gas	1/17/2013 11:36		Α												
1301397-007	SS-7	Soil Gas	1/17/2013 12:54			Α											
1301397-008	CSU-1	Soil Gas	1/17/2013 14:16		Α												

#### **Test Legend:**

1	TO15_SOIL(MG/M3)	2	TO15_SOIL(UG/M3)	3	4	5	
6		7		8	9	10	
11		12					

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A contain testgroup.

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Prepared by: Jena Alfaro

## **Sample Receipt Checklist**

Client Name:	Pangea Environmer	ntal Svcs., Inc.			Date and	Time Received:	1/17/2013 5:04:49 PM		
Project Name:	Solano Group				LogIn Rev	iewed by:	Jena Alfaro		
WorkOrder N°:	1301397	Matrix: Soil Gas			Carrier:	Client Drop-In			
		<u>Cha</u>	in of Cu	ustody (COC	) Information				
Chain of custody	present?		Yes	<b>✓</b>	No $\square$				
Chain of custody	signed when relinquis	shed and received?	Yes	<b>✓</b>	No 🗌				
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No 🗌				
Sample IDs note	d by Client on COC?		Yes	<b>✓</b>	No 🗆				
Date and Time o	f collection noted by C	Client on COC?	Yes	<b>✓</b>	No 🗆				
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌				
			Sample	Receipt Infe	ormation				
Custody seals in	tact on shipping conta	iner/cooler?	Yes		No $\square$		NA 🗹		
Shipping contain	er/cooler in good cond	dition?	Yes	<b>✓</b>	No 🗌				
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No $\square$				
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗌				
Sufficient sample	e volume for indicated	test?	Yes	<b>✓</b>	No $\square$				
		Sample Pres	servatio	n and Hold 1	<u>Γime (HT) Info</u>	ormation_			
All samples rece	ived within holding tim	ie?	Yes	<b>✓</b>	No $\square$				
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗹		
Water - VOA vial	ls have zero headspac	ce / no bubbles?	Yes		No 🗌 No	VOA vials submi	itted 🗸		
Sample labels ch	necked for correct pres	servation?	Yes	<b>✓</b>	No 🗌				
Metal - pH accep	otable upon receipt (pl	H<2)?	Yes		No 🗌		NA 🗹		
Samples Receive	ed on Ice?		Yes		No 🗹				
* NOTE: If the "N	lo" box is checked, se	e comments below.							
Comments:									



Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/16/13
1710 Franklin Street, Ste. 200		Date Received: 01/17/13
Oakland, CA 94612	Client Contact: Morgan Gillies	Date Reported: 01/22/13
Oukland, C11 74012	Client P.O.:	Date Completed: 01/22/13

**Work Order: 1301397** 

January 22, 2013

### CASE NARRATIVE REGARDING TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.

Pange	a Environmental Svcs., Inc.	Client	Project ID: S	Solano Group	Date Sampled:	01/17/13				
1710 1	Franklin Street, Ste. 200				Date Received:	01/17/13				
17101	Talikili Street, Stc. 200	Client	Contact: Mor	rgan Gillies	Date Extracted:	Date Extracted: 01/22/13				
Oakla	nd, CA 94612	Client	P.O.:		Date Analyzed:	01/22/13				
				Helium*						
	n method: ASTM D 1946-90  Client ID	36.4	Analyti Initial Pressure		M D 1946-90		Order: 13			
Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Helium	DF	% SS	Comments		
003A	SS-3	Soil Gas	13.48	26.86	0.041	1	N/A			
007A	SS-7	Soil Gas	13.58	27.06	0.086	1	N/A			
	Reporting Limit for DF =1;	W	psia	psia	NA			NA		
	ND means not detected at or above the reporting limit	SoilGas	psia	psia	0.005			%		
* vapor	samples are reported in %.		<u> </u>							
%SS = F	ercent Recovery of Surrogate Standard									
DF = Di	lution Factor									

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/17/13					
1710 Franklin Street, Ste. 200		Date Received: 01/17/13					
	Client Contact: Morgan Gillies	Date Extracted: 01/18/13-01/22/13					
Oakland, CA 94612	Client P.O.:	Date Analyzed: 01/18/13-01/22/13					
Volatile Organics by P&T and GC/MS in μg/m <sup>3*</sup>							

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 1301397 Lab ID 1301397-004A 1301397-005A 1301397-006A 1301397-007A SS-4 SS-5 Client ID **SS-6** SS-7 Reporting Limit for Soil Gas Soil Gas Soil Gas Soil Gas DF = 1Matrix and Pressure Ratio (Final/Initial) = 2Initial Pressure (psia) 13.48 13.91 13.78 13.58 Final Pressure (psia) 26.86 27.75 27.46 27.06 DF 67 10 10 2 Soil Gas W  $\mu g/m^{\scriptscriptstyle 3}$ ug/L Compound Concentration Tetrachloroethene 770,000 190,000 120,000 54,000 500 NA Trichloroethene 60,000 6300 9100 1600 500 NA Surrogate Recoveries (%) 121 %SS1: 100 120 121

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

Comments



<sup>\*</sup>soil vapor samples are reported in  $\mu g/m^3$ .

<sup>#</sup> surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

Pange	ea Environmental Svcs., Inc.	Client	Project ID:	Solano Group	Date Sampled: 01/17/13							
1710	Franklin Street, Ste. 200				Date Received: 01/17/	Date Received: 01/17/13						
1710	Trankini Street, Ste. 200	Client	Contact: Mo	rgan Gillies	Date Extracted: 01/18/	Date Extracted: 01/18/13						
Oakla	and, CA 94612	Client	P.O.:		Date Analyzed: 01/18/	13						
		Volatil	_		C/MS in μg/m³*							
	on method: SW5030B			Analytical methods: SW8260B Work Order: 1301    Pressure   Final Pressure   Tetrachloroethene   DF   % SS   C								
Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Tetrachloroethene	DF	% SS	Comments				
003A	SS-3	Soil Gas	12.94	25.79	27,000	1	123					
							<u> </u>					
							<u> </u>					
							<u> </u>					
	Reporting Limit for DF =1; ND means not detected at or	W	psia	psia	NA			NA				
	above the reporting limit	SoilGas	psia	psia	500		ŀ	ug/m³				
*soil va	por samples are reported in μg/m³.											
ND mea	ans not detected above the reporting lim	it/method detec	ction limit; N/A r	neans analyte not a	pplicable to this analysis.							
# surrog	gate diluted out of range or coelutes with	n another peak;	&) low surrogate	e due to matrix inte	rference.							
	Percent Recovery of Surrogate Standard ilution Factor	1										

Angela Rydelius, Lab Manager

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled:	01/16/13-01/17/13
1710 Franklin Street, Ste. 200		Date Received:	01/17/13
	Client Contact: Morgan Gillies	Date Extracted:	01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed:	01/18/13

### Leak Check Compound\*

Extraction method: TO15 Analytical methods: TO15 Work Order: 1301397 Lab ID Client ID Matrix Initial Pressure | Final Pressure Isopropyl Alcohol DF % SS Comments 001A SS-PO-1 Soil Gas 13.86 27.62 ND 1 N/A 002A SS-PO-2 Soil Gas 13.25 26.42 ND 1 N/A 004A SS-4 Soil Gas 13.64 27.19 ND 4 N/A 005A SS-5 Soil Gas 13.91 27.75 ND 1 N/A 006A SS-6 Soil Gas 13.78 27.46 ND 1 N/A 008A CSU-1 Soil Gas 13.62 27.14 ND 1 N/A Reporting Limit for DF =1; W psia NA NA psia ND means not detected at or SoilGas 50 psia psia  $\mu g/m^3$ above the reporting limit

* leak check compound is reported in	$\mu g/m^3$
--------------------------------------	-------------

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

The (liquid) Leak Check reference is:

DTSC, Advisory-Active Soil Gas Investigations, April 2012, page 17, section 4.2.2.1:

"The laboratory reports should quantify and annotate all detections of the leak check compound at the reporting limit of the target analytes."

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

Angela Rydelius, Lab Manager

Pangea Environmental Svcs., Inc. Client Project ID: Solano Group Date Sampled: 01/16/13 Date Received: 01/17/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 01/17/13-01/18/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 01/17/13-01/18/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1301397

Lab ID			130	1397-001A	Initial Pressure	13.86		
Client ID			S	S-PO-1	Final Pressure	27.62		
Matrix			S	Soil Gas				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	ND	1.0	120	Acrylonitrile	ND	1.0	4.4	
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5	
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14	
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9	
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150	
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3	
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4	
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9	
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180	
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20	
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12	
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12	
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2	
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1	
cis-1,2-Dichloroethene	18	1.0	8.1	trans-1,2-Dichloroethene	90	1.0	8.1	
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2	
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14	
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3	
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19	
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8	
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16	
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22	
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210	
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3	
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11	
Propene	ND	1.0	88	Styrene	ND	1.0	8.6	
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14	
Tetrachloroethene	1100	4.0	14	Tetrahydrofuran	8.1	1.0	6.0	
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15	
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11	
Trichloroethene	110	1.0	11	Trichlorofluoromethane	ND	1.0	11	
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10	
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	9.1	1.0	5.2	
Xylenes, Total	ND	1.0	27					

Surrogate Recoveries (%)							
%SS1:	127	%SS2:	110				
%SS3:	103						

### Comments:

\*vapor samples are reported in μg/m³.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard



Pangea Environmental Svcs., Inc. Client Project ID: Solano Group Date Sampled: 01/16/13 01/17/13 Date Received: 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 01/17/13-01/18/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 01/17/13-01/18/13

### Volatile Organic Compounds in μg/m3\*

Extraction Method: TO15 Analytical Method: TO15 Work Order: 1301397

Lab ID			130	1397-002A		Initial Pressure (psia)		
Client ID			S	SS-PO-2	Final Pressure	Final Pressure (psia)		
Matrix			S	Soil Gas				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	ND	1.0	120	Acrylonitrile	ND	1.0	4.4	
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5	
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14	
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9	
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150	
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3	
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4	
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9	
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180	
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20	
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12	
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12	
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2	
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1	
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	28	1.0	8.1	
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2	
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14	
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3	
Ethanol	210	1.0	96	Ethyl acetate	ND	1.0	19	
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8	
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16	
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22	
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210	
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3	
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11	
Propene	ND	1.0	88	Styrene	ND	1.0	8.6	
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14	
Tetrachloroethene	760	4.0	14	Tetrahydrofuran	14	1.0	6.0	
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15	
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11	
Trichloroethene	35	1.0	11	Trichlorofluoromethane	ND	1.0	11	
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10	
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2	
Xylenes, Total	ND	1.0	27					

Surrogate Recoveries (%)							
%SS1:	126	%SS2:	110				
%SS3:	104						

### Comments:

\*vapor samples are reported in μg/m³.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard



Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/17/13
1510 F. 11: G G. 200		Date Received: 01/17/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 01/18/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1301397

Lab ID			130	1397-003A	Initial Pressure	Initial Pressure (psia)		
Client ID		SS-3			Final Pressure	26.86		
Matrix		Soil Gas						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	ND	1.0	120	Acrylonitrile	ND	1.0	4.4	
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5	
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14	
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9	
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150	
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3	
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4	
Chloroethane	ND	1.0	5.4	Chloroform	23	1.0	9.9	
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180	
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20	
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12	
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12	
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2	
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1	
cis-1,2-Dichloroethene	590	1.0	8.1	trans-1,2-Dichloroethene	92	1.0	8.1	
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2	
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14	
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3	
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19	
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8	
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16	
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22	
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210	
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3	
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11	
Propene	ND	1.0	88	Styrene	ND	1.0	8.6	
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14	
Tetrahydrofuran	ND	1.0	6.0	Toluene	ND	1.0	7.7	
1,2,4-Trichlorobenzene	ND	1.0	15	1,1,1-Trichloroethane	ND	1.0	11	
1,1,2-Trichloroethane	ND	1.0	11	Trichloroethene	2600	4.0	11	
Trichlorofluoromethane	ND	1.0	11	1,2,4-Trimethylbenzene	ND	1.0	10	
1,3,5-Trimethylbenzene	ND	1.0	10	Vinyl Acetate	ND	1.0	180	
Vinyl Chloride	ND	1.0	5.2	Xylenes, Total	ND	1.0	27	
		Sur	rogate R	ecoveries (%)				
%SS1:	12	23		%SS2:	11	1		
%SS3:	10	)6					<u> </u>	

Comments:

\*vapor samples are reported in μg/m3.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard



Pangea Environmental Svcs., Inc. Client Project ID: Solano Group Date Sampled: 01/17/13 Date Received: 01/17/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 01/18/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 01/18/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1301397

Lab ID			130	1397-004A	Initial Pressure (psia)		13.64
Client ID				SS-4	Final Pressure (psia)		27.19
Matrix		Soil Gas					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<480	4.0	120	Acrylonitrile	ND<18	4.0	4.4
tert-Amyl methyl ether (TAME)	ND<34	4.0	8.5	Benzene	28	4.0	6.5
Benzyl chloride	ND<44	4.0	11	Bromodichloromethane	ND<56	4.0	14
Bromoform	ND<84	4.0	21	Bromomethane	ND<32	4.0	7.9
1,3-Butadiene	ND<18	4.0	4.5	2-Butanone (MEK)	ND<600	4.0	150
t-Butyl alcohol (TBA)	ND<250	4.0	62	Carbon Disulfide	ND<25	4.0	6.3
Carbon Tetrachloride	ND<52	4.0	13	Chlorobenzene	ND<38	4.0	9.4
Chloroethane	ND<22	4.0	5.4	Chloroform	80	4.0	9.9
Chloromethane	ND<17	4.0	4.2	Cyclohexane	ND<720	4.0	180
Dibromochloromethane	ND<68	4.0	17	1,2-Dibromo-3-chloropropane	ND<80	4.0	20
1,2-Dibromoethane (EDB)	ND<64	4.0	16	1,2-Dichlorobenzene	ND<48	4.0	12
1,3-Dichlorobenzene	ND<48	4.0	12	1,4-Dichlorobenzene	ND<48	4.0	12
Dichlorodifluoromethane	ND<40	4.0	10	1,1-Dichloroethane	ND<33	4.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND<33	4.0	8.2	1,1-Dichloroethene	49	4.0	8.1
cis-1,2-Dichloroethene	2200	4.0	8.1	trans-1,2-Dichloroethene	1000	4.0	8.1
1,2-Dichloropropane	ND<38	4.0	9.4	cis-1,3-Dichloropropene	ND<37	4.0	9.2
trans-1,3-Dichloropropene	ND<37	4.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND<56	4.0	14
Diisopropyl ether (DIPE)	ND<34	4.0	8.5	1,4-Dioxane	ND<29	4.0	7.3
Ethanol	ND<380	4.0	96	Ethyl acetate	ND<76	4.0	19
Ethyl tert-butyl ether (ETBE)	ND<34	4.0	8.5	Ethylbenzene	ND<35	4.0	8.8
4-Ethyltoluene	ND<40	4.0	10	Freon 113	ND<64	4.0	16
Heptane	ND<840	4.0	210	Hexachlorobutadiene	ND<88	4.0	22
Hexane	ND<720	4.0	180	2-Hexanone	ND<840	4.0	210
4-Methyl-2-pentanone (MIBK)	ND<33	4.0	8.3	Methyl-t-butyl ether (MTBE)	ND<29	4.0	7.3
Methylene chloride	ND<28	4.0	7.1	Naphthalene	ND<44	4.0	11
Propene	ND<350	4.0	88	Styrene	ND<34	4.0	8.6
1,1,1,2-Tetrachloroethane	ND<56	4.0	14	1,1,2,2-Tetrachloroethane	ND<56	4.0	14
Tetrahydrofuran	ND<24	4.0	6.0	Toluene	ND<31	4.0	7.7
1,2,4-Trichlorobenzene	ND<60	4.0	15	1,1,1-Trichloroethane	ND<44	4.0	11
1,1,2-Trichloroethane	ND<44	4.0	11	Trichlorofluoromethane	ND<44	4.0	11
1,2,4-Trimethylbenzene	ND<40	4.0	10	1,3,5-Trimethylbenzene	ND<40	4.0	10
Vinyl Acetate	ND<720	4.0	180	Vinyl Chloride	ND<21	4.0	5.2
Xylenes, Total	ND<110	4.0	27				

Surrogate Recoveries (%)							
%SS1: 126		%SS2:	108				
%SS3:	109						

Comments:

vapor samples are reported in μg/m<sup>3</sup>.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard



Pangea Environmental Svcs., Inc. Client Project ID: Solano Group Date Sampled: 01/17/13 Date Received: 01/17/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 01/18/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 01/18/13

### Volatile Organic Compounds in μg/m3\*

Extraction Method: TO15 Analytical Method: TO15 Work Order: 1301397

Lab ID	1301397-005A				Initial Pressure (psia)		13.91
Client ID		SS-5				Final Pressure (psia)	
Matrix		Soil Gas					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	81	1.0	8.1	trans-1,2-Dichloroethene	56	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrahydrofuran	ND	1.0	6.0	Toluene	ND	1.0	7.7
1,2,4-Trichlorobenzene	ND	1.0	15	1,1,1-Trichloroethane	ND	1.0	11
1,1,2-Trichloroethane	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				

Surrogate Recoveries (%)							
%SS1: 124		%SS2:	110				
%SS3:	109						

Comments:

vapor samples are reported in μg/m<sup>3</sup>.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard



Pangea Environmental Svcs., Inc. Client Project ID: Solano Group Date Sampled: 01/17/13 Date Received: 01/17/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 01/18/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 01/18/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1301397

Lab ID		1301397-006A				Initial Pressure (psia)	
Client ID		SS-6				Final Pressure (psia)	
Matrix			S	Soil Gas			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	7.2	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	13	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	270	1.0	8.1	trans-1,2-Dichloroethene	71	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrahydrofuran	ND	1.0	6.0	Toluene	ND	1.0	7.7
1,2,4-Trichlorobenzene	ND	1.0	15	1,1,1-Trichloroethane	ND	1.0	11
1,1,2-Trichloroethane	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				

%SS2:

%SS3: Comments:

vapor samples are reported in μg/m<sup>3</sup>.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

127

109

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

%SS1:



110

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/17/13
1710 Franklin Street, Ste. 200		Date Received: 01/17/13
1/10 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 01/18/13

### Volatile Organic Compounds in μg/m<sup>3\*</sup>

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1301397

I 1 ID			120	1207.007.1	T '.' 1D	( . )	12.50
Lab ID	1301397-007A				Initial Pressure	13.58 27.06	
Client ID	SS-7			Final Pressure (psia)			
Matrix				Soil Gas			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	22	1.0	8.1	trans-1,2-Dichloroethene	29	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	32	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrahydrofuran	7.2	1.0	6.0	Toluene	ND	1.0	7.7
1,2,4-Trichlorobenzene	ND	1.0	15	1,1,1-Trichloroethane	ND	1.0	11
1,1,2-Trichloroethane	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				-

Surrogate Recoveries (%)								
%SS1:	128	%SS2:	111					
%SS3:	108							

### Comments:

\*vapor samples are reported in μg/m3.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard



Pangea Environmental Svcs., Inc. Client Project ID: Solano Group Date Sampled: 01/17/13 Date Received: 01/17/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 01/18/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 01/18/13

### Volatile Organic Compounds in μg/m3\*

Extraction Method: TO15 Analytical Method: TO15 Work Order: 1301397

Lab ID				1397-008A		Initial Pressure (psia)	
Client ID		CSU-1			Final Pressure (psia)		27.14
Matrix		Soil Gas					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	160	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	290	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	ND	1.0	14	Tetrahydrofuran	ND	1.0	6.0
Toluene	19	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11
Trichloroethene	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27		1		

Surrogate Recoveries (%)								
%SS1:	117	%SS2:	109					
%SS3:	104							

### Comments:

\*vapor samples are reported in μg/m<sup>3</sup>.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard



### QC SUMMARY REPORT FOR ASTM D 1946-90

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 74142 WorkOrder: 1301397

EPA Method: ASTM D 1946-90 Extraction: A	Extraction: ASTM D 1946-90 Spiked								N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, maye	%	%	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Helium	N/A	0.010	N/A	N/A	N/A	99.3	N/A	N/A	60 - 140

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 74142 SUMMARY

Lab ID	Date Sampled Date Extracted Date Analyzed		Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301397-003A	01/17/13 10:06 AM	01/22/13	01/22/13 11:05 AM	1301397-007A	01/17/13 12:54 PM	01/22/13	01/22/13 11:18 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soilgas QC Matrix: Water BatchID: 74140 WorkOrder: 1301397

EPA Method: SW8260B Extraction: SW5030B Spiked Sample ID: N/A									N/A
Analyte	Sample Spiked MS MSD			MS-MSD	LCS	Acc	Acceptance Criteria (%)		
, a.a., c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	N/A	10	N/A	N/A	N/A	124	N/A	N/A	70 - 130
Benzene	N/A	10	N/A	N/A	N/A	110	N/A	N/A	70 - 130
t-Butyl alcohol (TBA)	N/A	40	N/A	N/A	N/A	126	N/A	N/A	70 - 130
Chlorobenzene	N/A	10	N/A	N/A	N/A	105	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	N/A	10	N/A	N/A	N/A	118	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	N/A	10	N/A	N/A	N/A	119	N/A	N/A	70 - 130
1,1-Dichloroethene	N/A	10	N/A	N/A	N/A	105	N/A	N/A	70 - 130
Diisopropyl ether (DIPE)	N/A	10	N/A	N/A	N/A	119	N/A	N/A	70 - 130
Ethyl tert-butyl ether (ETBE)	N/A	10	N/A	N/A	N/A	128	N/A	N/A	70 - 130
Methyl-t-butyl ether (MTBE)	N/A	10	N/A	N/A	N/A	130	N/A	N/A	70 - 130
Toluene	N/A	10	N/A	N/A	N/A	102	N/A	N/A	70 - 130
Trichloroethene	N/A	10	N/A	N/A	N/A	106	N/A	N/A	70 - 130
%SS1:	N/A	25	N/A	N/A	N/A	118	N/A	N/A	70 - 130
%SS2:	N/A	25	N/A	N/A	N/A	105	N/A	N/A	70 - 130
%SS3:	N/A	2.5	N/A	N/A	N/A	111	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 74140 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301397-003A	01/17/13 10:06 AM	01/18/13	01/18/13 7:26 PM	1301397-004A	01/17/13 10:34 AM	01/22/13	01/22/13 10:42 AM
1301397-005A	01/17/13 11:05 AM	01/18/13	01/18/13 8:43 PM	1301397-006A	01/17/13 11:36 AM	01/18/13	01/18/13 3:22 PM
1301397-007A	01/17/13 12:54 PM	01/18/13	01/18/13 9:21 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

### **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 74095 WorkOrder: 1301397

EPA Method: TO15 Extraction: TO15 Spiked Sample ID: N/A								N/A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	.CS Acceptance Criteria (%)					
Analyto	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS			
Acrylonitrile	N/A	25	N/A	N/A	N/A	90.6	N/A	N/A	60 - 140			
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	108	N/A	N/A	60 - 140			
Benzene	N/A	25	N/A	N/A	N/A	108	N/A	N/A	60 - 140			
Benzyl chloride	N/A	25	N/A	N/A	N/A	102	N/A	N/A	60 - 140			
Bromodichloromethane	N/A	25	N/A	N/A	N/A	122	N/A	N/A	60 - 140			
Bromoform	N/A	25	N/A	N/A	N/A	117	N/A	N/A	60 - 140			
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	89.3	N/A	N/A	60 - 140			
Carbon Disulfide	N/A	25	N/A	N/A	N/A	102	N/A	N/A	60 - 140			
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	122	N/A	N/A	60 - 140			
Chlorobenzene	N/A	25	N/A	N/A	N/A	107	N/A	N/A	60 - 140			
Chloroethane	N/A	25	N/A	N/A	N/A	138	N/A	N/A	60 - 140			
Chloroform	N/A	25	N/A	N/A	N/A	114	N/A	N/A	60 - 140			
Chloromethane	N/A	25	N/A	N/A	N/A	99.3	N/A	N/A	60 - 140			
Dibromochloromethane	N/A	25	N/A	N/A	N/A	123	N/A	N/A	60 - 140			
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	128	N/A	N/A	60 - 140			
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	109	N/A	N/A	60 - 140			
1,2-Dichlorobenzene	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140			
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140			
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	86.7	N/A	N/A	60 - 140			
Dichlorodifluoromethane	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140			
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	114	N/A	N/A	60 - 140			
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	123	N/A	N/A	60 - 140			
1,1-Dichloroethene	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140			
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140			
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140			
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	115	N/A	N/A	60 - 140			
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	112	N/A	N/A	60 - 140			
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	118	N/A	N/A	60 - 140			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	N/A	25	N/A	N/A	N/A	94.2	N/A	N/A	60 - 140			
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	126	N/A	N/A	60 - 140			
1,4-Dioxane	N/A	25	N/A	N/A	N/A	105	N/A	N/A	60 - 140			

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

<sup>%</sup> Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

<sup>\*</sup> MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

## **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 74095 WorkOrder: 1301397

EPA Method: TO15 Extraction: 1	TO15					,	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, mayte	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Ethyl acetate	N/A	25	N/A	N/A	N/A	119	N/A	N/A	60 - 140
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	115	N/A	N/A	60 - 140
Ethylbenzene	N/A	25	N/A	N/A	N/A	98.7	N/A	N/A	60 - 140
Freon 113	N/A	25	N/A	N/A	N/A	82.1	N/A	N/A	60 - 140
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	91.3	N/A	N/A	60 - 140
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	122	N/A	N/A	60 - 140
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
Methylene chloride	N/A	25	N/A	N/A	N/A	78.7	N/A	N/A	60 - 140
Naphthalene	N/A	25	N/A	N/A	N/A	114	N/A	N/A	60 - 140
Styrene	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	114	N/A	N/A	60 - 140
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
Tetrachloroethene	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	98.4	N/A	N/A	60 - 140
Toluene	N/A	25	N/A	N/A	N/A	107	N/A	N/A	60 - 140
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	95.4	N/A	N/A	60 - 140
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	118	N/A	N/A	60 - 140
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
Trichloroethene	N/A	25	N/A	N/A	N/A	108	N/A	N/A	60 - 140
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	106	N/A	N/A	60 - 140
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	107	N/A	N/A	60 - 140
Vinyl Chloride	N/A	25	N/A	N/A	N/A	85.7	N/A	N/A	60 - 140
%SS1:	N/A	500	N/A	N/A	N/A	109	N/A	N/A	60 - 140
%SS2:	N/A	500	N/A	N/A	N/A	109	N/A	N/A	60 - 140
%SS3:	N/A	500	N/A	N/A	N/A	104	N/A	N/A	60 - 140

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

QA/QC Officer

## **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 74095 WorkOrder: 1301397

EPA Method: TO15 Extraction	on: TO15					5	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, maye	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS

#### **BATCH 74095 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301397-001A	01/16/13 3:30 PM	01/17/13	01/17/13 8:26 PM	1301397-001A	01/16/13 3:30 PM	01/18/13	01/18/13 12:29 AM
1301397-001A	01/16/13 3:30 PM	01/18/13	01/18/13 12:29 AM	1301397-002A	01/16/13 4:01 PM	01/17/13	01/17/13 9:05 PM
1301397-002A	01/16/13 4:01 PM	01/18/13	01/18/13 1:10 AM	1301397-002A	01/16/13 4:01 PM	01/18/13	01/18/13 1:10 AM
1301397-003A	01/17/13 10:06 AM	01/18/13	01/18/13 8:12 PM	1301397-003A	01/17/13 10:06 AM	01/18/13	01/18/13 9:33 PM
1301397-004A	01/17/13 10:34 AM	01/18/13	01/18/13 8:52 PM	1301397-004A	01/17/13 10:34 AM	01/18/13	01/18/13 8:52 PM
1301397-005A	01/17/13 11:05 AM	01/18/13	01/18/13 1:51 AM	1301397-005A	01/17/13 11:05 AM	01/18/13	01/18/13 1:51 AM
1301397-006A	01/17/13 11:36 AM	01/18/13	01/18/13 2:31 AM	1301397-006A	01/17/13 11:36 AM	01/18/13	01/18/13 2:31 AM
1301397-007A	01/17/13 12:54 PM	01/18/13	01/18/13 3:12 AM	1301397-008A	01/17/13 2:16 PM	01/18/13	01/18/13 1:30 PM
1301397-008A	01/17/13 2:16 PM	01/18/13	01/18/13 1:30 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1770 1 141141111 541661, 516. 200	Client Contact: Morgan Gillies	Date Reported: 01/22/13
Oakland, CA 94612	Client P.O.:	Date Completed: 01/22/13

WorkOrder: 1301454

January 23, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 8 analyzed samples from your project: Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

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					l: mg	illie	s@p	an	geaei	av.c	com			8015)/MTBE	Gel Cleanup	/B&	(F									625 / 8270 / 8310				826		Samples for Metals
Tele: (510) 836-3					510)									1/(51)	el C	E&F	(418									8/0/				thod		analysis:
Project #: 1006.0	mie-		P	rojec	t Nai	me:_	500	B	апп	m-S	1	zilan	10	98 +		5520	ous		20)		7					82	6	_		Me		Yes / No
Project Location:	590 Branne	n St, Sar	Francis	<b>EO</b>	18	75	lane	o A	e, A	h	4/1	Gre	40	8020	SIII	ase (	carb		/ 80		NE					625	6020)	9050	6	EPA		
Sampler Signatur	re:	-			_	_			_	_	MET	THO	n	(209)	/m (s	Gre	dro.	21	602		8's (			093	0	Y43	/01	10/	109	y by		
1		SAME	PLING	90	ners		MA	TR	IX		RES			Gas	TPH as Diesel (8015) w/ Silica	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 (8010) 8021	BTEX ONLY (EPA 602 / 8020)		EPA 608 / 8082 PCB's ONLY	=	15	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA	CAM-17 Metals (6010 /	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Five fuel oxygenates by EPA Method 8260		
SAMPLE ID	LOCATION (Field Point			Containers	Containers							H	H	PH as	iesel	leum	rolen	108	ALY.	EPA 608 / 8081	808	EPA 8140 / 8141	EPA 8150 / 8151	2 / 62	625	N.V.	Meta	fetal	8/2	oxyge		
100000000000000000000000000000000000000	Name)	Date	Time	nta	ပိ	er			ge		,	0	ra er	& T	as D	Petro	Peti	109	0	809	809	8140	8150	524.	525	s/P	-17	15.	(200	fuel		
	2 200 (200)			Ü#	Type	Water	Soil	Air	Sludge	ICE	HCL	HNO3	Other	BTEX &	IPH	Fotal	l'ota	EPA	BTE	EPA	EPA	EPA	EPA	EPA	EPA	PAH	CAM	LUF	Lead	Five		
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8-13-7		1/12	1100	1	reca		7			1		t																				HOLD
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B-13-16			1145							II		П																				4000
B-14-4			1207							П																						HOLD
B-14-6			1205							П																						4000
B-14-8			1210							I								X														100
B-14-11			1230																												7	HOLD
B-14-12			1240																													HOLD
B-14-16			1250																													HOLD
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Pg. 2 of 3

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Tele: (510) 836-3			F	ax: (	(510)	836-	3709	)				_		3	lean	E&F	(418									70/8				etho		analysis:
Project #: 1386			P	rojec	t Na	ne: -	K2	Baile	leb	50	lane	6	ny	021E	ol C	5520	ons		(20)		X					/ 82	6	-		VW		Yes / No
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Sampler Signatur	e:				_		LP-15-6		0	l N	(ET)	HOI		8015	Silis	S	dro	21	1 602		B's (			097	0	EPA.	/010	/01				
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SAMPLE ID	LOCATION			Containers	tain									TPHg/BTEX/MTBE	5Cn	-	heur	(00)	ΓŽ	EPA 608 / 8081	8082	EPA 8140 / 8141	EPA 8150 / 8151	/ 62	625	VA's	letal	etals	<u> </u>	xyge		
SAMILLID	(Field Point Name)	Date	Time	ıtai	0	1.		J.				en.		STE	(801	etrol	Petro	710	NO	/ 80	/80	140	150	24.2	25 /	/ P	17 N	S M	Lead (6010)	el o		
	(value)	Date	Time	Ö	ype	ate	평.	nds	the	ICE	HCL	HNO3	Other	HgH.	ЭНЧ	급	Ital	PA 6	LEX	9 V d	9 V d	PA 8	PA 8	PA S	A S	Œ,	-W	JET.	) pea	ve fu		
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Tele: (510) 836-	3702				(510)		-	_							ō	& F/	90									8/0				thod		for Metals analysis:
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		SAMI	PLING		s.L.s		MA	TR	IX		MET			IE (80	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 8010y 8021	BTEX ONLY (EPA 602 / 8020)		EPA 608 / 8082 PCB's ONLY			EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Five fuel oxygenates		
	LOCATION			Containers	Type Containers			Т						MTBE	Se   (8	0 00	enm	E	2	180	082	EPA 8140 / 8141	EPA 8150 / 8151	624	25/	A.8	etals	tals	/ 20	ygen		
SAMPLE ID	(Field Point	4		tair	ont				9	1				TPHg/BTEX/	Die	trole	etro	8	ONI	EPA 608 / 8081	8/8	40 /	20 /	4.2	9/9	PN	7 M	S Me	8.00	el ox		
	Name)	Date	Time	8	be C	Water	=		Sludge	E	HCL	HNO,	Other	lg/B	H as	al Pe	al P	A 60	EX	A 60	A 60	A 81	A 81	A 52	A 52	H.s	M-	Ē	d (2	e fue		
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## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1301454

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

□WaterTrax ☐ WriteOn □ EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag Report to: Bill to: Requested TAT: 2 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 01/18/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: Solano Group Oakland, CA 94612 Date Printed: 01/18/2013 (510) 836-3700 FAX: (510) 836-3709

								Re	quested	l Tests	(See leg	end bel	ow)			
Lab ID	Client ID	Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
										1						
1301454-003	B-13-8	Soil	1/18/2013 11:15		Α											
1301454-009	B-14-8	Soil	1/18/2013 12:10		Α											
1301454-014	B-15-8	Soil	1/18/2013 14:25		Α											
1301454-017	B-12-4	Soil	1/18/2013 15:00		Α											
1301454-018	B-12-8	Soil	1/18/2013 15:25		Α											
1301454-022	B-11-8	Soil	1/18/2013 16:10		Α											
1301454-026	B-7-12	Soil	1/18/2013 17:35		Α											
1301454-029	B-6-12	Soil	1/18/2013 18:10		A											

#### **Test Legend:**

1	8010BMS_S	2	3	4	5
6		7	8	9	10
11		12			

Prepared by: Zoraida Cortez

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

## **Sample Receipt Checklist**

Client Name:	Pangea Environmental Svcs., Inc.			Date and	a Time Received:	1/10/2013	8:25:19 PW
Project Name:	Solano Group			LogIn Re	eviewed by:		Zoraida Cortez
WorkOrder N°:	<b>1301454</b> Matrix: <u>Soil</u>			Carrier:	Client Drop-In		
	Ch	ain of Cu	ustody (C	COC) Informatio	o <u>n</u>		
Chain of custody	present?	Yes	<b>✓</b>	No 🗆			
Chain of custody	signed when relinquished and received?	Yes	<b>✓</b>	No 🗆			
Chain of custody	agrees with sample labels?	Yes	<b>✓</b>	No 🗌			
Sample IDs note	ed by Client on COC?	Yes	<b>✓</b>	No 🗆			
Date and Time o	of collection noted by Client on COC?	Yes	<b>✓</b>	No 🗆			
Sampler's name	noted on COC?	Yes	<b>✓</b>	No 🗆			
		Sample	Receipt	: Information			
Custody seals in	tact on shipping container/cooler?	Yes		No 🗌		NA 🗸	
Shipping contain	er/cooler in good condition?	Yes	<b>✓</b>	No 🗌			
Samples in prop	er containers/bottles?	Yes	<b>✓</b>	No 🗌			
Sample containe	ers intact?	Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicated test?	Yes	<b>✓</b>	No 🗆			
	Sample Pre	eservatio	n and Ho	old Time (HT) In	formation		
All samples rece	ived within holding time?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature	Coole	er Temp:	5.4°C		NA 🗌	
Water - VOA via	ls have zero headspace / no bubbles?	Yes		No 🗆 N	lo VOA vials submi	tted 🗸	
Sample labels ch	necked for correct preservation?	Yes	✓	No 🗌			
Metal - pH accep	otable upon receipt (pH<2)?	Yes		No 🗆		NA 🗹	
Samples Receive	ed on Ice?	Yes	✓	No 🗌			
	(Ice Ty	ype: WE	TICE	)			
* NOTE: If the "N	No" box is checked, see comments below.						
Comments:							

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/19/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301454

Lab ID Client ID				1301454-003A B-13-8			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.0051	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)							
%SS1:	114	%SS2:	113				
%SS3:	102						
Comments:							

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/19/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B		Ana	alytical Met	hod: SW8260B	Work O	rder: 130	1454		
Lab ID				1301454-009A					
Client ID	B-14-8								
Matrix				Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005		
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005		
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005		
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005		
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004		
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005		
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005		
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004		
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005		
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005		
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005		
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005		
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005		
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005		
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005		
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005		

Surrogate Recoveries (%)							
%SS1:	114	%SS2:	118				
%SS3:	103						
Comments:							

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/19/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B		Ana	alytical Met	hod: SW8260B	Work O	rder: 130	1454		
Lab ID	1301454-014A								
Client ID	B-15-8								
Matrix		-		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005		
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005		
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005		
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005		
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004		
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005		
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005		
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004		
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005		
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005		
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005		
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005		
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005		
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005		
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005		
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005		

Surrogate Recoveries (%)							
%SS1:	117	%SS2:	117				
%SS3:	99						
Comments:							

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/19/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301454

Lab ID Client ID		1301454-017A B-12-4 Soil					
Matrix							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)							
%SS1:	114	%SS2:	116				
%SS3:	100						
Comments:							

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
	Client Contact: Morgan Gillies	Date Extracted 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/19/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301454

Lab ID Client ID		1301454-018A B-12-8 Soil					
Matrix							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.011	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
	%SS1:	114	%SS2:	115					
	%SS3:	101							
	Comments:								

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/19/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\* Analytical Method: SW8260B

Extraction Method: SW5030B		Ana	lytical Met	hod: SW8260B	Work O	rder: 130	1454
Lab ID				1301454-022A			
Client ID				B-11-8			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit

Matrix	B-11-8 Soil						
Compound Concentration * DF Reporting Limit Compound		Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
%SS1:	119	%SS2:	117						
%SS3:	100								
Comments:									

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 01/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/19/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301454

Lab ID Client ID	Lab ID         1301454-026A           Client ID         B-7-12						
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	1.0 0.005 Dichlorodifluoromethane		ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.0061	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
	%SS1:	113	%SS2:	114					
	%SS3:	102							
	Commonta								

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Frankfill Street, Ste. 200	Date Received: 01/18/13  Client Contact: Morgan Gillies Date Extracted 01/18/13	
Oakland, CA 94612	Client P.O.:	Date Analyzed 01/19/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301454

Lab ID	1301454-029A						
Client ID  Matrix	B-6-12						
Compound	Concentration *	Soil    Compound   Concentration *   Concentrati					Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.0062	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	5 Trichloroethene ND		1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
	%SS1:	113	%SS2:	116					
	%SS3:	101							
	Comments:								

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 74024 WorkOrder: 1301454

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	nple ID:	1301358-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	Criteria (%)	
, may to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	Rec. MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	95.5	89.6	6.41	101	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	75.6	74.9	0.947	82.4	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	84.6	70.6	18.1	78.3	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	76.4	75.9	0.673	81.9	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	79.3	75.4	5.01	87	60 - 116	30	70 - 130
%SS1:	94	0.12	96	85	12.3	99	70 - 130	30	70 - 130
%SS2:	107	0.12	107	107	0	107	70 - 130	30	70 - 130
%SS3:	101	0.012	100	95	5.09	98	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### **BATCH 74024 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301454-003A	01/18/13 11:15 AM	01/18/13	01/19/13 8:14 PM	1301454-009A	01/18/13 12:10 PM	01/18/13	01/19/13 8:55 PM
1301454-014A	01/18/13 2:25 PM	01/18/13	01/19/13 9:37 PM	1301454-017A	01/18/13 3:00 PM	01/18/13	01/19/13 6:53 PM
1301454-018A	01/18/13 3:25 PM	01/18/13	01/19/13 4:50 PM	1301454-022A	01/18/13 4:10 PM	01/18/13	01/19/13 6:12 PM
1301454-026A	01/18/13 5:35 PM	01/18/13	01/19/13 5:31 PM	1301454-029A	01/18/13 6:10 PM	01/18/13	01/19/13 7:34 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Hamain Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 01/22/13
Oakland, CA 94612	Client P.O.:	Date Completed: 02/11/13

WorkOrder: 1301454 A

February 11, 2013

Dear Morgan:

#### Enclosed within are:

- 1) The results of the 3 analyzed samples from your project: Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

4-10+3

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144	- WARTER !	1534 V	Villow Pass	s Road					4	.1				Т	TIR	N	AR		IND						1	[	2	**	E	4		
Web	site: www.mcc	Pittsl	burg, CA 9	4565	nin@	13	2	1	15	+				^	U		***	00	111		E I V E		I	RUS	н	24	HR		48 1		72 H	R 5 DAY
Telepho	ne: (925) 252	-9262	Com Em	an. m	ame	Fax:	(92	5) 2	52-9	269	)			EI	OF F	Requ	rire	d? (	Coel	t (!	Norr	nal)		Vo			e Or					
Report To: Morg			E	Bill T			_												A	nal	ysis	Rec	jues	t						C	ther	Comments
Company: Pange	a Environme	ental Ser	vices, In	c.		- / 10-1																										
1710 Franklin Str	reet, Suite 20	0, Oakla	and, CA	9461	2									E	dnı	8														09		Filter Samples
				E-Ma	_			_	geae	nv.	com			III	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	=									8310				EPA Method 8260		for Metals
Tele: (510) 836-3				ax:								- 1		015)/	) jel	E&	(418									10/				etho		analysis:
Project #: 10060			F	roje	et Na	me:	500	L.D.	MITTER	111-5	Str.	21/40	40_	+	CB C	5520	ons		120)		>					/82	6	6		L M		Yes / No
Project Location:	590 Branne	n Sty Sa	a bramei	500_	118	15	lein	e A	ve, H	h	46	on	40	8020	Sill	ase (	cart		1 80		INO					625	602	9709	(01			
Sampler Signatur	e:					_		L SOUTH		_	MET	ruo	D	(602	S) W	Gre	'dro	13	09		B's (			097	0	V <sub>d</sub> 3	010	10/	09/	s by		
		SAMI	PLING	- 00	Type Containers		MA	TR	IX		RES			Gas	801	OH &	Total Petroleum Hydrocarbons (418.1)	EPA 601 (8010) 8021	BTEX ONLY (EPA 602 / 8020)		EPA 608 / 8082 PCB's ONLY	-	-	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 /	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Five fuel oxygenates by		
SAMPLE ID	LOCATION			Containers	1 1									H as	esel	enm	olem	( <u>ē</u> )	LY	EPA 608 / 8081	8082	EPA 8140 / 8141	EPA 8150 / 8151	/ 62	625	N.V.	fetal	etal	8/2	xyge		
SAMI DE 10	(Field Point Name)	Date	Time	itai	5				о.			n	-	BTEX & TPH	S Di	etrol	etro	10	ON	/80	/80	140	150	24.2	25/	/P	17.8	S M	2007	el o		
	(vame)	Date	Time	0	- be	Water	Soil	Air	Sludge	ICE	HCL	HNO,	Other	EX	На	tal P	in in	9 V	EX	9 V	9 V	8 V	A 8	1 S	A 5	H,	E E	E	pg (	ve fu		
				#	F	=	S	A	S		I	Ξ	0	BI	F	To	To		BJ	Ξ	H	E	Ξ	13	E	P	0	7	1,	Fi		
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B-13-7		1	1100	1	1					1																						HOLD
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B-13-12			1/25		$\Box$					Ħ								X														Hace
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B-14-6 B-14-8			1205		++	+	Н			₩	+	+						V														4000
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B-14-11			1230		++	+	1	-	_	₩	+	-	Н											_								HOLD
B-14-12			1240		11	+		_		#																						HOLD
B-14-16			1250	1	11	1	Ш			#		1																				HOLD
B-15-5		1	1415				1,			1	,								1													HOLD
B-15-8		V	1425	V	W		V			V								$\times$														
Relinquished By:	1	Date:	Time;		eived)	By:		1	1		1	_		TC	E/t°	5/	+											CON	MME	NTS:		
Je 1	acc.	11/21,	20.29		1	Y		-	0	/	1				AD S							4	dd	ed.	4	6/1	3	48	AY!			
Relinquished By:		Date:	Time:	Rec	Received By:				DECHLORINATED IN LAB																							
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Relinquished By:		Date:	Time:	Received By:									vo	DAS	0	v.C	ME	TAL	S	ОТН	ER											
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Pg. 2073

N	IcCAMP)	BELL	ANA	LY	FIC.	AL	, IN	IC.					T				(	СН	AI	N	OF	C	US	ST	OI	Y	R	EC	có	RD	
		1534 V	Villow Pas	Road									П	TU	RN	AI						-			Ę	2		M	40		
Web	site: www.mcc		com Em		ain@r	ncca	mpb	ell.cor	n				1										RUS		24			48 H		72 H	R 5 DAY
Telepho	ne: (925) 252				F	ax:	(925	252		69			1	EDF	Rec	luir	ed?	Coe	lt (I	Nori	nal)	1	No	11	rite	e On	(D	W)	N	0	
Report To: Morg					o: Pa	nges	1											1	Anal	ysis	Rec	ques	it						(	Other	Comments
Company: Pange					Objects .								4																		Filter
1710 Franklin Str	eet, Suite 20	0, Oakl											4		E										0				260		Samples
T. 1. (F10) 026 2	703				il: mg				ten'	v.ce	m		-		F/R	5.0									625 / 8270 / 8310				EPA Method 8260		for Metals
Tele: (510) 836-3 Project #: 1286-1			- 1	ax:	(510) et Nai	836-	3709	) D-11-1	e the	2	1	7		9 8	0 EA	6 (41									270				feth		analysis:
Project Location:	2000 5 202	a Elli-C	Con E	rojec	I IVAI	ne: -	76	/	4	101	MI	Cor	*	202	(562	pou		070		LY					5/8	20)	6		PAN		Yes / No
Sampler Signatur		o mino o		- WHICE	SER I	115	12	HUHO	M	71	4/6	my	4	TPHA (8015Cm) w/ Siles Col Cleans)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)		602 / 8020)		EPA 608 / 8082 PCB's ONLY					1 62	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)		by El		
Sumpler Signatur		CAMI	PLING		1 10	Ι,	MAT	RIX			ETE			109)	& G	lydr	021	V 60		B's			EPA 524.2 / 624 / 8260	20	EPA	0109	010				
	VIII PROSPERINGE AND	SAMI	LING	2	ner	- 4	VLAL	KIA		PR	ESEI	RVE		185	0.0	in in	6	(E)	-	2 P(	=	51	24 (1	/ 82	s by	als (6	9) sı		enat		
SAMPLE ID	LOCATION (Field Point			Containers	Type Containers							-	13	TPHA (8015C.	leum leum	rolet	EPA 601 (8010) 8021	BTEX ONLY (EPA	EPA 608 / 8081	808	EPA 8140 / 8141	EPA 8150 / 8151	2 / 6	EPA 525 / 625 / 8270	PAH's / PNA's by	Mets	feta	6	fuel oxygenates		
	Name)	Date	Time	13	ပိ	er		96	L		1	2		1 /80	Petro	Pet	5109	0	809	809	8140	8150	524.	525	s/P	-12	15	(60)	nel		
	1123011235	Track Constitution	- COLUMNIC	ů #	ype	Water	Soil	Sludge	Other	ICE	HCL	HNO	Other	PHG.	otal	otal	PA	TE	PA	PA	Vd.	PA	PA	PA.	AH.	AM	E.	Lead (6010)	Five		
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B-15-12		1/18	1430	1	Acet		X			Х	4	4	+	4	4	-	4		_												HOLD
B-15-16			1440	1		Ш	1			1		4	1	4	4			_													HOLD
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B-12-16			1530													T															HOLD
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B-11-15.5		11/4	1640			П	1			П							-										П				HOLD
B-7-8			1730				T	П	1	П		T																			HOLD
B-7-12			1735	1			1			T			1				X														
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## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1301454 A

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

□ EDF Excel ☐ WaterTrax WriteOn Fax ✓ Email HardCopy ThirdParty J-flag Report to: Bill to: Requested TAT: 2 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Date Received: 01/18/2013 Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Add-On: 02/08/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: Solano Group Oakland, CA 94612 Date Printed: 02/08/2013 (510) 836-3700 FAX: (510) 836-3709

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
			_													
1301454-004	B-13-12	Soil	1/18/2013 11:25		Α											
1301454-019	B-12-12	Soil	1/18/2013 15:20		Α											
1301454-023	B-11-12	Soil	1/18/2013 16:20		Α											

#### Test Legend:

1 8010BMS_S	2	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Zoraida Cortez

Comments: 8010 added to 004,019,023 2/8/13 48hr. Ok'ed by Morgan to run samples pass their holding time.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/08/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/08/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301454

Lab ID				1301454-004A			
Client ID				B-13-12			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)										
%SS1:	110	%SS2:	102							
%SS3: 110										
Commonta										

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/08/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/08/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301454

Lab ID				1301454-019A			
Client ID				B-12-12			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)											
%SS1:	111	%SS2:	105								
%SS3: 111											

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 01/18/13
1710 Franklin Street, Ste. 200		Date Received: 01/18/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/08/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/08/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1301454

Lab ID	1301454-023A									
Client ID				B-11-12						
Matrix				Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005			
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005			
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005			
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005			
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004			
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005			
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005			
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004			
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005			
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005			
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005			
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005			
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005			
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005			
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005			
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005			

Surrogate Recoveries (%)									
%SS1: 110 %SS2: 102									
%SS3: 110									
Community									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 74524 WorkOrder: 1301454

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1302119-026A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)				
, analyse	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
Chlorobenzene	ND	0.050	83.2	88.8	6.54	91.9	61 - 108	30	70 - 130		
1,2-Dibromoethane (EDB)	ND	0.050	79.8	83.4	4.36	81.3	54 - 119	30	70 - 130		
1,2-Dichloroethane (1,2-DCA)	ND	0.050	86.5	92.9	7.10	95.2	48 - 115	30	70 - 130		
1,1-Dichloroethene	ND	0.050	81.5	86.5	5.94	85.2	46 - 111	30	70 - 130		
Trichloroethene	ND	0.050	93	100	7.33	102	60 - 116	30	70 - 130		
%SS1:	103	0.12	112	112	0	110	70 - 130	30	70 - 130		
%SS2:	109	0.12	107	104	2.52	102	70 - 130	30	70 - 130		
%SS3:	105	0.012	83	83	0	81	70 - 130	30	70 - 130		

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 74524 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301454-004A	01/18/13 11:25 AM	02/08/13	02/08/13 4:39 PM	1301454-019A	01/18/13 3:20 PM	02/08/13	02/08/13 5:20 PM
1301454-023A	01/18/13 4:20 PM	02/08/13	02/08/13 6:01 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Kershaw	Date Sampled: 02/01/13
1710 Franklin Street, Ste. 200		Date Received: 02/01/13
1710 1141141111 Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 02/05/13
Oakland, CA 94612	Client P.O.:	Date Completed: 02/05/13

WorkOrder: 1302013

February 05, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 6 analyzed samples from your project: #1435.002; Kershaw,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

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Web	site: www.mc	campbell	.com Ema	il: m	ain@r	ncca	mpt	ell	om.	1	U	Æ												RUS			HR		48 E		72 H	R 5 DAY
Telepho	ne: (925) 252	-9262		(016 (00)	F	ax:	(92	5) 2	52-92	269				EL	)F F	tequ	iire	d? (	Coel	t (l	Vori	mal)		No	) V	Vrite	e Or	n (D	W)	N	lo	
Report To: Morg	gan Gilllies		В	ill T	o: Pa	nge	a												A	nal	ysis	Re	que	st						(	Other	Comments
Company: Pange	ea Environm	ental Sei	rvices, In	c.																												FILL
1710 Franklin St	reet, Suite 20	0, Oakl	and, CA	94612	2										din	(F)										_				093		Filter Samples
					il: mg		-	-	geaei	iv.c	om		_		lear	F/B&	9									8310				8 p		for Metals
Tele: (510) 836-3					(510)								_		) je	E&	(418	0.1								/02				EPA Method 8260		analysis:
Project #: 1439				roje	et Nai	me:	Ke	rsha	w				4	/8021B)	ca G	5520	ons		(00)		×					/82	6	-		A.M		Yes / No
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		SAM	PLING	ya .	Type Containers	L	MA	TR	IX		MET			TPHg/BTEX/MTBE (80150	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grense (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 8010 8021	BTEX ONLY (EPA 602 / 8020)	220	EPA 608 / 8082 PCB's ONLY	=	15	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Five fuel oxygenates by		
SAMPLE ID	LOCATION			Containers	I iii									LINA	esel	enm	oleu	8010	E	EPA 608 / 8081	808	EPA 8140 / 8141	EPA 8150 / 8151	/ 62	625	3	feta	etal	8/2	xyge		
NO. 11 (11 (11 (11 (11 (11 (11 (11 (11 (11	(Field Point Name)	Date	Time	nta	ů	1			r se			-50	_	3TE)	s Di	etro	Petr	Y	O	/80	/80	140	150	24.2	25/	/ b	17.8	S M	200.	o lei		
	Tanto	Date	Time	S	ype	Water	Soil	Air	Sludge	ICE	HCL	HNO,	Other	Hg/	H	1	otal	9 V e	LEX	PA 6	9 V e	PA 8	8 V 8	PA S	PA S	É	E.	E	pe-	ve fi		
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A-2-6		1	1015	1	1		1																									4000
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A-5-13			1240							П								X														
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1-3-11		V	1410	4	1		V			V								V	1													
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8-11-		2/1/13	1551	/	//	/	10	10	10	1'	1	/-	D	GC	OOD	CO	NDIT	TON		_												
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## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1302013 ClientCode: PEO

		WaterTrax	WriteOn	EDF		xcel		■ E	QuIS	✓	Email		Hard	Сору	Third	<sup>o</sup> arty	J-fla	ıg
Report to: Morgan Gillies			ngillies@pange	eaenv.com; tdelafu	uente@				ark-R					Requ	ested TA	Γ:	2 d	days
Pangea Enviror 1710 Franklin S	nmental Svcs., Inc. Street, Ste. 200	cc: PO:						_			ntal Sv et, Ste.	cs., Ind 200	С.	Date	Receive	d: (	02/01/2	013
Oakland, CA 9 (510) 836-3700	4612 FAX: (510) 836-3709	ProjectNo: #	1435.002; Ker	shaw			Oa	aklan	id, CA	94612	2			Date	Printed:	;	02/01/2	013
										Re	queste	d Tests	(See le	gend b	elow)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2		3	4	5	6	7	8	9	10	11	12
1302013-003	A-4-6		Soil	2/1/2013 10:25		Α												T
1302013-008	A-6-6		Soil	2/1/2013 11:15		Α												
1302013-009	A-6-10		Soil	2/1/2013 11:30		Α												
1302013-011	A-5-13		Soil	2/1/2013 12:40		Α												
1302013-012	A-2-11		Soil	2/1/2013 13:50		Α												
1302013-013	A-3-11		Soil	2/1/2013 14:10		Α												
Test Legend: 1 8010BM	S_S 2 7			3 8					9					-	5 10			
11	12																	
													]	Prepar	ed by: 2	Zoraida	Corte	żZ

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

		Date and	Time received.	2/1/2010 0.00.0	J 1 W
		LogIn Re	viewed by:	Zo	oraida Cortez
		Carrier:	Client Drop-In		
ain of Cus	stody (COC)	Information	<u>1</u>		
Yes	✓	No $\square$			
Yes	✓	No 🗌			
Yes	<b>✓</b>	No $\square$			
Yes	<b>✓</b>	No $\square$			
Yes	<b>✓</b>	No $\square$			
Yes	<b>✓</b>	No $\square$			
Sample	Receipt Info	<u>rmation</u>			
Yes		No 🗌		NA 🗹	
Yes	<b>✓</b>	No 🗌			
Yes	<b>✓</b>	No 🗌			
Yes	<b>✓</b>	No 🗌			
Yes	<b>✓</b>	No 🗌			
eservation	and Hold T	ime (HT) Inf	ormation		
Yes	<b>✓</b>	No $\square$			
Cooler	Temp: 2.6	°C		NA 🗌	
Yes		No 🗌 No	VOA vials submit	tted 🗸	
Yes	✓	No 🗌			
Yes		No 🗌		NA 🗸	
Yes	<b>✓</b>	No $\square$			
/pe: WET	TICE )				
	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes V Yes V	LogIn Re Carrier:  ain of Custody (COC) Information Yes V No   Yes V No	LogIn Reviewed by:   Carrier:   Client Drop-In	Carrier: Client Drop-In   Client Drop-In

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Kershaw	Date Sampled: 02/01/13
1710 Franklin Street, Ste. 200		Date Received: 02/01/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/01/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/01/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302013

Lab ID	1302013-003A									
Client ID				A-4-6						
Matrix				Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005			
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005			
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005			
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005			
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004			
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005			
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005			
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004			
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005			
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005			
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005			
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005			
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005			
Tetrachloroethene	0.032	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005			
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	0.013	1.0	0.005			
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005			

Surrogate Recoveries (%)									
%SS1:	107	%SS2:	101						
%SS3:	78								
Commonto									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Kershaw	Date Sampled: 02/01/13
1710 Franklin Street, Ste. 200		Date Received: 02/01/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/01/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/04/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302013

Lab ID	1302013-008A						
Client ID		A-6-6					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.50	100	0.005	Bromoform	ND<0.50	100	0.005
Bromomethane	ND<0.50	100	0.005	Carbon Tetrachloride	ND<0.50	100	0.005
Chlorobenzene	ND<0.50	100	0.005	Chloroethane	ND<0.50	100	0.005
Chloroform	ND<0.50	100	0.005	Chloromethane	ND<0.50	100	0.005
Dibromochloromethane	ND<0.50	100	0.005	1,2-Dibromoethane (EDB)	ND<0.40	100	0.004
1,2-Dichlorobenzene	ND<0.50	100	0.005	1,3-Dichlorobenzene	ND<0.50	100	0.005
1,4-Dichlorobenzene	ND<0.50	100	0.005	Dichlorodifluoromethane	ND<0.50	100	0.005
1,1-Dichloroethane	ND<0.50	100	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.40	100	0.004
1,1-Dichloroethene	ND<0.50	100	0.005	cis-1,2-Dichloroethene	ND<0.50	100	0.005
trans-1,2-Dichloroethene	ND<0.50	100	0.005	1,2-Dichloropropane	ND<0.50	100	0.005
cis-1,3-Dichloropropene	ND<0.50	100	0.005	trans-1,3-Dichloropropene	ND<0.50	100	0.005
Freon 113	ND<10	100	0.1	Methylene chloride	ND<0.50	100	0.005
1,1,1,2-Tetrachloroethane	ND<0.50	100	0.005	1,1,2,2-Tetrachloroethane	ND<0.50	100	0.005
Tetrachloroethene	7.9	100	0.005	1,1,1-Trichloroethane	ND<0.50	100	0.005
1,1,2-Trichloroethane	ND<0.50	100	0.005	Trichloroethene	ND<0.50	100	0.005
Trichlorofluoromethane	ND<0.50	100	0.005	Vinyl Chloride	ND<0.50	100	0.005

Surrogate Recoveries (%)						
%SS1:	111	%SS2:	94			
%SS3:	79					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Kershaw	Date Sampled: 02/01/13
1710 Franklin Street Ste 200		Date Received: 02/01/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/01/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/04/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302013

Lab ID		1302013-009A					
Client ID		A-6-10					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.20	40	0.005	Bromoform	ND<0.20	40	0.005
Bromomethane	ND<0.20	40	0.005	Carbon Tetrachloride	ND<0.20	40	0.005
Chlorobenzene	ND<0.20	40	0.005	Chloroethane	ND<0.20	40	0.005
Chloroform	ND<0.20	40	0.005	Chloromethane	ND<0.20	40	0.005
Dibromochloromethane	ND<0.20	40	0.005	1,2-Dibromoethane (EDB)	ND<0.16	40	0.004
1,2-Dichlorobenzene	ND<0.20	40	0.005	1,3-Dichlorobenzene	ND<0.20	40	0.005
1,4-Dichlorobenzene	ND<0.20	40	0.005	Dichlorodifluoromethane	ND<0.20	40	0.005
1,1-Dichloroethane	ND<0.20	40	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.16	40	0.004
1,1-Dichloroethene	ND<0.20	40	0.005	cis-1,2-Dichloroethene	ND<0.20	40	0.005
trans-1,2-Dichloroethene	ND<0.20	40	0.005	1,2-Dichloropropane	ND<0.20	40	0.005
cis-1,3-Dichloropropene	ND<0.20	40	0.005	trans-1,3-Dichloropropene	ND<0.20	40	0.005
Freon 113	ND<4.0	40	0.1	Methylene chloride	ND<0.20	40	0.005
1,1,1,2-Tetrachloroethane	ND<0.20	40	0.005	1,1,2,2-Tetrachloroethane	ND<0.20	40	0.005
Tetrachloroethene	3.9	40	0.005	1,1,1-Trichloroethane	ND<0.20	40	0.005
1,1,2-Trichloroethane	ND<0.20	40	0.005	Trichloroethene	ND<0.20	40	0.005
Trichlorofluoromethane	ND<0.20	40	0.005	Vinyl Chloride	ND<0.20	40	0.005

Surrogate Recoveries (%)						
%SS1:	109	%SS2:	95			
%SS3: 78						
Commants:						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Kershaw	Date Sampled: 02/01/13
1710 Franklin Street, Ste. 200		Date Received: 02/01/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/01/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/04/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302013

Lab ID		1302013-011A					
Client ID		A-5-13					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.050	10	0.005	Bromoform	ND<0.050	10	0.005
Bromomethane	ND<0.050	10	0.005	Carbon Tetrachloride	ND<0.050	10	0.005
Chlorobenzene	ND<0.050	10	0.005	Chloroethane	ND<0.050	10	0.005
Chloroform	ND<0.050	10	0.005	Chloromethane	ND<0.050	10	0.005
Dibromochloromethane	ND<0.050	10	0.005	1,2-Dibromoethane (EDB)	ND<0.040	10	0.004
1,2-Dichlorobenzene	ND<0.050	10	0.005	1,3-Dichlorobenzene	ND<0.050	10	0.005
1,4-Dichlorobenzene	ND<0.050	10	0.005	Dichlorodifluoromethane	ND<0.050	10	0.005
1,1-Dichloroethane	ND<0.050	10	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.040	10	0.004
1,1-Dichloroethene	ND<0.050	10	0.005	cis-1,2-Dichloroethene	ND<0.050	10	0.005
trans-1,2-Dichloroethene	ND<0.050	10	0.005	1,2-Dichloropropane	ND<0.050	10	0.005
cis-1,3-Dichloropropene	ND<0.050	10	0.005	trans-1,3-Dichloropropene	ND<0.050	10	0.005
Freon 113	ND<1.0	10	0.1	Methylene chloride	ND<0.050	10	0.005
1,1,1,2-Tetrachloroethane	ND<0.050	10	0.005	1,1,2,2-Tetrachloroethane	ND<0.050	10	0.005
Tetrachloroethene	1.3	10	0.005	1,1,1-Trichloroethane	ND<0.050	10	0.005
1,1,2-Trichloroethane	ND<0.050	10	0.005	Trichloroethene	ND<0.050	10	0.005
Trichlorofluoromethane	ND<0.050	10	0.005	Vinyl Chloride	ND<0.050	10	0.005

Surrogate Recoveries (%)						
%SS1:	112	%SS2:	100			
%SS3:	75					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Kershaw	Date Sampled: 02/01/13
1710 Franklin Street, Ste. 200		Date Received: 02/01/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/01/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/04/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302013

Lab ID	1302013-012A						
Client ID		A-2-11					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.10	20	0.005	Bromoform	ND<0.10	20	0.005
Bromomethane	ND<0.10	20	0.005	Carbon Tetrachloride	ND<0.10	20	0.005
Chlorobenzene	ND<0.10	20	0.005	Chloroethane	ND<0.10	20	0.005
Chloroform	ND<0.10	20	0.005	Chloromethane	ND<0.10	20	0.005
Dibromochloromethane	ND<0.10	20	0.005	1,2-Dibromoethane (EDB)	ND<0.080	20	0.004
1,2-Dichlorobenzene	ND<0.10	20	0.005	1,3-Dichlorobenzene	ND<0.10	20	0.005
1,4-Dichlorobenzene	ND<0.10	20	0.005	Dichlorodifluoromethane	ND<0.10	20	0.005
1,1-Dichloroethane	ND<0.10	20	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.080	20	0.004
1,1-Dichloroethene	ND<0.10	20	0.005	cis-1,2-Dichloroethene	ND<0.10	20	0.005
trans-1,2-Dichloroethene	ND<0.10	20	0.005	1,2-Dichloropropane	ND<0.10	20	0.005
cis-1,3-Dichloropropene	ND<0.10	20	0.005	trans-1,3-Dichloropropene	ND<0.10	20	0.005
Freon 113	ND<2.0	20	0.1	Methylene chloride	ND<0.10	20	0.005
1,1,1,2-Tetrachloroethane	ND<0.10	20	0.005	1,1,2,2-Tetrachloroethane	ND<0.10	20	0.005
Tetrachloroethene	1.5	20	0.005	1,1,1-Trichloroethane	ND<0.10	20	0.005
1,1,2-Trichloroethane	ND<0.10	20	0.005	Trichloroethene	ND<0.10	20	0.005
Trichlorofluoromethane	ND<0.10	20	0.005	Vinyl Chloride	ND<0.10	20	0.005

Surrogate Recoveries (%)						
%SS1:	110	%SS2:	95			
%SS3:	78					
Commants						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Kershaw	Date Sampled: 02/01/13
1710 Franklin Street, Ste. 200		Date Received: 02/01/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 02/01/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/04/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302013

Lab ID	1302013-013A						
Client ID	A-3-11						
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.20	40	0.005	Bromoform	ND<0.20	40	0.005
Bromomethane	ND<0.20	40	0.005	Carbon Tetrachloride	ND<0.20	40	0.005
Chlorobenzene	ND<0.20	40	0.005	Chloroethane	ND<0.20	40	0.005
Chloroform	ND<0.20	40	0.005	Chloromethane	ND<0.20	40	0.005
Dibromochloromethane	ND<0.20	40	0.005	1,2-Dibromoethane (EDB)	ND<0.16	40	0.004
1,2-Dichlorobenzene	ND<0.20	40	0.005	1,3-Dichlorobenzene	ND<0.20	40	0.005
1,4-Dichlorobenzene	ND<0.20	40	0.005	Dichlorodifluoromethane	ND<0.20	40	0.005
1,1-Dichloroethane	ND<0.20	40	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.16	40	0.004
1,1-Dichloroethene	ND<0.20	40	0.005	cis-1,2-Dichloroethene	ND<0.20	40	0.005
trans-1,2-Dichloroethene	ND<0.20	40	0.005	1,2-Dichloropropane	ND<0.20	40	0.005
cis-1,3-Dichloropropene	ND<0.20	40	0.005	trans-1,3-Dichloropropene	ND<0.20	40	0.005
Freon 113	ND<4.0	40	0.1	Methylene chloride	ND<0.20	40	0.005
1,1,1,2-Tetrachloroethane	ND<0.20	40	0.005	1,1,2,2-Tetrachloroethane	ND<0.20	40	0.005
Tetrachloroethene	0.66	40	0.005	1,1,1-Trichloroethane	ND<0.20	40	0.005
1,1,2-Trichloroethane	ND<0.20	40	0.005	Trichloroethene	ND<0.20	40	0.005
Trichlorofluoromethane	ND<0.20	40	0.005	Vinyl Chloride	ND<0.20	40	0.005

Surrogate Recoveries (%)						
%SS1:	111	%SS2:	97			
%SS3:	74					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 74416 WorkOrder: 1302013

EPA Method: SW8260B Extraction: S	W5030B	Spiked Sample ID: 1301757-038A							
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
, a.a., y.c	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	87.8	89.9	2.31	96.4	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	89.2	90.3	1.20	94.3	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	82.2	88.4	7.23	92.2	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	78.9	79.2	0.443	90.3	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	84.8	87.5	3.09	96.2	60 - 116	30	70 - 130
%SS1:	108	0.12	107	108	0.908	107	70 - 130	30	70 - 130
%SS2:	122	0.12	125	124	0.367	126	70 - 130	30	70 - 130
%SS3:	112	0.012	113	111	1.30	114	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 74416 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302013-003A	02/01/13 10:25 AM	1 02/01/13	02/01/13 9:47 PM	1302013-008A	02/01/13 11:15 AM	02/01/13	02/04/13 3:14 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 74433 WorkOrder: 1302013

EPA Method: SW8260B Extraction: S	W5030B			;	Spiked Sam	ple ID:	1302013-013A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	S Acceptance Criteria (		
, a.a., c	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND<0.20	0.050	88.7	85.6	3.56	94	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND<0.16	0.050	87.5	84.7	3.36	93.7	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND<0.16	0.050	84.2	82.6	1.98	85.7	48 - 115	30	70 - 130
1,1-Dichloroethene	ND<0.20	0.050	81.1	78.8	2.92	86.8	46 - 111	30	70 - 130
Trichloroethene	ND<0.20	0.050	106	99.1	6.51	92.1	60 - 116	30	70 - 130
%SS1:	111	0.12	107	107	0	105	70 - 130	30	70 - 130
%SS2:	97	0.12	121	122	1.13	126	70 - 130	30	70 - 130
%SS3:	74	0.012	112	114	1.71	115	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 74433 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302013-009A	02/01/13 11:30 AM	02/01/13	02/04/13 3:57 PM	1302013-011A	02/01/13 12:40 PM	02/01/13	02/04/13 4:40 PM
1302013-012A	02/01/13 1:50 PM	02/01/13	02/04/13 6:05 PM	1302013-013A	02/01/13 2:10 PM	02/01/13	02/04/13 5:24 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1187 Solano	Date Sampled: 02/08/13
1710 Franklin Street, Ste. 200		Date Received: 02/11/13
1770 Hailkini Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Reported: 02/12/13
Oakland, CA 94612	Client P.O.:	Date Completed: 02/12/13

WorkOrder: 1302244

February 13, 2013

Dear Bob:

#### Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: #1187 Solano,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

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	www.mcc Telepho	ne: (8)	77) 252-	926	2 / F	ax:	(925	5) 25	2-9:	269	1		J.	2	9	G	o Fra	cker	EDF		PDF		EDI		Wri	te On	(DW	()	EQ	)uIS				
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Sampler Signate	T Pot				-	_	N	LAT	RIX				M	ETH	OD	8021	1	Gres	carb	ONLY (EPA 8260/8021)	Pes	Are	stick	5	NO	SVC	PAH	/ 200	200.	010	OLV	0		
		SAM	PLING	IJ						_	_	_			VED	as (	13	11.8	ydro	LY	1,00	B's	P P	cidio	260	270	310 (	7.06	0.7	8/6	ISS	108		
SAMPLE ID	Location/ Field Point Name	Date	Time	Containers	Ground Water	Waste Water	Drinking Water	Sea / Water	Soll	Air	Sludge	Other	HCL	HNO,	Other	BTEX & TPH as G	TPH as Diesel (8015)	Total Petroleum Oll & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	MTBE / BTEX ON		EPA 608 / 8082 PCB's; Aroclors / Conge	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8268 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 /	LUFT 5 Metals (200.7 / 200.8 /	Metals (200.7 / 200.8 / 6010 / 6020)	Filter sample for DISSOLVED	1065 8		
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## McCampbell Analytical, Inc.

A-4-9

A-7-0

## **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(925) 252-9262			WorkO	order: 130224	4 Clie	entCode: PEO			
	☐ WaterTrax ☐ WriteOr	nEDF	Excel	EQuIS	<b>✓</b> Email	HardCopy	ThirdParty	J-flag	
Report to:			В	ill to:		Re	quested TAT:	2 da	ys
Bob Clark-Riddell Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200	Email: BRiddell@parcc: PO:	ngeaenv.com		_	iddell ironmental Svc n Street, Ste. 2	TD .	ite Received:	02/11/201	13
Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	ProjectNo: #1187 Soland	)		Oakland, CA			ite Printed:	02/11/20	3
					Requested	Tests (See legen	d below)		
Lab ID Client ID	Matrix	Collection Date	Hold 1	2 3	4 5	6 7	8 9 1	0 11	12

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Α

2/8/2013 13:15

2/8/2013 13:15

Soil

Soil

### Test Legend:

1302244-001

1302244-002

1	8010BMS_S	2	3	4	5
6		7	8	9	10
11	1	12			

**Prepared by: Zoraida Cortez** 

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environment	tal Svcs., Inc.			Date a	and Tim	ne Received:	2/11/2013 4	:16:20 PM
Project Name:	#1187 Solano				LogIn	Review	ved by:		Zoraida Cortez
WorkOrder N°:	1302244	Matrix: Soil			Carrie	er: <u>F</u>	Rob Pringle (M	Al Courier)	
		<u>Chair</u>	of Cu	ustody (CO	OC) Informa	<u>ıtion</u>			
Chain of custody	present?		Yes	<b>✓</b>	No 🗌				
Chain of custody	signed when relinquisl	ned and received?	Yes	✓	No $\square$				
Chain of custody	agrees with sample la	bels?	Yes	✓	No $\square$				
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No $\square$				
Date and Time of	collection noted by Cl	ient on COC?	Yes	<b>✓</b>	No $\square$				
Sampler's name	noted on COC?		Yes	✓	No 🗌				
		<u>s</u>	ample	Receipt	<u>Information</u>				
Custody seals int	act on shipping contain	ner/cooler?	Yes		No 🗆			NA 🗸	
Shipping containe	er/cooler in good condi	tion?	Yes	✓	No $\square$				
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌				
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌				
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No 🗌				
		Sample Prese	rvatio	n and Hol	d Time (HT)	) Inform	<u>nation</u>		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌				
Container/Temp I	Blank temperature		Coole	er Temp:	4.6°C			NA $\square$	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes		No 🗌	No VC	DA vials submit	tted 🗸	
Sample labels ch	ecked for correct pres	ervation?	Yes	✓	No 🗌				
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌			NA 🗸	
Samples Receive	ed on Ice?		Yes	✓	No 🗌				
		(Ice Type	: WE	TICE )					
* NOTE: If the "N	o" box is checked, see	e comments below.							
						==			

Pangea Environmental Svcs., Inc.	Client Project ID: #1187 Solano	Date Sampled: 02/08/13
1710 Franklin Street, Ste. 200		Date Received: 02/11/13
1710 Flankini Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 02/11/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/11/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302244

Lab ID				1302244-001A					
Client ID				A-4-9					
Matrix	latrix Soil								
Compound	Concentration *	DF		Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005		
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005		
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005		
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005		
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004		
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005		
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005		
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004		
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005		
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005		
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005		
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005		
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005		
Tetrachloroethene	0.011	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005		
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	0.0050	1.0	0.005		
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005		

Surrogate Recoveries (%)											
%SS1:	104	%SS2:	114								
%SS3:	115										
Comments											

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1187 Solano	Date Sampled: 02/08/13
1710 Franklin Street, Ste. 200		Date Received: 02/11/13
1710 Frankfill Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 02/11/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 02/12/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302244

Lab ID				1302244-002A						
Client ID				A-7-9						
Matrix	ID A-7-9									
Compound	Concentration *	DF		Compound	Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND<0.010	2.0	0.005	Bromoform	ND<0.010	2.0	0.005			
Bromomethane	ND<0.010	2.0	0.005	Carbon Tetrachloride	ND<0.010	2.0	0.005			
Chlorobenzene	ND<0.010	2.0	0.005	Chloroethane	ND<0.010	2.0	0.005			
Chloroform	ND<0.010	2.0	0.005	Chloromethane	ND<0.010	2.0	0.005			
Dibromochloromethane	ND<0.010	2.0	0.005	1,2-Dibromoethane (EDB)	ND<0.0080	2.0	0.004			
1,2-Dichlorobenzene	ND<0.010	2.0	0.005	1,3-Dichlorobenzene	ND<0.010	2.0	0.005			
1,4-Dichlorobenzene	ND<0.010	2.0	0.005	Dichlorodifluoromethane	ND<0.010	2.0	0.005			
1,1-Dichloroethane	ND<0.010	2.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.0080	2.0	0.004			
1,1-Dichloroethene	ND<0.010	2.0	0.005	cis-1,2-Dichloroethene	ND<0.010	2.0	0.005			
trans-1,2-Dichloroethene	ND<0.010	2.0	0.005	1,2-Dichloropropane	ND<0.010	2.0	0.005			
cis-1,3-Dichloropropene	ND<0.010	2.0	0.005	trans-1,3-Dichloropropene	ND<0.010	2.0	0.005			
Freon 113	ND<0.20	2.0	0.1	Methylene chloride	ND<0.010	2.0	0.005			
1,1,1,2-Tetrachloroethane	ND<0.010	2.0	0.005	1,1,2,2-Tetrachloroethane	ND<0.010	2.0	0.005			
Tetrachloroethene	0.23	2.0	0.005	1,1,1-Trichloroethane	ND<0.010	2.0	0.005			
1,1,2-Trichloroethane	ND<0.010	2.0	0.005	Trichloroethene	ND<0.010	2.0	0.005			
Trichlorofluoromethane	ND<0.010	2.0	0.005	Vinyl Chloride	ND<0.010	2.0	0.005			

Surrogate Recoveries (%)											
	%SS1:	108	%SS2:	113							
	%SS3:	111									
	Comments:										

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 74524 WorkOrder: 1302244

EPA Method: SW8260B Extraction: S	W5030B			;	Spiked Sam	ple ID:	1302119-026A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
, a.a.y.c	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	83.2	88.8	6.54	91.9	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	79.8	83.4	4.36	81.3	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	86.5	92.9	7.10	95.2	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	81.5	86.5	5.94	85.2	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	93	100	7.33	102	60 - 116	30	70 - 130
%SS1:	103	0.12	112	112	0	110	70 - 130	30	70 - 130
%SS2:	109	0.12	107	104	2.52	102	70 - 130	30	70 - 130
%SS3:	105	0.012	83	83	0	81	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 74524 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302244-001A	02/08/13 1:15 PM	02/11/13	02/11/13 11:07 PM	1302244-002A	02/08/13 1:15 PM	02/11/13	02/12/13 12:13 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

A QA/QC Officer

## **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 02/15/13
1710 Franklin Street, Ste. 200		Date Received: 02/19/13
1770 1141141111 541661, 566. 200	Client Contact: Morgan Gillies	Date Reported: 02/21/13
Oakland, CA 94612	Client P.O.:	Date Completed: 02/20/13

WorkOrder: 1302476

February 26, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.



McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Road								Т					C	HA	I	N O	F	CU	ST	OD	YI	RE	CO	RD	_						
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Wel	bsite: www.mc				ain@r	ncca	mpb	ell.co	m				- 1										RUS		24 1			HR		HR	5 DAY
	ne: (925) 252	-9262					_	) 25	2-92	69			_	EL	)F F	<b>₹eq</b>	uire	d? C			orm	-	No	ν	Vrite	On (	DW	) 1	No		
Report To: Mor				Bill To	: Pa	nge	a						_						Ai	aly	sis R	eque	est	_			_	1	Other	_	Comments
Company: Pang													_																		Filter
1710 Franklin St	reet, Suite 20	0, Oakla				74 SEC. 2011		No Hore	/0.0.				4																		Samples
				E-Mai			-		aen	v.cc	m	_	$\dashv$																	- 1	for Metals
Tele: (510) 836-3				ax: (	-				_				$\dashv$																		analysis:
Project #: 1435.0	44000			Projec	t Nai	ne:	Sola	ino (	rou	ıp			$\dashv$		B)															- 1	Yes / No
Project Location			bany	/	-						-		$\dashv$	118)	260	01														-1	
Sampler Signatu	re:		cary			_		7 ACT-1-CV		I M	ETI	HOL	$\vdash$	1/802	s (8	08 P															
		SAMPLI	PLING	, o	ers						ESE			(8015Cm/8021B)	nate	Etho															
SAMPLE ID	LOCATION			Containers	Type Containers								(80	Five fuel oxygenates (8260B)	by EPA MEthod 8010																
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	Name)	Date	Time	l S	.be	Water	Soil	Air	Other	ICE	HCL	8	Other	HgH	ve fi	VOCS									1						
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## McCampbell Analytical, Inc.

EX-SE-5

Soil

## **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1302476

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

☐ WaterTrax WriteOn □ EDF Excel **EQuIS** ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 3 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 02/19/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 02/19/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 5 8 Lab ID 2 3 10 12 Client ID Matrix Collection Date Hold 4 11

Α

2/15/2013 11:30

#### **Test Legend:**

1302476-001

1 8010BMS_S	2	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

	Pangea Enviro							and III		4:U4:56 PW
Project Name:	#1435.002; So	olano Group	1				LogIn	n Revie	wed by:	Zoraida Cortez
WorkOrder N°:	1302476	Mat	rix: <u>Soil</u>				Carrie	er:	Rob Pringle (MAI Courier)	
				<u>Chai</u> ı	<u>ո of C</u> լ	ustody (	(COC) Informa	ation		
Chain of custody	present?				Yes	<b>✓</b>	No 🗆			
Chain of custody	signed when re	linquished a	nd receive	ed?	Yes	<b>✓</b>	No 🗆			
Chain of custody	agrees with sar	mple labels?			Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on C	OC?			Yes	<b>✓</b>	No 🗆			
Date and Time of	f collection note	d by Client	on COC?		Yes	<b>✓</b>	No 🗆			
Sampler's name	noted on COC?				Yes	<b>✓</b>	No 🗌			
				<u>ş</u>	Sample	e Receir	ot Information	<u>1</u>		
Custody seals int	tact on shipping	container/c	ooler?		Yes		No 🗌		NA 🗹	
Shipping containe	er/cooler in goo	d condition?			Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bo	ttles?			Yes	<b>✓</b>	No 🗌			
Sample containe	rs intact?				Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indi	cated test?			Yes	<b>✓</b>	No 🗌			
			Sample	Prese	rvatio	n and F	lold Time (HT	) Infori	<u>mation</u>	
All samples recei	ived within holdi	ng time?			Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperati	ure			Coole	er Temp	: 5.4°C		NA 🗆	
Water - VOA vial	s have zero hea	adspace / no	bubbles?		Yes		No 🗌	No V	OA vials submitted 🗹	
Sample labels ch	ecked for corre	ct preservat	on?		Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon rece	ipt (pH<2)?			Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?				Yes	<b>✓</b>	No 🗌			
			(lo	е Туре	: WE	T ICE	)			
* NOTE: If the "N	lall bassin abasil	,		0147						

Pangea Environmental Svcs., Inc.		Date Sampled: 02/15/13		
1710 Franklin Street, Ste. 200	Group	Date Received: 02/19/13		
1710 Plankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 02/19/13		
Oakland, CA 94612	Client P.O.:	Date Analyzed: 02/20/13		

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

 Extraction Method:
 SW5030B
 Analytical Method:
 SW8260B
 Work Order:
 1302476

 Lab ID
 1302476-001A
 EX-SE-5
 EX-SE-5

Client ID				EX-SE-5			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.012	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)											
%SS1:	97	%SS2:	110								
%SS3:	109										
Comments:											

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 74810 WorkOrder: 1302476

EPA Method: SW8260B Extraction:	SW5030B			Spiked Sam	ple ID:	1302440-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, and yet	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	83.6	82.9	0.773	90.4	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	85.7	86	0.351	93.1	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	83.4	83.3	0.144	89	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	82	81.6	0.516	91.7	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	83.4	82	1.65	88.9	60 - 116	30	70 - 130
%SS1:	98	0.12	106	108	2.28	107	70 - 130	30	70 - 130
%SS2:	110	0.12	109	109	0	109	70 - 130	30	70 - 130
%SS3:	112	0.012	109	110	1.02	107	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 74810 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled Date Extracted Date Analyzed	
1302476-001A	02/15/13 11:30 AM	02/19/13	02/20/13 12:43 PM			

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

## **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 02/18/13
1710 Franklin Street, Ste. 200		Date Received: 02/19/13
1770 1141141111 541661, 566. 200	Client Contact: Morgan Gillies	Date Reported: 02/21/13
Oakland, CA 94612	Client P.O.:	Date Completed: 02/21/13

WorkOrder: 1302475

February 26, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 3 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.



#### McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Road \ 2() CHAIN OF CUSTODY RECORD TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Morgan Gillies Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: mgillies@pangeaenv.com for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project #: 1435.002 Project Name: Solano Group Yes / No Project Location: 1187 Solapo Ave, Albany Sampler Signature: METHOD SAMPLING Type Containers MATRIX PRESERVED Containers LOCATION SAMPLE ID (Field Point Name) Date Time Other HNO3 2/18/13/14:00 15:00 TUBE VOA Relinguished By; Time: Received By-COMMENTS: GOOD CONDITION HEAD SPACE ABSENT Relinquished By: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Received By: Relinquished By: Date: Time: VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

## **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701

WorkOrder: 1302475 ClientCode: PEO

. ,																	
		WaterTrax	WriteOn	EDF		Excel		EQuIS	<b>✓</b>	Email		HardCop	ру	ThirdPa	ırty	J-fla	g
Report to:						В	ill to:					F	Reque	sted TAT:		2 d	lays
O	onmental Svcs., Inc. Street, Ste. 200 94612	cc: PO:	ngillies@pange 1435.002; Sol	eaenv.com; tdelafu	uente@	Фра	Pang 1710	Frankl	kiddell vironmer in Stree A 94612	t, Ste. 2	,	1		Received: Printed:		)2/19/2 )2/19/2	
									Red	quested	Tests (	See lege	nd be	low)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1302475-001	EX-SE2-6		Soil	2/18/2013 14:00		Α											
1302475-002	EX-E-7		Soil	2/18/2013 15:00		Α											
1302475-003	EX-SE		Water	2/18/2013 14:15			Α										

#### Test Legend:

1302475-003

1 8010BMS_S	2 8010BMS_W	3	4	5
6	7	8	9	10
11	12			

Prepared by: Zoraida Cortez

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environment	al Svcs., Inc.			Date a	and Time	Received:	2/19/2013	1:00:40 PM
Project Name:	#1435.002; Solano G	iroup			LogIn	Reviewed	d by:		Zoraida Cortez
WorkOrder N°:	1302475	Matrix: Soil/Water			Carrie	er: <u>Rol</u>	b Pringle (M	IAI Courier)	
		<u>Chai</u>	n of Cւ	ustody (CO	OC) Informa	<u>ition</u>			
Chain of custody	present?		Yes	<b>✓</b>	No 🗆				
Chain of custody	signed when relinquisl	ned and received?	Yes	<b>✓</b>	No 🗌				
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌				
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$				
Date and Time of	collection noted by Cl	ient on COC?	Yes	<b>✓</b>	No $\square$				
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$				
		<u> </u>	Sample	Receipt	<u>Information</u>	l.			
Custody seals int	act on shipping contain	ner/cooler?	Yes		No 🗌			NA 🗹	
Shipping containe	er/cooler in good condi	tion?	Yes	<b>✓</b>	No 🗌				
Samples in prope	er containers/bottles?		Yes	✓	No $\square$				
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌				
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No $\square$				
		Sample Prese	ervatio	n and Hol	d Time (HT)	) Informat	tion .		
All samples recei	ved within holding time	9?	Yes	<b>✓</b>	No $\square$				
Container/Temp I	Blank temperature		Coole	er Temp:	5.4°C			NA 🗌	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes	✓	No 🗌	No VOA	vials subm	itted	
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌				
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌			NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌				
		(Ice Type	e: WE	TICE )					
* NOTE: If the "N	o" box is checked, see	comments below.							

Lab ID

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.		Date Sampled: 02/18/13
1710 Franklin Street, Ste. 200	Group	Date Received: 02/19/13
1710 Plankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 02/19/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 02/20/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1302475-001A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302475

Client ID		EX-SE2-6								
Matrix				Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005			
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005			
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005			
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005			
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004			
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005			
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005			
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004			
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005			
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005			
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005			
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005			
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005			
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005			
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005			
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005			

Surrogate Recoveries (%)								
%SS1:	95	%SS2:	110					
%SS3:	102							
Comments:								

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.		Date Sampled: 02/18/13
1710 Franklin Street, Ste. 200	Group	Date Received: 02/19/13
1710 Plankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 02/19/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 02/20/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

 Extraction Method:
 SW5030B
 Analytical Method:
 SW8260B
 Work Order:
 1302475

 Lab ID
 1302475-002A

 Client ID
 EX-E-7

Matrix		Soil							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005		
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005		
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005		
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005		
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004		
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005		
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005		
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004		
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005		
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005		
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005		
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005		
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005		
Tetrachloroethene	0.055	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005		
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005		
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005		

Surrogate Recoveries (%)								
%SS1:	104	%SS2:	108					
%SS3:	108							
Comments:								

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Lab ID

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Pangea Environmental Svcs., Inc.		Date Sampled: 02/18/13
1710 Franklin Street, Ste. 200	Group	Date Received: 02/19/13
1710 Plankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 02/20/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 02/20/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1302475-003A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302475

Client ID				EX-SE			
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<2.5	5.0	0.5	Bromoform	ND<2.5	5.0	0.5
Bromomethane	ND<2.5	5.0	0.5	Carbon Tetrachloride	ND<2.5	5.0	0.5
Chlorobenzene	ND<2.5	5.0	0.5	Chloroethane	ND<2.5	5.0	0.5
Chloroform	ND<2.5	5.0	0.5	Chloromethane	ND<2.5	5.0	0.5
Dibromochloromethane	ND<2.5	5.0	0.5	1,2-Dibromoethane (EDB)	ND<2.5	5.0	0.5
1,2-Dichlorobenzene	ND<2.5	5.0	0.5	1,3-Dichlorobenzene	ND<2.5	5.0	0.5
1,4-Dichlorobenzene	ND<2.5	5.0	0.5	Dichlorodifluoromethane	ND<2.5	5.0	0.5
1,1-Dichloroethane	ND<2.5	5.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND<2.5	5.0	0.5
1,1-Dichloroethene	ND<2.5	5.0	0.5	cis-1,2-Dichloroethene	ND<2.5	5.0	0.5
trans-1,2-Dichloroethene	ND<2.5	5.0	0.5	1,2-Dichloropropane	ND<2.5	5.0	0.5
cis-1,3-Dichloropropene	ND<2.5	5.0	0.5	trans-1,3-Dichloropropene	ND<2.5	5.0	0.5
Freon 113	ND<50	5.0	10	Methylene chloride	ND<2.5	5.0	0.5
1,1,1,2-Tetrachloroethane	ND<2.5	5.0	0.5	1,1,2,2-Tetrachloroethane	ND<2.5	5.0	0.5
Tetrachloroethene	93	5.0	0.5	1,1,1-Trichloroethane	ND<2.5	5.0	0.5
1,1,2-Trichloroethane	ND<2.5	5.0	0.5	Trichloroethene	ND<2.5	5.0	0.5
Trichlorofluoromethane	ND<2.5	5.0	0.5	Vinyl Chloride	ND<2.5	5.0	0.5

Surrogate Recoveries (%)										
%SS1:	112	%SS2:	106							
%SS3:	103									
Comments:										

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 74810 WorkOrder: 1302475

EPA Method: SW8260B Extraction:	SW5030B					;	Spiked Sam	ple ID:	1302440-001A
Analyte	Sample	Spiked	piked MS MSD MS-MSD LCS			Acc	Acceptance Criteria (%)		
, and yet	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	83.6	82.9	0.773	90.4	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	85.7	86	0.351	93.1	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	83.4	83.3	0.144	89	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	82	81.6	0.516	91.7	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	83.4	82	1.65	88.9	60 - 116	30	70 - 130
%SS1:	98	0.12	106	108	2.28	107	70 - 130	30	70 - 130
%SS2:	110	0.12	109	109	0	109	70 - 130	30	70 - 130
%SS3:	112	0.012	109	110	1.02	107	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 74810 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302475-001A	02/18/13 2:00 PM	1 02/19/13	02/20/13 11:20 AM	1302475-002A	02/18/13 3:00 PM	02/19/13	02/20/13 12:02 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 74866 WorkOrder: 1302475

EPA Method: SW8260B Extraction: S	W5030B						Spiked Sam	ple ID:	1302449-023A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, a.d.y.c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	78	78.8	0.979	95.8	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	82.2	84.3	2.51	106	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	79.2	78.5	0.813	97.5	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	83.4	81.7	2.00	97.5	70 - 130	20	70 - 130
Trichloroethene	ND	10	81	81.3	0.408	95.2	70 - 130	20	70 - 130
%SS1:	103	25	109	107	1.65	108	70 - 130	20	70 - 130
%SS2:	105	25	103	104	0.661	105	70 - 130	20	70 - 130
%SS3:	100	2.5	97	102	4.89	106	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 74866 SUMMARY

Lab ID	Date Sampled Date E		Date Analyzed	Lab ID	Date Sa	ampled	Date Extracted	Date Analyzed	
1302475-003A	02/18/13 2:15 PM	1 02/20/13	02/20/13 1:09 PM						

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

## **Analytical Report**

Pangea Environmental Svcs., Inc.	ronmental Svcs., Inc. Client Project ID: #1435.002; Solano Group		13
1710 Franklin Street, Ste. 200		Date Received: 02/22/	13
1770 1141141111 541661, 566. 200	Client Contact: Morgan Gillies	Date Reported: 02/25/	13
Oakland, CA 94612	Client P.O.:	Date Completed: 02/25/	13

WorkOrder: 1302670

February 27, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1302670

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR 48 HR 72 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) Telephone: (925) 252-9262 Fax: (925) 252-9269 Bill To: Pangea Report To: Morgan Gillies Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: mgillies@pangeaenv.com for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project #: 1435.002 Project Name: Solano Group Yes / No Five fuel oxygenates (8260B) Project Location: 1187 Solano Ave, Albany VOCs by EPA MEthod 8010 Sampler Signature: METHOD SAMPLING MATRIX Type Containers PRESERVED Containers LOCATION SAMPLE ID (Field Point Sludge Other ICE Name) Date Time HNO, HCL Soil EX-N-8 2122/13/12:15 Reliaquished Bg. Received By: ICE/t° Date: Time: COMMENTS: GOOD CONDITION 2/22/3 HEAD SPACE ABSENT Relinguished By-Date: Time: Received By DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Received By: Date: Time: VOAS 0&G METALS OTHER PRESERVATION pH<2 Page 2 of 6

## McCampbell Analytical, Inc.

EX-N-8

Soil

## **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1302670 ClientCode: PEO **EQuIS**  WriteOn EDF Excel ✓ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 1 day Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 02/22/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Oakland, CA 94612 Date Printed: 02/22/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 5 8 Lab ID 2 3 10 12 Client ID Matrix Collection Date Hold 4 11

Α

2/22/2013 12:15

#### **Test Legend:**

1302670-001

1	8010BMS_S	2		3	4	5
6		7		8	9	10
11		12	1			

Prepared by: Maria Venegas

**Comments:** 24hr Rush

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environment	al Svcs., Inc.			Date a	and Time Received:	2/22/2013 5	17:45 PM
Project Name:	#1435.002; Solano G	iroup			LogIn	Reviewed by:		Maria Venegas
WorkOrder N°:	1302670	Matrix: Soil			Carrie	er: Rob Pringle (M	IAI Courier)	
		Chain	of Cu	ıstody (COC	) Informa	<u>tion</u>		
Chain of custody	present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquisl	ned and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No $\square$			
Date and Time of	f collection noted by Cl	ient on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$			
		<u>s</u>	ample	Receipt Info	ormation			
Custody seals int	act on shipping contain	ner/cooler?	Yes		No 🗌		NA 🗸	
Shipping containe	er/cooler in good condi	tion?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌			
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No 🗌			
		Sample Prese	rvatio	n and Hold 1	ime (HT)	Information		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp: 6.4	4°C		NA $\square$	
Water - VOA vial	s have zero headspace	e / no bubbles?	Yes		No 🗌	No VOA vials submi	itted 🗹	
Sample labels ch	ecked for correct prese	ervation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No $\square$		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No $\square$			
		(Ice Type	: WE	TICE )				
* NOTE: If the "N	lo" box is checked, see	comments below.						
	======	======			:			======

Lab ID

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.		Date Sampled: 02/22/13		
1710 Franklin Street, Ste. 200	Group	Date Received: 02/22/13		
1/10 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 02/22/13		
Oakland, CA 94612	Client P.O.:	Date Analyzed: 02/23/13		

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1302670-001A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1302670

Client ID				EX-N-8			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
%SS1:	105	%SS2:	106						
%SS3:	97								
Comments:		-							

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 74989 WorkOrder: 1302670

EPA Method: SW8260B Extraction: SW5030B Spiked Sample ID: 1									
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, may to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	86.5	87.1	0.763	90.9	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	77.4	77.4	0	83.6	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	78.2	77.7	0.680	82.4	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	86	82.8	3.79	93	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	87.1	84.7	2.84	92.9	60 - 116	30	70 - 130
%SS1:	105	0.12	106	106	0	107	70 - 130	30	70 - 130
%SS2:	106	0.12	109	109	0	110	70 - 130	30	70 - 130
%SS3:	97	0.012	102	104	1.24	100	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 74989 SUMMARY

L	ab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1	302670-001A	02/22/13 12:15 PM	M 02/22/13	02/23/13 2:09 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

## **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 02/25/13
1710 Franklin Street, Ste. 200		Date Received: 02/26/13
1770 Training Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 02/28/13
Oakland, CA 94612	Client P.O.:	Date Completed: 02/28/13

WorkOrder: 1302733

February 28, 2013

Dear Morgan:

#### Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

302733

#### CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL, INC. TURN AROUND TIME 1534 Willow Pass Road Pittsburg, CA 94565 24 HR 72 HR 5 DAY RUSH Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) Write On (DW) No No Fax: (925) 252-9269 Telephone: (925) 252-9262 Bill To: Pangea Analysis Request Other Comments Report To: Morgan Gillies Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: mgillies@pangeaenv.com for Metals Fax: (510) 836-3709 Tele: (510) 836-3702 analysis: Project Name: Solano Group Project #: 1435.002 Yes / No Five fuel oxygenates (8260B) Project Location: 1187 Solano Ave, Albany TPHg/BTEX (8015Cm/8021B) VOCs by EPA MEthod 8010 Sampler Signature: METHOD MATRIX SAMPLING Type Containers PRESERVED # Containers LOCATION SAMPLE ID (Field Point Water Sludge HNO3 Name) Date Time Other ICE Soil ICE/to 4 COMMENTS: Received By Relinquished By: Time: GOOD CONDITION HEAD SPACE ABSENT Relinquished By: Received By: DECHLORINATED IN LAB Date: Time: APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

Client ID

EX-E-GW

EX-N-GW

Matrix

Water

Water

## **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1302733

2

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3

5

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Page 1 of 1

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12

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(320) 202 3202									
	WaterTrax	WriteOn	EDF	Excel	EQuIS	<b>✓</b> Email	HardCopy	ThirdParty	J-flag
eport to:				В	ill to:		Req	uested TAT:	2 days
Morgan Gillies	Email: n	ngillies@pangea	env.com; tdela	ifuente@pa	Bob Clark-Rid	ldell			
Pangea Environmental Svcs., Inc.	cc:				Pangea Enviro	onmental Svcs., Ir	nc.		
1710 Franklin Street, Ste. 200	PO:				1710 Franklin	Street, Ste. 200	Dat	te Received:	02/26/2013
Oakland, CA 94612	ProjectNo: #	1435.002; Solan	o Group		Oakland, CA 9	94612	Dat	te Printed:	02/26/2013
(510) 836-3700 FAX: (510) 836-3709									
						Requested Test	s (See legend	below)	

Collection Date Hold

2/25/2013 15:30

2/25/2013 15:40

#### Test Legend:

Lab ID

1302733-001

1302733-002

1 8010BMS_W	2	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environment	tal Svcs., Inc.			Date a	and Ti	me Received:	2/26/2013 5	:31:22 PM
Project Name:	#1435.002; Solano G	Group			LogIn	Revie	ewed by:		Zoraida Cortez
WorkOrder N°:	1302733	Matrix: Water			Carrie	er:	Rob Pringle (MA	Al Courier)	
		<u>Chai</u>	ո of Cւ	ustody (CO	C) Informat	<u>ıtion</u>			
Chain of custody	present?		Yes	<b>✓</b>	No 🗆				
Chain of custody	signed when relinquish	ned and received?	Yes	<b>✓</b>	No 🗌				
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌				
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No $\square$				
Date and Time of	collection noted by Cl	ient on COC?	Yes	<b>✓</b>	No $\square$				
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌				
		<u>s</u>	ample	Receipt In	<u>formation</u>				
Custody seals int	act on shipping contair	ner/cooler?	Yes		No 🗌			NA 🗸	
Shipping contained	er/cooler in good condi	tion?	Yes	<b>✓</b>	No 🗌				
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No $\square$				
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌				
Sufficient sample	volume for indicated to	est?	Yes	<b>✓</b>	No $\square$				
		Sample Prese	rvatio	n and Hold	Time (HT)	) Infor	mation		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌				
Container/Temp B	Blank temperature		Coole	er Temp: 4	°C			NA 🗌	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes	<b>✓</b>	No 🗌	No V	OA vials submit	ted	
Sample labels ch	ecked for correct prese	ervation?	Yes	<b>✓</b>	No 🗌				
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌			NA 🗸	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗌				
		(Ice Type	: WE	TICE )					
* NOTE: If the "N	o" box is checked, see	comments below.							
						==	=====		

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 02/25/13
1710 Familia Stand St. 200	Group	Date Received: 02/26/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 02/26/13-02/27/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 02/26/13-02/27/13

Lab ID	1302733-001A	1302733-002A			
Client ID	EX-E-GW	EX-N-GW		Reporting DF	
Matrix	W	W		S	W
DF	50	1			
Compound		Conce	entration	μg/kg	μg/L
Bromodichloromethane	ND<25	ND		NA	0.5
Bromoform	ND<25	ND		NA	0.5
Bromomethane	ND<25	ND		NA	0.5
Carbon Tetrachloride	ND<25	ND		NA	0.5
Chlorobenzene	ND<25	ND		NA	0.5
Chloroethane	ND<25	ND		NA	0.5
Chloroform	ND<25	ND		NA	0.5
Chloromethane	ND<25	ND		NA	0.5
Dibromochloromethane	ND<25	ND		NA	0.5
1,2-Dibromoethane (EDB)	ND<25	ND		NA	0.5
1,2-Dichlorobenzene	ND<25	ND		NA	0.5
1,3-Dichlorobenzene	ND<25	ND		NA	0.5
1,4-Dichlorobenzene	ND<25	ND		NA	0.5
Dichlorodifluoromethane	ND<25	ND		NA	0.5
1,1-Dichloroethane	ND<25	ND		NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<25	ND		NA	0.5
1,1-Dichloroethene	ND<25	ND		NA	0.5
cis-1,2-Dichloroethene	ND<25	0.71		NA	0.5
trans-1,2-Dichloroethene	ND<25	ND		NA	0.5
1,2-Dichloropropane	ND<25	ND		NA	0.5
cis-1,3-Dichloropropene	ND<25	ND		NA	0.5
trans-1,3-Dichloropropene	ND<25	ND		NA	0.5
Freon 113	ND<500	ND		NA	10
Methylene chloride	ND<25	ND		NA	0.5
1,1,1,2-Tetrachloroethane	ND<25	ND		NA	0.5
1,1,2,2-Tetrachloroethane	ND<25	ND		NA	0.5
Tetrachloroethene	750	8.3		NA	0.5
1,1,1-Trichloroethane	ND<25	ND		NA	0.5
1,1,2-Trichloroethane	ND<25	ND		NA	0.5
Trichloroethene	ND<25	1.4		NA	0.5
Trichlorofluoromethane	ND<25	ND		NA	0.5
Vinyl Chloride	ND<25	ND		NA	0.5
		rrogate Recoverie	s (%)		
%SS1:	104	102			
%SS2:	104	96			
%SS3:	94	93			
G .				<u> </u>	

	Su	irrogate Recoverie	S (%)	
%SS1:	104	102		
%SS2:	104	96		
%SS3:	94	93		
Comments				

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 75079 WorkOrder: 1302733

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1302614-004B
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, a.a., c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	81.8	79	3.40	95.9	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	98.1	96.3	1.87	106	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	94.4	95.1	0.812	104	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	92.1	92.5	0.463	107	70 - 130	20	70 - 130
Trichloroethene	ND	10	88.4	87.4	1.05	103	70 - 130	20	70 - 130
%SS1:	103	25	102	103	0.686	101	70 - 130	20	70 - 130
%SS2:	97	25	99	95	3.43	99	70 - 130	20	70 - 130
%SS3:	94	2.5	89	91	1.76	91	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75079 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302733-001A	02/25/13 3:30 PM	1 02/27/13	02/27/13 3:02 PM	1302733-002A	02/25/13 3:40 PM	02/26/13	02/26/13 10:03 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

A QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/05/13	
1710 Franklin Street, Ste. 200		Date Received: 03/06/13	
1710 Hankim Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 03/11/13	
Oakland, CA 94612	Client P.O.:	Date Completed: 03/08/13	

WorkOrder: 1303130

March 12, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 3 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

Wel	McCAMPBELL ANALYTICAL, INC.  1534 Willow Pass Road Pittsburg, CA 94565  Website: www.mccampbell.com Telephone: (925) 252-9262  Report To: Morgan Gillies  McCAMPBELL ANALYTICAL, INC.  1534 Willow Pass Road Pittsburg, CA 94565  Email: main@mccampbell.com Fax: (925) 252-9269  Report To: Morgan Gillies  Bill To: Pangea							CHAIN OF CUSTODY RECORD TURN AROUND TIME								5 DAY															
Report To: Mor	gan Gillies		1	Bill T	o: Pa	ngea													Ana	lysis	Re	que	t					C	ther	(	omments
Company: Pang	ea Environm	ental Ser	vices, In	c.													188	Т	T	1											
1710 Franklin St	reet, Suite 20	0, Oakla	and, CA	94612	2																										ilter
5	-1.2.011		E	E-Mai	il: mg	illies	@pa	ngea	en	v.co	m																				amples or Metals
Tele: (510) 836-3	3702		I	ax:	(510)	836-3	709																				1			100	nalysis:
Project #: 1435.0	The state of the s		F	rojec	et Nan	ne: S	olar	io G	rou	р																					es / No
Project Location		Ave, Al	bany	, ,			11 1 57							(S)																1 3	637110
Sampler Signatu	7777	ele	Lely	1										321E	9	010															
		SAMI	PLING		sus	N	IAT	RIX		PRE	ETH		D	TPHg/BTEX (8015Cm/8021B) Five fuel oxygenates (8260B)		VOCs by EPA MEthod 8010	R														
	LOCATION			ers	ain e								٦	8015	0	ME									- 17						
SAMPLE ID	(Field Point	Lame	10000	Containers	Type Containers					9.1				EX OX		EPA									1						
	Name)	Date	Time	ont	e C	ter	200	dge	er	E 1	10	5 3	5	Ene Fine		s by												ċ			
				# C	2	Water	Air	Sludge	Other	ICE	HCL	HNO	Ottner	TPHg/BTEX Five fuel ox	1	8															
NELLI	-	2/10	4120	1	-		/		$\dashv$	7		-	+		1	/	+	+	+	-	-			-	+	-	+		+	+	10 ODGE
EX-F1-11		3/5/13	4:30	1	TVE		7			-		-	+	-		X	+	+	+	H	-					-				_ A	10 OVEL
EX-F2-7 SW-1-4	Language Control		4:40	1															1							_				_	
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## McCampbell Analytical, Inc.

EX-F1-11

EX-F2-7

SW-1-4

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1303130

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

□ EDF ☐ WaterTrax WriteOn Excel **EQuIS** ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 5 days Morgan Gillies mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Email: Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 03/06/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Oakland, CA 94612 Date Printed: 03/06/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 2 5 8 Lab ID 3 4 10 12 Client ID Matrix Collection Date Hold 11

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3/5/2013 16:30

3/5/2013 16:40

3/5/2013 16:50

Soil

Soil

Soil

#### **Test Legend:**

1303130-001

1303130-002

1303130-003

1	8010BMS_S	2	3	4	5	
6		7	8	9	10	
11		12				

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	and Tin	ne Received:	3/6/2013 5:	04:09 PM
Project Name:	#1435.002; Solano G	Group			LogIn	Reviev	ved by:		Jena Alfaro
WorkOrder N°:	1303130	Matrix: Soil			Carrie	er: <u>[</u>	Rob Pringle (M	IAI Courier)	
		<u>Chair</u>	n of Cu	ustody (CC	OC) Informa	<u>ation</u>			
Chain of custody	present?		Yes	<b>✓</b>	No 🗌				
Chain of custody	signed when relinquis	ned and received?	Yes	<b>✓</b>	No 🗌				
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌				
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No 🗌				
Date and Time of	collection noted by Cl	ient on COC?	Yes	✓	No 🗌				
Sampler's name	noted on COC?		Yes	✓	No 🗌				
		<u>s</u>	ample	Receipt I	<u>nformation</u>	ļ.			
Custody seals int	act on shipping contain	ner/cooler?	Yes		No 🗌			NA 🗸	
Shipping contained	er/cooler in good condi	tion?	Yes	<b>✓</b>	No 🗌				
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌				
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌				
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No 🗌				
		Sample Prese	rvatio	n and Hole	d Time (HT)	) Inforn	<u>nation</u>		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌				
Container/Temp I	Blank temperature		Coole	er Temp:	2.8°C			NA 🗌	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes		No 🗌	No V	OA vials submi	itted 🗸	
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌				
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌			NA 🗸	
Samples Receive	ed on Ice?		Yes	✓	No 🗌				
		(Ice Type	: WE	TICE )					
* NOTE: If the "N	o" box is checked, see	e comments below.							
						==:		====	

Pangea Environmental Svcs., Inc.	•	Date Sampled: 03/05/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/06/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/06/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/07/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303130

Lab ID		1303130-001A										
Client ID				EX-F1-11								
Matrix				Soil								
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit					
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005					
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005					
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005					
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005					
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004					
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005					
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005					
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004					
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005					
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005					
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005					
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005					
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005					
Tetrachloroethene	0.083	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005					
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005					
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005					

Surrogate Recoveries (%)									
%SS1: 93 %SS2: 109									
%SS3:	116								

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/05/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/06/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/06/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/07/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303130

Lab ID		1303130-002A EX-F2-7									
Client ID  Matrix				Soil							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit				
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.003				
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005				
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005				
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005				
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004				
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005				
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005				
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004				
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005				
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005				
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005				
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005				
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005				
Tetrachloroethene	0.025	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005				
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.003				
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005				

Surrogate Recoveries (%)									
%SS1:	87	%SS2:	110						
%SS3:	105								
C									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/05/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/06/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/06/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/07/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303130

Lab ID		1303130-003A										
Client ID				SW-1-4								
Matrix				Soil								
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit					
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005					
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005					
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005					
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005					
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004					
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005					
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005					
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004					
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005					
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005					
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005					
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005					
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005					
Tetrachloroethene	0.021	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005					
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005					
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005					

Surrogate Recoveries (%)									
%SS1: 94 %SS2: 109									
%SS3: 118									
Commonta									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75211 WorkOrder: 1303130

EPA Method: SW8260B Extraction: SW5030B Sp							Spiked Sample ID: 1303061-0			
Analyte	Sample		MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)	
, analyse	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Chlorobenzene	ND	0.050	84.1	84.9	0.883	85.7	61 - 108	30	70 - 130	
1,2-Dibromoethane (EDB)	ND	0.050	102	101	0.984	107	54 - 119	30	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	0.050	85.7	81.8	4.69	87.2	48 - 115	30	70 - 130	
1,1-Dichloroethene	ND	0.050	78.1	66.9	15.4	80	46 - 111	30	70 - 130	
Trichloroethene	ND	0.050	91.1	86.8	4.79	88.3	60 - 116	30	70 - 130	
%SS1:	92	0.12	92	86	7.50	90	70 - 130	30	70 - 130	
%SS2:	117	0.12	116	110	4.76	113	70 - 130	30	70 - 130	
%SS3:	103	0.012	102	105	2.93	104	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75211 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303130-001A	03/05/13 4:30 PM	03/06/13	03/07/13 10:18 PM	1303130-002A	03/05/13 4:40 PM	03/06/13	03/07/13 12:39 PM
1303130-003A	03/05/13 4:50 PM	03/06/13	03/07/13 11:00 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/06/13
1710 Franklin Street, Ste. 200		Date Received: 03/06/13
1710 1141141111 541001, 510. 200	Client Contact: Morgan Gillies	Date Reported: 03/07/13
Oakland, CA 94612	Client P.O.:	Date Completed: 03/07/13

WorkOrder: 1303129

March 07, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

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Tele: (510) 836-	3702			-	(510)	NAME OF TAXABLE PARTY.	demonstration for	***	12211																							analysis:
Project #: 1435.				Proje	ct Nai	me:	Sol	yno (	Gro	up			_					100			. 1		20	9								Yes / No
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## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1303129 ClientCode: PEO ☐ WaterTrax ☐ WriteOn □ EDF Excel **EQuIS** ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 1 day Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 03/06/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 03/06/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 2 5 8 Lab ID 3 4 10 12 Client ID Matrix Collection Date Hold 11 1303129-001 EX-F3-6 3/6/2013 10:20 Soil Α 1303129-002 EX-F4-6

Α

3/6/2013 10:30

Soil

#### Test Legend:

1	8010BMS_S	2	3	4	5	
6		7	8	9	10	
11		12				

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

	ime: Pang
Chain of Custody present?  Yes	lame: #143
Chain of custody present?  Chain of custody signed when relinquished and received?  Yes	er N°: 1303
Chain of custody signed when relinquished and received? Yes	
Chain of custody agrees with sample labels?  Sample IDs noted by Client on COC?  Yes  No  No  No  No  No  No  No  No  No  N	custody prese
Sample IDs noted by Client on COC?  Pes No Date and Time of collection noted by Client on COC?  Sampler's name noted on COC?  Yes No Sample Receipt Information  Custody seals intact on shipping container/cooler?  Shipping container/cooler in good condition?  Sample sin proper containers/bottles?  Sample containers intact?  Sufficient sample volume for indicated test?  Yes No Sample volume for indicated test?  Sample Preservation and Hold Time (HT) Information  All samples received within holding time?  Yes No Soler Temp: 2.8°C NA Soler NA Soler Temp: 2.8°C NA Soler NA Soler No No No VOA vials submitted Soler No No No VOA vials submitted Soler Soler Preservation?  No No No VOA vials submitted Soler No Soler Preservation?	custody signe
Date and Time of collection noted by Client on COC?  Yes  No  No  Sampler's name noted on COC?  Yes  No  No  No  NA  A Sample Receipt Information  Custody seals intact on shipping container/cooler? Yes  No  No  NA  Shipping container/cooler in good condition? Yes  No  Samples in proper containers/bottles? Yes  No  Sample containers intact? Yes  No  Sufficient sample volume for indicated test? Yes  No  No  Sample Preservation and Hold Time (HT) Information  All samples received within holding time? Yes  No  No  Sample Preservation and Hold Time (HT) Information  All samples received within holding time? Yes  No  No  No  No  No  No  No VOA vials submitted  Sample labels checked for correct preservation? Yes  No  No  No  No VOA vials submitted  Sample labels checked for correct preservation? Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  Yes  No  No  No VOA vials submitted  Yes  No  No  No VOA vials submitted  Yes  Yes  No  No  No VOA vials submitted  Yes  Yes  No  No  No VOA vials submitted  Yes  Yes  Yes  Yes  Yes  No  No  No VOA vials submitted  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Y	custody agree
Sample Receipt Information  Custody seals intact on shipping container/cooler? Yes No No NA Shipping container/cooler in good condition? Yes No No Samples in proper containers/bottles? Yes No Sample containers intact? Yes No Sufficient sample volume for indicated test? Yes No No Sample seceived within holding time? Yes No No Samples received within holding time? Yes No No Sample received within holding time? Yes No No Sample Sample received within holding time? Yes No No No No No No No No No No No No No	Ds noted by C
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Shipping container/cooler in good condition?  Yes No Samples in proper containers/bottles?  Yes No Sample containers intact?  Yes No Sample containers intact?  Yes No Sample volume for indicated test?  Yes No Sample Preservation and Hold Time (HT) Information  All samples received within holding time?  Yes No Sample Preservation and Hold Time (HT) Information  Container/Temp Blank temperature  Cooler Temp: 2.8°C  NA Sample labels checked for correct preservation?  Yes No No No VOA vials submitted Sample labels checked for correct preservation?	
Samples in proper containers/bottles?  Yes No Sample containers intact?  Yes No Sufficient sample volume for indicated test?  Yes No Sufficient sample volume for indicated test?  Sample Preservation and Hold Time (HT) Information  All samples received within holding time?  Yes No Somple Indicated test?  Yes No Somple Indicated test?  No Sample Indicated test?  No Sample Indicated test?  No No No VOA vials submitted Sample Indicated test?  No Sample Indicated test?  No Sample Indicated test?  No Sample Information	seals intact or
Sample containers intact?  Yes  No  Sufficient sample volume for indicated test?  Yes  No  No   Sample Preservation and Hold Time (HT) Information  All samples received within holding time?  Yes  No  Container/Temp Blank temperature  Cooler Temp: 2.8°C  NA  Water - VOA vials have zero headspace / no bubbles?  Yes  No  No  No VOA vials submitted  Sample labels checked for correct preservation?  Yes  No  No  No  No  No  No  No  No  No  No	container/coo
Sufficient sample volume for indicated test?  Yes  No   Sample Preservation and Hold Time (HT) Information  All samples received within holding time?  Yes  No  Container/Temp Blank temperature  Cooler Temp: 2.8°C  NA  Water - VOA vials have zero headspace / no bubbles?  Yes  No  No  No VOA vials submitted  Sample labels checked for correct preservation?  Yes  No  No  No  No  No  No  No  No  No  No	in proper conf
Sample Preservation and Hold Time (HT) Information  All samples received within holding time?  Yes  No  Container/Temp Blank temperature  Cooler Temp: 2.8°C  NA  Water - VOA vials have zero headspace / no bubbles?  Yes  No  No  No VOA vials submitted  Sample labels checked for correct preservation?  Yes  No  No  No  No  No  No  No  No  No  No	containers inta
All samples received within holding time?  Yes  No  Container/Temp Blank temperature  Cooler Temp: 2.8°C  NA  Water - VOA vials have zero headspace / no bubbles?  Yes  No  No  No VOA vials submitted  Sample labels checked for correct preservation?  Yes  No  No  No  No  No  No  No  No  No  No	t sample volun
Container/Temp Blank temperature  Cooler Temp: 2.8°C  NA   Water - VOA vials have zero headspace / no bubbles?  Yes  No  No VOA vials submitted  Sample labels checked for correct preservation?  Yes  No  No  No VOA vials submitted	
Water - VOA vials have zero headspace / no bubbles?  Yes  No □ No VOA vials submitted ✓  Sample labels checked for correct preservation?  Yes ✓  No □	les received w
Sample labels checked for correct preservation? Yes ✓ No □	r/Temp Blank
	/OA vials have
	abels checked
Metal - pH acceptable upon receipt (pH<2)? Yes ☐ No ☐ NA ✓	H acceptable ı
Samples Received on Ice? Yes   ✓ No   ✓	Received on I
(Ice Type: WET ICE )	
* NOTE: If the "No" box is checked, see comments below.	If the "No" box
	====

Pangea Environmental Svcs., Inc.		Date Sampled: 03/06/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/06/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/06/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/07/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B		Ana	ılytical Met	hod: SW8260B	Work O	rder: 130	3129				
Lab ID				1303129-001A							
Client ID				EX-F3-6							
Matrix		Soil									
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit				
Bromodichloromethane	ND<0.025	5.0	0.005	Bromoform	ND<0.025	5.0	0.005				
Bromomethane	ND<0.025	5.0	0.005	Carbon Tetrachloride	ND<0.025	5.0	0.005				
Chlorobenzene	ND<0.025	5.0	0.005	Chloroethane	ND<0.025	5.0	0.005				
Chloroform	ND<0.025	5.0	0.005	Chloromethane	ND<0.025	5.0	0.005				
Dibromochloromethane	ND<0.025	5.0	0.005	1,2-Dibromoethane (EDB)	ND<0.020	5.0	0.004				
1,2-Dichlorobenzene	ND<0.025	5.0	0.005	1,3-Dichlorobenzene	ND<0.025	5.0	0.005				
1,4-Dichlorobenzene	ND<0.025	5.0	0.005	Dichlorodifluoromethane	ND<0.025	5.0	0.005				
1,1-Dichloroethane	ND<0.025	5.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.020	5.0	0.004				
1,1-Dichloroethene	ND<0.025	5.0	0.005	cis-1,2-Dichloroethene	ND<0.025	5.0	0.005				
trans-1,2-Dichloroethene	ND<0.025	5.0	0.005	1,2-Dichloropropane	ND<0.025	5.0	0.005				
cis-1,3-Dichloropropene	ND<0.025	5.0	0.005	trans-1,3-Dichloropropene	ND<0.025	5.0	0.005				
Freon 113	ND<0.50	5.0	0.1	Methylene chloride	ND<0.025	5.0	0.005				
1,1,1,2-Tetrachloroethane	ND<0.025	5.0	0.005	1,1,2,2-Tetrachloroethane	ND<0.025	5.0	0.005				
Tetrachloroethene	0.57	5.0	0.005	1,1,1-Trichloroethane	ND<0.025	5.0	0.005				
1,1,2-Trichloroethane	ND<0.025	5.0	0.005	Trichloroethene	ND<0.025	5.0	0.005				
Trichlorofluoromethane	ND<0.025	5.0	0.005	Vinyl Chloride	ND<0.025	5.0	0.005				

Surrogate Recoveries (%)									
%SS1:	100	%SS2:	101						
%SS3:	96								
Comments									

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/06/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/06/13
1710 Flankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/06/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/06/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303129

Lab ID							
Client ID				EX-F4-6			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	0.0069	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.20	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	0.021	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

	Surrogate Re	ecoveries (%)	
%SS1:	96	%SS2:	105
%SS3:	94		
Comments:			

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75211 WorkOrder: 1303129

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1303061-001A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
, mary to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Chlorobenzene	ND	0.050	84.1	84.9	0.883	85.7	61 - 108	30	70 - 130	
1,2-Dibromoethane (EDB)	ND	0.050	102	101	0.984	107	54 - 119	30	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	0.050	85.7	81.8	4.69	87.2	48 - 115	30	70 - 130	
1,1-Dichloroethene	ND	0.050	78.1	66.9	15.4	80	46 - 111	30	70 - 130	
Trichloroethene	ND	0.050	91.1	86.8	4.79	88.3	60 - 116	30	70 - 130	
%SS1:	92	0.12	92	86	7.50	90	70 - 130	30	70 - 130	
%SS2:	117	0.12	116	110	4.76	113	70 - 130	30	70 - 130	
%SS3:	103	0.012	102	105	2.93	104	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75211 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303129-001A	03/06/13 10:20 AM	03/06/13	03/07/13 7:12 AM	1303129-002A	03/06/13 10:30 AM	03/06/13	03/06/13 10:50 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/07/13
1710 Franklin Street, Ste. 200		Date Received: 03/08/13
1710 Hankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 03/13/13
Oakland, CA 94612	Client P.O.:	Date Completed: 03/13/13

WorkOrder: 1303216

March 13, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

DIICH 1303216

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Tele: (510) 836-3	702				(510)	in the same of							_			1118																analysis:	
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## McCampbell Analytical, Inc.

EX-F5-9

EX-F6-12

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1303216 ClientCode: PEO WriteOn **▼** EDF Excel **EQuIS** ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 3 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 03/08/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Oakland, CA 94612 Date Printed: 03/08/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 2 5 8 Lab ID 3 4 10 12 Client ID Matrix Collection Date Hold 11

Α

Α

Α

3/7/2013 16:40

3/7/2013 16:50

Soil

Soil

#### **Test Legend:**

1303216-001

1303216-002

1 8010BMS_S	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Melissa Valles

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Enviro							and Time Rec		0:U2:22 PW
Project Name:	#1435.002; So	lano Grou	р				LogIn	Reviewed by	:	Melissa Valles
WorkOrder N°:	1303216	Ma	trix: <u>S</u>	<u>oil</u>			Carrie	r: Rob Pr	ingle (MAI Courier)	
				<u>Ch</u> :	ain of Cı	ustody (	(COC) Information	<u>tion</u>		
Chain of custody	present?				Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when rel	linquished	and re	ceived?	Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with san	nple labels	?		Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on C	OC?			Yes	<b>✓</b>	No 🗌			
Date and Time of	f collection noted	d by Client	on CO	C?	Yes	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?				Yes	<b>✓</b>	No 🗌			
					Sample	Receir	ot Information			
Custody seals int	tact on shipping	container/o	cooler?	,	Yes		No 🗌		NA 🗸	
Shipping containe	er/cooler in good	d condition	?		Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bot	ttles?			Yes	<b>✓</b>	No 🗌			
Sample containe	rs intact?				Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indic	cated test?			Yes	<b>✓</b>	No 🗌			
			Sa	mple Pre	<u>servatio</u>	n and F	lold Time (HT)	Information		
All samples recei	ived within holdir	ng time?			Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperatu	ıre			Coole	er Temp	: 5.6°C		NA 🗌	
Water - VOA vial	s have zero hea	dspace / n	o bubb	les?	Yes		No 🗌	No VOA via	ls submitted 🗹	
Sample labels ch	ecked for correc	ct preserva	tion?		Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon recei	ipt (pH<2)?	•		Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?				Yes	<b>✓</b>	No 🗌			
				(Ice Ty	pe: WE	T ICE	)			
* NOTE: If the "N	lo" box is checke	ad aaa aa	nmonte	s helow						

Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/07/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/08/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/08/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/09/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303216

Lab ID				1303216-001A			
Client ID				EX-F5-9			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.0077	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
%SS1:	94	%SS2:	107						
%SS3: 119									
Community									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/07/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/08/13
1710 Frankini Sueet, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/08/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/09/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303216

Lab ID				1303216-002A			
Client ID				EX-F6-12			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.0066	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
%SS1:	94	%SS2:	108						
%SS3:	122								
Community									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75263 WorkOrder: 1303216

EPA Method: SW8260B Extraction	n: SW5030B					;	Spiked Sam	ple ID:	1303131-012A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, and ye	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	84.2	83.8	0.442	91.6	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	94.4	96.8	2.58	98.6	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	79.5	84.6	6.24	89	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	77.1	80.4	4.12	88.4	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	84.9	86.5	1.78	92.1	60 - 116	30	70 - 130
%SS1:	89	0.12	87	94	7.85	88	70 - 130	30	70 - 130
%SS2:	113	0.12	109	114	4.48	115	70 - 130	30	70 - 130
%SS3:	107	0.012	105	102	3.02	105	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75263 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303216-001A	03/07/13 4:40 PM	03/08/13	03/09/13 12:27 AM	1303216-002A	03/07/13 4:50 PM	03/08/13	03/09/13 1:09 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/08/13
1710 Franklin Street, Ste. 200		Date Received: 03/09/13
1770 1141141111 541661, 566. 200	Client Contact: Morgan Gillies	Date Reported: 03/11/13
Oakland, CA 94612	Client P.O.:	Date Completed: 03/11/13

WorkOrder: 1303249

March 11, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 3 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1303249

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	McCAMPBELL ANALYTICAL, INC.  1534 Willow Pass Road Pittsburg, CA 94565  Website: www.mccampbell.com Email: main@mccampbell.com											OU	ND	ГІМ	E	RU	SH	24	HR	48	HR		HR	D					
	ne: (925) 252		COM EM			ax: (9							EL	)F F	tequ	tirec	1? C			mal)	No		Write	On	(DW	) N	lo		
Report To: Mor					o: Pa	ngea						$\Box$						An	alysi	Req	uest	y u			-	(	Other		Comments
Company: Pang						10.	1					$\perp$				53	7												Filter
1710 Franklin St	reet, Suite 20	0, Oakla														NP	111											- 1	Samples
	E-Mail: mgillies@pangeaenv.com					com		-				3	4								1				for Metals				
	Tele: (510) 836-3702 Fax: (510) 836-3709						-				NO-UNPre	Container	11											analysis:					
	Project #: 1435.002 Project Name: Solano Group						$\dashv$		8)		-	7												Yes / No					
Project Location:		Ave, Al	bany				_					$\dashv$	18)	260	10	0			1						1			- 1	
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	non com	SAMI	PLING	90	iers	M	ATI	RIX		RESI			(8015Cm/8021B)	enate	TEtho	1													
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Air	Sludge	ICE.	HCL	HNO,	Other	TPHg/BTEX (80	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010	pH-NOT													
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EX-1-9		-	440	1	TONE	1	-		1	1		$\dashv$			*						+	+	+			+			40 (11
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Relinquished By:		Date:	Time:	Reco	eived B	y:										TION	vo	AS/	D&G	MET pH<		от	HER					- 22	2

# McCampbell Analytical, Inc.

B-17

EX-F7-4

Water

Soil

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Wille Pittsburg, (925) 252-

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1303249 ClientCode: PEO (925) 252-9262 WriteOn EDF Excel **EQuIS** ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 1 day Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 03/09/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 03/11/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 2 5 8 Lab ID 3 4 10 12 Client ID Matrix Collection Date Hold 11 1303249-001 3/8/2013 15:30 B-16 Water Α

Α

Α

3/8/2013 15:40

3/8/2013 16:10

#### Test Legend:

1303249-002

1303249-003

1 8010BMS_S	2 8010BMS_W	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Maria Venegas

Comments: <u>24hr.</u>

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	nd Time Received:	3/9/2013 12:00	:00 PM
Project Name:	#1435.002; Solano G	Froup			LogIn F	Reviewed by:	M	aria Venegas
WorkOrder N°:	1303249	Matrix: Soil/Water			Carrier	: Client Drop-In		
		<u>Chai</u>	n of Cı	ustody (CO	C) Informati	<u>ion</u>		
Chain of custody	present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquisl	ned and received?	Yes	<b>✓</b>	No $\square$			
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No $\square$			
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$			
Date and Time of	f collection noted by Cl	ient on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No 🗌			
		<u> </u>	Sample	Receipt In	formation			
Custody seals int	act on shipping contain	ner/cooler?	Yes		No $\square$		NA 🗸	
Shipping containe	er/cooler in good condi	tion?	Yes	<b>✓</b>	No $\square$			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No 🗌			
		Sample Prese	ervatio	n and Hold	Time (HT) I	<u>Information</u>		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp: 5	5.6°C		NA $\square$	
Water - VOA vial	s have zero headspace	e / no bubbles?	Yes	✓	No 🗌	No VOA vials submi	tted	
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ice Type	e: WE	ET ICE )				
* NOTE: If the "N	lo" box is checked, see	comments below.						
=====					====			

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/08/13
1710 Franklin Street Ste 200	Group	Date Received: 03/09/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/11/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/11/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303249

Lab ID				1303249-001A			
Client ID				B-16			
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<25	50	0.5	Bromoform	ND<25	50	0.5
Bromomethane	ND<25	50	0.5	Carbon Tetrachloride	ND<25	50	0.5
Chlorobenzene	ND<25	50	0.5	Chloroethane	ND<25	50	0.5
Chloroform	ND<25	50	0.5	Chloromethane	ND<25	50	0.5
Dibromochloromethane	ND<25	50	0.5	1,2-Dibromoethane (EDB)	ND<25	50	0.5
1,2-Dichlorobenzene	ND<25	50	0.5	1,3-Dichlorobenzene	ND<25	50	0.5
1,4-Dichlorobenzene	ND<25	50	0.5	Dichlorodifluoromethane	ND<25	50	0.5
1,1-Dichloroethane	ND<25	50	0.5	1,2-Dichloroethane (1,2-DCA)	ND<25	50	0.5
1,1-Dichloroethene	ND<25	50	0.5	cis-1,2-Dichloroethene	ND<25	50	0.5
trans-1,2-Dichloroethene	ND<25	50	0.5	1,2-Dichloropropane	ND<25	50	0.5
cis-1,3-Dichloropropene	ND<25	50	0.5	trans-1,3-Dichloropropene	ND<25	50	0.5
Freon 113	ND<500	50	10	Methylene chloride	ND<25	50	0.5
1,1,1,2-Tetrachloroethane	ND<25	50	0.5	1,1,2,2-Tetrachloroethane	ND<25	50	0.5
Tetrachloroethene	520	50	0.5	1,1,1-Trichloroethane	ND<25	50	0.5
1,1,2-Trichloroethane	ND<25	50	0.5	Trichloroethene	ND<25	50	0.5
Trichlorofluoromethane	ND<25	50	0.5	Vinyl Chloride	ND<25	50	0.5

Surrogate Recoveries (%)										
%SS1:	95	%SS2:	92							
%SS3:	89									
Commonts										

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

b1) aqueous sample that contains greater than ~1 vol. % sediment

Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/08/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/09/13
1/10 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/11/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/11/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303249

Lab ID		1303249-002A											
Client ID				B-17									
Matrix				Water									
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit						
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5						
Bromomethane	ND	1.0	0.5	Carbon Tetrachloride	ND	1.0	0.5						
Chlorobenzene	ND	1.0	0.5	Chloroethane	ND	1.0	0.5						
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5						
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromoethane (EDB)	ND	1.0	0.5						
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5						
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5						
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5						
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5						
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5						
cis-1,3-Dichloropropene	ND	1.0	0.5	trans-1,3-Dichloropropene	ND	1.0	0.5						
Freon 113	ND	1.0	10	Methylene chloride	ND	1.0	0.5						
1,1,1,2-Tetrachloroethane	ND	1.0	0.5	1,1,2,2-Tetrachloroethane	ND	1.0	0.5						
Tetrachloroethene	25	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5						
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5						
Trichlorofluoromethane	ND	1.0	0.5	Vinyl Chloride	ND	1.0	0.5						

Surrogate Recoveries (%)										
%SS1:	97	%SS2:	91							
%SS3:	86									
Commenter bl										

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

b1) aqueous sample that contains greater than ~1 vol. % sediment



Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/08/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/09/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/11/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/11/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303249

Lab ID				1303249-003A			
Client ID				EX-F7-4			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.15	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)										
%SS1:	94	%SS2:	111							
%SS3:	115									
C										

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

b1) aqueous sample that contains greater than ~1 vol. % sediment



## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75338 WorkOrder: 1303249

EPA Method: SW8260B Extraction: SW5030B Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	IS-MSD LCS		Acceptance Criteria (%)			
, wayte	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
Chlorobenzene	N/A	0.050	N/A	N/A	N/A	92.2	N/A	N/A	70 - 130		
1,2-Dibromoethane (EDB)	N/A	0.050	N/A	N/A	N/A	107	N/A	N/A	70 - 130		
1,2-Dichloroethane (1,2-DCA)	N/A	0.050	N/A	N/A	N/A	92	N/A	N/A	70 - 130		
1,1-Dichloroethene	N/A	0.050	N/A	N/A	N/A	82.3	N/A	N/A	70 - 130		
Trichloroethene	N/A	0.050	N/A	N/A	N/A	92.8	N/A	N/A	70 - 130		
%SS1:	N/A	0.12	N/A	N/A	N/A	92	N/A	N/A	70 - 130		
%SS2:	N/A	0.12	N/A	N/A	N/A	113	N/A	N/A	70 - 130		
%SS3:	N/A	0.012	N/A	N/A	N/A	106	N/A	N/A	70 - 130		

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75338 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1303249-003A	03/08/13 4:10 PM	1 03/11/13	03/11/13 12:53 PM					

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 75374 WorkOrder: 1303249

EPA Method: SW8260B Extraction: SW5030B Spiked Sample ID: N/A										
Analyte	Sample	Spiked MS MSD MS-MSD LCS A						cceptance Criteria (%)		
, wally to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Chlorobenzene	N/A	10	N/A	N/A	N/A	88.4	N/A	N/A	70 - 130	
1,2-Dibromoethane (EDB)	N/A	10	N/A	N/A	N/A	94.2	N/A	N/A	70 - 130	
1,2-Dichloroethane (1,2-DCA)	N/A	10	N/A	N/A	N/A	86.5	N/A	N/A	70 - 130	
1,1-Dichloroethene	N/A	10	N/A	N/A	N/A	84.5	N/A	N/A	70 - 130	
Trichloroethene	N/A	10	N/A	N/A	N/A	97.2	N/A	N/A	70 - 130	
%SS1:	N/A	25	N/A	N/A	N/A	98	N/A	N/A	70 - 130	
%SS2:	N/A	25	N/A	N/A	N/A	93	N/A	N/A	70 - 130	
%SS3:	N/A	2.5	N/A	N/A	N/A	85	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75374 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303249-001A	03/08/13 3:30 PM	03/11/13	03/11/13 1:31 PM	1303249-002A	03/08/13 3:40 PM	03/11/13	03/11/13 12:49 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: 1435.002.310; Solano Group	Date Sampled: 03/11/13
1710 Franklin Street, Ste. 200		Date Received: 03/11/13
1770 1141141111 Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 03/12/13
Oakland, CA 94612	Client P.O.:	Date Completed: 03/12/13

WorkOrder: 1303308

March 12, 2013

### Dear Morgan:

#### Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: 1435.002.310; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1303308

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 24 HB 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com No Write On (DW) EDF Required? Coelt (Normal) Fax: (925) 252-9269 Telephone: (925) 252-9262 Report To: Morgan Gillies Bill To: Pangea Other **Analysis Request** Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: mgillies@pangeaenv.com for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project #: 1435.002 - 310 Project Name: Solano Group Yes / No Five fuel oxygenates (8260B) Project Location: 1187 Solano Aye, Albany TPHg/BTEX (8015Cm/8021B) VOCs by EPA MEthod 8010 Sampler Signature: METHOD SAMPLING MATRIX PRESERVED # Containers LOCATION SAMPLE ID (Field Point Sludge Name) Date Time Other ICE GOOD CONDITION Relinquished By: Received By Time: COMMENTS: Date: HEAD SPACE ABSENT Relinquished By: Received By: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Received By: /Date: Time: VOAS O&G METALS OTHER PRESERVATION Page 2 of 7

# McCampbell Analytical, Inc.

FAX: (510) 836-3709

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(510) 836-3700

tsburg, CA 94565-1701 WorkOrder: 1303308 ClientCode: PEO

WaterTrax WriteOn FEDF Excel EQuIS Femail HardCopy ThirdParty ☐ J-flag

Report to: Bill to: Requested TAT: 1 day

Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. cc: Pangea Environmental Svcs., Inc.

 1710 Franklin Street, Ste. 200
 PO:
 1710 Franklin Street, Ste. 200
 Date Received:
 03/11/2013

 Oakland, CA 94612
 ProjectNo: 1435.002.310; Solano Group
 Oakland, CA 94612
 Date Printed:
 03/12/2013

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1303308-001	SW-2-4	Soil	3/11/2013 15:35		Α	Α										
1303308-002	SW-3-4	Soil	3/11/2013 15:45		Α											

#### **Test Legend:**

1	8010BMS_S	2 PREDF REPORT	3	4	5	
6		7	8	9	10	
11		12				

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

## **Sample Receipt Checklist**

Client Name:	Pangea Environme	ntal Svcs., Inc.			Date a	and Time Received:	3/11/2013	6:55:32 PM
Project Name:	1435.002.310; Sola	no Group			LogIn I	Reviewed by:		Jena Alfaro
WorkOrder N°:	1303308	Matrix: Soil			Carrier	r: Rob Pringle (M	IAI Courier)	
		Cha	in of Cı	ustody (C	OC) Informat	tion		
Chain of custody	present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquis	shed and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with sample l	abels?	Yes	<b>✓</b>	No 🗌			
Sample IDs note	ed by Client on COC?		Yes	<b>✓</b>	No 🗌			
Date and Time of	of collection noted by C	Client on COC?	Yes	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗆			
			Sample	e Receipt	<u>Information</u>			
Custody seals in	tact on shipping conta	iner/cooler?	Yes		No 🗌		NA 🗸	
	er/cooler in good cond		Yes	✓	No 🗌			
Samples in prop	er containers/bottles?		Yes	<b>✓</b>	No 🗌			
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicated	test?	Yes	<b>✓</b>	No 🗌			
		Sample Pres	servatio	n and Ho	ld Time (HT)	<u>Information</u>		
All samples rece	ived within holding tim	ne?	Yes	<b>✓</b>	No 🗆			
·	Blank temperature		Coole	er Temp:	6°C		NA 🗌	
·	Is have zero headspac	ce / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗸	
	necked for correct pres		Yes	<b>✓</b>	No 🗌			
Metal - pH accep	otable upon receipt (pl	H<2)?	Yes		No 🗆		NA 🗸	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗌			
-		(Ісе Тур	oe: WE	TICE )	1			
* NOTE: If the "N	No" box is checked, se	ee comments below.						
Comments:								

Pangea Environmental Svcs., Inc.	Client Project ID: 1435.002.310;	Date Sampled: 03/11/13
1710 Franklin Street, Ste. 200	Solano Group	Date Received: 03/11/13
	Client Contact: Morgan Gillies	Date Extracted 03/11/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/11/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303308

Lab ID	1303308-001A						
Client ID	SW-2-4						
Matrix	Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.16	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	95	%SS2:	111			
%SS3:	106					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: 1435.002.310;	Date Sampled: 03/11/13
1710 Franklin Street, Ste. 200	Solano Group	Date Received: 03/11/13
	Client Contact: Morgan Gillies	Date Extracted 03/11/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/11/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303308

Lab ID	1303308-002A						
Client ID	SW-3-4						
Matrix	Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.10	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	95	%SS2:	110			
%SS3:	114					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75338 WorkOrder: 1303308

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1303230-010A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, and yet	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	82.3	86.8	5.35	92.2	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	99.4	104	4.41	107	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	86.8	91.1	4.82	92	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	68.5	78.4	13.5	82.3	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	82.1	86.6	5.36	92.8	60 - 116	30	70 - 130
%SS1:	94	0.12	97	97	0	92	70 - 130	30	70 - 130
%SS2:	113	0.12	110	111	0.189	113	70 - 130	30	70 - 130
%SS3:	105	0.012	100	106	6.05	106	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75338 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303308-001A	03/11/13 3:35 PM	03/11/13	03/11/13 10:05 PM	1303308-002A	03/11/13 3:45 PM	03/11/13	03/11/13 10:47 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/12/13
1710 Franklin Street, Ste. 200		Date Received: 03/13/13
1770 Hankim Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 03/14/13
Oakland, CA 94612	Client P.O.:	Date Completed: 03/14/13

WorkOrder: 1303379

March 14, 2013

### Dear Morgan:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1303379

#### TURN AROUND TIME CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Road Pittsburg, CA 94565 48 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelf (Normal) Write On (DW) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Morgan Gillies Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: mgillies@pangeaenv.com for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project #: 1435.002 Project Name: Solano Group Yes / No Five fuel oxygenates (8260B) Project Location: 1187 Solano Ave, Albany, TPHg/BTEX (8015Cm/8021B) VOCs by EPA MEthod 8010 Buchellel Sampler Signature: METHOD SAMPLING Type Containers MATRIX PRESERVED Containers LOCATION SAMPLE ID (Field Point Sludge Name) Date Time Other HNO3 ICE 3/12/13 Religquished By: Received By: Date: Time: + ICE/tº COMMENTS: GOOD CONDITION HEAD SPACE ABSENT Relinquished By Date: Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

EX-F3-8

Soil

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd

Pittsburg, CA 94565-1701

(925) 252-9262				Woı	rkOrde	r: 1303379	)	ClientCo	de: PEC	)				
	☐ WaterTrax	WriteOn	<b>✓</b> EDF	Exce	el	EQuIS	<b>✓</b> Ema	ail [	HardCo	ру	ThirdPar	ty	J-flag	J
Report to:					Bill to:				F	Reques	ted TAT:		1 0	day
Morgan Gillies Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	cc: PO:	gillies@pangea	aenv.com; tdelaf no Group	uente@pa	P	ob Clark-Ri rangea Envi 710 Franklii Pakland, CA	ronmental n Street, S		Ì		Peceived: Printed:		)3/13/2( )3/13/2(	
							Reque	sted Tests	(See lege	nd bel	ow)			
ab ID Client ID		Matrix	<b>Collection Date</b>	Hold	1	2 3	4	5 6	7	8	9	10	11	12

3/12/2013 16:45

### Test Legend:

1303379-001

1 8010BMS_S	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Zoraida Cortez

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

		2010 0.		
		LogIn R	Reviewed by:	Zoraida Cortez
		Carrier:	Rob Pringle (MAI Courier)	
ain of Cu	stody (Co	OC) Informati	<u>on</u>	
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No $\square$		
Sample	Receipt	<u>Information</u>		
Yes		No 🗌	NA 🗸	
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No 🗌		
servation	n and Hol	d Time (HT) I	<u>nformation</u>	
Yes	<b>✓</b>	No 🗌		
Coole	r Temp:	2.8°C	NA 🗌	
Yes		No 🗌 1	No VOA vials submitted 🗹	
Yes	<b>✓</b>	No 🗌		
Yes	<b>✓</b>	No 🗌	NA 🗆	
Yes	<b>✓</b>	No 🗌		
pe: WE	TICE )			
	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Yes V Cooler Temp: Yes V Yes V	LogIn F   Carrier:	No

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/12/13		
1710 Franklin Street, Ste. 200	Group	Date Received: 03/13/13		
	Client Contact: Morgan Gillies	Date Extracted 03/13/13		
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/13/13		

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

 Extraction Method:
 SW5030B
 Analytical Method:
 SW8260B
 Work Order:
 1303379

Lab ID	1303379-001A								
Client ID		EX-F3-8							
Matrix				Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND<0.020	4.0	0.005	Bromoform	ND<0.020	4.0	0.005		
Bromomethane	ND<0.020	4.0	0.005	Carbon Tetrachloride	ND<0.020	4.0	0.005		
Chlorobenzene	ND<0.020	4.0	0.005	Chloroethane	ND<0.020	4.0	0.005		
Chloroform	ND<0.020	4.0	0.005	Chloromethane	ND<0.020	4.0	0.005		
Dibromochloromethane	ND<0.020	4.0	0.005	1,2-Dibromoethane (EDB)	ND<0.016	4.0	0.004		
1,2-Dichlorobenzene	ND<0.020	4.0	0.005	1,3-Dichlorobenzene	ND<0.020	4.0	0.005		
1,4-Dichlorobenzene	ND<0.020	4.0	0.005	Dichlorodifluoromethane	ND<0.020	4.0	0.005		
1,1-Dichloroethane	ND<0.020	4.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.016	4.0	0.004		
1,1-Dichloroethene	ND<0.020	4.0	0.005	cis-1,2-Dichloroethene	ND<0.020	4.0	0.005		
trans-1,2-Dichloroethene	ND<0.020	4.0	0.005	1,2-Dichloropropane	ND<0.020	4.0	0.005		
cis-1,3-Dichloropropene	ND<0.020	4.0	0.005	trans-1,3-Dichloropropene	ND<0.020	4.0	0.005		
Freon 113	ND<0.40	4.0	0.1	Methylene chloride	ND<0.020	4.0	0.005		
1,1,1,2-Tetrachloroethane	ND<0.020	4.0	0.005	1,1,2,2-Tetrachloroethane	ND<0.020	4.0	0.005		
Tetrachloroethene	0.36	4.0	0.005	1,1,1-Trichloroethane	ND<0.020	4.0	0.005		
1,1,2-Trichloroethane	ND<0.020	4.0	0.005	Trichloroethene	ND<0.020	4.0	0.005		
Trichlorofluoromethane	ND<0.020	4.0	0.005	Vinyl Chloride	ND<0.020	4.0	0.005		

Surrogate Recoveries (%)								
%SS1: 95 %SS2: 96								
%SS3: 74								
Comments								

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75430 WorkOrder: 1303379

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1303348-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, a.a.y.c	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	76.6	76.3	0.396	92.6	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	83	83	0	102	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	83.6	82.1	1.78	97.7	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	64.6	64.7	0.0152	79.6	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	81.6	81.6	0	91.4	60 - 116	30	70 - 130
%SS1:	95	0.12	98	99	1.47	97	70 - 130	30	70 - 130
%SS2:	103	0.12	112	113	0.474	116	70 - 130	30	70 - 130
%SS3:	75	0.012	100	97	3.16	112	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75430 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303379-001A	03/12/13 4:45 PM	03/13/13	03/13/13 8:05 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/13/13
1710 Franklin Street, Ste. 200		Date Received: 03/14/13
1770 Training Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 03/15/13
Oakland, CA 94612	Client P.O.:	Date Completed: 03/15/13

WorkOrder: 1303419

March 15, 2013

### Dear Morgan:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

						_							_	_										1	_	-		1,	1				
Web	osite: www.mc ne: (925) 252	1534 V Pitts campbell	Willow Pas burg, CA	s Road 94565	l ain@i	meca	mpt	ell.c		269				7			ARG	OU	ND	TI	M	E	F	US RUS No	H	24	] HR	(	48 H		72 I		D 5 DAY
Report To: Mor	gan Gillies		]	Bill T	o: Pa	nge	a												A	naly	sis	Rec	ues	t						0	ther	T	Comments
Company: Pange	ea Environm	ental Sei	rvices, Ir	ıc.												-																Т	
1710 Franklin St	reet, Suite 20	0, Oakla	and, CA	9461	2																	9									19		Filter
			1	E-Ma	il: mg	illie	s@p	ang	eaei	ıv.c	om									-1													Samples
Tele: (510) 836-3	702		1	Fax:	(510)	836	-370	19																									for Metals analysis:
Project #: 1435.0				Proje	et Nai	me:	Sol	ano	Gro	up															7								Yes / No
Project Location:			bany							515				8)	80B	1000															740	-	
Sampler Signatur	re: /5+0	Sled	Lally		v.									0211	(82	8010		9 [							. "			1 (			- 11	П	
-		SAM	PLING	100	ers		MA	TRI	X			HO		(8015Cm/8021B)	nates	Ethod																1	
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Air	Other	ICE	HCL	HNO3	Other	TPHg/BTEX (801	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010																	
5X-F8-11		3/13/13	3:00	1	na		X			V					-	×			_									_	+	$\rightarrow$		+	
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Relinquished By:	7	Date:	Time:	Rece	eived B	ý:				4	_			PK	ESE	RVE	D IN	LAB															
					(	/								PR	ESEI	RVA	TION		AS	0&		ME'		5 (	ЭТН	ER							

## McCampbell Analytical, Inc.

EX-F8-11

Soil

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1303419

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

☐ WaterTrax WriteOn **▼** EDF Excel **EQuIS** ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 1 day Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 03/14/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 03/14/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 2 5 8 Lab ID 3 10 12 Client ID Matrix Collection Date Hold 4 11

Α

Α

3/13/2013 15:00

#### **Test Legend:**

1303419-001

1 8010BMS_S	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	and Time Received:	3/14/2013	2:47:26 PM
Project Name:	#1435.002; Solano G	Group			LogIn	Reviewed by:		Zoraida Cortez
WorkOrder N°:	1303419	Matrix: Soil			Carrie	r: Rob Pringle (N	MAI Courier)	
		<u>Chair</u>	of Cu	ıstody (C	OC) Informa	<u>tion</u>		
Chain of custody	present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquis	hed and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No $\square$			
Date and Time of	f collection noted by Cl	lient on COC?	Yes	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No 🗌			
		<u>s</u>	ample	Receipt	<u>Information</u>			
Custody seals int	tact on shipping contai	ner/cooler?	Yes		No 🗌		NA 🗸	
Shipping containe	er/cooler in good condi	ition?	Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌			
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicated t	est?	Yes	<b>✓</b>	No 🗌			
		Sample Prese	rvatio	n and Ho	d Time (HT)	<u>Information</u>		
All samples recei	ived within holding time	e?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	r Temp:	5.8°C		NA $\square$	
Water - VOA vial	s have zero headspace	e / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗹	
Sample labels ch	necked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗌			
		(Ice Type	: WE	TICE )				
* NOTE: If the "N	lo" box is checked, see	e comments below.						
		======						

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/13/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/14/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/14/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/14/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303419

Lab ID				1303419-001A			
Client ID  Matrix				EX-F8-11 Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.059	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

		Surrogate Ro	ecoveries (%)	
	%SS1:	93	%SS2:	101
	%SS3:	89		
Г	Comments			

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75471 WorkOrder: 1303419

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1303385-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, wayte	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND<1	0.050	NR	NR	NR	95.4	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	ND<0.8	0.050	NR	NR	NR	101	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND<0.8	0.050	NR	NR	NR	101	N/A	N/A	70 - 130
1,1-Dichloroethene	ND<1	0.050	NR	NR	NR	81.6	N/A	N/A	70 - 130
Trichloroethene	ND<1	0.050	NR	NR	NR	93	N/A	N/A	70 - 130
%SS1:	99	0.12	NR	NR	NR	97	N/A	N/A	70 - 130
%SS2:	107	0.12	NR	NR	NR	115	N/A	N/A	70 - 130
%SS3:	87	0.012	NR	NR	NR	112	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75471 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303419-001A	03/13/13 3:00 PM	M 03/14/13	03/14/13 9:25 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.02; Solano Group	Date Sampled: 03/14/13
1710 Franklin Street, Ste. 200		Date Received: 03/14/13
1770 Hankim Succe, Sec. 200	Client Contact: Morgan Gillies	Date Reported: 03/15/13
Oakland, CA 94612	Client P.O.:	Date Completed: 03/15/13

WorkOrder: 1303437

March 15, 2013

Dear Morgan:

### Enclosed within are:

- 1) The results of the 5 analyzed samples from your project: #1435.02; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 24 HR 48 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Morgan Gillies Analysis Request Bill To: Pangea Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 + Detalett & Vaga Env C Samples E-Mail: mgillies@pangeaenv.com for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project #: 1435.002 Project Name: Solano Group Yes / No Five fuel oxygenates (8260B) Project Location: 1187 Solano Ave, Albany, TPHg/BTEX (8015Cm/8021B) VOCs by EPA MEthod 8010 Sampler Signature: METHOD SAMPLING MATRIX PRESERVED Containers LOCATION SAMPLE ID (Field Point Sludge Name) Date Time Other ICE LOW UDON :60 COMMENTS: Relinquished By: Received By: ICE/to/ Date: Time: GOOD CONDITION 2015 HEAD SPACE ABSENT Relinquished By: Received By: Date: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Time: Date: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1303437

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

☐ WaterTrax ☐ WriteOn □ EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 1 day Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. BRiddell@pangeaenv.com Pangea Environmental Svcs., Inc. CC: Date Received: 03/14/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.02; Solano Group Oakland, CA 94612 Date Printed: 03/14/2013 (510) 836-3700 FAX: (510) 836-3709

									R	equest	ed Test	s (See	lege	nd belo	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	3	4	5	6	7	'	8	9	10	11	12
1303437-001	EX-F9-11	Soil	3/14/2013 17:00		Α													
1303437-002	SW-4-5	Soil	3/14/2013 17:10		Α													
1303437-003	SW-5-2	Soil	3/14/2013 17:20		Α													
1303437-004	SW-6-2	Soil	3/14/2013 17:15		Α													
1303437-005	SW-7-5	Soil	3/14/2013 17:25		Α													

#### **Test Legend:**

1 8010BMS_S	2	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	i angea Envilo	onmentai Svcs., in	<b>,</b> .			Date	and time Received	. 3/14/2013	3 8:15:30 PW
Project Name:	#1435.02; Sola	ano Group				LogIn	Reviewed by:		Zoraida Cortez
WorkOrder N°:	1303437	Matrix: Soi	<u>l</u>			Carrie	er: <u>Client Drop-I</u>	<u>n</u>	
			<u>Chain</u>	of Cı	ıstody (0	COC) Informa	tion		
Chain of custody	present?			Yes	<b>✓</b>	No $\square$			
Chain of custody	signed when rel	inquished and rece	ived?	Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with sam	nple labels?	,	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on Co	OC?	,	Yes	<b>✓</b>	No $\square$			
Date and Time of	f collection noted	d by Client on COC	?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?			Yes	<b>✓</b>	No 🗌			
			<u>Sa</u>	ample	Receip	t Information			
Custody seals int	tact on shipping	container/cooler?		Yes		No 🗌		NA 🗹	
Shipping containe	er/cooler in good	I condition?	,	Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bot	tles?		Yes	<b>✓</b>	No 🗌			
Sample containe	rs intact?			Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indic	cated test?		Yes	<b>✓</b>	No 🗌			
		<u>Sam</u>	ple Preser	vatio	n and He	old Time (HT)	Information		
All samples recei	ived within holdin	ng time?	,	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperatu	ire		Coole	r Temp:	6.4°C		NA $\square$	
Water - VOA vial	s have zero head	dspace / no bubble	s?	Yes		No 🗌	No VOA vials sub	mitted 🗹	
Sample labels ch	necked for correc	ct preservation?	,	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon recei	pt (pH<2)?	,	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		,	Yes	<b>✓</b>	No 🗌			
			(Ice Type:	WE	T ICE	)			
* NOTE: If the "N	lo" box is checke	ed, see comments	below.						

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.02; Solano	Date Sampled: 03/14/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/14/13
	Client Contact: Morgan Gillies	Date Extracted 03/14/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/15/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303437

Lab ID		1303437-001A						
Client ID  Matrix		EX-F9-11 Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005	
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005	
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005	
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005	
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004	
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005	
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005	
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005	
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005	
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005	
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005	
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005	
Tetrachloroethene	0.026	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005	
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005	
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005	

Surrogate Recoveries (%)						
%SS1:	95	%SS2:	111			
%SS3:	115					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.02; Solano	Date Sampled: 03/14/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/14/13
	Client Contact: Morgan Gillies	Date Extracted 03/14/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/15/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303437 Lab ID 1303437-002A Client ID SW-4-5 Matrix Soil Compound Concentration \* DF Compound Concentration \* DF Limit 0.005 Bromodichloromethane 1.0 Bromoform ND 1.0 0.005 Carbon Tetrachloride 0.005 Bromomethane ND 1.0 0.005 ND 1.0 ND 1.0 0.005 1.0 0.005 Chlorobenzene Chloroethane ND Chloroform ND 1.0 0.005 Chloromethane ND 1.0 0.005 Dibromochloromethane ND 1.0 0.005 1,2-Dibromoethane (EDB) ND 1.0 0.004 0.005 0.005 1.2-Dichlorobenzene ND 1.0 1.3-Dichlorobenzene ND 1.0 1.4-Dichlorobenzene ND 1.0 0.005 Dichlorodifluoromethane ND 1.0 0.005 1,1-Dichloroethane ND 1.0 0.005 1,2-Dichloroethane (1,2-DCA) ND 1.0 0.004

Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005
Surrogate Recoveries (%)							
%SS1:	95			%SS2:	11	0	•
%SS3:	11:	3					

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

ND

ND

ND

ND

ND

ND

0.016

1.0

1.0

1.0

1.0

1.0

1.0

1.0

0.005

0.005

0.005

0.1

0.005

0.005

0.005

cis-1,2-Dichloroethene

1,2-Dichloropropane

Methylene chloride

trans-1,3-Dichloropropene

1,1,2,2-Tetrachloroethane

1,1,1-Trichloroethane

Trichloroethene

ND

ND

ND

ND

ND

ND

ND

1.0

1.0

1.0

1.0

1.0

1.0

1.0

0.005

0.005

0.005

0.005

0.005

0.005

0.005

1,1-Dichloroethene

Freon 113

Comments:

trans-1,2-Dichloroethene

cis-1,3-Dichloropropene

1,1,1,2-Tetrachloroethane

Tetrachloroethene

1,1,2-Trichloroethane

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.02; Solano	Date Sampled: 03/14/13
1710 Familia Stand Sta 200	Group	Date Received: 03/14/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/14/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/15/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B	Analytical Method: SW8260B		Work Order: 1303437				
Lab ID	Lab ID 1303437-003A						
Client ID		SW-5-2					
Matrix				Soil			15
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.12	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	94	%SS2:	113			
%SS3:	118					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.02; Solano	Date Sampled: 03/14/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/14/13
	Client Contact: Morgan Gillies	Date Extracted 03/14/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/15/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B		Analytical Method: SW8260B				Work Order: 1303437			
Lab ID	1303437-004A SW-6-2								
Client ID									
Matrix			Reporting	Soil			Reporting		
Compound	Concentration *	DF	Limit	Compound	Concentration *	DF	Limit		
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005		
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005		
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005		
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005		
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004		
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005		
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005		
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004		
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005		
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005		
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005		
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005		
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005		
Tetrachloroethene	0.12	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005		
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005		
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005		

Surrogate Recoveries (%)					
	%SS1:	97	%SS2:	106	
	%SS3:	97			
	Comments:				

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.02; Solano	Date Sampled: 03/14/13
1710 Front I'm Ground Str. 200	Group	Date Received: 03/14/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/14/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/15/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303437

Lab ID		1303437-005A										
Client ID				SW-7-5								
Matrix			Reporting	Soil			Reporting					
Compound	Concentration *	DF	Limit	Compound	Concentration *	DF	Limit					
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005					
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005					
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005					
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005					
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004					
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005					
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005					
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004					
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005					
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005					
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005					
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005					
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005					
Tetrachloroethene	0.047	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005					
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005					
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005					

Surrogate Recoveries (%)								
%SS1:	97	%SS2:	107					
%SS3:	96							
Comments								

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75471 WorkOrder: 1303437

EPA Method: SW8260B Extraction:	SW5030B					;	Spiked Sam	ple ID:	1303385-001A		
Analyte	Sample	Spiked	MS	MS MSD MS-MSD LCS				Acceptance Criteria (%)			
, maye	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
Chlorobenzene	ND<1	0.050	NR	NR	NR	95.4	N/A	N/A	70 - 130		
1,2-Dibromoethane (EDB)	ND<0.8	0.050	NR	NR	NR	101	N/A	N/A	70 - 130		
1,2-Dichloroethane (1,2-DCA)	ND<0.8	0.050	NR	NR	NR	101	N/A	N/A	70 - 130		
1,1-Dichloroethene	ND<1	0.050	NR	NR	NR	81.6	N/A	N/A	70 - 130		
Trichloroethene	ND<1	0.050	NR	NR	NR	93	N/A	N/A	70 - 130		
%SS1:	99	0.12	NR	NR	NR	97	N/A	N/A	70 - 130		
%SS2:	107	0.12	NR	NR	NR	115	N/A	N/A	70 - 130		
%SS3:	87	0.012	NR	NR	NR	112	N/A	N/A	70 - 130		

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75471 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303437-001A	03/14/13 5:00 PM	03/14/13	03/15/13 10:08 AM	1303437-002A	03/14/13 5:10 PM	03/14/13	03/15/13 10:50 AM
1303437-003A	03/14/13 5:20 PM	03/14/13	03/15/13 11:32 AM	1303437-004A	03/14/13 5:15 PM	03/14/13	03/15/13 11:02 AM
1303437-005A	03/14/13 5:25 PM	03/14/13	03/15/13 11:41 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

A QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/16/13
1710 Franklin Street, Ste. 200		Date Received: 03/18/13
1710 Hankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 03/18/13
Oakland, CA 94612	Client P.O.:	Date Completed: 03/18/13

WorkOrder: 1303476

March 18, 2013

Dear Morgan:

### Enclosed within are:

- 1) The results of the 4 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1303476

Bell

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY, RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) Fax: (925) 252-9269 Telephone: (925) 252-9262 Report To: Morgan Gillies Bill To: Pangea Analysis Request Other Com ments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: mgillies@pangeaenv.com for Metals Fax: (510) 836-3709 Tele: (510) 836-3702 analysis: Project Name: Solano Group Project #: 1435.002 Yes / No Five fuel oxygenates (8260B) Project Location: 1187 Solano Ave, Albany Delatelle Sampler Signature: METHOD VOCs by EPA MEthod MATRIX SAMPLING Type Containers PRESERVED # Containers LOCATION SAMPLE ID (Field Point Air HNO, Name) Time Date ICE Soil SHUER-1-3/16/13 11:30 Lew ofor SPINEY 1-1-1 5W-8-514-9-1:35 Received By: ICE/to Relinquished By: Time: Date: GOOD CONDITION HEAD SPACE ABSENT Relinquished By: Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Time: Received By: Date: VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1303476

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

**EQuIS** ☐ J-flag ☐ WaterTrax WriteOn **▼** EDF Excel ✓ Email ☐ HardCopy ☐ ThirdParty Report to: Bill to: Requested TAT: 0 day Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 03/17/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 03/18/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below)

										(			,			
Lab ID	Client ID	Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
				•												
1303476-001	Sewer-1-1	Soil	3/16/2013 11:30		Α	Α										
1303476-002	Sewer-2-1	Soil	3/16/2013 11:35		Α											
1303476-003	SW-8-1	Soil	3/16/2013 13:30		Α											
1303476-004	SW-9-1	Soil	3/16/2013 13:35		A											
						•										

#### **Test Legend:**

1	8010BMS_S		2 PREDF REPORT	3	]	4	5
6			7	8		9	10
11		1	12				

Prepared by: Maria Venegas

Comments: Samples setup 3/18/13. Same Day Rush

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environmenta	ai Svcs., inc.			Date a	ina Time Received:	3/1//2013 8	114:10 AW
Project Name:	#1435.002; Solano G	roup			LogIn	Reviewed by:		Maria Venegas
WorkOrder N°:	1303476	Matrix: Soil			Carrier	r: <u>Client Drop-In</u>		
		Cha	ain of Cı	ustody (COC	) Informat	tion		
Chain of custody	present?		Yes	✓	No $\square$			
Chain of custody	signed when relinquish	ed and received?	Yes	✓	No $\square$			
Chain of custody	agrees with sample lab	oels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$			
Date and Time of	f collection noted by Clie	ent on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌			
Sample Receipt Information								
Custody seals int	tact on shipping contain	er/cooler?	Yes		No 🗌		NA 🗸	
Shipping containe	er/cooler in good condit	ion?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containers intact?			Yes	✓	No 🗌			
Sufficient sample	volume for indicated te	est?	Yes	<b>✓</b>	No 🗌			
		Sample Pre	servatio	on and Hold	Time (HT)	Information		
All samples recei	ived within holding time	?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp: 6	°C		NA $\square$	
Water - VOA vial	s have zero headspace	/ no bubbles?	Yes		No 🗌	No VOA vials submi	itted 🗹	
Sample labels ch	ecked for correct prese	ervation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pH<	<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗌			
		(Ice Ty	pe: WE	ET ICE )				
* NOTE: If the "No" box is checked, see comments below.								
	:							

Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/16/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/18/13
	Client Contact: Morgan Gillies	Date Extracted 03/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/18/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303476

Lab ID		1303476-001A								
Client ID				Sewer-1-1						
Matrix				Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005			
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005			
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005			
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005			
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004			
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005			
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005			
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004			
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005			
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005			
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005			
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005			
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005			
Tetrachloroethene	0.34	5.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005			
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005			
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005			

Surrogate Recoveries (%)								
%SS1:	96	%SS2:	114					
%SS3:	105							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/16/13		
1710 Franklin Street, Ste. 200	Group	Date Received: 03/18/13		
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/18/13		
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/18/13		

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303476

Lab ID				1303476-002A			
Client ID				Sewer-2-1			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.34	4.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	0.013	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)										
%SS1:	94	%SS2:	97							
%SS3:	92									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.		Date Sampled: 03/16/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/18/13
1710 Frankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/18/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303476

Lab ID				1303476-003A			
Client ID				SW-8-1			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.12	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)											
%SS1:	94	%SS2:	97								
%SS3:	97										
Comments											

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/16/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/18/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/18/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/18/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303476

Lab ID				1303476-004A			
Client ID				SW-9-1			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.096	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

	Surrogate Recoveries (%)											
%SS1:	95	%SS2:	114									
%SS3:	104											
Commonts												

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75563 WorkOrder: 1303476

EPA Method: SW8260B Extraction: S	W5030B					,	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, mary to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	N/A	0.050	N/A	N/A	N/A	98.5	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	N/A	0.050	N/A	N/A	N/A	89.9	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	N/A	0.050	N/A	N/A	N/A	99.9	N/A	N/A	70 - 130
1,1-Dichloroethene	N/A	0.050	N/A	N/A	N/A	93.4	N/A	N/A	70 - 130
Trichloroethene	N/A	0.050	N/A	N/A	N/A	98.1	N/A	N/A	70 - 130
%SS1:	N/A	0.12	N/A	N/A	N/A	97	N/A	N/A	70 - 130
%SS2:	N/A	0.12	N/A	N/A	N/A	108	N/A	N/A	70 - 130
%SS3:	N/A	0.012	N/A	N/A	N/A	91	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 75563 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303476-001A	03/16/13 11:30 AM	03/18/13	03/18/13 12:02 PM	1303476-001A	03/16/13 11:30 AM	03/18/13	03/18/13 1:26 PM
1303476-002A	03/16/13 11:35 AM	03/18/13	03/18/13 10:34 AM	1303476-002A	03/16/13 11:35 AM	03/18/13	03/18/13 11:51 AM
1303476-003A	03/16/13 1:30 PM	03/18/13	03/18/13 11:13 AM	1303476-004A	03/16/13 1:35 PM	03/18/13	03/18/13 12:44 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/20/13	
1710 Franklin Street, Ste. 200		Date Received: 03/20/13	
1770 1141141111 541661, 566. 200	Client Contact: Morgan Gillies	Date Reported: 03/26/13	
Oakland, CA 94612	Client P.O.:	Date Completed: 03/22/13	

WorkOrder: 1303576

March 27, 2013

### Dear Morgan:

### Enclosed within are:

- 1) The results of the 5 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

1303576

McCAMPBELL ANALYTICAL, INC.  1534 Willow Pass Road Pittsburg, CA 94565  Website: www.mccampbell.com Telephone: (925) 252-9262  Report To: Morgan Gillies  Bill To: Pangea									CHAIN OF CUSTODY RECORD  TURN AROUND TIME																
eport To: Morgan Gillies Bill To: Pangea															Ai	ialysis	Requ	uest				0	ther	Comme	its
Company: Pange																								Filter	
1710 Franklin Str	eet, Suite 200	), Oakla							-									18.0	17					Samples	
					The Party of Street, or other Persons and Str	illies@j	AND CONTRACTOR OF THE PARTY OF	env	v.com										11					for Meta	
Fele: (510) 836-37						836-370												1						analysis	
Project#: 1435.00				rojec	t Nan	ne: Sol	ano G	rou	P			83										1 1		Yes / No	
Project Location:		Ave, Al	bany		_	-		-	-	-	92181	(8260B	9				1		1						
Sampler Signature	e: **	1	-					_	META	LOD	1 88	(8	98												
		SAMI	PLING		12	MA	TRIX		METE		S	ate	tho												
SAMPLE ID	LOCATION (Field Point Name)	Data	Time	Containers	Containers	_	ie si			5 1	X (801	rel oxyges	IN EPA VIII												
	(Name)	Date	Time	# Cor	Type	Water	Air	Other	HCE	HNO	TPHg/BTE	Five fuel	1007												
DB-1		3/29/3	1210	3	WAS	X			XX				X											1	-
8-19-2		1	1115	1	人的	×			X				X										/	Revised	5.4
B-19-5			1110		1	X			×				X						П		T		1	(1	
P-30-2			1045			X			×				X						11			177		11	
B-20-5		1	1040	t	1	V				_			0				-	1			H		1	11	
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Relinquished By:		Date:	Time:	Rec	eived B		-		2	1	G	OOL	COND SPACE	HIO							COMM	IENTS:			-
Relinquished By:	13	Pate:/26/13	11 mge: 1630	Rec	eived B	D	Y	8			DA	ECH PPR	LORIN OPRIA RVED	ATED TE CO	IN LA										
Relinquished By:	1	Date:	Time:	Rec	cived B	y2 .							RVAT	V		O&G	MET pH<2		OTHE	R					

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1303576 ClientCode: PEO

		WaterTrax	WriteOn	<b>✓</b> EDF		Excel		EQuIS	✓	Email		HardC	ору	ThirdPa	arty	J-fla	g
Report to:						Bi	II to:						Reque	sted TAT:		5 d	lays
1710 Franklin St Oakland, CA 94	612	Email: mgillies@pangeaenv.com; tdelafuente@pacc: PO: ProjectNo: #1435.002; Solano Group				Bob Clark-Riddell Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612						Date Received: Date Printed:			03/20/2013 03/27/2013		
(510) 836-3700	FAX: (510) 836-3709																
	Requested Tests (See legend below)								elow)								
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1303576-001	DB-1		Water	3/20/2013 12:10			Α	Α									
1303576-002	B-19-2		Soil	3/20/2013 11:15		Α											
						Λ											
1303576-003	B-19-5		Soil	3/20/2013 11:10		Α											
1303576-003 1303576-004	B-19-5 B-20-2		Soil Soil	3/20/2013 11:10 3/20/2013 10:45		A											

### Test Legend:

1	8010BMS_S	2 8010BMS_W	3 PREDF REPORT	4	5	
6		7	8	9	10	
11		12				

Prepared by: Ana Venegas

### **Comments:**

## **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	and Tim	e Received:	3/20/2013 5	:07:52 PM			
Project Name: #1435.002; Solano Group					LogIn F	Review	ed by:		Ana Venegas			
WorkOrder N°:	1303576	Matrix: Soil/Water			Carrier	r: <u>R</u>	ob Pringle (M	Al Courier)				
		<u>Chai</u>	n of Cւ	ıstody (C0	OC) Informati	tion						
Chain of custody	present?		Yes	<b>✓</b>	No 🗌							
Chain of custody	signed when relinquis	hed and received?	Yes	<b>✓</b>	No $\square$							
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No 🗌							
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No 🗌							
Date and Time of	f collection noted by C	lient on COC?	Yes	<b>✓</b>	No $\square$							
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$							
Sample Receipt Information												
Custody seals int	tact on shipping contai	iner/cooler?	Yes		No $\square$			NA 🗸				
Shipping container/cooler in good condition?				<b>✓</b>	No 🗌							
Samples in prope	er containers/bottles?	Yes	<b>✓</b>	No 🗌								
Sample containers intact?				<b>✓</b>	No 🗌							
Sufficient sample	volume for indicated	test?	Yes	<b>✓</b>	No $\square$							
		Sample Pres	<u>ervatio</u>	n and Hol	d Time (HT)	Inform	<u>ation</u>					
All samples recei	ived within holding tim	e?	Yes	<b>✓</b>	No $\square$							
Container/Temp	Blank temperature		Coole	r Temp:	6.4°C			NA $\square$				
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes	<b>✓</b>	No $\square$	No VO	A vials submi	itted				
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌							
Metal - pH acceptable upon receipt (pH<2)?			Yes		No 🗌			NA 🗸				
Samples Receive	ed on Ice?		Yes	✓	No 🗌							
		(Ice Type	e: WE	T ICE )								
* NOTE: If the "N	lo" box is checked, se	e comments below.										
=====												
Comments:												

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/20/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/20/13
	Client Contact: Morgan Gillies	Date Extracted 03/21/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/21/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303576

Lab ID	1303576-001A						
Client ID		DB-1					
Matrix		Water					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	Carbon Tetrachloride	ND	1.0	0.5
Chlorobenzene	ND	1.0	0.5	Chloroethane	ND	1.0	0.5
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromoethane (EDB)	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
cis-1,3-Dichloropropene	ND	1.0	0.5	trans-1,3-Dichloropropene	ND	1.0	0.5
Freon 113	ND	1.0	10	Methylene chloride	ND	1.0	0.5
1,1,1,2-Tetrachloroethane	ND	1.0	0.5	1,1,2,2-Tetrachloroethane	ND	1.0	0.5
Tetrachloroethene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	Vinyl Chloride	ND	1.0	0.5

Surrogate Recoveries (%)						
%SS1:	101	%SS2:	101			
%SS3: 86						
Community 1-1						

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.



Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/20/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/20/13
	Client Contact: Morgan Gillies	Date Extracted 03/20/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/21/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303576

Lab ID	1303576-002A						
Client ID		B-19-2					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1: 92 %SS2: 106						
%SS3: 84						
Comments						

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.



Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/20/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/20/13
	Client Contact: Morgan Gillies	Date Extracted 03/20/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/21/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303576

Lab ID		1303576-003A					
Client ID		B-19-5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.013	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1: 91 %SS2: 104						
%SS3: 85						
Commonte						

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.



Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/20/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/20/13
	Client Contact: Morgan Gillies	Date Extracted 03/20/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/21/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303576

Lab ID		1303576-004A					
Client ID		B-20-2					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.013	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	94	%SS2:	106			
%SS3: 87						
Comments:						

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.



Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/20/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/20/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/20/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/21/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303576

Lab ID		1303576-005A								
Client ID				B-20-5						
Matrix				Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005			
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005			
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005			
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005			
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004			
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005			
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005			
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004			
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005			
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005			
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005			
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005			
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005			
Tetrachloroethene	0.0085	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005			
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005			
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005			

Surrogate Recoveries (%)								
%SS1:	94	%SS2:	108					
%SS3:	85							
Comments								

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.



# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 75676 WorkOrder: 1303576

EPA Method: SW8260B Extraction: S	W5030B					,	Spiked Sam	ple ID:	1303576-004A
Analyte	Sample	Sample Spiked		MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, wally co	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	91.3	91	0.268	98.7	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	97.4	96.6	0.751	104	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	87.4	89.8	2.67	100	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	76.7	78.7	2.56	86.8	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	91.9	92.4	0.533	99.4	60 - 116	30	70 - 130
%SS1:	94	0.12	99	99	0	99	70 - 130	30	70 - 130
%SS2:	106	0.12	116	116	0	115	70 - 130	30	70 - 130
%SS3:	87	0.012	121	121	0	112	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 75676 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303576-002A	03/20/13 11:15 AM	03/20/13	03/21/13 12:55 AM	1303576-003A	03/20/13 11:10 AM	03/20/13	03/21/13 1:36 AM
1303576-004A	03/20/13 10:45 AM	03/20/13	03/21/13 2:17 AM	1303576-005A	03/20/13 10:40 AM	03/20/13	03/21/13 2:58 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

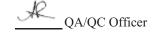
% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.



# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 75745 WorkOrder: 1303576

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1303576-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
y.c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	93	93.4	0.461	93.5	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	92.7	95.2	2.67	89.3	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	99.8	100	0.576	92.6	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	86.2	85	1.46	84.5	70 - 130	20	70 - 130
Trichloroethene	ND	10	88.4	88.5	0.105	90.8	70 - 130	20	70 - 130
%SS1:	101	25	104	104	0	100	70 - 130	20	70 - 130
%SS2:	101	25	101	99	2.01	100	70 - 130	20	70 - 130
%SS3:	86	2.5	88	90	2.20	88	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 75745 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sar	mpled	Date Extracted	Date Analyzed	
1303576-001A	03/20/13 12:10 PN	M 03/21/13	03/21/13 4:04 PM						

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

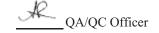
% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.



# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 03/20/13	
1710 Franklin Street, Ste. 200		Date Received: 03/21/13	
1710 Hankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 03/26/13	
Oakland, CA 94612	Client P.O.:	Date Completed: 03/25/13	

WorkOrder: 1303603

March 26, 2013

Dear Morgan:

### Enclosed within are:

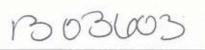
- 1) The results of the 3 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.



McCAMPBELL ANALYTICAL, INC.  1534 Willow Pass Road Pittsburg, CA 94565  Website: www.mccampbell.com Telephone: (925) 252-9262  Email: main@mccampbell.com Fax: (925) 252-9269							CHAIN OF CUSTODY RECORD  TURN AROUND TIME  RUSH 24 HR 48 HR 72 HR  EDF Required? Coelt (Normal) No Write On (DW) No									DAY																
Report To: Mor	gan Gillies		1	Bill T	o: Pa	nge	1			-								A	nal	ysis	Re	que	st						0	ther		Comment
Company: Pang	ea Environme	ental Ser	rvices, In	ic.		17													100				15	Т			100					2010297-03-115
1710 Franklin St	reet, Suite 20	0, Oakla	and, CA	94612	2																											Filter
			1	E-Ma	il: mg	illie	@pa	ange	aen	v.ce	m																					Samples for Metals
Tele: (510) 836-3	3702		1	ax:	(510)	836-	3709	)									1														- 1	analysis:
Project #: 1435.0	002		I	roje	et Na	me:	Sola	no (	irou	ıp																						Yes / No
Project Location	: 1187 Solano	Ave, Al	hany ,	,				-						3	0B)																	1637 110
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SAMPLE ID	LOCATION			ners	ıtain		П							108) X	xyger	A MI											ľ					
	(Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO,	Other	TPHg/BTEX	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010													ť			
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18-18-GW	-	3/20/13		17	VIN	1	+	+	-	4		+	+	-		X	+	-	1		-									-	+	
15-19-GW			18:10	+	+	-		+		-		-	+		-	1	-							-		-				- 4	+	
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Relinquished By:	1	Date:	Time:	Rece	eived B	1:					0					ORINA			AR													
		1/21/12	1400		1	1	1	1	//	7	)			APP	RO	PRIAT	E CO	NTA		RS_	-											
Relinquished By:	7	Date:	Time:	Rees	wed B	V.	(	Y	/	$\neq$			-	PRE	SEF	RVEDI	N LA	В														
and an artist of a		-7			000		U	0						PRE	SEF	RVATIO		DAS	08		ME pH<		.S	OTE	IER							

# McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

Siburg, CA 94565-1701 WorkOrder: 1303603 ClientCode: PEO

WaterTrax	()23) 23	72 7202																
Morgan Gillies			WaterTrax	WriteOn	EDF		Excel		EQuIS	<b>✓</b>	Email		_Hard0	Сору	ThirdPa	arty	J-fla	g
Requested   Tests   See   legend   below	Morgan Gilli Pangea Env 1710 Frankl	rironmental Svcs., Inc. in Street, Ste. 200	cc: PO:			uente@		Bob Pang 1710	gea Env ) Frankli	ironme n Stree	et, Ste.			Date	Received	:	03/21/2	
Lab ID Client ID Matrix Collection Date Hold 1 2 3 4 5 6 7 8 9 10 11    1303603-001				,														
1303603-001		011			0 11 11 5 1					1	1		1					40
1303603-002	Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	1	8	9	10	11	12
1303603-002	1303603-001	B-18-GW		Water	3/20/2013 18:00		Α											T
Test Legend:   1																	+	
Test Legend:  1																	-	
	1 8010													_				
Prepared by: Jena Alfaro	11	12																
														Prep	ared by:	Jena	Alfaro	

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	Pangea Environmen	ital Svcs., Inc.			Date a	and Time Received:	3/21/2013 1	:57:47 PM
Project Name:	#1435.002; Solano (	Group			LogIn	Reviewed by:		Jena Alfaro
WorkOrder N°:	1303603	Matrix: Water			Carrie	r: Rob Pringle (M	Al Courier)	
		<u>Chai</u>	n of Cւ	ustody (COC	C) Informat	<u>tion</u>		
Chain of custody	present?		Yes	<b>✓</b>	No $\square$			
Chain of custody	signed when relinquis	hed and received?	Yes	<b>✓</b>	No $\square$			
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No $\square$			
Sample IDs note	d by Client on COC?		Yes	✓	No $\square$			
Date and Time of	f collection noted by C	lient on COC?	Yes	✓	No $\square$			
Sampler's name	noted on COC?		Yes	✓	No $\square$			
		<u> </u>	Sample	Receipt In	<u>formation</u>			
Custody seals int	tact on shipping contai	ner/cooler?	Yes		No 🗌		NA 🗹	
Shipping containe	er/cooler in good cond	ition?	Yes	✓	No $\square$			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample containe	rs intact?		Yes	✓	No $\square$			
Sufficient sample	volume for indicated	test?	Yes	✓	No $\square$			
		Sample Prese	ervatio	n and Hold	Time (HT)	Information		
All samples recei	ived within holding time	e?	Yes	✓	No $\square$			
Container/Temp	Blank temperature		Coole	er Temp: 5	.2°C		NA 🗌	
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes	✓	No $\square$	No VOA vials submi	tted	
Sample labels ch	necked for correct pres	ervation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pH	l<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗌			
		(Ісе Туре	e: WE	TICE )				
* NOTE: If the "N	lo" box is checked, se	e comments below.						

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/20/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/21/13
1710 Frankfill Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 03/22/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/22/13

# Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303603

Lab ID		1303603-001A						
Client ID		B-18-GW						
Matrix				Water				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Bromodichloromethane	ND<50	100	0.5	Bromoform	ND<50	100	0.5	
Bromomethane	ND<50	100	0.5	Carbon Tetrachloride	ND<50	100	0.5	
Chlorobenzene	ND<50	100	0.5	Chloroethane	ND<50	100	0.5	
Chloroform	ND<50	100	0.5	Chloromethane	ND<50	100	0.5	
Dibromochloromethane	ND<50	100	0.5	1,2-Dibromoethane (EDB)	ND<50	100	0.5	
1,2-Dichlorobenzene	ND<50	100	0.5	1,3-Dichlorobenzene	ND<50	100	0.5	
1,4-Dichlorobenzene	ND<50	100	0.5	Dichlorodifluoromethane	ND<50	100	0.5	
1,1-Dichloroethane	ND<50	100	0.5	1,2-Dichloroethane (1,2-DCA)	ND<50	100	0.5	
1,1-Dichloroethene	ND<50	100	0.5	cis-1,2-Dichloroethene	ND<50	100	0.5	
trans-1,2-Dichloroethene	ND<50	100	0.5	1,2-Dichloropropane	ND<50	100	0.5	
cis-1,3-Dichloropropene	ND<50	100	0.5	trans-1,3-Dichloropropene	ND<50	100	0.5	
Freon 113	ND<1000	100	10	Methylene chloride	ND<50	100	0.5	
1,1,1,2-Tetrachloroethane	ND<50	100	0.5	1,1,2,2-Tetrachloroethane	ND<50	100	0.5	
Tetrachloroethene	620	100	0.5	1,1,1-Trichloroethane	ND<50	100	0.5	
1,1,2-Trichloroethane	ND<50	100	0.5	Trichloroethene	ND<50	100	0.5	
Trichlorofluoromethane	ND<50	100	0.5	Vinyl Chloride	ND<50	100	0.5	

Surrogate Recoveries (%)							
%SS1:	104	%SS2:	98				
%SS3:	87						
C							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 03/20/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/21/13
	Client Contact: Morgan Gillies	Date Extracted 03/22/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/22/13

# Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303603

Lab ID		1303603-002A							
Client ID		B-19-GW							
Matrix				Water					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND<50	100	0.5	Bromoform	ND<50	100	0.5		
Bromomethane	ND<50	100	0.5	Carbon Tetrachloride	ND<50	100	0.5		
Chlorobenzene	ND<50	100	0.5	Chloroethane	ND<50	100	0.5		
Chloroform	ND<50	100	0.5	Chloromethane	ND<50	100	0.5		
Dibromochloromethane	ND<50	100	0.5	1,2-Dibromoethane (EDB)	ND<50	100	0.5		
1,2-Dichlorobenzene	ND<50	100	0.5	1,3-Dichlorobenzene	ND<50	100	0.5		
1,4-Dichlorobenzene	ND<50	100	0.5	Dichlorodifluoromethane	ND<50	100	0.5		
1,1-Dichloroethane	ND<50	100	0.5	1,2-Dichloroethane (1,2-DCA)	ND<50	100	0.5		
1,1-Dichloroethene	ND<50	100	0.5	cis-1,2-Dichloroethene	ND<50	100	0.5		
trans-1,2-Dichloroethene	ND<50	100	0.5	1,2-Dichloropropane	ND<50	100	0.5		
cis-1,3-Dichloropropene	ND<50	100	0.5	trans-1,3-Dichloropropene	ND<50	100	0.5		
Freon 113	ND<1000	100	10	Methylene chloride	ND<50	100	0.5		
1,1,1,2-Tetrachloroethane	ND<50	100	0.5	1,1,2,2-Tetrachloroethane	ND<50	100	0.5		
Tetrachloroethene	440	100	0.5	1,1,1-Trichloroethane	ND<50	100	0.5		
1,1,2-Trichloroethane	ND<50	100	0.5	Trichloroethene	ND<50	100	0.5		
Trichlorofluoromethane	ND<50	100	0.5	Vinyl Chloride	ND<50	100	0.5		

Surrogate Recoveries (%)							
%SS1:	103	%SS2:	99				
%SS3:	84						
Comments							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	3	Date Sampled: 03/20/13
1710 Franklin Street, Ste. 200	Group	Date Received: 03/21/13
	Client Contact: Morgan Gillies	Date Extracted 03/23/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 03/23/13

# Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1303603

Lab ID		1303603-003A								
Client ID		B-20-GW								
Matrix				Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND<5.0	10	0.5	Bromoform	ND<5.0	10	0.5			
Bromomethane	ND<5.0	10	0.5	Carbon Tetrachloride	ND<5.0	10	0.5			
Chlorobenzene	ND<5.0	10	0.5	Chloroethane	ND<5.0	10	0.5			
Chloroform	ND<5.0	10	0.5	Chloromethane	ND<5.0	10	0.5			
Dibromochloromethane	ND<5.0	10	0.5	1,2-Dibromoethane (EDB)	ND<5.0	10	0.5			
1,2-Dichlorobenzene	ND<5.0	10	0.5	1,3-Dichlorobenzene	ND<5.0	10	0.5			
1,4-Dichlorobenzene	ND<5.0	10	0.5	Dichlorodifluoromethane	ND<5.0	10	0.5			
1,1-Dichloroethane	ND<5.0	10	0.5	1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	0.5			
1,1-Dichloroethene	ND<5.0	10	0.5	cis-1,2-Dichloroethene	ND<5.0	10	0.5			
trans-1,2-Dichloroethene	ND<5.0	10	0.5	1,2-Dichloropropane	ND<5.0	10	0.5			
cis-1,3-Dichloropropene	ND<5.0	10	0.5	trans-1,3-Dichloropropene	ND<5.0	10	0.5			
Freon 113	ND<100	10	10	Methylene chloride	ND<5.0	10	0.5			
1,1,1,2-Tetrachloroethane	ND<5.0	10	0.5	1,1,2,2-Tetrachloroethane	ND<5.0	10	0.5			
Tetrachloroethene	190	10	0.5	1,1,1-Trichloroethane	ND<5.0	10	0.5			
1,1,2-Trichloroethane	ND<5.0	10	0.5	Trichloroethene	7.0	10	0.5			
Trichlorofluoromethane	ND<5.0	10	0.5	Vinyl Chloride	ND<5.0	10	0.5			

Surrogate Recoveries (%)							
%SS1:	105	%SS2:	98				
%SS3:	84						
Commonta							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 75800 WorkOrder: 1303603

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1303622-004A
Analyte		Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
, and yet	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	94.2	96.4	2.31	98.2	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	96.6	103	6.65	93.7	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	105	109	3.16	92.2	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	86.9	90.7	4.23	87.7	70 - 130	20	70 - 130
Trichloroethene	ND	10	91.1	93.3	2.38	94.2	70 - 130	20	70 - 130
%SS1:	104	25	107	105	1.58	100	70 - 130	20	70 - 130
%SS2:	100	25	100	102	1.85	100	70 - 130	20	70 - 130
%SS3:	86	2.5	89	90	0.406	92	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 75800 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1303603-001A	03/20/13 6:00 PM	03/22/13	03/22/13 10:45 PM	1303603-002A	03/20/13 6:10 PM	03/22/13	03/22/13 11:23 PM
1303603-003A	03/20/13 6:20 PM	03/23/13	03/23/13 12:01 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: Solano	Date Sampled: 04/08/13
1710 Franklin Street, Ste. 200		Date Received: 04/08/13
1710 Hamain Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 04/09/13
Oakland, CA 94612	Client P.O.:	Date Completed: 04/09/13

WorkOrder: 1304247

April 11, 2013

Dear Morgan:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: Solano,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1304247

### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com No EDF Required? Coelt (Normal) Write On (DW) Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Morgan Gillies Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 TPH as Diesel (8015) w/ Silica Gel Cleanup Total Petroleum Oil & Grease (5520 E&F/B&F) Samples PAH's / PNA's by EPA 625 / 8270 / 8310 E-Mail: mgillies@pangeaenv.com Fotal Petroleum Hydrocarbons (418.1) for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project Name: Parker Place Project #: 1435.001 BTEX ONLY (EPA 602 / 8020) Yes / No EPA 608 / 8082 PCB's ONLY CAM-17 Metals (6010 / 6020) LUFT 5 Metals (6010 / 6020) Project Location: 2600 Shattuck Avenue, Berkeley (187) Lead (200.8 / 200.9 / 6010) Sampler Signature: METHOD EPA 525 / 625 / 8270 SAMPLING MATRIX Type Containers PRESERVED EPA 8140 / 8141 EPA 8150 / 8151 # Containers LOCATION SAMPLE ID (Field Point Sludge Water Other HNO3 Other Name) Date Time ICE INF 12:10 Received By: Relinguished By: Time: COMMENTS: Date: GOOD CONDITION 3:00 HEAD SPACE ABSENT Relinquished By: Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Time: Received By: Date: VOAS 0&G METALS OTHER PRESERVATION pH<2

# McCampbell Analytical, Inc.

INF

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1304247

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

**EQuIS** WriteOn EDF Excel ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 3 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 04/08/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 ProjectNo: Solano Oakland, CA 94612 Oakland, CA 94612 Date Printed: 04/08/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 5 8 Lab ID 2 3 10 12 Client ID Matrix Collection Date Hold 4 11

Α

4/8/2013 12:10

Air

### **Test Legend:**

1304247-001

1 8010BMS_A	2	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Maria Venegas

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	Pangea Environmen	ital Svcs., Inc.			Date a	nd Time Received:	4/8/2013 2:5	8:46 PM		
Project Name:	Solano				LogIn F	Reviewed by:		Maria Venegas		
WorkOrder N°:	1304247	Matrix: Air			Carrier	: Client Drop-In				
Chain of Custody (COC) Information										
Chain of custody	present?		Yes	<b>✓</b>	No 🗌					
Chain of custody	signed when relinquis	shed and received?	Yes	<b>✓</b>	No 🗌					
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No 🗌					
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$					
Date and Time of	f collection noted by C	lient on COC?	Yes	<b>✓</b>	No $\square$					
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌					
	Sample Receipt Information									
Custody seals int	act on shipping contai	iner/cooler?	Yes		No 🗌		NA 🗹			
Shipping containe	er/cooler in good cond	lition?	Yes	<b>✓</b>	No 🗌					
Samples in prope	er containers/bottles?		Yes	✓	No $\square$					
Sample containe	rs intact?		Yes	✓	No 🗌					
Sufficient sample	volume for indicated	test?	Yes	<b>✓</b>	No $\square$					
		Sample Pres	ervatio	n and Hold	<u>Гіте (НТ) І</u>	<u>Information</u>				
All samples recei	ved within holding time	e?	Yes	<b>✓</b>	No 🗌					
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗸			
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes		No 🗌	No VOA vials submi	tted 🗸			
Sample labels ch	ecked for correct pres	servation?	Yes	<b>✓</b>	No 🗌					
Metal - pH accep	table upon receipt (pH	l<2)?	Yes		No 🗌		NA 🗸			
Samples Receive	ed on Ice?		Yes		No 🗹					
* NOTE: If the "N	lo" box is checked, sed	e comments below.		===:	====	=====	====	:======		

Pangea Environmental Svcs., Inc.	Client Project ID: Solano	Date Sampled: 04/08/13
1710 Franklin Start Str. 200		Date Received: 04/08/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/08/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/08/13

Halogenated V	_	es by P&T and Galytical Method: SW8260	C-MS (8010 Basi	c Target List)*  Work Order:	1304247	
Lab ID	1304247-001A	ilytical Method. 5 W 6200		Work Order.	1304247	
	INF			Reporting		
Client ID	INF			DF	=1	
Matrix	A			S	A	
DF	1				А	
Compound		Conce	entration	μg/kg	μg/L	
Bromodichloromethane	ND			NA	0.25	
Bromoform	ND			NA	0.25	
Bromomethane	ND			NA	0.25	
Carbon Tetrachloride	ND			NA	0.25	
Chlorobenzene	ND			NA	0.25	
Chloroethane	ND			NA	0.25	
Chloroform	ND			NA	0.25	
Chloromethane	ND			NA	0.25	
Dibromochloromethane	ND			NA	0.25	
1,2-Dibromoethane (EDB)	ND			NA	0.5	
1,2-Dichlorobenzene	ND			NA	0.25	
1,3-Dichlorobenzene	ND			NA	0.25	
1,4-Dichlorobenzene	ND			NA	0.25	
Dichlorodifluoromethane	ND			NA	0.25	
1,1-Dichloroethane	ND			NA	0.25	
1,2-Dichloroethane (1,2-DCA)	ND			NA	0.25	
1,1-Dichloroethene	ND			NA	0.25	
cis-1,2-Dichloroethene	ND			NA	0.25	
trans-1,2-Dichloroethene	ND			NA	0.25	
1,2-Dichloropropane	ND			NA	0.25	
cis-1,3-Dichloropropene	ND			NA	0.25	
trans-1,3-Dichloropropene	ND			NA	0.25	
Freon 113	ND			NA	0.5	
Methylene chloride	ND			NA	0.25	
1,1,1,2-Tetrachloroethane	ND			NA	0.5	
1,1,2,2-Tetrachloroethane	ND			NA	0.25	
Tetrachloroethene	5.0			NA	0.25	
1,1,1-Trichloroethane	ND			NA	0.25	
1,1,2-Trichloroethane	ND			NA	0.25	
Trichloroethene	0.51			NA	0.25	
Trichlorofluoromethane	ND			NA	0.25	
Vinyl Chloride	ND			NA	0.25	
-	Su	rrogate Recoverie	s (%)	- '		
%SS1:	108		- \			
%SS2:	109					
%SS3:	83					
/0000;	63					

Surrogate Recoveries (%)								
%SS1:	108							
%SS2:	109							
%SS3:	83							
Comments								

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: Solano	Date Sampled: 04/08/13
1710 Franklin Grand Str. 200		Date Received: 04/08/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/08/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/08/13

Lab ID	1304247-001A				
Client ID	INF			Reporting DF	
Matrix	A			S	A
DF	1				A
Compound		Conc	entration	μg/kg	μL/L
Bromodichloromethane	ND			NA	0.036
Bromoform	ND			NA	0.024
Bromomethane	ND			NA	0.063
Carbon Tetrachloride	ND			NA	0.039
Chlorobenzene	ND			NA	0.053
Chloroethane	ND			NA	0.093
Chloroform	ND			NA	0.05
Chloromethane	ND			NA	0.12
Dibromochloromethane	ND			NA	0.029
1,2-Dibromoethane (EDB)	ND			NA	0.064
1,2-Dichlorobenzene	ND			NA	0.041
1,3-Dichlorobenzene	ND			NA	0.041
1,4-Dichlorobenzene	ND			NA	0.041
Dichlorodifluoromethane	ND			NA	0.05
1,1-Dichloroethane	ND			NA	0.061
1,2-Dichloroethane (1,2-DCA)	ND			NA	0.061
1,1-Dichloroethene	ND			NA	0.062
cis-1,2-Dichloroethene	ND			NA	0.062
trans-1,2-Dichloroethene	ND			NA	0.062
1,2-Dichloropropane	ND			NA	0.053
cis-1,3-Dichloropropene	ND			NA	0.054
trans-1,3-Dichloropropene	ND			NA	0.054
Freon 113	ND			NA	0.064
Methylene chloride	ND			NA	0.071
1,1,1,2-Tetrachloroethane	ND			NA	0.036
1,1,2,2-Tetrachloroethane	ND			NA	0.036
Tetrachloroethene	0.73			NA	0.036
1,1,1-Trichloroethane	ND			NA	0.045
1,1,2-Trichloroethane	ND			NA	0.045
Trichloroethene	0.093			NA	0.046
Trichlorofluoromethane	ND			NA	0.044
Vinyl Chloride	ND			NA	0.096
		ate Recoverie	s (%)		
%SS1:	108				
%SS2:	109				
%SS3:	83				
G					

Comments

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

<sup>\*</sup> vapor samples are reported in μL/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe, and air in  $\mu$ L/L.

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 76258 WorkOrder: 1304247

EPA Method: SW8260B Extraction: S	W5030B					,	Spiked Sam	ple ID:	1304222-004A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	89.1	88.5	0.668	101	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	98	98.5	0.509	104	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	101	101	0	103	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	79.3	80.8	1.83	88.1	70 - 130	20	70 - 130
Trichloroethene	ND	10	80.4	82.8	2.90	94.6	70 - 130	20	70 - 130
%SS1:	113	25	113	111	1.84	111	70 - 130	20	70 - 130
%SS2:	107	25	106	105	0.889	102	70 - 130	20	70 - 130
%SS3:	93	2.5	96	94	2.26	95	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 76258 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1304247-001A	04/08/13 12:10 PN	1 04/08/13	04/08/13 3:37 PM					ĺ

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: 1187 Solano	Date Sampled: 04/10/13
1710 Franklin Street, Ste. 200		Date Received: 04/10/13
1710 Hamain Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Reported: 04/11/13
Oakland, CA 94612	Client P.O.:	Date Completed: 04/11/13

WorkOrder: 1304307

April 12, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: 1187 Solano,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1534 Willowww.mcco	ow Pass Ro ampbell.c ne: (877) 2	d. / Pitts om / m 52-9262	Analytica sburg, Ca. 94565-1 nain@mccampbe 2 / Fax: (925) 252-9	1701 ell.com 9269	TURN AROUND DIME:	PDF 🔲	24 HR	48 HR		□5 DAY	
Company: PANKER	e ru	Der	THE TANK	GEN BOB						ressuriza	tion Gas
Tele: (510)435-86			E-Mail: Dille	U @ Paragrew.		Pressurized By				N2	Не
Project #:	64		Project Name:	1(87 Solano							
Project Location:				(10) mano							
Sampler Signature:	Boke/	Ul	ll		Notes:						
Field Sample ID	Collection		Canister SN#	Sampler Kit SN#							
(Location)	Date	Time	Cumster of the	5/63	Analysis Requested	Indoor	Soil	Initial	anister Pr Final	essure/Vac	
INF	4/14/3	12:00	1 BAG9		8010	Air	Gas	muai	rinai	Receipt	Final (psi)
INF-PO	1 10	1:00	1 846		T.		1				
										Н.	
+1											
							1				
5. 										7100	
V											
<del></del>											
Relinquished By: Relinquished By: Relinquished By:	Date: 4 0 13 Date: 4 5 13 Date: 5 15 15	Time:	Received By:  Received By:	A	Temp (°C): V Condition: Custody Seals Intact?: Yes Shipped Via:				-		

# McCampbell Analytical, Inc.

INF

INF-PO

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1304307 ClientCode: PEO ☐ WaterTrax WriteOn **▼** EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 3 days Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 04/10/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: 1187 Solano Oakland, CA 94612 Date Printed: 04/10/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 2 5 8 Lab ID 3 4 10 12 Client ID Matrix Collection Date Hold 11

Α

Α

Α

4/10/2013 12:00

4/10/2013 13:00

Air

Air

### **Test Legend:**

1304307-001

1304307-002

1 8010BMS_A	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	and Ti	ime Received: 4/10/2013 3	:06:13 PM	
Project Name:	1187 Solano				LogIn	Revie	ewed by:	Zoraida Cortez	
WorkOrder N°:	1304307	Matrix: Air			Carrie	er:	Rob Pringle (MAI Courier)		
Chain of Custody (COC) Information									
Chain of custody	present?		Yes	<b>✓</b>	No 🗌				
Chain of custody	signed when relinquis	hed and received?	Yes	<b>✓</b>	No 🗌				
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌				
Sample IDs noted	d by Client on COC?		Yes	✓	No 🗌				
Date and Time of	collection noted by Cl	ient on COC?	Yes	✓	No $\square$				
Sampler's name	noted on COC?		Yes	✓	No $\square$				
Sample Receipt Information									
Custody seals int	act on shipping contai	ner/cooler?	Yes		No $\square$		NA 🗹		
Shipping containe	er/cooler in good condi	tion?	Yes	<b>✓</b>	No 🗌				
Samples in prope	er containers/bottles?		Yes	✓	No 🗌				
Sample contained	rs intact?		Yes	<b>✓</b>	No 🗌				
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No $\square$				
		Sample Prese	ervatio	n and Hold T	ime (HT)	Infor	mation		
All samples recei	ved within holding time	e?	Yes	<b>✓</b>	No $\square$				
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗹		
Water - VOA vial	s have zero headspace	e / no bubbles?	Yes		No 🗌	No V	/OA vials submitted ✓		
Sample labels ch	ecked for correct pres	ervation?	Yes	✓	No 🗌				
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗹		
Samples Receive	ed on Ice?		Yes		No 🗹				
* NOTE: If the "N	o" box is checked, see	e comments below.	===		:		:======	======	

Lab ID

1304307-001A

Extraction Method: SW5030B

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Work Order: 1304307

~ .	<u> </u>	
Pangea Environmental Svcs., Inc.	Client Project ID: 1187 Solano	Date Sampled: 04/10/13
1710 Franklin Strant Str. 200		Date Received: 04/10/13
1710 Franklin Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted: 04/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/10/13

# Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\* Analytical Method: SW8260B

1304307-002A

Reporting Limit for Client ID INF INF-PO DF = 1Matrix Α Α S Α DF 1 1 Compound Concentration μg/kg  $\mu g/L$ 0.25 Bromodichloromethane ND ND NA Bromoform ND ND NA 0.25 Bromomethane ND ND NA 0.25 Carbon Tetrachloride ND ND NA 0.25 0.25 Chlorobenzene ND ND NA Chloroethane ND ND 0.25 NA Chloroform 0.25 ND ND NA 0.25 Chloromethane ND ND NA Dibromochloromethane 0.25 ND ND NA 1,2-Dibromoethane (EDB) ND ND NA 0.5 1,2-Dichlorobenzene ND ND NA 0.25

1,2 Biemerecement	112	112		1 11 1	0.20
1,3-Dichlorobenzene	ND	ND		NA	0.25
1,4-Dichlorobenzene	ND	ND		NA	0.25
Dichlorodifluoromethane	ND	ND		NA	0.25
1,1-Dichloroethane	ND	ND		NA	0.25
1,2-Dichloroethane (1,2-DCA)	ND	ND		NA	0.25
1,1-Dichloroethene	ND	ND		NA	0.25
cis-1,2-Dichloroethene	ND	ND		NA	0.25
trans-1,2-Dichloroethene	ND	ND		NA	0.25
1,2-Dichloropropane	ND	ND		NA	0.25
cis-1,3-Dichloropropene	ND	ND		NA	0.25
trans-1,3-Dichloropropene	ND	ND		NA	0.25
Freon 113	ND	ND		NA	0.5
Methylene chloride	ND	ND		NA	0.25
1,1,1,2-Tetrachloroethane	ND	ND		NA	0.5
1,1,2,2-Tetrachloroethane	ND	ND		NA	0.25
Tetrachloroethene	4.4	0.70		NA	0.25
1,1,1-Trichloroethane	ND	ND		NA	0.25
1,1,2-Trichloroethane	ND	ND		NA	0.25
Trichloroethene	0.29	ND		NA	0.25
Trichlorofluoromethane	ND	ND		NA	0.25

Surrogate Recoveries (%)								
%SS1:	100	107						
%SS2:	106	108						
%SS3:	93	90						
Comments	Comments							

ND

ND

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

NA

0.25

Vinyl Chloride

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

~ .	<u>.                                    </u>	
Pangea Environmental Svcs., Inc.	Client Project ID: 1187 Solano	Date Sampled: 04/10/13
1710 Familia Stand St. 200		Date Received: 04/10/13
1710 Franklin Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted: 04/10/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/10/13

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV\* Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1304307 Lab ID 1304307-001A 1304307-002A Reporting Limit for Client ID INF INF-PO DF = 1Matrix Α Α S Α DF 1 1 Compound Concentration  $\mu g/kg$  $\mu L/L$ 0.036 Bromodichloromethane ND ND NA Bromoform ND ND NA 0.024ND ND NA 0.063Bromomethane Carbon Tetrachloride ND ND NA 0.039 0.053 Chlorobenzene ND ND NA Chloroethane ND ND 0.093 NA Chloroform ND ND 0.05 NA Chloromethane ND ND 0.12 NA Dibromochloromethane ND ND NA 0.0291,2-Dibromoethane (EDB) ND ND NA 0.064 1,2-Dichlorobenzene ND ND 0.041 NA ND 0.041 1,3-Dichlorobenzene ND NA 1,4-Dichlorobenzene ND ND NA 0.041 Dichlorodifluoromethane ND ND NA 0.05 1,1-Dichloroethane ND ND NA 0.061 1,2-Dichloroethane (1,2-DCA) ND ND NA 0.061 0.062 1,1-Dichloroethene ND ND NA cis-1,2-Dichloroethene ND ND NA 0.062 trans-1,2-Dichloroethene ND ND NA 0.062 1,2-Dichloropropane ND ND NA 0.053 ND ND NA 0.054cis-1,3-Dichloropropene trans-1,3-Dichloropropene ND 0.054 ND NA Freon 113 ND ND NA 0.064 Methylene chloride ND ND NA 0.071 1,1,1,2-Tetrachloroethane ND ND NA 0.0361,1,2,2-Tetrachloroethane ND ND NA 0.036 Tetrachloroethene 0.64 0.10 NA 0.036 1,1,1-Trichloroethane ND ND NA 0.045 1,1,2-Trichloroethane ND ND NA 0.045 Trichloroethene 0.052 0.046 ND NA Trichlorofluoromethane ND ND NA 0.044 Vinyl Chloride ND ND NA 0.096

Surrogate Recoveries (%)						
%SS1:	100	107				
%SS2:	106	108				
%SS3:	93	90				
Comments						

<sup>\*</sup> vapor samples are reported in µL/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe, and air in  $\mu$ L/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor



# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 76327 WorkOrder: 1304307

EPA Method: SW8260B Extraction: S	W5030B					5	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, wayte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	N/A	20	N/A	N/A	N/A	103	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	N/A	20	N/A	N/A	N/A	110	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	N/A	20	N/A	N/A	N/A	105	N/A	N/A	70 - 130
1,1-Dichloroethene	N/A	20	N/A	N/A	N/A	93.1	N/A	N/A	70 - 130
Trichloroethene	N/A	20	N/A	N/A	N/A	114	N/A	N/A	70 - 130
%SS1:	N/A	25	N/A	N/A	N/A	108	N/A	N/A	70 - 130
%SS2:	N/A	25	N/A	N/A	N/A	107	N/A	N/A	70 - 130
%SS3:	N/A	2.5	N/A	N/A	N/A	91	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 76327 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304307-001A	04/10/13 12:00 PM	04/10/13	04/10/13 4:08 PM	1304307-001A	04/10/13 12:00 PM	04/10/13	04/10/13 4:08 PM
1304307-002A	04/10/13 1:00 PM	04/10/13	04/10/13 4:51 PM	1304307-002A	04/10/13 1:00 PM	04/10/13	04/10/13 4:51 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 04/15/13
1710 Franklin Street, Ste. 200		Date Received: 04/15/13
1770 1141141111 Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 04/17/13
Oakland, CA 94612	Client P.O.:	Date Completed: 04/16/13

WorkOrder: 1304466

April 19, 2013

Dear Morgan:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 5 DAY RUSH 24 HR 72 HR 48 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Morgan Gillies Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: mgillies@pangeaenv.com for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project Name: Solano Group Project #: 1435.002 Yes / No Five fuel oxygenates (8260B) Project Location: 1187 Solano Ave, Albany TPHg/BTEX (8015Cm/8021B) VOCs by EPA MEthod 8010 Sampler Signature: METHOD SAMPLING MATRIX Type Containers PRESERVED # Containers LOCATION SAMPLE ID (Field Point Sludge Time Name) Date HCL ICE INF-PO 4/15/13 Relinquished By: Received By: Time: ICE/to COMMENTS: GOOD CONDITION HEAD SPACE ABSENT Relinguished By Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Received By: Time: VOAS O&G METALS OTHER PRESERVATION pH<2

# McCampbell Analytical, Inc.

INF-PO

Air

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(925) 252-9262		WorkO	rder: 1304466	ClientCo	ode: PEO			
	☐ WaterTrax ☐ WriteOn ☐ ED	OF Excel	EQuIS	<b>✓</b> Email	HardCopy	ThirdParty	J-flag	
Report to:		Bi	II to:		Requ	uested TAT:	5 da	ıys
Morgan Gillies Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	Email: mgillies@pangeaenv.com; cc: PO: ProjectNo: #1435.002; Solano Group	<b>.</b>	Bob Clark-Ridd Pangea Enviror 1710 Franklin S Oakland, CA 94	nmental Svcs., In Street, Ste. 200	Date	e Received: e Printed:	04/15/20 04/15/20	
				Requested Tests	s (See legend l	pelow)		
ab ID Client ID	Matrix Collectio	n Date Hold 1	2 3	4 5 6	7 8	9 10	11	12

4/15/2013 13:00

### Test Legend:

1304466-001

1 8010BMS_A	2	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	and Tin	ne Received: 4/15/2013	6:28:27 PM
Project Name:	#1435.002; Solano 0	Group			LogIn	Reviev	wed by:	Zoraida Cortez
WorkOrder N°:	1304466	Matrix: Air			Carrie	r: <u>F</u>	Rob Pringle (MAI Courier)	
		<u>Chai</u>	n of Cu	ıstody (COC)	Informat	<u>tion</u>		
Chain of custody	present?		Yes	✓	No $\square$			
Chain of custody	signed when relinquis	hed and received?	Yes	•	No $\square$			
Chain of custody	agrees with sample la	bels?	Yes	•	No $\square$			
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No $\square$			
Date and Time of	f collection noted by C	lient on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?		Yes	✓	No $\square$			
		<u> </u>	Sample	Receipt Info	rmation			
Custody seals int	tact on shipping contai	ner/cooler?	Yes		No 🗌		NA 🗸	
Shipping containe	er/cooler in good cond	ition?	Yes	<b>✓</b>	No $\square$			
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No $\square$			
Sample containe	rs intact?		Yes	<b>✓</b>	No $\square$			
Sufficient sample	volume for indicated t	test?	Yes	<b>✓</b>	No $\square$			
		Sample Prese	ervatio	n and Hold T	ime (HT)	Inforn	nation	
All samples recei	ived within holding time	e?	Yes	✓	No $\square$			
Container/Temp	Blank temperature		Coole	r Temp:			NA 🗹	
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes		No $\square$	No VO	OA vials submitted 🗹	
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No $\square$		NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🗸			
* NOTE: If the "N	lo" box is checked, see	e comments below.						
		· — — — — — -		_ — — — -				- — — — — — — —

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 04/15/13
1710 F. 11. G G. 200	Group	Date Received: 04/15/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/15/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/15/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Halogenated T	Volatile Organics	s by P&T and G	C-MS (8010 Bas	sic Target List)*			
Extraction Method: SW5030B	Analytical Method: SW8260B				Work Order: 1304466		
Lab ID	1304466-001A						
Client ID	INF-PO				Reporting DF		
Matrix	A				S	A	
DF	1						
Compound		Conce	entration		μg/kg	μg/L	
Bromodichloromethane	ND				NA	0.25	
Bromoform	ND				NA	0.25	
Bromomethane	ND				NA	0.25	
Carbon Tetrachloride	ND				NA	0.25	
Chlorobenzene	ND				NA	0.25	
Chloroethane	ND				NA	0.25	
Chloroform	ND				NA	0.25	
Chloromethane	ND				NA	0.25	
Dibromochloromethane	ND				NA	0.25	
1,2-Dibromoethane (EDB)	ND				NA	0.5	
1,2-Dichlorobenzene	ND				NA	0.25	
1,3-Dichlorobenzene	ND				NA	0.25	
1,4-Dichlorobenzene	ND				NA	0.25	
Dichlorodifluoromethane	ND				NA	0.25	
1,1-Dichloroethane	ND				NA	0.25	
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.25	
1,1-Dichloroethene	ND				NA	0.25	
cis-1,2-Dichloroethene	ND				NA	0.25	
trans-1,2-Dichloroethene	ND				NA	0.25	
1,2-Dichloropropane	ND				NA	0.25	
cis-1,3-Dichloropropene	ND				NA	0.25	
trans-1,3-Dichloropropene	ND				NA	0.25	
Freon 113	ND				NA	0.5	
Methylene chloride	ND				NA	0.25	
1,1,1,2-Tetrachloroethane	ND				NA	0.23	
1,1,2-Tetrachloroethane	ND				NA	0.25	
Tetrachloroethene	0.37				NA NA	0.25	
1,1,1-Trichloroethane	ND					0.25	
					NA NA		
1,1,2-Trichloroethane	ND ND				NA NA	0.25	
Trichland for any state of	ND ND				NA NA	0.25	
Trichlorofluoromethane	ND ND				NA NA	0.25	
Vinyl Chloride	ND				NA	0.25	
0/001		rogate Recoverie	s (%)				
%SS1:	110						
%SS2:	107						
%SS3:	100						
Comments							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 04/15/13
1710 Franklin Street, Ste. 200	Group	Date Received: 04/15/13
	Client Contact: Morgan Gillies	Date Extracted: 04/15/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/15/13

Halogenated Volat  Extraction Method: SW5030B		P&T and GC-M alytical Method: SW8260	•	arget List) in PPMV*  Work Orde	r: 1304466		
Lab ID	1304466-001A	1					
Client ID	INF-PO				Reporting Limit for DF =1		
Matrix	A						
DF	1			S	A		
Compound		Conce	entration	μg/kg	μL/L		
Bromodichloromethane	ND			NA	0.036		
Bromoform	ND			NA	0.024		
Bromomethane	ND			NA	0.063		
Carbon Tetrachloride	ND			NA	0.039		
Chlorobenzene	ND			NA	0.053		
Chloroethane	ND			NA	0.093		
Chloroform	ND			NA	0.05		
Chloromethane	ND			NA	0.12		
Dibromochloromethane	ND			NA	0.029		
1,2-Dibromoethane (EDB)	ND			NA	0.064		
1,2-Dichlorobenzene	ND			NA	0.041		
1,3-Dichlorobenzene	ND			NA	0.041		
1,4-Dichlorobenzene	ND			NA	0.041		
Dichlorodifluoromethane	ND			NA	0.05		
1,1-Dichloroethane	ND			NA	0.061		
1,2-Dichloroethane (1,2-DCA)	ND			NA	0.061		
1,1-Dichloroethene	ND			NA	0.062		
cis-1,2-Dichloroethene	ND			NA	0.062		
trans-1,2-Dichloroethene	ND			NA	0.062		
1,2-Dichloropropane	ND			NA	0.053		
cis-1,3-Dichloropropene	ND			NA	0.054		
trans-1,3-Dichloropropene	ND			NA	0.054		
Freon 113	ND			NA	0.064		
Methylene chloride	ND			NA	0.071		
1,1,1,2-Tetrachloroethane	ND			NA	0.036		
1,1,2,2-Tetrachloroethane	ND			NA	0.036		
Tetrachloroethene	0.053			NA	0.036		
1,1,1-Trichloroethane	ND			NA	0.045		
1,1,2-Trichloroethane	ND			NA	0.045		
Trichloroethene	ND			NA	0.046		
Trichlorofluoromethane	ND			NA	0.044		
Vinyl Chloride	ND			NA	0.096		
	Su	ırrogate Recoverie	s (%)				
%SS1:	110						
%SS2:	107						
%SS3:	100						
Comments							

 $<sup>^*</sup>$  vapor samples are reported in  $\mu$ L/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe, and air in  $\mu$ L/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 76431 WorkOrder: 1304466

EPA Method: SW8260B Extraction: S		Spiked Sample ID: 1304391-003A							
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
Analyte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	98.9	98.5	0.408	107	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	105	107	2.20	113	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	95.8	95.2	0.717	99.9	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	87.4	90.7	3.67	95.8	70 - 130	20	70 - 130
Trichloroethene	ND	10	101	99.2	1.38	110	70 - 130	20	70 - 130
%SS1:	109	25	108	109	0.753	105	70 - 130	20	70 - 130
%SS2:	107	25	107	106	0.582	108	70 - 130	20	70 - 130
%SS3:	93	2.5	90	89	1.09	93	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 76431 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1304466-001A	04/15/13 1:00 PN	M 04/15/13	04/15/13 8:05 PM					

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002,320; Solano Group	Date Sampled: 04/19/13
1710 Franklin Street, Ste. 200		Date Received: 04/19/13
1770 Hankim Succe, Sec. 200	Client Contact: Morgan Gillies	Date Reported: 04/24/13
Oakland, CA 94612	Client P.O.:	Date Completed: 04/22/13

WorkOrder: 1304618

April 25, 2013

Dear Morgan:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002,320; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

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	ne: (925) 252	-9262		am m.		ax: (	925)	252	-926	9		_	-	EDF Required? Coelt (Normal) No Write  Analysis Request					COIL	(DIII		300		*				
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# McCampbell Analytical, Inc.

INF

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1304618

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

□WaterTrax ☐ WriteOn □ EDF Excel **EQuIS** ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 5 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 04/19/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002,320; Solano Group Oakland, CA 94612 Date Printed: 04/20/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 2 5 8 Lab ID 3 10 12 Client ID Matrix Collection Date Hold 4 11

Α

Α

4/19/2013 14:00

Air

#### Test Legend:

1304618-001

1	8010BMS_A	2 801	IOBMS_PPMV	3	4	5	
6		7		8	9	10	
11		12					

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	nd Time Received:	4/19/2013 7:	46:08 PM
Project Name:	#1435.002,320; Sola	ano Group			LogIn I	Reviewed by:		Jena Alfaro
WorkOrder N°:	1304618	Matrix: Air			Carrier	: David Valles (N	(1Al Courier	
		<u>Cha</u>	in of Cu	ıstody (COC	) Informat	ion		
Chain of custody	present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquis	hed and received?	Yes	✓	No $\square$			
Chain of custody	agrees with sample la	ibels?	Yes	<b>✓</b>	No $\square$			
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$			
Date and Time of	f collection noted by C	lient on COC?	Yes	✓	No $\square$			
Sampler's name	noted on COC?		Yes	✓	No $\square$			
			Sample	Receipt Info	ormation			
Custody seals int	tact on shipping contai	ner/cooler?	Yes		No $\square$		NA 🗸	
Shipping containe	er/cooler in good cond	ition?	Yes	<b>✓</b>	No $\square$			
Samples in prope	er containers/bottles?		Yes	✓	No $\square$			
Sample contained	rs intact?		Yes	✓	No $\square$			
Sufficient sample	volume for indicated t	test?	Yes	✓	No $\square$			
		Sample Pres	servatio	n and Hold 1	Γime (HT)	<u>Information</u>		
All samples recei	ived within holding time	e?	Yes	<b>✓</b>	No $\square$			
Container/Temp	Blank temperature		Coole	r Temp:			NA 🗸	
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes		No $\square$	No VOA vials submi	tted 🗹	
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?		Yes		No 🗸			
* NOTE: If the "N	lo" box is checked, see	e comments below.						
			===					

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002,320;	Date Sampled: 04/19/13
1710 Front I'm Stored Str. 200	Solano Group	Date Received: 04/19/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/22/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/22/13

Halogenated Extraction Method: SW5030B		P&T and GC-MS (8010 Basic Method: SW8260B	e Target List)*  Work Order:	1304618
Lab ID	1304618-001A			
Client ID	INF		Reporting DF	
Matrix	A		S	A
DF	1			А
Compound		Concentration	μg/kg	μg/L
Bromodichloromethane	ND		NA	0.25
Bromoform	ND		NA	0.25
Bromomethane	ND		NA	0.25
Carbon Tetrachloride	ND		NA	0.25
Chlorobenzene	ND		NA	0.25
Chloroethane	ND		NA	0.25
Chloroform	ND		NA	0.25
Chloromethane	ND		NA	0.25
Dibromochloromethane	ND		NA	0.25
1,2-Dibromoethane (EDB)	ND		NA	0.5
1,2-Dichlorobenzene	ND		NA	0.25
1,3-Dichlorobenzene	ND		NA	0.25
1,4-Dichlorobenzene	ND		NA	0.25
Dichlorodifluoromethane	ND		NA	0.25
1,1-Dichloroethane	ND		NA	0.25
1,2-Dichloroethane (1,2-DCA)	ND		NA	0.25
1,1-Dichloroethene	ND		NA	0.25
cis-1,2-Dichloroethene	ND		NA	0.25
trans-1,2-Dichloroethene	ND		NA	0.25
1,2-Dichloropropane	ND		NA	0.25
cis-1,3-Dichloropropene	ND		NA	0.25
trans-1,3-Dichloropropene	ND		NA	0.25
Freon 113	ND		NA	0.5
Methylene chloride	ND		NA	0.25
1,1,1,2-Tetrachloroethane	ND		NA	0.5
1,1,2,2-Tetrachloroethane	ND		NA	0.25
Tetrachloroethene	1.6		NA	0.25
1,1,1-Trichloroethane	ND		NA	0.25
1,1,2-Trichloroethane	ND		NA	0.25
Trichloroethene	ND		NA	0.25
Trichlorofluoromethane	ND		NA	0.25
Vinyl Chloride	ND		NA	0.25
	Surroga	nte Recoveries (%)		
%SS1:	105			
%SS2:	101			
%SS3:	91			
Comments				

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	3	Date Sampled: 04/19/13
1710 Familia Stanta Str. 200	Solano Group	Date Received: 04/19/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/22/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/22/13

# Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV\*

Extraction Method: SW5030B	Analytical	Method: SW8260B	Work Order:	1304618
Lab ID	1304618-001A		Reporting	Timit for
Client ID	INF		DF	
Matrix	A		S	A
DF	1			Λ
Compound		Concentration	μg/kg	μL/L
Bromodichloromethane	ND		NA	0.036
Bromoform	ND		NA	0.024
Bromomethane	ND		NA	0.063
Carbon Tetrachloride	ND		NA	0.039
Chlorobenzene	ND		NA	0.053
Chloroethane	ND		NA	0.093
Chloroform	ND		NA	0.05
Chloromethane	ND		NA	0.12
Dibromochloromethane	ND		NA	0.029
1,2-Dibromoethane (EDB)	ND		NA	0.064
1,2-Dichlorobenzene	ND		NA	0.041
1,3-Dichlorobenzene	ND		NA	0.041
1,4-Dichlorobenzene	ND		NA	0.041
Dichlorodifluoromethane	ND		NA	0.05
1,1-Dichloroethane	ND		NA	0.061
1,2-Dichloroethane (1,2-DCA)	ND		NA	0.061
1,1-Dichloroethene	ND		NA	0.062
cis-1,2-Dichloroethene	ND		NA	0.062
trans-1,2-Dichloroethene	ND		NA	0.062
1,2-Dichloropropane	ND		NA	0.053
cis-1,3-Dichloropropene	ND		NA	0.054
trans-1,3-Dichloropropene	ND		NA	0.054
Freon 113	ND		NA	0.064
Methylene chloride	ND		NA	0.071
1,1,1,2-Tetrachloroethane	ND		NA	0.036
1,1,2,2-Tetrachloroethane	ND		NA	0.036
Tetrachloroethene	0.23		NA	0.036
1,1,1-Trichloroethane	ND		NA	0.045
1,1,2-Trichloroethane	ND		NA	0.045
Trichloroethene	ND		NA	0.046
Trichlorofluoromethane	ND		NA	0.044
Vinyl Chloride	ND		NA	0.096
	Surroga	ate Recoveries (%)		
%SS1:	105			
%SS2:	101			
%SS3:	91			
Comments				

<sup>\*</sup> vapor samples are reported in  $\mu$ L/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe, and air in  $\mu$ L/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 76561 WorkOrder: 1304618

EPA Method: SW8260B Extraction: S	W5030B	ple ID:	): 1304592-011B						
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	Criteria (%)	
, a.a., c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	93.6	94	0.444	103	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	108	108	0	110	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	95.4	95.5	0.0542	97	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	81.4	81.8	0.435	88.9	70 - 130	20	70 - 130
Trichloroethene	ND	10	93	92.3	0.796	105	70 - 130	20	70 - 130
%SS1:	110	25	111	112	0.856	102	70 - 130	20	70 - 130
%SS2:	108	25	108	107	0.654	109	70 - 130	20	70 - 130
%SS3:	92	2.5	89	89	0	93	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 76561 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304618-001A	04/19/13 2:00 PM	I 04/22/13	04/22/13 11:03 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 04/25/13	
1710 Franklin Street, Ste. 200		Date Received: 04/25/13	
1710 1141141111 Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 05/01/13	
Oakland, CA 94612	Client P.O.:	Date Completed: 05/01/13	

WorkOrder: 1304802

May 01, 2013

### Dear Morgan:

### Enclosed within are:

- 1) The results of the 14 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1304802

We	McCAMP	1534 V Pitts campbell	ANA Willow Pass sburg, CA 9	LY's Road	TIC	meeam	IN	C.							N AI	ROI	UNI	) T	IMI	E	R	USI	Н	241	HR		ECC		) 2 HF	5 DAY
Report To: Mor	one: (925) 252	-9262	E	SIII T		Fax: (9	125)	252-	9209	-		+			equi	- ung	_	Anal	_			777		1110	OII.	(1)		Othe	20	Comments
Company: Pang	No. 100 (100 (100 (100 (100 (100 (100 (100	ental Se			0. 12	ingea						+					1	Mai	VSIS	recu	uest							Othe		Comments
1710 Franklin St					2						10.																			Filter
1/10 Frankin St	reet, Suite 20	o, oan				gillies@	a)nar	10091	env.c	om																				Samples
Tele: (510) 836-3	3702					836-3		Scar	011110	OIII								١.,										-		for Metals
Project #: 1435.0						me: S		o Gr	oun	-																				analysis: Yes / No
Project Location		Ave. Al		10]0			O IIII II	0.01	опр				_	0B)																1 68 / 140
Sampler Signatu			TO .										m/8021B)	(8260B)	010															
		T	PLING	1	1 10	T M	ATE	DIV		1ET					8 po	1							3						- 30	
	1	SAIVE	FLING	2	ner	IVI	AIR	CLA	PR	ESE	RVI	ED	8015C	enat	(Eth											1				
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Air	Sludge	ICE	HCL	HNO <sub>3</sub>	- 1	TPHg/BTEX (80	Five fuel oxygenates	VOCs by EPA MEthod 8010															
B-22-5		425	1045	1	55 510ex		7		V			+			$\vee$	+				_							+	-		
B-21-5	-	125		1	31984				10		-	+	-	-		*	1			-	+			-	-	-	-	-		W.
	-		945		11		7		10		-	+	-		_	-			-	-	-	-			4	-	+	+		
B-30-5			1215	1	11	>			X		4	4	4		$\times$					_	_				_	_	+	1		
B-24-4,5	1		1415	V	V	1	<		X						$\times$															
B-22			1130	3	WAS	X			$\perp \times$	X				3	X															
B-21			1015	1	1	IX		7/	×	X					X															
B-30		1	1255	V	V	X			X	X					X															
5520-1			1411	1	Teller	1	X				7		$\top$		X															
55-7			1350		1		1				_	$\top$	+		V				7	1					$\exists$					
				$\vdash$	H						-	+	+		Ç							-			+	-	+	H		
55-10		$\vdash$	1355	1	1	-	1		-		-	+	+	-1		-				-		-	-	-	-	+	-			
55-6			1248	Y	1	-		4	-	_	4	+	4	-	<u> </u>	-			-	-	-	-	-	-	4	-	-	-		
550-2			1413	I.Y	IV		X					_			X															
55-9		1	1402	U	V		X								×														1	
B-24		X	1605	3	UAS	X			X	X				9	X															
Relinenished By:	10 1	Date:	Time: 16/6 Time: 16/36	Rece	eived B	10	7		_			I I	HEA DEC APP	DD C D S HLO ROI	ONDI PACE A ORINA PRIATE EVED II	TED E CO	IN L		s	/					C	OMM	MENTS	S:		
Relinquished By:		Date:	Time:	Rege	ived B	y:()	7	,							VATIO	V	DAS	0&		MET		C	тн	ER						

# McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1304802

Page 1 of 1

1534 Willow Pass Rd

Pittsburg, CA 94565-1701 (925) 252-9262

		WaterTrax	WriteOn	<b>✓</b> EDF		Excel		EQuIS	✓	Email	Har	rdCopy	Third	lParty	J-fla	ıg
eport to: Morgan Gillies	1	Bill Email: mgillies@pangeaenv.com; tdelafuente@pa						Requested TAT:					5 d	lays		
_		cc: PO: ProjectNo: #	1435.002; Sola	Pangea Environmental Svcs 1710 Franklin Street, Ste. 20 5.002; Solano Group Oakland, CA 94612								04/25/2013 04/26/2013				
									Re	quested <sup>-</sup>	Γests (See	legend b	elow)			
ab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6 7	8	9	10	11	12
304802-001	B-22-5		Soil	4/25/2013 10:45			Α		Α							
304802-002	B-21-5		Soil	4/25/2013 9:45			Α									
304802-003	B-30-5		Soil	4/25/2013 12:15			Α									
304802-004	B-24-4.5		Soil	4/25/2013 14:15			Α									1
304802-005	B-22		Water	4/25/2013 11:30				Α								
304802-006	B-21		Water	4/25/2013 10:15				Α								
304802-007	B-30		Water	4/25/2013 12:55				Α								
304802-008	SSPO-1		Air	4/25/2013 14:11		Α										
304802-009	SS-7		Air	4/25/2013 13:50		Α										
304802-010	SS-10		Air	4/25/2013 13:55		Α										
304802-011	SS-6		Air	4/25/2013 13:48		Α										
304802-012	SSPO-2		Air	4/25/2013 14:13		Α										
304802-013	SS-9		Air	4/25/2013 14:02		Α										
304802-014	B-24		Water	4/25/2013 16:05				Α								
est Legend:																
1 8010BN	1S_A 2	8010BMS	_\$	3 801	OBMS	_w		4	PF	REDF REF	ORT		5			
6	7			8				9					10			
11	12															
											_	Prepai	red by:	Maria	Venega	ıs

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	r ungou Enviro	onmental Svcs., Inc.			2410 41	nd Time Received: 4/25/20	13 6:36:00 PW
Project Name:	#1435.002; So	olano Group			LogIn F	Reviewed by:	Maria Venegas
WorkOrder N°:	1304802	Matrix: Air/Soil/W	<u>ater</u>		Carrier	: <u>David Valles (MAI Courie</u>	er)
		CI	<u>nain of Cւ</u>	ustody ((	COC) Informati	<u>ion</u>	
Chain of custody	present?		Yes	<b>✓</b>	No 🗌		
Chain of custody	signed when rel	linquished and received?	Yes	<b>✓</b>	No 🗌		
Chain of custody	agrees with san	nple labels?	Yes	<b>✓</b>	No 🗌		
Sample IDs noted	d by Client on C	OC?	Yes	<b>✓</b>	No 🗌		
Date and Time of	f collection noted	d by Client on COC?	Yes	<b>✓</b>	No 🗌		
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌		
			Sample	Receip	t Information		
Custody seals int	tact on shipping	container/cooler?	Yes		No 🗆	NA 🗸	
Shipping containe	er/cooler in good	d condition?	Yes	<b>✓</b>	No 🗌		
Samples in prope	er containers/bot	tles?	Yes	<b>✓</b>	No 🗌		
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗌		
Sufficient sample	volume for indic	cated test?	Yes	<b>✓</b>	No 🗌		
		Sample Pr	<u>eservatio</u>	n and H	old Time (HT) I	Information	
All samples recei	ived within holdir	ng time?	Yes	<b>✓</b>	No 🗌		
Container/Temp	Blank temperatu	ire	Coole	er Temp:	1.2°C	NA 🗌	
Nater - VOA vial	s have zero hea	dspace / no bubbles?	Yes	<b>✓</b>	No $\square$	No VOA vials submitted	
Sample labels ch	ecked for correc	ct preservation?	Yes	<b>✓</b>	No 🗌		
Metal - pH accep	table upon recei	pt (pH<2)?	Yes		No 🗌	NA 🗹	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗌		
		(Ice T	ype: WE	T ICE	)		
* NOTE, If the "N	la" bay ia abaaly	ed, see comments below.					

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 04/25/13
1710 Franklin Street, Ste. 200	Group	Date Received: 04/25/13
	Client Contact: Morgan Gillies	Date Extracted: 04/26/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/26/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B	Ana	alytical Method: SW826	0B		Work Order:	1304802
Lab ID	1304802-008A	1304802-009A	1304802-010A	1304802-011A	Reporting	Limit for
Client ID	SSPO-1	SS-7	SS-10	SS-6		=1
Matrix	A	A	A	A	S	A
DF	1	1	1	4		7 1
Compound		Conc	entration		μg/kg	μg/L
Bromodichloromethane	ND	ND	ND	ND<1.0	NA	0.25
Bromoform	ND	ND	ND	ND<1.0	NA	0.25
Bromomethane	ND	ND	ND	ND<1.0	NA	0.25
Carbon Tetrachloride	ND	ND	ND	ND<1.0	NA	0.25
Chlorobenzene	ND	ND	ND	ND<1.0	NA	0.25
Chloroethane	ND	ND	ND	ND<1.0	NA	0.25
Chloroform	ND	ND	ND	ND<1.0	NA	0.25
Chloromethane	ND	ND	ND	ND<1.0	NA	0.25
Dibromochloromethane	ND	ND	ND	ND<1.0	NA	0.25
1,2-Dibromoethane (EDB)	ND	ND	ND	ND<2.0	NA	0.5
1,2-Dichlorobenzene	ND	ND	ND	ND<1.0	NA	0.25
1,3-Dichlorobenzene	ND	ND	ND	ND<1.0	NA	0.25
1,4-Dichlorobenzene	ND	ND	ND	ND<1.0	NA	0.25
Dichlorodifluoromethane	ND	ND	ND	ND<1.0	NA	0.25
1,1-Dichloroethane	ND	ND	ND	ND<1.0	NA	0.25
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND<1.0	NA	0.25
1,1-Dichloroethene	ND	ND	ND	ND<1.0	NA	0.25
cis-1,2-Dichloroethene	ND	ND	ND	ND<1.0	NA	0.25
trans-1,2-Dichloroethene	ND	ND	ND	ND<1.0	NA	0.25
1,2-Dichloropropane	ND	ND	ND	ND<1.0	NA	0.25
cis-1,3-Dichloropropene	ND	ND	ND	ND<1.0	NA	0.25
trans-1,3-Dichloropropene	ND	ND	ND	ND<1.0	NA	0.25
Freon 113	ND	ND	ND	ND<2.0	NA	0.5
Methylene chloride	ND	ND	ND	ND<1.0	NA	0.25
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND<2.0	NA	0.5
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND<1.0	NA	0.25
Tetrachloroethene	0.86	2.0	ND	40	NA	0.25
1,1,1-Trichloroethane	ND	ND	ND	ND<1.0	NA	0.25
1,1,2-Trichloroethane	ND	ND	ND	ND<1.0	NA	0.25
Trichloroethene	ND	ND	ND	10	NA	0.25
Trichlorofluoromethane	ND	ND	ND	ND<1.0	NA	0.25
Vinyl Chloride	ND	ND	ND	ND<1.0	NA	0.25
	Su	rrogate Recoverie	s (%)			
%SS1:	107	107	105	108		
%SS2:	99	99	99	98		
%SS3:	98	96	95	107		
Comments						
	-				*	

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

extracts are reported in mg/L, wipe samples in µg/wipe.

Pangea Environmental Svcs., Inc.	3	Date Sampled: 04/25/13
1710 Familia Grand Gra 200	Group	Date Received: 04/25/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/26/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/26/13

Extraction Method: SW5030B	Ans	alytical Method: SW826	)B	Work Order:	1304802
Lab ID	1304802-012A	1304802-013A		D. (	T: :. C
Client ID	SSPO-2	SS-9		Reporting DF	
Matrix	A	A		S	A
DF	1	1			
Compound		Conc	entration	μg/kg	μg/L
Bromodichloromethane	ND	ND		NA	0.25
Bromoform	ND	ND		NA	0.25
Bromomethane	ND	ND		NA	0.25
Carbon Tetrachloride	ND	ND		NA	0.25
Chlorobenzene	ND	ND		NA	0.25
Chloroethane	ND	ND		NA	0.25
Chloroform	ND	ND		NA	0.25
Chloromethane	ND	ND		NA	0.25
Dibromochloromethane	ND	ND		NA	0.25
1,2-Dibromoethane (EDB)	ND	ND		NA	0.5
1,2-Dichlorobenzene	ND	ND		NA	0.25
1,3-Dichlorobenzene	ND	ND		NA	0.25
1,4-Dichlorobenzene	ND	ND		NA	0.25
Dichlorodifluoromethane	ND	ND		NA	0.25
1,1-Dichloroethane	ND	ND		NA	0.25
1,2-Dichloroethane (1,2-DCA)	ND	ND		NA	0.25
1,1-Dichloroethene	ND	ND		NA	0.25
cis-1,2-Dichloroethene	ND	ND		NA	0.25
trans-1,2-Dichloroethene	ND	ND		NA	0.25
1,2-Dichloropropane	ND	ND		NA	0.25
cis-1,3-Dichloropropene	ND	ND		NA	0.25
trans-1,3-Dichloropropene	ND	ND		NA	0.25
Freon 113	ND	ND		NA	0.5
Methylene chloride	ND	ND		NA	0.25
1,1,1,2-Tetrachloroethane	ND	ND		NA	0.5
1,1,2,2-Tetrachloroethane	ND	ND		NA	0.25
Tetrachloroethene	ND	ND		NA	0.25
1,1,1-Trichloroethane	ND	ND		NA	0.25
1,1,2-Trichloroethane	ND	ND		NA	0.25
Trichloroethene	ND	ND		NA	0.25
Trichlorofluoromethane	ND	ND		NA	0.25
Vinyl Chloride	ND	ND		NA	0.25
		rrogate Recoverie	s (%)		
%SS1:	107	106			
%SS2:	99	99			
%SS3:	91	90			
Comments				<u> </u>	

Comments \* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	,	Date Sampled: 04/25/13
1710 Franklin Street, Ste. 200	Group	Date Received: 04/25/13
	Client Contact: Morgan Gillies	Date Extracted: 04/26/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/26/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV\*

Extraction Method: SW5030B	Ana	alytical Method: SW826	)B	,	Work Order:	1304802
Lab ID	1304802-008A	1304802-009A	1304802-010A	1304802-011A		T
Client ID	SSPO-1	SS-7	SS-10	SS-6	Reporting DF	
Matrix	A	A	A	A	S	A
DF	1	1	1	4		Α
Compound		Conc	entration		μg/kg	μL/L
Bromodichloromethane	ND	ND	ND	ND<0.14	NA	0.036
Bromoform	ND	ND	ND	ND<0.096	NA	0.024
Bromomethane	ND	ND	ND	ND<0.25	NA	0.063
Carbon Tetrachloride	ND	ND	ND	ND<0.16	NA	0.039
Chlorobenzene	ND	ND	ND	ND<0.21	NA	0.053
Chloroethane	ND	ND	ND	ND<0.37	NA	0.093
Chloroform	ND	ND	ND	ND<0.20	NA	0.05
Chloromethane	ND	ND	ND	ND<0.48	NA	0.12
Dibromochloromethane	ND	ND	ND	ND<0.12	NA	0.029
1,2-Dibromoethane (EDB)	ND	ND	ND	ND<0.26	NA	0.064
1,2-Dichlorobenzene	ND	ND	ND	ND<0.16	NA	0.041
1,3-Dichlorobenzene	ND	ND	ND	ND<0.16	NA	0.041
1,4-Dichlorobenzene	ND	ND	ND	ND<0.16	NA	0.041
Dichlorodifluoromethane	ND	ND	ND	ND<0.20	NA	0.05
1,1-Dichloroethane	ND	ND	ND	ND<0.24	NA	0.061
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND<0.24	NA	0.061
1,1-Dichloroethene	ND	ND	ND	ND<0.25	NA	0.062
cis-1,2-Dichloroethene	ND	ND	ND	ND<0.25	NA	0.062
trans-1,2-Dichloroethene	ND	ND	ND	ND<0.25	NA	0.062
1,2-Dichloropropane	ND	ND	ND	ND<0.21	NA	0.053
cis-1,3-Dichloropropene	ND	ND	ND	ND<0.22	NA	0.054
trans-1,3-Dichloropropene	ND	ND	ND	ND<0.22	NA	0.054
Freon 113	ND	ND	ND	ND<0.26	NA	0.064
Methylene chloride	ND	ND	ND	ND<0.28	NA	0.071
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND<0.14	NA	0.036
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND<0.14	NA	0.036
Tetrachloroethene	0.12	0.30	ND	5.8	NA	0.036
1,1,1-Trichloroethane	ND	ND	ND	ND<0.18	NA	0.045
1,1,2-Trichloroethane	ND	ND	ND	ND<0.18	NA	0.045
Trichloroethene	ND	ND	ND	1.8	NA	0.046
Trichlorofluoromethane	ND	ND	ND	ND<0.18	NA	0.044
Vinyl Chloride	ND	ND	ND	ND<0.38	NA	0.096
-		rrogate Recoverie		,	•	
%SS1:	107	107	105	108		
%SS2:	99	99	99	98		
%SS3:	98	96	95	107		
Comments						
* vanor camples are reported in uL/L coil/sl	udaa/aalid aammlaa in	man/Ira muaduat/ai1/m	om o guanua liguid and	males and all TCLD 0	CDI D avetma a	ta ama

1							
Comments							
%SS3:	98	96	95	107			
%SS2:	99	99	99	98			
%SS1:	107	107	105	108			

<sup>\*</sup> vapor samples are reported in µL/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe, and air in  $\mu$ L/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	3	Date Sampled: 04/25/13
1710 Familia Grand Gra 200	Group	Date Received: 04/25/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/26/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/26/13

Halogenated Vola Extraction Method: SW5030B	·	P&T and GC-M alytical Method: SW826	(S (8010 Basic Target)	List) in PPMV*  Work Order:	1304802
Lab ID	1304802-012A	1304802-013A			
Client ID	SSPO-2	SS-9		Reporting DF	Limit for =1
Matrix	A	A		S	A
DF	1	1		3	A
Compound		Conc	entration	μg/kg	μL/L
Bromodichloromethane	ND	ND		NA	0.036
Bromoform	ND	ND		NA	0.024
Bromomethane	ND	ND		NA	0.063
Carbon Tetrachloride	ND	ND		NA	0.039
Chlorobenzene	ND	ND		NA	0.053
Chloroethane	ND	ND		NA	0.093
Chloroform	ND	ND		NA	0.05
Chloromethane	ND	ND		NA	0.12
Dibromochloromethane	ND	ND		NA	0.029
1,2-Dibromoethane (EDB)	ND	ND		NA	0.064
1,2-Dichlorobenzene	ND	ND		NA	0.041
1,3-Dichlorobenzene	ND	ND		NA	0.041
1,4-Dichlorobenzene	ND	ND		NA	0.041
Dichlorodifluoromethane	ND	ND		NA	0.05
1,1-Dichloroethane	ND	ND		NA	0.061
1,2-Dichloroethane (1,2-DCA)	ND	ND		NA	0.061
1,1-Dichloroethene	ND	ND		NA	0.062
cis-1,2-Dichloroethene	ND	ND		NA	0.062
trans-1,2-Dichloroethene	ND	ND		NA	0.062
1,2-Dichloropropane	ND	ND		NA	0.053
cis-1,3-Dichloropropene	ND	ND		NA	0.054
trans-1,3-Dichloropropene	ND	ND		NA	0.054
Freon 113	ND	ND		NA	0.064
Methylene chloride	ND	ND		NA	0.071
1,1,1,2-Tetrachloroethane	ND	ND		NA	0.036
1,1,2,2-Tetrachloroethane	ND	ND		NA	0.036
Tetrachloroethene	ND	ND		NA	0.036
1,1,1-Trichloroethane	ND	ND		NA	0.045
1,1,2-Trichloroethane	ND	ND		NA	0.045
Trichloroethene	ND	ND		NA	0.046
Trichlorofluoromethane	ND	ND		NA	0.044
Vinyl Chloride	ND	ND		NA	0.096
	Su	rrogate Recoverie	es (%)		
%SS1:	107	106			
%SS2:	99	99			
%SS3:	91	90			
Comments					

<sup>\*</sup> vapor samples are reported in µL/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe, and air in  $\mu$ L/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Lab ID

Client ID

1304802-001A

B-22-5

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

Extraction Method: SW5030B

Dichlorodifluoromethane

1,2-Dichloroethane (1,2-DCA)

1,1-Dichloroethane

1,1-Dichloroethene

cis-1,2-Dichloroethene

1,2-Dichloropropane

Methylene chloride

Tetrachloroethene

Trichloroethene

1,1,1-Trichloroethane

1,1,2-Trichloroethane

Freon 113

trans-1,2-Dichloroethene

cis-1,3-Dichloropropene

trans-1,3-Dichloropropene

1,1,1,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

1304802-004A

B-24-4.5

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

0.005

0.005

0.004

0.005

0.005

0.005

0.005

0.005

0.005

0.1

0.005

0.005

0.005

0.005

0.005

0.005

0.005

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

Work Order: 1304802

Reporting Limit for

Pangea Environmental Svcs., Inc.	3	Date Sampled: 04/25/13
1710 Familia Grand Gran 200	Group	Date Received: 04/25/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/26/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/27/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\* Analytical Method: SW8260B

1304802-002A

B-21-5

1304802-003A

B-30-5

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

DF = 1S S Matrix S S S W DF 1 1 1 Compound Concentration mg/kg  $\mu g/L$ ND 0.005 Bromodichloromethane ND ND NA Bromoform ND ND ND ND 0.005NA ND ND ND ND 0.005NA Bromomethane Carbon Tetrachloride ND ND ND ND 0.005 NA Chlorobenzene ND ND ND ND 0.005 NA Chloroethane ND ND ND 0.005 NA ND Chloroform ND ND ND ND 0.005 NA ND Chloromethane ND ND ND 0.005 NA ND Dibromochloromethane ND ND ND 0.005 NA 1,2-Dibromoethane (EDB) ND ND ND ND 0.004 NA 1,2-Dichlorobenzene ND ND ND ND 0.005 NA ND ND ND 0.005 1,3-Dichlorobenzene ND NA 1,4-Dichlorobenzene ND ND ND ND 0.005 NA

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

Trichlorofluoromethane	ND	ND	ND	ND	0.005	NA			
Vinyl Chloride	ND	ND	ND	ND	0.005	NA			
Surrogate Recoveries (%)									
%SS1:	105	106	106	104					
%SS2:	115	115	113	115					
%SS3:	113	109	111	111					
Comments									

water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

	<u> </u>	
Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 04/25/13
1710 Familia Grand Gr. 200	Group	Date Received: 04/25/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/30/13-05/01/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/30/13-05/01/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B	An	alytical Method: SW826	0B		Work Order: 1304802			
Lab ID	1304802-005A	1304802-006A	1304802-007A	1304802-014A	A Reporting Limit for			
Client ID	B-22	B-21	B-30	B-24		=1		
Matrix	W	W	W	W	S	W		
DF	100	5	20	1		**		
Compound			μg/kg	μg/L				
Bromodichloromethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Bromoform	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Bromomethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Carbon Tetrachloride	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Chlorobenzene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Chloroethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Chloroform	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Chloromethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Dibromochloromethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,2-Dibromoethane (EDB)	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,2-Dichlorobenzene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,3-Dichlorobenzene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,4-Dichlorobenzene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Dichlorodifluoromethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,1-Dichloroethane	nloroethane ND<50		ND<10	ND	NA	0.5		
1,2-Dichloroethane (1,2-DCA)	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,1-Dichloroethene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
cis-1,2-Dichloroethene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
trans-1,2-Dichloroethene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,2-Dichloropropane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
cis-1,3-Dichloropropene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
trans-1,3-Dichloropropene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Freon 113	ND<1000	ND<50	ND<200	ND	NA	10		
Methylene chloride	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,1,1,2-Tetrachloroethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,1,2,2-Tetrachloroethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Tetrachloroethene	820	85	290	ND	NA	0.5		
1,1,1-Trichloroethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
1,1,2-Trichloroethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Trichloroethene	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Trichlorofluoromethane	ND<50	ND<2.5	ND<10	ND	NA	0.5		
Vinyl Chloride	ND<50	ND<2.5	ND<10	ND	NA	0.5		
	Su	rrogate Recoverie	es (%)					
%SS1:	111	116	118	110				
%SS2:	105	103	105	94				
%SS3:	94	95	92	111				
Comments	b1	b1	b1	b1				

Surrogate Recoveries (%)												
%SS1:	111	116	118	110								
%SS2:	105	103	105	94								
%SS3:	94	95	92	111								
Comments	b1	b1	b1	b1								

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

b1) aqueous sample that contains greater than ~1 vol. % sediment

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 76777 WorkOrder: 1304802

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1304829-002B
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, a.e., y.c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	85.7	89.5	4.33	89.3	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	100	103	2.99	95.3	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	102	105	2.71	101	70 - 130	20	70 - 130
1,1-Dichloroethene	0.84	10	84.9	91.3	6.63	92.7	70 - 130	20	70 - 130
Trichloroethene	11	10	81.7	88.4	3.35	96.5	70 - 130	20	70 - 130
%SS1:	109	25	109	109	0	109	70 - 130	20	70 - 130
%SS2:	97	25	96	96	0	97	70 - 130	20	70 - 130
%SS3:	96	2.5	94	95	0.250	93	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 76777 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304802-008A	04/25/13 2:11 PM	04/26/13	04/26/13 2:28 PM	1304802-009A	04/25/13 1:50 PM	04/26/13	04/26/13 3:11 PM
1304802-010A	04/25/13 1:55 PM	04/26/13	04/26/13 3:54 PM	1304802-011A	04/25/13 1:48 PM	04/26/13	04/26/13 11:12 PM
1304802-012A	04/25/13 2:13 PM	04/26/13	04/26/13 5:20 PM	1304802-013A	04/25/13 2:02 PM	04/26/13	04/26/13 6:03 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 76802 WorkOrder: 1304802

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1304856-002B
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, may to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	90.2	88.5	1.86	90.8	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	106	104	1.81	96.4	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	101	99.9	0.700	99.2	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	96.8	96	0.811	93	70 - 130	20	70 - 130
Trichloroethene	ND	10	98.8	96.7	2.10	97.2	70 - 130	20	70 - 130
%SS1:	111	25	112	111	1.01	108	70 - 130	20	70 - 130
%SS2:	97	25	96	95	1.08	96	70 - 130	20	70 - 130
%SS3:	104	2.5	109	105	4.08	103	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 76802 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304802-005A	04/25/13 11:30 AM	05/01/13	05/01/13 6:48 AM	1304802-006A	04/25/13 10:15 AM	05/01/13	05/01/13 12:37 AM
1304802-007A	04/25/13 12:55 PM	05/01/13	05/01/13 1:18 AM	1304802-014A	04/25/13 4:05 PM	04/30/13	04/30/13 1:20 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

### **QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 76660 WorkOrder: 1304802

EPA Method: SW8260B Extraction: S	W5030B					,	Spiked Sam	ple ID:	1304721-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
7 Mary to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND<0.02	0.050	NR	NR	NR	101	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	ND<0.016	0.050	NR	NR	NR	107	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND<0.016	0.050	NR	NR	NR	83.5	N/A	N/A	70 - 130
1,1-Dichloroethene	ND<0.02	0.050	NR	NR	NR	90.9	N/A	N/A	70 - 130
Trichloroethene	ND<0.02	0.050	NR	NR	NR	107	N/A	N/A	70 - 130
%SS1:	92	0.12	NR	NR	NR	103	N/A	N/A	70 - 130
%SS2:	125	0.12	NR	NR	NR	118	N/A	N/A	70 - 130
%SS3:	93	0.012	NR	NR	NR	116	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 76660 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304802-001A	04/25/13 10:45 AM	04/26/13	04/27/13 4:14 PM	1304802-002A	04/25/13 9:45 AM	04/26/13	04/27/13 4:53 PM
1304802-003A	04/25/13 12:15 PM	04/26/13	04/27/13 5:32 PM	1304802-004A	04/25/13 2:15 PM	04/26/13	04/27/13 6:11 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

RA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 04/25/13
1710 Franklin Street, Ste. 200		Date Received: 04/26/13
1770 Hankim Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 04/29/13
Oakland, CA 94612	Client P.O.:	Date Completed: 04/29/13

WorkOrder: 1304832

April 29, 2013

Dear Morgan:

### Enclosed within are:

- 1) The results of the 13 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

RUSH

1304832

#### CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 48 HR 72 HR 5 DAY RUSH 24 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No No Write On (DW) Fax: (925) 252-9269 Telephone: (925) 252-9262 Report To: Morgan Gillies Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: mgillies@pangeaenv.com for Metals Fax: (510) 836-3709 Tele: (510) 836-3702 analysis: Project Name: Solano Group Project #: 1435.002 Yes / No (8260B) Project Location: 1187 Solano Ave, Albany VOCs by EPA MEthod 8010 Sampler Signature: METHOD MATRIX SAMPLING Type Containers PRESERVED Containers LOCATION SAMPLE ID (Field Point Sludge Water HNO3 Other Other Name) Date Time Soil X 1750 1200 1810 ICE/F COMMENTS: Relinquished By: Time: Received By: Date: GOOD CONDITION 1/46 1504 HEAD SPACE ABSENT Relinquished By Date: Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS 806 PRESERVED IN LAB Received By: Relinquished By: Date: Time: VOAS O&G METALS OTHER PRESERVATION pH<2

# McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

04/26/2013

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1304832 ClientCode: PEO ☐ WaterTrax ☐ WriteOn **▼** EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag Report to: Bill to: Requested TAT: 3 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 04/26/2013 1710 Franklin Street, Ste. 200 1710 Franklin Street, Ste. 200 PO:

Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 **Date Printed:** (510) 836-3700 FAX: (510) 836-3709

								Re	quested	Tests	(See leg	end be	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1304832-001	B-23	Water	4/25/2013 17:15			Α	Α									
1304832-002	B-23-4.5	Soil	4/25/2013 16:30		Α											
1304832-003	B-23-8.5	Soil	4/25/2013 16:45		Α											
1304832-004	B-26-2.5	Soil	4/25/2013 17:50		Α											
1304832-005	B-26-5	Soil	4/25/2013 18:00		Α											
1304832-006	B-29-2.5	Soil	4/25/2013 18:05		Α											
1304832-007	B-29-5	Soil	4/25/2013 18:10		Α											
1304832-008	B-28-2.5	Soil	4/25/2013 18:20		Α											
1304832-009	B-27-3	Soil	4/25/2013 18:25		Α											
1304832-010	B-28-5	Soil	4/25/2013 18:30		Α											
1304832-011	B-27-5	Soil	4/25/2013 18:35		Α											
1304832-012	B-25-2.5	Soil	4/25/2013 18:40		Α											
1304832-013	B-25-5	Soil	4/25/2013 18:45		Α											

#### **Test Legend:**

1	8010BMS_S	2	2 8010BMS_W	3 PREDF REPORT	4	5
6		7	7	8	9	10
11		1	2			

Prepared by: Zoraida Cortez

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	i diigod Eiivii	onmentai Svcs	., 1110.			2410 4	na Time Receivea:	.,_0,_0 .	1:01:37 PW
Project Name:	#1435.002; Sc	olano Group				LogIn I	Reviewed by:		Zoraida Cortez
WorkOrder N°:	1304832	Matrix:	Soil/Water			Carrier	: David Valles (N	MAI Courier)	
			<u>Chai</u>	in of Cı	ustody (	COC) Informat	ion		
Chain of custody	present?			Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when re	linquished and	received?	Yes	<b>✓</b>	No 🗆			
Chain of custody	agrees with sar	mple labels?		Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on C	OC?		Yes	<b>✓</b>	No 🗆			
Date and Time of	f collection note	d by Client on	COC?	Yes	<b>✓</b>	No 🗆			
Sampler's name	noted on COC?			Yes	<b>✓</b>	No 🗌			
			;	Sample	e Receip	t Information			
Custody seals int	tact on shipping	container/cool	er?	Yes		No 🗌		NA 🗹	
Shipping containe	er/cooler in good	d condition?		Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bo	ttles?		Yes	<b>✓</b>	No 🗌			
Sample container	rs intact?			Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indi	cated test?		Yes	<b>✓</b>	No 🗌			
			Sample Pres	ervatio	n and H	old Time (HT)	<u>Information</u>		
All samples recei	ived within holdi	ng time?		Yes	<b>✓</b>	No 🗌			
Container/Temp l	Blank temperatu	ure		Coole	er Temp:	4.4°C		NA 🗌	
Water - VOA vial	s have zero hea	adspace / no bu	ıbbles?	Yes		No 🗌	No VOA vials subm	itted 🗸	
Sample labels ch	necked for corre	ct preservation	?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon rece	ipt (pH<2)?		Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?			Yes	✓	No 🗌			
			(Ice Typ	e: WE	T ICE	)			
* NOTE: If the "N	lo" hox is check	ed see comme	ents below.						

Pangea Environmental Svcs., Inc.		Date Sampled: 04/25/13
1710 Franklin Street Str. 200	Group	Date Received: 04/26/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/26/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/27/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B	Ana	Work Order: 1304832				
Lab ID	1304832-002A	1304832-003A	1304832-004A	1304832-005A	Dtin	I :::4 f
Client ID	B-23-4.5	B-23-8.5	B-26-2.5	B-26-5	Reporting DF	=1
Matrix	S	S	S	S	S	W
DF	1	1	1	1		VV
Compound		Conc	entration		mg/kg	μg/L
Bromodichloromethane	ND	ND	ND	ND	0.005	NA
Bromoform	ND	ND	ND	ND	0.005	NA
Bromomethane	ND	ND	ND	ND	0.005	NA
Carbon Tetrachloride	ND	ND	ND	ND	0.005	NA
Chlorobenzene	ND	ND	ND	ND	0.005	NA
Chloroethane	ND	ND	ND	ND	0.005	NA
Chloroform	ND	ND	ND	ND	0.005	NA
Chloromethane	ND	ND	ND	ND	0.005	NA
Dibromochloromethane	ND	ND	ND	ND	0.005	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	0.004	NA
1,2-Dichlorobenzene	ND	ND	ND	ND	0.005	NA
1,3-Dichlorobenzene	ND	ND	ND	ND	0.005	NA
1,4-Dichlorobenzene	ND	ND	ND	ND	0.005	NA
Dichlorodifluoromethane	ND	ND	ND	ND	0.005	NA
1,1-Dichloroethane	ND	ND	ND	ND	0.005	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	0.004	NA
1,1-Dichloroethene	ND	ND	ND	ND	0.005	NA
cis-1,2-Dichloroethene	ND	ND	ND	ND	0.005	NA
trans-1,2-Dichloroethene	ND	ND	ND	ND	0.005	NA
1,2-Dichloropropane	ND	ND	ND	ND	0.005	NA
cis-1,3-Dichloropropene	ND	ND	ND	ND	0.005	NA
trans-1,3-Dichloropropene	ND	ND	ND	ND	0.005	NA
Freon 113	ND	ND	ND	ND	0.1	NA
Methylene chloride	ND	ND	ND	ND	0.005	NA
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	0.005	NA
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	0.005	NA
Tetrachloroethene	ND	ND	0.018	0.0050	0.005	NA
1,1,1-Trichloroethane	ND	ND	ND	ND	0.005	NA
1,1,2-Trichloroethane	ND	ND	ND	ND	0.005	NA
Trichloroethene	ND	ND	ND	ND	0.005	NA
Trichlorofluoromethane	ND	ND	ND	ND	0.005	NA
Vinyl Chloride	ND	ND	ND	ND	0.005	NA
		rrogate Recoverie			T	
%SS1:	104	105	105	105		
%SS2:	116	115	114	114		
%SS3:	113	112	110	110		
Comments						

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

Pangea Environmental Svcs., Inc.		Date Sampled: 04/25/13
1710 Free Lin Street Str. 200	Group	Date Received: 04/26/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/26/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/27/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1304832 Lab ID 1304832-006A 1304832-007A 1304832-008A 1304832-009A Reporting Limit for Client ID B-29-2.5 B-29-5 B-28-2.5 B-27-3 DF = 1S S Matrix S S S W DF 1 1 1 Compound Concentration mg/kg  $\mu g/L$ ND ND 0.005 Bromodichloromethane ND NA Bromoform ND ND ND ND 0.005NA ND ND ND ND 0.005NA Bromomethane Carbon Tetrachloride ND ND ND ND 0.005 NA Chlorobenzene ND ND ND ND 0.005 NA Chloroethane ND 0.005 ND ND ND NA Chloroform ND ND ND ND 0.005 NA ND Chloromethane ND ND ND 0.005 NA Dibromochloromethane ND ND ND ND 0.005 NA 1,2-Dibromoethane (EDB) ND ND ND ND 0.004 NA 1,2-Dichlorobenzene ND ND ND ND 0.005 NA ND ND ND 1,3-Dichlorobenzene ND 0.005 NA 1,4-Dichlorobenzene ND ND ND ND 0.005 NA Dichlorodifluoromethane ND ND ND ND 0.005 NA 1,1-Dichloroethane ND ND ND ND 0.005 NA 1,2-Dichloroethane (1,2-DCA) ND ND ND ND 0.004 NA 1,1-Dichloroethene ND ND ND ND 0.005 NA cis-1,2-Dichloroethene ND ND ND ND 0.005 NA trans-1,2-Dichloroethene ND ND ND ND 0.005 NA 1,2-Dichloropropane ND ND ND ND 0.005 NA ND ND 0.005 cis-1,3-Dichloropropene ND ND NA 0.005 trans-1,3-Dichloropropene ND ND ND ND NA Freon 113 ND ND ND ND 0.1 NA Methylene chloride ND ND ND ND 0.005 NA ND 1,1,1,2-Tetrachloroethane ND ND ND 0.005 NA ND ND 1,1,2,2-Tetrachloroethane ND ND 0.005 NA Tetrachloroethene ND ND ND ND 0.005 NA 1,1,1-Trichloroethane ND ND ND ND 0.005 NA 1,1,2-Trichloroethane ND ND ND 0.005 ND NA ND ND 0.005 Trichloroethene ND ND NA Trichlorofluoromethane ND ND ND ND 0.005 NA Vinyl Chloride ND ND ND ND 0.005 NA

Surrogate Recoveries (%)										
%SS1:	107	102	103	101						
%SS2:	108	105	105	104						
%SS3:	103	113	107	108						
Comments										
st 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	/r :1/ 1 1 / 1: 1	1 ' /1	1 +/ 11/	11 11 1 1	11 TOLD A CDLD					

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	2	Date Sampled: 04/25/13
1710 Familia Grand Gran 200	Group	Date Received: 04/26/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/26/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/27/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Analytical Method: SW8260B Extraction Method: SW5030B Work Order: 1304832 Lab ID 1304832-010A 1304832-011A 1304832-012A 1304832-013A Reporting Limit for Client ID B-28-5 B-27-5 B-25-2.5 B-25-5 DF = 1S S Matrix S S S W DF 1 1 1 Compound Concentration mg/kg  $\mu g/L$ ND ND 0.005 Bromodichloromethane ND NA Bromoform ND ND ND ND 0.005NA ND ND ND ND 0.005NA Bromomethane Carbon Tetrachloride ND ND ND ND 0.005 NA Chlorobenzene ND ND ND ND 0.005 NA Chloroethane ND 0.005 ND ND ND NA Chloroform ND ND ND ND 0.005 NA ND Chloromethane ND ND ND 0.005 NA Dibromochloromethane ND ND ND ND 0.005 NA 1,2-Dibromoethane (EDB) ND ND ND ND 0.004 NA 1,2-Dichlorobenzene ND ND ND ND 0.005 NA ND ND ND 1,3-Dichlorobenzene ND 0.005 NA 1,4-Dichlorobenzene ND ND ND ND 0.005 NA Dichlorodifluoromethane ND ND ND ND 0.005 NA 1,1-Dichloroethane ND ND ND ND 0.005 NA 1,2-Dichloroethane (1,2-DCA) ND ND ND ND 0.004 NA 1,1-Dichloroethene ND ND ND ND 0.005 NA cis-1,2-Dichloroethene ND ND ND ND 0.005 NA trans-1,2-Dichloroethene ND ND ND ND 0.005 NA 1,2-Dichloropropane ND ND ND ND 0.005 NA ND ND 0.005 cis-1,3-Dichloropropene ND ND NA 0.005 trans-1,3-Dichloropropene ND ND ND ND NA Freon 113 ND ND ND ND 0.1 NA Methylene chloride ND ND ND ND 0.005 NA 1,1,1,2-Tetrachloroethane ND ND ND ND 0.005 NA ND 1,1,2,2-Tetrachloroethane ND ND ND 0.005 NA 0.0071Tetrachloroethene ND ND 0.0066 0.005 NA 1,1,1-Trichloroethane ND ND ND ND 0.005 NA 1,1,2-Trichloroethane ND ND ND 0.005ND NA ND 0.005 Trichloroethene ND ND ND NA

Vinyl Chloride	ND	ND	ND	ND	0.005 NA					
Surrogate Recoveries (%)										
%SS1:	102	103	103	101						
%SS2:	105	103	105	105						
%SS3:	108	113	109	106						
Comments										
4 1 1 1 1	· /r ·1/ 1 1 / 1·1	1 . /1	1 ./ !1/	11 11 1 1	11 TOLD O ODLD					

ND

ND

ND

0.005

NA

ND

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

Trichlorofluoromethane

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/kg$ .

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 04/25/13
1710 Franklin Street Str. 200	Group	Date Received: 04/26/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 04/27/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 04/27/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B	Analytical I	Method: SW8260B	Work Order:	1304832
Lab ID	1304832-001A			
Client ID	B-23		Reporting DF	
Matrix	W		S	W
DF	1			
Compound		Concentration	μg/kg	μg/L
Bromodichloromethane	ND		NA	0.5
Bromoform	ND		NA	0.5
Bromomethane	ND		NA	0.5
Carbon Tetrachloride	ND		NA	0.5
Chlorobenzene	ND		NA	0.5
Chloroethane	ND		NA	0.5
Chloroform	ND		NA	0.5
Chloromethane	ND		NA	0.5
Dibromochloromethane	ND		NA	0.5
1,2-Dibromoethane (EDB)	ND		NA	0.5
1,2-Dichlorobenzene	ND		NA	0.5
1,3-Dichlorobenzene	ND		NA	0.5
1,4-Dichlorobenzene	ND		NA	0.5
Dichlorodifluoromethane	ND		NA	0.5
1,1-Dichloroethane	ND		NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND		NA	0.5
1,1-Dichloroethene	ND		NA	0.5
cis-1,2-Dichloroethene	ND		NA	0.5
trans-1,2-Dichloroethene	ND		NA	0.5
1,2-Dichloropropane	ND		NA	0.5
cis-1,3-Dichloropropene	ND		NA	0.5
trans-1,3-Dichloropropene	ND		NA	0.5
Freon 113	ND		NA	10
Methylene chloride	ND		NA	0.5
1,1,1,2-Tetrachloroethane	ND		NA	0.5
1,1,2,2-Tetrachloroethane	ND		NA	0.5
Tetrachloroethene	ND		NA	0.5
1,1,1-Trichloroethane	ND		NA	0.5
1,1,2-Trichloroethane	ND		NA	0.5
Trichloroethene	ND		NA	0.5
Trichlorofluoromethane	ND		NA	0.5
Vinyl Chloride	ND		NA	0.5
		te Recoveries (%)	T.	
%SS1:	107			
%SS2:	98			
%SS3:	95			
Comments				

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 76752 WorkOrder: 1304832

EPA Method: SW8260B Extraction: S	W5030B					5	Spiked Sam	ple ID:	1304506-019A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, way to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	86.1	83.8	2.78	104	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	96.6	95.7	0.971	112	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	81.9	83.9	2.44	90.7	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	78.4	78	0.480	90.9	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	101	100	0.169	110	60 - 116	30	70 - 130
%SS1:	108	0.12	105	106	0.583	105	70 - 130	30	70 - 130
%SS2:	122	0.12	115	116	0.905	115	70 - 130	30	70 - 130
%SS3:	119	0.012	118	117	0.155	114	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### **BATCH 76752 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304832-002A	04/25/13 4:30 PM	04/26/13	04/27/13 12:58 PM	1304832-003A	04/25/13 4:45 PM	04/26/13	04/27/13 1:37 PM
1304832-004A	04/25/13 5:50 PM	04/26/13	04/27/13 2:16 PM	1304832-005A	04/25/13 6:00 PM	04/26/13	04/27/13 2:55 PM
1304832-006A	04/25/13 6:05 PM	04/26/13	04/27/13 3:35 PM	1304832-007A	04/25/13 6:10 PM	04/26/13	04/27/13 2:02 AM
1304832-008A	04/25/13 6:20 PM	04/26/13	04/27/13 2:44 AM	1304832-009A	04/25/13 6:25 PM	04/26/13	04/27/13 3:27 AM
1304832-010A	04/25/13 6:30 PM	04/26/13	04/27/13 4:09 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

RA/QC Officer

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 76767 WorkOrder: 1304832

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1304832-013A
Analyte	Sample	Spiked MS MSD MS-MSD				LCS	Acc	eptance	Criteria (%)
, a.a.y.c	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	87.4	91.8	4.96	99.6	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	92.6	97.1	4.70	106	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	74.3	78.7	5.73	84.1	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	73	78.4	7.24	85.5	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	92	96.6	4.89	105	60 - 116	30	70 - 130
%SS1:	101	0.12	105	104	0.818	104	70 - 130	30	70 - 130
%SS2:	105	0.12	114	114	0	115	70 - 130	30	70 - 130
%SS3:	106	0.012	110	108	1.52	110	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 76767 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304832-011A	04/25/13 6:35 PM	04/26/13	04/27/13 4:52 AM	1304832-012A	04/25/13 6:40 PM	04/26/13	04/27/13 5:34 AM
1304832-013A	04/25/13 6:45 PM	04/26/13	04/27/13 6:17 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 76777 WorkOrder: 1304832

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1304829-002B
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
Analyce	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	85.7	89.5	4.33	89.3	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	100	103	2.99	95.3	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	102	105	2.71	101	70 - 130	20	70 - 130
1,1-Dichloroethene	0.84	10	84.9	91.3	6.63	92.7	70 - 130	20	70 - 130
Trichloroethene	11	10	81.7	88.4	3.35	96.5	70 - 130	20	70 - 130
%SS1:	109	25	109	109	0	109	70 - 130	20	70 - 130
%SS2:	97	25	96	96	0	97	70 - 130	20	70 - 130
%SS3:	96	2.5	94	95	0.250	93	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### **BATCH 76777 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304832-001A	04/25/13 5:15 PM	1 04/27/13	04/27/13 1:19 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

A QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: 1187 Solano	Date Sampled: 05/13/13
1710 Franklin Street, Ste. 200		Date Received: 05/13/13
1710 Hamain Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Reported: 05/14/13
Oakland, CA 94612	Client P.O.:	Date Completed: 05/15/13

WorkOrder: 1305393

May 15, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: 1187 Solano,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

We Tele	bsite: <u>www.m</u> ephone: (877	PITTSBUI ccampbell ) 252-920	LOW PAS RG, CA 94 Lcom Em	SS RO. 565-17 ail: m	AD 701 nain@ Fax:	ML mee: (92	, IN	bell.	com 9269	30	F	?	1	15 3 <sup>G</sup>	eo T	l'ra	cke	C U r E	HA ND	TI	MI	OF E PD Cho	C F	US RUS if sa	H Ex	24 cel le is	Y HR effl	R]	EC Vri	te C	72 I On (D	HR (W) (is r	equired
Report To: 80	3 CLARI	C-PID	DELL B	ill To	:	Bi	10		1				_						A	naly	ysis	Rec	ues	t					W	0	ther	C	comments
Company:				-Mai										8015) / MTBE		20 E/B&F)					Congeners		ai I	1		*	20)	(0)	00			S	ilter amples or Metals
Tele: (570) Project #: Project Location: Sampler Signatur	35-86 SOLANO	64		ax: (	t Nar	ne:	U.	87	50	Ret	WI	0		(602 / 8021 + 8015		Grease (1664 / 5520 E/B&F)	ns (418.1)	(HVOCs)	602 / 8021)	cides)	; Aroclors	3)	erbicides)	0	3)	/ PNAs)	7 6010 / 60	7 6010 / 602	20)	)			nalysis: 'es / No
Sampler Signatur	e: By	Midd	lu	111 345	100									12/8		rease	repor	9021	PA (	Pestic	NLY	icide	CIH	/OCs	300	AHs	200.8	8.000	09/0	0			
		SAME		22	iners		MA	TR	IX			HO		15 Gas (60	(\$108		Hydroc	/ 8010 / /	ONLY (1	D) 1808	PCB's O	(NP Pes	(Acidic	/ 8260 (V	1/8270 (5	/8310 (P	(200.77	(200.772	0,8 / 6010	108			
SAMPLE ID	LOCATION/ Field Point Name	Date	Time	# Containers	Type Containers	Water	Soil	Air	Sludge	ICE	HCL	HNO	Other	BTEX & TPH	TPH as Diesel (8015)	Total Petrolcum Oil &	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.77/200.87/60107/6020)	Lead (200.7 / 200.8 / 6010 / 6020)	1307			
INF-V-1185N		5[13[13	11:00	(	812		>	Z																						X			
																							4										
								/																		20	97						
Relinquished By:  Relinquished By:	elu ;	Date:	Time:	Rec	eived I	7		X	0	1				G() HI DI AI PF	E/f*_DOD EAD ECHI PPRO RESE	SPA LOR DPRI RVI	CE A	E CO	IN I	AB_ INE	RS_		ETA	LS	01	нег	ı	CO	OMA	IENT	S:		

# McCampbell Analytical, Inc.

INF-V-1185N

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1305393 ClientCode: PEO □WaterTrax ☐ WriteOn □ EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 2 days Bob Clark-Riddell BRiddell@pangeaenv.com Bob Clark-Riddell Email: Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 05/13/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: 1187 Solano Oakland, CA 94612 Date Printed: 05/13/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 5 8 Lab ID 2 3 10 12 Client ID Matrix Collection Date Hold 4 11

Α

Α

5/13/2013 11:00

Air

### Test Legend:

1305393-001

1	8010BMS_A	2 8010BMS_PPMV	3	4	5	
6		7	8	9	10	
11		12	1			

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	Pangea Environmen	ital Svcs., Inc.			Date a	and Time Received:	5/13/2013 3	:10:44 PM
Project Name:	1187 Solano				LogIn	Reviewed by:		Jena Alfaro
WorkOrder N°:	1305393	Matrix: <u>Air</u>			Carrie	r: Rob Pringle (M	IAI Courier)	
		<u>Cha</u>	in of Cu	ustody (COC	) Informa	<u>tion</u>		
Chain of custody	present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquis	shed and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No $\square$			
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$			
Date and Time of	collection noted by C	lient on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌			
			Sample	Receipt Inf	<u>ormation</u>			
Custody seals int	act on shipping contai	iner/cooler?	Yes		No 🗌		NA 🗹	
Shipping contained	er/cooler in good cond	lition?	Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No $\square$			
Sample container	rs intact?		Yes	✓	No 🗌			
Sufficient sample	volume for indicated	test?	Yes	<b>✓</b>	No $\square$			
		Sample Pres	ervatio	n and Hold	<u>Γime (HT)</u>	Information		
All samples recei	ved within holding time	e?	Yes	<b>✓</b>	No 🗌			
Container/Temp I	Blank temperature		Coole	er Temp:			NA 🗸	
Water - VOA vials	s have zero headspac	e / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗸	
Sample labels ch	ecked for correct pres	servation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accept	table upon receipt (pH	l<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?		Yes		No 🗸			
* NOTE: If the "N	o" box is checked, see	e comments below.	=	===:	===:	=====	====	======

Pangea Environmental Svcs., Inc.	Client Project ID: 1187 Solano	Date Sampled: 05/13/13
1710 Franklin Start Str. 200		Date Received: 05/13/13
1710 Franklin Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted: 05/13/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 05/13/13

Halogenated	Volatile Organics by	P&T and GC-MS (8010 B	asic Target List)*	
Extraction Method: SW5030B	Analytical I	Method: SW8260B	Work Order:	1305393
Lab ID	1305393-001A			
Client ID	INF-V-1185N			g Limit for F =1
Matrix	A		S	A
DF	1			71
Compound		Concentration	μg/kg	μg/L
Bromodichloromethane	ND		NA	0.25
Bromoform	ND		NA	0.25
Bromomethane	ND		NA	0.25
Carbon Tetrachloride	ND		NA	0.25
Chlorobenzene	ND		NA	0.25
Chloroethane	ND		NA	0.25
Chloroform	ND		NA	0.25
Chloromethane	ND		NA	0.25
Dibromochloromethane	ND		NA	0.25
1,2-Dibromoethane (EDB)	ND		NA	0.5
1,2-Dichlorobenzene	ND		NA	0.25
1,3-Dichlorobenzene	ND		NA	0.25
1,4-Dichlorobenzene	ND		NA	0.25
Dichlorodifluoromethane	ND		NA	0.25
1,1-Dichloroethane	ND		NA	0.25
1,2-Dichloroethane (1,2-DCA)	ND		NA	0.25
1,1-Dichloroethene	ND		NA	0.25
cis-1,2-Dichloroethene	ND		NA	0.25
trans-1,2-Dichloroethene	ND		NA	0.25
1,2-Dichloropropane	ND		NA	0.25
cis-1,3-Dichloropropene	ND		NA	0.25
trans-1,3-Dichloropropene	ND		NA	0.25
Freon 113	ND		NA	0.5
Methylene chloride	ND		NA	0.25
1,1,1,2-Tetrachloroethane	ND		NA	0.5
1,1,2,2-Tetrachloroethane	ND		NA	0.25
Tetrachloroethene	1.3		NA	0.25
1,1,1-Trichloroethane	ND		NA	0.25
1,1,2-Trichloroethane	ND		NA	0.25
Trichloroethene	ND		NA	0.25
Trichlorofluoromethane	ND		NA	0.25
Vinyl Chloride	ND		NA	0.25
	Surroga	te Recoveries (%)		· · · · · · · · · · · · · · · · · · ·
%SS1:	115			
%SS2:	107			
%SS3:	105			
Comments				

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

Pangea Environmental Svcs., Inc.	Client Project ID: 1187 Solano	Date Sampled: 05/13/13
1710 Franklin Start Str. 200		Date Received: 05/13/13
1710 Franklin Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted: 05/13/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 05/13/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV\*

Halogenated Volat	tile Organics by	P&T and GC-M	S (8010 Basic Ta	arget List) in PPN	∕IV*	
Extraction Method: SW5030B	An	alytical Method: SW826	)B		Work Order:	1305393
Lab ID	1305393-001A					
Client ID	INF-V-1185N				Reporting Limit f DF =1	
Matrix	A				S A	
DF	1					
Compound		Conce	entration		μg/kg	μL/L
Bromodichloromethane	ND				NA	0.036
Bromoform	ND				NA	0.024
Bromomethane	ND				NA	0.063
Carbon Tetrachloride	ND				NA	0.039
Chlorobenzene	ND				NA	0.053
Chloroethane	ND				NA	0.093
Chloroform	ND				NA	0.05
Chloromethane	ND				NA	0.12
Dibromochloromethane	ND				NA	0.029
1,2-Dibromoethane (EDB)	ND				NA	0.064
1,2-Dichlorobenzene	ND				NA	0.041
1,3-Dichlorobenzene	ND				NA	0.041
1,4-Dichlorobenzene	ND				NA	0.041
Dichlorodifluoromethane	ND				NA	0.05
1,1-Dichloroethane	ND				NA	0.061
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.061
1,1-Dichloroethene	ND				NA	0.062
cis-1,2-Dichloroethene	ND				NA	0.062
trans-1,2-Dichloroethene	ND				NA	0.062
1,2-Dichloropropane	ND				NA	0.053
cis-1,3-Dichloropropene	ND				NA	0.054
trans-1,3-Dichloropropene	ND				NA	0.054
Freon 113	ND				NA	0.064
Methylene chloride	ND				NA	0.071
1,1,1,2-Tetrachloroethane	ND				NA	0.036
1,1,2,2-Tetrachloroethane	ND				NA	0.036
Tetrachloroethene	0.19				NA	0.036
1,1,1-Trichloroethane	ND				NA	0.045
1,1,2-Trichloroethane	ND				NA	0.045
Trichloroethene	ND				NA	0.046
Trichlorofluoromethane	ND				NA	0.044
Vinyl Chloride	ND				NA	0.096
	Su	irrogate Recoverie	s (%)			
%SS1:	115					
%SS2:	107					
%SS3:	105					
Comments						

<sup>\*</sup> vapor samples are reported in  $\mu$ L/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe, and air in  $\mu$ L/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 77315 WorkOrder: 1305393

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
y.c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	N/A	10	N/A	N/A	N/A	106	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	N/A	10	N/A	N/A	N/A	109	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	N/A	10	N/A	N/A	N/A	108	N/A	N/A	70 - 130
1,1-Dichloroethene	N/A	10	N/A	N/A	N/A	118	N/A	N/A	70 - 130
Trichloroethene	N/A	10	N/A	N/A	N/A	106	N/A	N/A	70 - 130
%SS1:	N/A	25	N/A	N/A	N/A	116	N/A	N/A	70 - 130
%SS2:	N/A	25	N/A	N/A	N/A	108	N/A	N/A	70 - 130
%SS3:	N/A	2.5	N/A	N/A	N/A	116	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 77315 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1305393-001A	05/13/13 11:00 AM	M 05/13/13	05/13/13 3:53 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 05/17/13
1710 Franklin Street, Ste. 200		Date Received: 05/17/13
1710 Hamain Street, Ste. 200	Client Contact: Morgan Gillies	Date Reported: 05/20/13
Oakland, CA 94612	Client P.O.:	Date Completed: 05/20/13

WorkOrder: 1305548

May 20, 2013

Dear Morgan:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

#### CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Road Pittsburg, CA 94565 RUSH 24 HR 48 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) No Fax: (925) 252-9269 Telephone: (925) 252-9262 Bill To: Pangea Report To: Morgan Gillies Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter TPH as Diesel (8015) w/ Silica Gel Cleanup 1710 Franklin Street, Suite 200, Oakland, CA 94612 Total Petroleum Oil & Grease (5520 E&F/B&F) Samples PAH's / PNA's by EPA 625 / 8270 / 8310 E-Mail: mgillies@pangeaenv.com Total Petroleum Hydrocarbons (418.1) for Metals Fax: (510) 836-3709 Tele: (510) 836-3702 analysis: Project Name: So Lond Gran Project #: BTEX ONLY (EPA 602 / 8020) Yes / No BTEX & TPH as Gas (602/8020+ EPA 608 / 8082 PCB's ONLY CAM-17 Metals (6010 / 6020) Project Location: 1/95 LUFT 5 Metals (6010 / 6020) Sampler Signature: EPA 524.2 / 624 / 8260 EPA 601/8010/8021 EPA 525 / 625 / 8270 METHOD MATRIX SAMPLING Type Containers PRESERVED EPA 8140 / 8141 EPA 8150 / 8151 # Containers EPA 608 / 8081 LOCATION SAMPLE ID (Field Point Sludge Date Time HNO, Other Name) Other ICE HCL 55-6 5/17/13/120 Soil GAS Religquished By: Received By: ICE/t\* COMMENTS: Date: Time: GOOD CONDITION HEAD SPACE ABSENT Relinquished By Received By: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Date: Relinquished By: Time: Received By VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

SS-6

Air

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(925) 252-9262			Woı	kOrder: 1305	548 C	lientCode: PE	lO			
	☐ WaterTrax ☐ V	VriteOnEDF	Exce	el EQuI	S <b></b> Email	HardC	Copy ThirdPa	arty	J-flag	
Report to:				Bill to:			Requested TAT:	:	2 day	ys
Morgan Gillies Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	cc: PO: ProjectNo: Solano	@pangeaenv.com; td	lelafuente@pa	Pangea E 1710 Frar	:-Riddell Invironmental St nklin Street, Ste. CA 94612	,	Date Received Date Printed:		17/201 17/201	
					Requeste	d Tests (See leg	gend below)			-
ab ID Client ID	M	latrix Collection D	Date Hold	1 2 3	4 5	6 7	8 9	10 1	11	12

5/17/2013 11:20

### Test Legend:

1305548-001

1 8010BMS_PPMV	2	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

## **Sample Receipt Checklist**

Client Name:	Pangea Environmen	ntal Svcs., Inc.			Date and	Time Received: 5/17/2013	2:57:23 PM
Project Name:	Solano Group				LogIn Rev	viewed by:	Zoraida Cortez
WorkOrder N°:	1305548	Matrix: Air			Carrier:	Rob Pringle (MAI Courier)	
		<u>Cha</u>	in of Cι	ıstody (COC	) Information	1	
Chain of custody	present?		Yes	<b>✓</b>	No 🗌		
Chain of custody	signed when relinquis	shed and received?	Yes	<b>✓</b>	No 🗌		
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No 🗌		
Sample IDs note	d by Client on COC?		Yes	<b>✓</b>	No $\square$		
Date and Time o	f collection noted by C	lient on COC?	Yes	<b>✓</b>	No $\square$		
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$		
			<u>Sample</u>	Receipt Info	ormation_		
Custody seals in	tact on shipping conta	iner/cooler?	Yes		No 🗌	NA 🗹	
Shipping contain	er/cooler in good cond	lition?	Yes	<b>✓</b>	No 🗌		
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌		
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗌		
Sufficient sample	volume for indicated	test?	Yes	<b>✓</b>	No $\square$		
		Sample Pres	ervatio	n and Hold 1	Time (HT) Info	ormation	
All samples rece	ived within holding tim	e?	Yes	<b>✓</b>	No 🗌		
Container/Temp	Blank temperature		Coole	er Temp:		NA 🗸	
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes		No 🗌 No	VOA vials submitted 🗹	
Sample labels ch	necked for correct pres	servation?	Yes	<b>✓</b>	No 🗌		
Metal - pH accep	table upon receipt (pF	H<2)?	Yes		No 🗌	NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🗹		
* NOTE: If the "N	lo" box is checked, se	e comments below.					
Comments:							

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 05/17/13
1710 Familia Guard Gua 200		Date Received: 05/17/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 05/17/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 05/17/13

Halogenate	1 Volatile Organics by P&I and GC-MS (8010 Basic Target List)*		
Extraction Method: SW5030B	Analytical Method: SW8260B	Work Order:	1305548

Extraction Method: SW5030B	Analyti	cal Method: SW826	ЭВ	,	Work Order:	1305548
Lab ID	1305548-001A					T
Client ID	SS-6				Reporting Limit to DF =1	
Matrix	A				-	
DF	1				S	A
Compound		Conc	entration		μg/kg	μg/L
Bromodichloromethane	ND				NA	0.25
Bromoform	ND				NA	0.25
Bromomethane	ND				NA	0.25
Carbon Tetrachloride	ND				NA	0.25
Chlorobenzene	ND				NA	0.25
Chloroethane	ND				NA	0.25
Chloroform	ND				NA	0.25
Chloromethane	ND				NA	0.25
Dibromochloromethane	ND				NA	0.25
1,2-Dibromoethane (EDB)	ND				NA	0.5
1,2-Dichlorobenzene	ND				NA	0.25
1,3-Dichlorobenzene	ND				NA	0.25
1,4-Dichlorobenzene	ND				NA	0.25
Dichlorodifluoromethane	ND				NA	0.25
1,1-Dichloroethane	ND				NA	0.25
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.25
1,1-Dichloroethene	ND				NA	0.25
cis-1,2-Dichloroethene	ND				NA	0.25
trans-1,2-Dichloroethene	ND				NA	0.25
1,2-Dichloropropane	ND				NA	0.25
cis-1,3-Dichloropropene	ND				NA	0.25
trans-1,3-Dichloropropene	ND				NA	0.25
Freon 113	ND				NA	0.5
Methylene chloride	ND				NA	0.25
1,1,1,2-Tetrachloroethane	ND				NA	0.5
1,1,2,2-Tetrachloroethane	ND				NA	0.25
Tetrachloroethene	19				NA	0.25
1,1,1-Trichloroethane	ND				NA	0.25
1,1,2-Trichloroethane	ND				NA	0.25
Trichloroethene	3.8				NA	0.25
Trichlorofluoromethane	ND				NA	0.25
Vinyl Chloride	ND				NA	0.25
		gate Recoverie	s (%)	-		
%SS1:	112	Auto Hecoverie	5 (70)			
%SS2:	108					
%SS3:	82					
~					+	

Surrogate Recoveries (%)										
%SS1:	112									
%SS2:	108									
%SS3:	82									
Comments	Comments									

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

OC for				
	Rydelius,	Lab	Manag	er

Pangea Environmental Svcs., Inc.	Client Project ID: Solano Group	Date Sampled: 05/17/13
1710 Franklin Start Str. 200		Date Received: 05/17/13
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 05/17/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 05/17/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV\*

Halogenated Volat	ile Organics by P&T	and GC-MS (8010 Basic Targ	get List) in PPMV*	
Extraction Method: SW5030B	Analytical N	Method: SW8260B	Work Order:	1305548
Lab ID	1305548-001A			T: :. C
Client ID	SS-6		Reporting DF	
Matrix	A		S	A
DF	1			
Compound		Concentration	μg/kg	μL/L
Bromodichloromethane	ND		NA	0.036
Bromoform	ND		NA	0.024
Bromomethane	ND		NA	0.063
Carbon Tetrachloride	ND		NA	0.039
Chlorobenzene	ND		NA	0.053
Chloroethane	ND		NA	0.093
Chloroform	ND		NA	0.05
Chloromethane	ND		NA	0.12
Dibromochloromethane	ND		NA	0.029
1,2-Dibromoethane (EDB)	ND		NA	0.064
1,2-Dichlorobenzene	ND		NA	0.041
1,3-Dichlorobenzene	ND		NA	0.041
1,4-Dichlorobenzene	ND		NA	0.041
Dichlorodifluoromethane	ND		NA	0.05
1,1-Dichloroethane	ND		NA	0.061
1,2-Dichloroethane (1,2-DCA)	ND		NA	0.061
1,1-Dichloroethene	ND		NA	0.062
cis-1,2-Dichloroethene	ND		NA	0.062
trans-1,2-Dichloroethene	ND		NA	0.062
1,2-Dichloropropane	ND		NA	0.053
cis-1,3-Dichloropropene	ND		NA	0.054
trans-1,3-Dichloropropene	ND		NA	0.054
Freon 113	ND		NA	0.064
Methylene chloride	ND		NA	0.071
1,1,1,2-Tetrachloroethane	ND		NA	0.036
1,1,2,2-Tetrachloroethane	ND		NA	0.036
Tetrachloroethene	2.8		NA	0.036
1,1,1-Trichloroethane	ND		NA	0.045
1,1,2-Trichloroethane	ND		NA	0.045
Trichloroethene	0.69		NA	0.046
Trichlorofluoromethane	ND		NA	0.044
Vinyl Chloride	ND		NA NA	0.096
		e Recoveries (%)	,	
%SS1:	112			
%SS2:	108			
%SS3:	82			
Comments				

<sup>\*</sup> vapor samples are reported in  $\mu$ L/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe, and air in  $\mu$ L/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

OC for				
	Rydelius,	Lab	Manag	ger

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 77446 WorkOrder: 1305548

EPA Method: SW8260B Extraction: S	W5030B					5	Spiked Sam	ple ID:	1305521-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, a.a., c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	82.1	87.1	5.98	97	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	91.4	97.8	6.71	102	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	91.9	98.7	7.06	111	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	75.8	80.1	5.42	88.2	70 - 130	20	70 - 130
Trichloroethene	ND	10	87	94.9	8.60	105	70 - 130	20	70 - 130
%SS1:	108	25	109	112	2.24	113	70 - 130	20	70 - 130
%SS2:	104	25	105	104	0.866	108	70 - 130	20	70 - 130
%SS3:	79	2.5	87	87	0	87	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 77446 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1305548-001A	05/17/13 11:20 AN	M 05/17/13	05/17/13 4:35 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 05/22/13
1710 Franklin Street, Ste. 200		Date Received: 05/23/13
1770 1141141111 541661, 566. 200	Client Contact: Bob Clark-Riddell	Date Reported: 05/28/13
Oakland, CA 94612	Client P.O.:	Date Completed: 05/28/13

WorkOrder: 1305757

May 29, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1305757

McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 Website: www.mccampbell.com Email: main@mccampbell.com RUSH 24 HR 48 HR 72 HR 5 DAY EDF Required? Coelf (Normal) No Write On (DW) Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Bob Clark-Riddell Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200, Oakland, CA 94612 Filter Samples E-Mail: briddell@pangeaenv.com for Metals Tele: (510) 435-8664 Fax: (510) 836-3709 analysis: Project #: 1435.002 Project Name: Solano Group Yes / No Project Location: 1187 Solano Ave, Albany Five fuel oxygenates (8260B) VOCs by EPA MEthod 8010 VOCs by EPA Method 8260 TPHg/BTEX (8015Cm/8021B) Sampler Signature: Soft Willely METHOD SAMPLING MATRIX Type Containers PRESERVED # Containers LOCATION SAMPLE ID (Field Point Sludge Water Name) Date Time HNO3 Other HCL ICE Soil 5/20/13 3.70 VOX MW-2 peremail 5/28/13 Relinguished By: Time: Received By: ICE/to COMMENTS: 150 GOOD CONDITION HEAD SPACE ABSENT Relinquished By Date: Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Dates Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

HardCopy

Page 1 of 1

☐ J-flag

☐ ThirdParty

1534 Willow Pass Rd Pittsburg, CA 94565-170 (925) 252-9262

Bob Clark-Riddell

Oakland, CA 94612

(510) 836-3700

Pangea Environmental Svcs., Inc.

FAX: (510) 836-3709

1710 Franklin Street, Ste. 200

Report to:

Bill to: Requested TAT: 2 days

Email: BRiddell@pangeaenv.com Bob Clark-Riddell

cc: Pangea Environmental Svcs., Inc.

PO: 1710 Franklin Street, Ste. 200 *Date Received:* 05/23/2013

ProjectNo: #1435.002; Solano Group Oakland, CA 94612 *Date Printed:* 05/23/2013

Requested Tests (See legend below) 2 5 8 Lab ID 3 10 12 Client ID Matrix Collection Date Hold 4 11 1305757-001 MW-2 5/22/2013 15:30 Α Water Α

### **Test Legend:**

1 8010BMS_W	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environme	ntal Svcs., Inc.			Date a	and Time Received:	5/23/2013	6:41:25 PM
Project Name:	#1435.002; Solano	Group			LogIn	Reviewed by:		Jena Alfaro
WorkOrder N°:	1305757	Matrix: Water			Carrie	er: Rob Pringle (M	IAI Courier)	
		Cha	ain of Cu	ustody (0	COC) Informa	<u>ition</u>		
Chain of custody	y present?		Yes	•	No 🗌			
Chain of custody	y signed when relinqui	shed and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody	y agrees with sample l	abels?	Yes	<b>✓</b>	No 🗌			
Sample IDs note	ed by Client on COC?		Yes	<b>✓</b>	No $\square$			
Date and Time o	of collection noted by (	Client on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$			
			Sample	Receip	t Information			
Custody seals in	ntact on shipping conta	ainer/cooler?	Yes		No 🗌		NA 🗸	
Shipping contain	ner/cooler in good con	dition?	Yes	<b>✓</b>	No $\square$			
Samples in prop	er containers/bottles?		Yes	<b>✓</b>	No 🗌			
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicated	I test?	Yes	•	No $\square$			
		Sample Pre	<u>servatio</u>	n and H	old Time (HT)	) Information		
All samples rece	eived within holding tim	ne?	Yes	<b>✓</b>	No $\square$			
Container/Temp	Blank temperature		Coole	er Temp:	1.2°C		NA 🗌	
Water - VOA via	lls have zero headspa	ce / no bubbles?	Yes	<b>✓</b>	No 🗌	No VOA vials subm	itted	
Sample labels ch	hecked for correct pre	servation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	otable upon receipt (pl	H<2)?	Yes		No $\square$		NA 🗸	
Samples Receive	red on Ice?		Yes	<b>✓</b>	No 🗌			
		(Ice Ty	pe: WE	T ICE	)			
* NOTE: If the "N	No" box is checked, se	ee comments below.						
		======			====			======:

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 05/22/13
1710 Franklin Street, Ste. 200	Group	Date Received: 05/23/13
1/10 Frankfill Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 05/24/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 05/24/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1305757

Lab ID	1305757-001A							
Client ID		MW-2						
Matrix		Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Bromodichloromethane	ND<1.2	2.5	0.5	Bromoform	ND<1.2	2.5	0.5	
Bromomethane	ND<1.2	2.5	0.5	Carbon Tetrachloride	ND<1.2	2.5	0.5	
Chlorobenzene	ND<1.2	2.5	0.5	Chloroethane	ND<1.2	2.5	0.5	
Chloroform	ND<1.2	2.5	0.5	Chloromethane	ND<1.2	2.5	0.5	
Dibromochloromethane	ND<1.2	2.5	0.5	1,2-Dibromoethane (EDB)	ND<1.2	2.5	0.5	
1,2-Dichlorobenzene	ND<1.2	2.5	0.5	1,3-Dichlorobenzene	ND<1.2	2.5	0.5	
1,4-Dichlorobenzene	ND<1.2	2.5	0.5	Dichlorodifluoromethane	ND<1.2	2.5	0.5	
1,1-Dichloroethane	ND<1.2	2.5	0.5	1,2-Dichloroethane (1,2-DCA)	ND<1.2	2.5	0.5	
1,1-Dichloroethene	ND<1.2	2.5	0.5	cis-1,2-Dichloroethene	ND<1.2	2.5	0.5	
trans-1,2-Dichloroethene	ND<1.2	2.5	0.5	1,2-Dichloropropane	ND<1.2	2.5	0.5	
cis-1,3-Dichloropropene	ND<1.2	2.5	0.5	trans-1,3-Dichloropropene	ND<1.2	2.5	0.5	
Freon 113	ND<25	2.5	10	Methylene chloride	ND<1.2	2.5	0.5	
1,1,1,2-Tetrachloroethane	ND<1.2	2.5	0.5	1,1,2,2-Tetrachloroethane	ND<1.2	2.5	0.5	
Tetrachloroethene	48	2.5	0.5	1,1,1-Trichloroethane	ND<1.2	2.5	0.5	
1,1,2-Trichloroethane	ND<1.2	2.5	0.5	Trichloroethene	ND<1.2	2.5	0.5	
Trichlorofluoromethane	ND<1.2	2.5	0.5	Vinyl Chloride	ND<1.2	2.5	0.5	

Surrogate Recoveries (%)							
%SS1:	111	%SS2:	111				
%SS3:	95						
Community							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

OC for			
	Angela Rydelius,	Lab	Manager

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 77633 WorkOrder: 1305757

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1305754-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	99.8	104	3.70	103	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	117	116	1.03	104	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	99	98.4	0.587	95.7	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	94.8	100	5.51	97.3	70 - 130	20	70 - 130
Trichloroethene	ND	10	99.8	103	3.39	98.8	70 - 130	20	70 - 130
%SS1:	112	25	113	111	1.86	108	70 - 130	20	70 - 130
%SS2:	111	25	108	109	1.03	111	70 - 130	20	70 - 130
%SS3:	95	2.5	95	95	0	96	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 77633 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed	
1305757-001A	05/22/13 3:30 PN	1 05/24/13	05/24/13 8:56 PM					

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 05/24/13
1710 Franklin Street, Ste. 200		Date Received: 05/28/13
1770 1 141141111 541661, 516. 200	Client Contact: Bob Clark-Riddell	Date Reported: 05/31/13
Oakland, CA 94612	Client P.O.:	Date Completed: 05/30/13

WorkOrder: 1305839

May 31, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

13 05839

Telepho	ne: (925) 252	-9262	com Em	aii: m:	ain@n F	ax:	(925)	H.cor	n			S	1000				CHAIN OF CUSTODY RECORD ROUND TIME	Y
Report To: Bob				Bill To	o: Pa	nge	A										Analysis Request Other Commo	ents
Company: Pange						-1.5												
1710 Franklin St	reet, Suite 20	0, Oakla	and, CA	94612	2												Filter	a
			I	E-Mai	l: bri	dde	l@pa	inge	aen	v.coi	m					ł.	Sample for Met	254.54
Tele: (510) 435-8	3664			ax: (													analysis	
Project #: 1435.0	002			rojec	t Nan	ne:	Solar	no G	rou	p				_	1920		Yes / No	
Project Location:	: 1187 Solano	Ave, Al	bany	,									2	60B	010	260	200	
Sampler Signatur	re: Orl	She	Chell										9021	(82	s po	200	ğ	
		SAMI	PLING	90	ners		MAT	RIX		ME PRE	TH SER		15Cm/8	nates	MEth	Method 8260	Memo	
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	Other	TPHg/BTEX (8015Cm/8021B)	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010	VOCs by EPA	VOCS By ETA	
A-0-51		5/24/13	200	1	THE		X			X			-		X			$\neg$
7. 8		1/2/11/2	200	1	Trye					1				1				-
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Relinguished By:	1-9	Date:	1500	1	ivet B	X		X		7		\	Al	PPRO	PRI	ATE	ATED IN LAB	
Relinquished By:		Date:	Time:	Rece	ived B			4	_	7								ge 2 o

## McCampbell Analytical, Inc.

A-8-5'

Soil

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(925) 252-9262			WorkOr	der: 1305839	Cli	entCode: PEO				
	☐ WaterTrax ☐ WriteOn	<b>∠</b> EDF	Excel	EQuIS	<b>y</b> Email	HardCop	/ThirdPa	rty	_J-flag	
Report to:			Bil	I to:		Re	equested TAT:		3 da	ıys
Bob Clark-Riddell Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	Email: BRiddell@pangcc: PO: ProjectNo: #1435.002; Sol	•		Bob Clark-Rid Pangea Enviro 1710 Franklin Oakland, CA 9	onmental Svo Street, Ste. 2	D	ate Received: ate Printed:		5/28/20 5/28/20	
					Requested	Tests (See legen	d below)			
ab ID Client ID	Matrix	Collection Date H	lold 1	2 3	4 5	6 7	8 9	10	11	12

Α

Α

5/24/2013 15:00

### Test Legend:

1305839-001

1 8010BMS_S	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Jena Alfaro

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

## **Sample Receipt Checklist**

Client Name:	Pangea Environm	ental Svcs., Inc.			Date a	nd Time Received:	5/28/2013	3:34:55 PM
Project Name:	#1435.002; Solan	o Group			Login i	Reviewed by:		Jena Alfaro
WorkOrder N°:	1305839	Matrix: Soil			Carrier	: Rob Pringle (M	Al Courier)	
		Cha	ain of C	ustody (C	OC) Informat	ion		
Chain of custody	y present?		Yes	✓	No 🗌			
Chain of custody	y signed when relinqu	uished and received?	Yes	✓	No 🗌			
Chain of custody	y agrees with sample	labels?	Yes	<b>✓</b>	No 🗌			
Sample IDs note	ed by Client on COC	?	Yes	✓	No 🗌			
Date and Time of	of collection noted by	Client on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$			
			Sample	e Receipt	Information			
Custody seals in	ntact on shipping con	tainer/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	ner/cooler in good co	ndition?	Yes	<b>✓</b>	No 🗌			
Samples in prop	er containers/bottles	?	Yes	<b>✓</b>	No 🗌			
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicate	ed test?	Yes	<b>✓</b>	No 🗌			
		Sample Pre	servatio	n and Ho	old Time (HT)	<u>Information</u>		
All samples rece	eived within holding ti	me?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:	3.6°C		NA 🗌	
Water - VOA via	ıls have zero headsp	ace / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗸	
Sample labels cl	hecked for correct pr	eservation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	otable upon receipt (	pH<2)?	Yes		No $\square$		NA 🗸	
Samples Receiv	ed on Ice?		Yes	<b>✓</b>	No $\square$			
		(Ice Ty	pe: WE	T ICE	)			
* NOTE: If the "I	No" box is checked, s	see comments below.						
Comments:								

1534 Willow Pass Road, Pittsburg, CA 94565-1701

MCCampbe "When	<u> Ell ANGIY</u> n Quality Count		<u> </u>	nc.			52-9262 / Fax: (925) 252 E-mail: main@mccampb		
Pangea Environmental Svcs.,			-	ect ID:	#1435.002; Solano	Date S	ampled: 05/24/	13	
1510 5 111 6		Group	)			Date R	deceived: 05/28/	13	
1710 Franklin Street, Ste. 200		Client	Con	tact: Bo	ob Clark-Riddell	Date E	Extracted 05/28/	13	
Oakland, CA 94612	(	Client	P.O.	:		Date A	analyzed 05/29/	13	
Halogena	ated Volatile (	Orgai	nics l	by <b>Р&amp;</b> Т	and GC-MS (8010 B	asic Tai	get List)*		
Extraction Method: SW5030B			Ana	lytical Met	hod: SW8260B		Work O	rder: 130	5839
Lab ID					1305839-001A				
Client ID  Matrix					A-8-5' Soil				
Compound	Concentration	n *	DF	Reporting Limit	Compound		Concentration *	DF	Reporting Limit
Bromodichloromethane	ND		1.0	0.005	Bromoform		ND	1.0	0.005
Bromomethane	ND		1.0	0.005	Carbon Tetrachloride		ND	1.0	0.005
Chlorobenzene	ND		1.0	0.005	Chloroethane		ND	1.0	0.005
Chloroform	ND		1.0	0.005	Chloromethane		ND	1.0	0.005
Dibromochloromethane	ND		1.0	0.005	1,2-Dibromoethane (EDB)		ND	1.0	0.004
1,2-Dichlorobenzene	ND		1.0	0.005	1,3-Dichlorobenzene		ND	1.0	0.005
1,4-Dichlorobenzene	ND		1.0	0.005	Dichlorodifluoromethane		ND	1.0	0.005
1,1-Dichloroethane	ND		1.0	0.005	1,2-Dichloroethane (1,2-DC	CA)	ND	1.0	0.004
1,1-Dichloroethene	ND		1.0	0.005	cis-1,2-Dichloroethene		ND	1.0	0.005
trans-1,2-Dichloroethene	ND		1.0	0.005	1,2-Dichloropropane		ND	1.0	0.005
cis-1,3-Dichloropropene	ND		1.0	0.005	trans-1,3-Dichloropropene		ND	1.0	0.005
Freon 113	ND		1.0	0.1	Methylene chloride		ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND		1.0	0.005	1,1,2,2-Tetrachloroethane		ND	1.0	0.005
Tetrachloroethene	0.00	93	1.0	0.005	1,1,1-Trichloroethane		ND	1.0	0.005
1,1,2-Trichloroethane	ND		1.0	0.005	Trichloroethene		ND	1.0	0.005
Trichlorofluoromethane	ND		1.0	0.005	Vinyl Chloride		ND	1.0	0.005
			Suri	rogate Re	ecoveries (%)				
%SS1:		103			%SS2:		100	5	
0/553.		06							

%SS1:	103	%SS2:	106
%SS3:	96		
Comments:			

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g$ /wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

OC for			
	Rydelius,	Lab	Manager

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 77754 WorkOrder: 1305839

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1305826-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
. n.a.y.c	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	87.9	88.7	0.985	86.7	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	87.9	87.1	0.898	93.4	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	75.6	76.6	1.27	106	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	73.4	73.4	0	82.2	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	83.3	84.3	1.20	95.2	60 - 116	30	70 - 130
%SS1:	108	0.12	111	112	0.392	100	70 - 130	30	70 - 130
%SS2:	112	0.12	111	112	0.807	107	70 - 130	30	70 - 130
%SS3:	115	0.012	115	116	1.04	102	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 77754 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1305839-001A	05/24/13 3:00 PM	1 05/28/13	05/29/13 4:01 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

A QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 05/24/13
1710 Franklin Street, Ste. 200		Date Received: 05/28/13
1770 1 141141111 541661, 516. 200	Client Contact: Bob Clark-Riddell	Date Reported: 05/30/13
Oakland, CA 94612	Client P.O.:	Date Completed: 05/30/13

WorkOrder: 1305834

May 30, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1305834

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Report To: Bob					o: Pa	nge	a										_	_	An	alys	s Re	ques	t					0	ther	C	omments
Company: Pangea Environmental Services, Inc.																												10	ilter		
1710 Franklin St	reet, Suite 20	0, Oakla	ind, CA	94612	2								_										ľ							100	amples
		1111	E	-Mai	il: bri	ddel	ll@p	ange	eaen	V.C	om																				or Metals
Tele: (510) 435-8664 Fax: (510) 836-3709																											nalysis:				
Project #: 1435.002 Project Name: Solamo Group																		1								es / No					
Project Location:			bany											B)	60B	010	260														
Sampler Signatur	re: Sol	SIL	Lis											/S021B)	(82	s po	8 pc						. "								
	METH									SCm/5	nates	WEth	Metho																		
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO,	Other	TPHg/BTEX (801	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010	VOCs by EPA Method 8260											ŝ			
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## McCampbell Analytical, Inc.

MW-3

Water

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(925) 252-9262				Wo	rkOr	rder: 1305	5834	Cli	entCod	e: PEO					
	WaterTrax	WriteOn	<b>✓</b> EDF	Ехс	cel	EQu	ulS [	Email		]HardCop	у	ThirdPar	ty	J-flag	j
Report to:					Bill	I to:				R	equest	ted TAT:		3 da	ays
Bob Clark-Riddell Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	cc: PO: ProjectNo: #143	ddell@pange 35.002; Sola				Bob Clar Pangea I 1710 Fra Oakland,	Environm anklin Stre	ental Sveet, Ste.	,	L		eceived: rinted:		5/28/20 5/28/20	
							R	Requested	l Tests (	See lege	nd belo	ow)			
ab ID Client ID		Matrix	<b>Collection Date</b>	Hold	1	2 3	3 4	5	6	7	8	9	10	11	12

Α

Α

5/24/2013 14:50

### Test Legend:

1305834-001

1 8010BMS_W	2 PREDF REPORT	3	4	5
6	7	8	9	10
11	12			

Prepared by: Jena Alfaro

### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	and Time Received:	5/28/2013 3	:12:46 PM
Project Name:	#1435.002; Solano 0	Group			LogIn	Reviewed by:		Jena Alfaro
WorkOrder N°:	1305834	Matrix: Water			Carrie	er: Rob Pringle (M	Al Courier)	
		<u>Chai</u>	n of Cւ	ıstody (C	OC) Informa	ition		
Chain of custody	present?		Yes	✓	No 🗌			
Chain of custody	signed when relinquis	hed and received?	Yes	✓	No 🗌			
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	✓	No 🗌			
Date and Time of	f collection noted by Cl	ient on COC?	Yes	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No 🗌			
		<u> </u>	Sample	Receipt	<u>Information</u>			
Custody seals int	act on shipping contai	ner/cooler?	Yes		No 🗌		NA 🗸	
Shipping containe	er/cooler in good condi	tion?	Yes	✓	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indicated t	est?	Yes	✓	No 🗌			
		Sample Prese	ervatio	n and Ho	ld Time (HT)	Information		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌			
Container/Temp I	Blank temperature		Coole	r Temp:	3.6°C		NA 🗌	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes	✓	No 🗌	No VOA vials submi	tted	
Sample labels ch	ecked for correct pres	ervation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ice Type	e: WE	TICE )				
* NOTE: If the "N	lo" box is checked, see	e comments below.						
======								

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 05/24/13				
1710 Franklin Street, Ste. 200	Group	Date Received: 05/28/13				
1710 Frankini Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 05/29/13				
Oakland, CA 94612	Client P.O.:	Date Analyzed 05/29/13				

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B	Analytical Method: SW8260B	Work Order: 1305834
----------------------------	----------------------------	---------------------

Lab ID				1305834-001A			
Client ID				MW-3			
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<2.5	5.0	0.5	Bromoform	ND<2.5	5.0	0.5
Bromomethane	ND<2.5	5.0	0.5	Carbon Tetrachloride	ND<2.5	5.0	0.5
Chlorobenzene	ND<2.5	5.0	0.5	Chloroethane	ND<2.5	5.0	0.5
Chloroform	ND<2.5	5.0	0.5	Chloromethane	ND<2.5	5.0	0.5
Dibromochloromethane	ND<2.5	5.0	0.5	1,2-Dibromoethane (EDB)	ND<2.5	5.0	0.5
1,2-Dichlorobenzene	ND<2.5	5.0	0.5	1,3-Dichlorobenzene	ND<2.5	5.0	0.5
1,4-Dichlorobenzene	ND<2.5	5.0	0.5	Dichlorodifluoromethane	ND<2.5	5.0	0.5
1,1-Dichloroethane	ND<2.5	5.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND<2.5	5.0	0.5
1,1-Dichloroethene	ND<2.5	5.0	0.5	cis-1,2-Dichloroethene	ND<2.5	5.0	0.5
trans-1,2-Dichloroethene	ND<2.5	5.0	0.5	1,2-Dichloropropane	ND<2.5	5.0	0.5
cis-1,3-Dichloropropene	ND<2.5	5.0	0.5	trans-1,3-Dichloropropene	ND<2.5	5.0	0.5
Freon 113	ND<50	5.0	10	Methylene chloride	ND<2.5	5.0	0.5
1,1,1,2-Tetrachloroethane	ND<2.5	5.0	0.5	1,1,2,2-Tetrachloroethane	ND<2.5	5.0	0.5
Tetrachloroethene	92	5.0	0.5	1,1,1-Trichloroethane	ND<2.5	5.0	0.5
1,1,2-Trichloroethane	ND<2.5	5.0	0.5	Trichloroethene	2.9	5.0	0.5
Trichlorofluoromethane	ND<2.5	5.0	0.5	Vinyl Chloride	ND<2.5	5.0	0.5

Surrogate Recoveries (%)										
%SS1:	109	%SS2:	109							
%SS3:	89									
Commonts										

<sup>\*</sup> water and vapor samples are reported in  $\mu g/L$ , soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g/wipe$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

OC for				
	Angela	Rydelius,	Lab	Manager

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 77821 WorkOrder: 1305834

EPA Method: SW8260B Extraction: SW5030B							Spiked Sample ID: 1305841-001A					
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	ceptance Criteria (%)				
, wayte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS			
Chlorobenzene	ND	20	99	97.6	1.41	102	70 - 130	20	70 - 130			
1,2-Dibromoethane (EDB)	ND	20	109	109	0	107	70 - 130	20	70 - 130			
1,2-Dichloroethane (1,2-DCA)	ND	20	96.9	96.1	0.834	93.7	70 - 130	20	70 - 130			
1,1-Dichloroethene	ND	20	92.1	92.9	0.848	93.6	70 - 130	20	70 - 130			
Trichloroethene	ND	20	96.5	96.9	0.374	98.3	70 - 130	20	70 - 130			
%SS1:	109	25	111	113	1.36	108	70 - 130	20	70 - 130			
%SS2:	110	25	109	110	0.260	111	70 - 130	20	70 - 130			
%SS3:	90	2.5	92	95	3.16	92	70 - 130	20	70 - 130			

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 77821 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	[	Date Sampled	Date Extracted	Date Analyzed	
1305834-001A	05/24/13 2:50 PM	05/29/13	05/29/13 10:49 PM						

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: 1435.002; Solano Group	Date Sampled: 06/10/13
1710 Franklin Street, Ste. 200		Date Received: 06/11/13
1710 Hankini Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Reported: 06/13/13
Oakland, CA 94612	Client P.O.:	Date Completed: 06/13/13

WorkOrder: 1306273

June 13, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: 1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.



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Report To: Mor		_	-	Bill To	o: Pa	nge	R												Ai	alys	is R	eque	st			-			Other	r	Comments
Company: Pang													_																		Elle
1710 Franklin St	reet, Suite 20	0, Oakla																													Filter Samples
			I	E-Mai	il: mg	illie	s@p	ange	eaen	v.c	m																				for Metals
Tele: (510) 836-3	3702		1	ax: (	(510)	836-	370	9																				1			analysis:
Project #: 1435.0	002		I	rojec	et Nar	ne:	Sola	no (	Gro	ир					_																Yes/No
Project Location			bany											(9	809										1.9						
Sampler Signatu	re: But	reflect	Leu		E/									1208	(82)	8010								1				1			
		SAMI	PLING	s	iers		MA	FRE	X			HOI		(8015Cm/8021B)	nates	Ethod															
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	ter		lao	er		2	03	er	TPHg/BTEX (80	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010															
				# C	Typ	Water	Soil	All	Other	ICE	HCL	HNO3	Other	TPH	Five	VOC								Н					Ш		
MW-1		6/19/13	175m)	1	VOA	X				X						X					-							+	$\Box$		
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## McCampbell Analytical, Inc.

MW-1

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1306273 ClientCode: PEO □WaterTrax WriteOn **▼** EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 3 days Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 06/11/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: 1435.002; Solano Group Oakland, CA 94612 Date Printed: 06/11/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 2 5 8 Lab ID 3 10 12 Client ID Matrix Collection Date Hold 4 11

Α

Α

6/10/2013 17:00

Water

#### **Test Legend:**

1306273-001

1 8010BMS_W	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	and Time Received:	6/11/2013	4:14:39 PM
Project Name:	1435.002; Solano G	roup			LogIn	Reviewed by:		Zoraida Cortez
WorkOrder N°:	1306273	Matrix: Water			Carrie	er: Rob Pringle (N	MAI Courier)	
		Chai	n of Cu	ıstody (C	OC) Informa	<u>tion</u>		
Chain of custody	present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquis	hed and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No $\square$			
Sample IDs note	d by Client on COC?		Yes	<b>✓</b>	No $\square$			
Date and Time o	f collection noted by C	lient on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$			
		<u> </u>	Sample	Receipt	<u>Information</u>			
Custody seals in	tact on shipping contai	ner/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	er/cooler in good cond	ition?	Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌			
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicated	test?	Yes	<b>✓</b>	No 🗌			
		Sample Prese	ervatio	n and Ho	ld Time (HT)	Information		
All samples recei	ived within holding time	e?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	r Temp:	7°C		NA 🗌	
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes	✓	No 🗌	No VOA vials subm	nitted	
Sample labels ch	necked for correct pres	ervation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pH	l<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ice Type	e: WE	TICE )				
* NOTE: If the "N	lo" box is checked, see	e comments below.						
		======			=			

Pangea Environmental Svcs., Inc.	Client Project ID: 1435.002; Solano	Date Sampled: 06/10/13
1710 Franklin Street, Ste. 200	Group	Date Received: 06/11/13
1710 Frankfill Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 06/13/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 06/13/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1306273

Lab ID				1306273-001A			
Client ID				MW-1			
Matrix				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<10	20	0.5	Bromoform	ND<10	20	0.5
Bromomethane	ND<10	20	0.5	Carbon Tetrachloride	ND<10	20	0.5
Chlorobenzene	ND<10	20	0.5	Chloroethane	ND<10	20	0.5
Chloroform	ND<10	20	0.5	Chloromethane	ND<10	20	0.5
Dibromochloromethane	ND<10	20	0.5	1,2-Dibromoethane (EDB)	ND<10	20	0.5
1,2-Dichlorobenzene	ND<10	20	0.5	1,3-Dichlorobenzene	ND<10	20	0.5
1,4-Dichlorobenzene	ND<10	20	0.5	Dichlorodifluoromethane	ND<10	20	0.5
1,1-Dichloroethane	ND<10	20	0.5	1,2-Dichloroethane (1,2-DCA)	ND<10	20	0.5
1,1-Dichloroethene	ND<10	20	0.5	cis-1,2-Dichloroethene	ND<10	20	0.5
trans-1,2-Dichloroethene	ND<10	20	0.5	1,2-Dichloropropane	ND<10	20	0.5
cis-1,3-Dichloropropene	ND<10	20	0.5	trans-1,3-Dichloropropene	ND<10	20	0.5
Freon 113	ND<200	20	10	Methylene chloride	ND<10	20	0.5
1,1,1,2-Tetrachloroethane	ND<10	20	0.5	1,1,2,2-Tetrachloroethane	ND<10	20	0.5
Tetrachloroethene	200	20	0.5	1,1,1-Trichloroethane	ND<10	20	0.5
1,1,2-Trichloroethane	ND<10	20	0.5	Trichloroethene	42	20	0.5
Trichlorofluoromethane	ND<10	20	0.5	Vinyl Chloride	ND<10	20	0.5

	Surrogate R	ecoveries (%)	
%SS1:	104	%SS2:	109
%SS3:	96		
Commonta			

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 78258 WorkOrder: 1306273

EPA Method: SW8260B Extraction: S	W5030B						Spiked Sam	ple ID:	1306241-015B
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, wally c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	96	95.6	0.352	89.7	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	105	104	0.551	87.3	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	93.5	93.7	0.223	87.3	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	92.1	91.8	0.281	89.8	70 - 130	20	70 - 130
Trichloroethene	ND	10	95.4	96.6	1.25	87.1	70 - 130	20	70 - 130
%SS1:	102	25	109	110	0.891	103	70 - 130	20	70 - 130
%SS2:	107	25	108	104	2.88	110	70 - 130	20	70 - 130
%SS3:	92	2.5	92	93	1.32	96	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 78258 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1306273-001A	06/10/13 5:00 PM	1 06/13/13	06/13/13 12:19 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200		Date Received: 07/02/13
1770 1141141111 541661, 516. 200	Client Contact: Bob Clark-Riddell	Date Reported: 07/10/13
Oakland, CA 94612	Client P.O.:	Date Completed: 07/10/13

WorkOrder: 1307071

July 11, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 18 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1307071

We Telepho	Accample besite: www.mccone: (925) 252	1534 V Pitts campbell -9262	Villow Pass burg, CA 9 .com Ema	Road 4565 iil: ma	ain@r F	ncca	mpbe (925			69				TU			ROI	UN Co	D Telt	IN EHM (Nor	mat	}	RUS No	SH	241	HR	RE 48 (DW	HR		D 72 H		
Report To: Bob					: Pa	nge	ì						1						An	llysi	s Re	que	st						Oth	er	Comm	ents
Company: Pang																															Filter	
1710 Franklin St	reet, Suite 20	0, Oakla		-			15115151																								Sample	PS
					l: bri		-	_	aen	v.cc	m		+	-	-	+		1			-										for Me	
Tele: (510) 435-8					510)								4						1	1	1										analys	is:
Project #: 1435.0				rojec	t Nai	ne:	Sola	no G	rou	ıp_			+	(8)	0																Yes / N	0
Project Location	Control of the Contro		The state of the s	-									- 6	(8260B)	801	0928										11						
Sampler Signatu	re:			>_=	_	_				3.4	ETH	IOD	7800 LD	8 (8	pod	7		1														
		SAM	PLING	90	ners	1	MAT	RIX				RVE		nate	ME	Method																
SAMPLE ID	LOCATION (Field Point Name)	Date 7/2/13	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO,	12	Five fuel oxygenates	VOCs by EPA MEthod 8010	VOCe by FPA																
13-31-1	B-31	40	1100	1	4		X			X			T		)			T					Т									
13-31-3		1	1108	1	1		1						1		>		1			1												
B-31-5	1		1112										1	T	1																	
B-32-1	B-32		1220				1						+	$\top$	(	1	+			+						1	1	1				
B-32-3	12 34		1228	1			1						t		5	>		t		+								+		+		
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B-32-5	2-27			1			+	+		+	+	+	+	+	1	1	+	+	+	+	+	-	+			-	-	+	+	+		
B-33-3	B-33		1302				+			1	-	+	+		1	1	+	+	+	+		-					+	+	+	+		_
B-33-5	_	-	1311	$\rightarrow$	$\vdash$		$\vdash$	-	-		-	+	+	+		1	+	+	+	+	-		-			-	+	+	4	+	_	
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13-34-3			1010							1			+	-	1	1	+	-	-								_	+	-	-		
B-34-5	4		1021				1						1	1	7	1	1		1									1				
B-33-1	13-33		1255												X																	
A-9-3	A-9	1	0937				1			1					X																	
A-9-6	V	A	1007	1	1		V			0			T			,																
Relinquished By:	200	Date: 7/2/13	Time:	Rece	ived B	1	ن	4	4				I	CE/t° GOOI HEAD DECH	CO SP/	ACE	ABS	ENT						1		C	ОММ	IENT	rs:			
Relinquished By:		Date:	Time:	20000	ived B	D.A.			V				P	PRES	OPR	ED	E CC N LA	AB_	AIN	ERS_	MI		LS	отн	IER	8	1	12	レ			

McCAMPBELL ANALYTICAL, INC.  1534 Willow Pass Road Pittsburg, CA 94565  Website: www.mccampbell.com Telephone: (925) 252-9262  Fax: (925) 252-9269														CHAIN OF CUSTODY RECORD  TURN AROUND TIME  RUSH 24 HR 48 HR 72 HR 5 DAY  EDF Required? Coelt (Norman) No Write On (DW) No																									
Report To: Bob Clark-Riddell Bill To: Pangea																			Ana	ilysi	s R	equ	est							0	ther		Comme						
Company: Pang	ea Environme	ental Ser	vices, In	c.															Г			Т	Т		П					T				Title					
1710 Franklin St	reet, Suite 20	0, Oakla	and, CA	94612	2								4																				ш	Filter Samples					
E-Mail: briddell@pangeaenv.com											4						-	1	-		-	-	-1		-1				$\vdash$			for Meta							
Tele: (510) 435-	8664				(510)		-						4																					analysis					
Project #: 1435.				rojec	t Nai	me:	Sola	no (	Frou	ıp qı			4			_	-																Н	Yes / No					
Project Location	The second second second	Ave, Al	bany										4	B)	809	8010	1260										-1		М										
Sampler Signatu	re:	al	6-8	9.	-	-							4	m/8021B)	(82	Por	od 8														П								
SAMPLE ID		SAMI	PLING		ers	1	MATRIX				METHOD PRESERVED			SCm/	nates	MEd	Meth																						
	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO	Other	TPHg/BTEX (801	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010	VOCs by EPA Method 8260																						
A-9-9	HOO 1	7/2/15	1100	1	551		X			X	П		Ť			X														$\forall$									
A-9-12	1223 V	1	1223	1	1		1			1			1			X			T			T		Ť															
A-10-3	A-10		1045				1						1		-	X			T		T			T		T	T	П											
A-10-6.5	1		1127									T	1		·	X				T	T	T	T	T		П													
A-10-9			1250										1		7				Т	T	-	T	T	T	-	П													
A-10-12	1		1352				1			1			1			X			t	T	T	T	T	Ť		T													
A-10-13.5	A-10		1410	1			1			1		1	1		T	7.3			T			T	T	Ť		Т													
A-11-3	A-11	V	1345	V	V		1			1	T		1	T	1	X			$\vdash$	T	T	1	+	T	1					1				1					
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Relinquished By:	20=	Date:	Time:	-	eceixed By:									ICE/t* COMMENTS: GOOD CONDITION HEAD SPACE ABSENT DECHLORINATED IN LAB																									
Relinquished By:	Date:	Time:	Rec	eived E	ved By:									SER	VE	) IN	LA	В_		-		IET.	ALS		тн	ER-	APPROPRIATE CONTAINERS PRESERVED IN LAB  VOAS O&G METALS OTHER  7 2												

## McCampbell Analytical, Inc.

FAX: (510) 836-3709

12

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1307071

Page 1 of 2

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(510) 836-3700

□WaterTrax ☐ WriteOn **▼**EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag Report to: Bill to: Requested TAT: 5 days BRiddell@pangeaenv.com Bob Clark-Riddell Email: Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 07/02/2013 1710 Franklin Street, Ste. 200 1710 Franklin Street, Ste. 200 PO: Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 07/02/2013

								Re	quested	l Tests (	See leg	end bel	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1307071-001	B-31-1	Soil	7/2/2013 11:00		Α	Α										$\overline{}$
1307071-002	B-31-3	Soil	7/2/2013 11:08		Α											
1307071-003	B-31-5	Soil	7/2/2013 11:12		Α											
1307071-004	B-32-1	Soil	7/2/2013 12:20		Α											
1307071-005	B-32-3	Soil	7/2/2013 12:28		Α											
1307071-006	B-32-5	Soil	7/2/2013 12:36		Α											
1307071-007	B-33-3	Soil	7/2/2013 13:02		Α											
1307071-009	B-34-1	Soil	7/2/2013 10:00		Α											
1307071-010	B-34-3	Soil	7/2/2013 10:10		Α											
1307071-011	B-34-5	Soil	7/2/2013 10:21		Α											
1307071-012	B-33-1	Soil	7/2/2013 12:55		Α											
1307071-013	A-9-3	Soil	7/2/2013 9:37		Α											
1307071-015	A-9-9	Soil	7/2/2013 11:00		Α											
1307071-016	A-9-12	Soil	7/2/2013 12:23		Α											
Test Legend:				_												
1 8010BMS_S	2 PREI	OF REPORT	3				4					5				
6	7		8				9					10	1			

$C_0$	m		_	-	40	
	111	m	ω	n		۰

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Prepared by: Jena Alfaro

## McCampbell Analytical, Inc.

□WaterTrax

☐ WriteOn

# **CHAIN-OF-CUSTODY RECORD**

✓ Email

HardCopy

EQuIS

Page 2 of 2

J-flag

☐ ThirdParty

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1307071 ClientCode: PEO Excel

Report to:			Bill to:	Requested TAT:	5 days
Bob Clark-Riddell	Email:	BRiddell@pangeaenv.com	Bob Clark-Riddell		_
Pangea Environmental Svcs., Inc.	cc:		Pangea Environmental Svcs., Inc.		
1710 Franklin Street, Ste. 200	PO:		1710 Franklin Street, Ste. 200	Date Received:	07/02/2013

**✓** EDF

Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 07/02/2013 (510) 836-3700 FAX: (510) 836-3709

								Re	quested	Tests (	See leg	end bel	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1307071-017	A-10-3	Soil	7/2/2013 10:45		Α											
1307071-018	A-10-6.5	Soil	7/2/2013 11:27		Α											
1307071-020	A-10-12	Soil	7/2/2013 13:52		Α											
1307071-022	A-11-3	Soil	7/2/2013 13:45		Α											

#### Test Legend:

1	8010BMS_S	2	PREDF REPORT	3	4	5	5
6		7		8	9	1	0
11		12					

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environment	tal Svcs., Inc.			Date	and 1	ime Received:	7/2/2013 6:	21:43 PM
Project Name:	#1435.002; Solano G	Froup			LogIr	n Revi	ewed by:		Jena Alfaro
WorkOrder N°:	1307071	Matrix: Soil			Carri	er:	Client Drop-In		
		<u>Chair</u>	ո of Cւ	ustody (C	OC) Informa	<u>ation</u>			
Chain of custody	present?		Yes	✓	No 🗌				
Chain of custody	signed when relinquisl	ned and received?	Yes	✓	No 🗌				
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌				
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$				
Date and Time of	collection noted by Cl	ient on COC?	Yes	✓	No $\square$				
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌				
		<u>s</u>	Sample	Receipt	Information	<u>1</u>			
Custody seals into	act on shipping contail	ner/cooler?	Yes		No 🗌			NA 🗹	
Shipping contained	er/cooler in good condi	tion?	Yes	✓	No 🗌				
Samples in prope	er containers/bottles?		Yes	✓	No $\square$				
Sample container	rs intact?		Yes	✓	No 🗌				
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No 🗌				
		Sample Prese	rvatio	n and Ho	ld Time (HT	') Info	<u>rmation</u>		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌				
Container/Temp B	Blank temperature		Coole	er Temp:	5.8°C			NA 🗌	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes		No 🗌	No	VOA vials submit	tted 🗸	
Sample labels ch	ecked for correct pres	ervation?	Yes	✓	No 🗌				
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌			NA 🗸	
Samples Receive	ed on Ice?		Yes	✓	No 🗌				
		(Ice Type	: WE	TICE )					
* NOTE: If the "N	o" box is checked, see	comments below.							

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
Group	Date Received: 07/02/13
Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Client P.O.:	Date Analyzed 07/02/13
	Group  Client Contact: Bob Clark-Riddell

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-001A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		B-31-1							
Matrix				Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005		
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005		
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005		
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005		
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004		
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005		
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005		
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004		
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005		
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005		
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005		
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005		
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005		
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005		
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005		
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005		

Surrogate Recoveries (%)									
%SS1:	95	%SS2:	108						
%SS3: 89									
Comments:									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
1710 Plankim Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/02/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-002A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

CII I I		D 21 2									
Client ID				B-31-3							
Matrix				Soil							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit				
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005				
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005				
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005				
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005				
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004				
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005				
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005				
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004				
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005				
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005				
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005				
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005				
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005				
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005				
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005				
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005				

Surrogate Recoveries (%)									
%SS1:	94	%SS2:	109						
%SS3: 85									
Commanto									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	3	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
1710 Frankini Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/02/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-003A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		B-31-5						
Matrix				Soil				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005	
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005	
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005	
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005	
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004	
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005	
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005	
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005	
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005	
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005	
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005	
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005	
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005	
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005	
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005	

Surrogate Recoveries (%)							
%SS1:	93	%SS2:	106				
%SS3:	87						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street Ste 200	Group	Date Received: 07/02/13
1710 Franklin Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/02/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-004A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		B-32-1					
Matrix Compound	Concentration *	DF	Reporting	Soil Compound	Concentration *	DF	Reporting
Compound	Concentration	DI	Limit	Compound	Concentration	DI	Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.084	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)							
%SS1:	91	%SS2:	110				
%SS3: 84							
Comments:							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	3	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
1710 Frankini Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-005A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		B-32-3					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)							
%SS1:	89	%SS2:	109				
%SS3:	82						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13			
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13			
1710 Frankiiii Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13			
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/04/13			

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-006A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		B-32-5						
Matrix				Soil				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005	
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005	
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005	
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005	
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004	
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005	
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005	
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005	
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005	
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005	
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005	
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005	
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005	
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005	
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005	

Surrogate Recoveries (%)							
%SS1:	90	%SS2:	108				
%SS3:	76						

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-007A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		B-33-3					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)							
%SS1:	88	%SS2:	108				
%SS3:	76						
Comments							

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g$ /wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-009A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Euro IB		1007071 00711					
Client ID		B-34-1					
Matrix							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.011	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	87	%SS2:	106			
%SS3:	75					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-010A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		B-34-3					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)							
%SS1:	88	%SS2:	107				
%SS3: 75							
Comments:							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-011A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Euo ID		130/0/1 011/1					
Client ID		B-34-5					
Matrix		Soil					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	90	%SS2:	105			
%SS3: 74						
Comments:						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	3	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-012A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		B-33-1					
Matrix Compound	Concentration *	DF	Reporting Limit	Soil Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND<0.050	10	0.005	Bromoform	ND<0.050	10	0.005
Bromomethane	ND<0.050	10	0.005	Carbon Tetrachloride	ND<0.050	10	0.005
Chlorobenzene	ND<0.050	10	0.005	Chloroethane	ND<0.050	10	0.005
Chloroform	ND<0.050	10	0.005	Chloromethane	ND<0.050	10	0.005
Dibromochloromethane	ND<0.050	10	0.005	1,2-Dibromoethane (EDB)	ND<0.040	10	0.004
1,2-Dichlorobenzene	ND<0.050	10	0.005	1,3-Dichlorobenzene	ND<0.050	10	0.005
1,4-Dichlorobenzene	ND<0.050	10	0.005	Dichlorodifluoromethane	ND<0.050	10	0.005
1,1-Dichloroethane	ND<0.050	10	0.005	1,2-Dichloroethane (1,2-DCA)	ND<0.040	10	0.004
1,1-Dichloroethene	ND<0.050	10	0.005	cis-1,2-Dichloroethene	ND<0.050	10	0.005
trans-1,2-Dichloroethene	ND<0.050	10	0.005	1,2-Dichloropropane	ND<0.050	10	0.005
cis-1,3-Dichloropropene	ND<0.050	10	0.005	trans-1,3-Dichloropropene	ND<0.050	10	0.005
Freon 113	ND<1.0	10	0.1	Methylene chloride	ND<0.050	10	0.005
1,1,1,2-Tetrachloroethane	ND<0.050	10	0.005	1,1,2,2-Tetrachloroethane	ND<0.050	10	0.005
Tetrachloroethene	0.70	10	0.005	1,1,1-Trichloroethane	ND<0.050	10	0.005
1,1,2-Trichloroethane	ND<0.050	10	0.005	Trichloroethene	0.16	10	0.005
Trichlorofluoromethane	ND<0.050	10	0.005	Vinyl Chloride	ND<0.050	10	0.005

Surrogate Recoveries (%)						
%SS1: 99 %SS2: 98						
%SS3: 84						
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-013A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID	D A-9-3								
Matrix		Soil							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005		
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005		
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005		
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005		
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004		
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005		
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005		
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004		
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005		
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005		
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005		
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005		
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005		
Tetrachloroethene	0.041	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005		
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005		
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005		

Surrogate Recoveries (%)						
%SS1:	89	%SS2:	104			
%SS3: 73						
Comments:						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-015A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		A-9-9 Soil					
Matrix							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1: 90 %SS2: 105						
%SS3: 75						
Comments						

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-016A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Euro IB				100,0,1 01011			
Client ID		A-9-12					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1: 92 %SS2: 104						
%SS3: 73						
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-017A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Lau ID		150/0/1-01/A							
Client ID	A-10-3								
Matrix		Soil							
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit		
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.003		
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.00		
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.00		
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.00		
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.00		
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.00		
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.00		
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.00		
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.00		
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.00		
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.00		
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.00		
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.00		
Tetrachloroethene	0.045	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.00		
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.00		
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.00		

Surrogate Recoveries (%)						
%SS1:	93	%SS2:	103			
%SS3: 71						
Comments						

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/03/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-018A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		A-10-6.5					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.0079	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	94	%SS2:	103			
%SS3: 72						
Comments						

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/10/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-020A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Client ID		A-10-12					
Matrix Compound	Concentration *	DF	Reporting Limit	Soil Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)							
%SS1: 93 %SS2: 87							
%SS3: 100							
Comments							

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 07/02/13
1710 Franklin Street, Ste. 200	Group	Date Received: 07/02/13
	Client Contact: Bob Clark-Riddell	Date Extracted 07/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/06/13

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307071-022A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307071

Luo ID		1307071 02211					
Client ID		A-11-3					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1: 98 %SS2: 101						
%SS3: 88						
Comments:						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

#### **QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 78971 WorkOrder: 1307071

EPA Method: SW8260B Extraction: S	W5030B					5	Spiked Sam	ple ID:	1307071-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, and yet	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	87.6	84.3	3.84	84.7	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	87.8	85.5	2.72	84.5	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	82	78	4.91	79.6	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	85	79.5	6.68	81.8	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	86.6	82.1	5.29	83.3	60 - 116	30	70 - 130
%SS1:	95	0.12	96	95	1.40	96	70 - 130	30	70 - 130
%SS2:	108	0.12	89	90	0.269	88	70 - 130	30	70 - 130
%SS3:	89	0.012	103	105	1.13	102	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 78971 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307071-001A	07/02/13 11:00 AM	07/02/13	07/02/13 9:45 PM	1307071-002A	07/02/13 11:08 AM	07/02/13	07/02/13 10:24 PM
1307071-003A	07/02/13 11:12 AM	07/02/13	07/02/13 11:03 PM	1307071-004A	07/02/13 12:20 PM	07/02/13	07/02/13 11:42 PM
1307071-005A	07/02/13 12:28 PM	07/02/13	07/03/13 12:21 AM	1307071-006A	07/02/13 12:36 PM	07/02/13	07/04/13
1307071-007A	07/02/13 1:02 PM	07/02/13	07/03/13 1:39 AM	1307071-009A	07/02/13 10:00 AM	07/02/13	07/03/13 2:19 AM
1307071-010A	07/02/13 10:10 AM	07/02/13	07/03/13 2:58 AM	1307071-011A	07/02/13 10:21 AM	07/02/13	07/03/13 3:39 AM
1307071-012A	07/02/13 12:55 PM	07/02/13	07/03/13 1:56 PM	1307071-013A	07/02/13 9:37 AM	07/02/13	07/03/13 4:58 AM
1307071-015A	07/02/13 11:00 AM	07/02/13	07/03/13 5:38 AM	1307071-016A	07/02/13 12:23 PM	07/02/13	07/03/13 4:29 PM
1307071-017A	07/02/13 10:45 AM	07/02/13	07/03/13 5:10 PM	1307071-018A	07/02/13 11:27 AM	07/02/13	07/03/13 5:51 PM
1307071-020A	07/02/13 1:52 PM	07/02/13	07/10/13 4:55 PM	1307071-022A	07/02/13 1:45 PM	07/02/13	07/06/13 6:52 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1307070 **Amended:** 10/15/2013

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Morgan Gillies

**Project P.O.:** 

**Project Name:** #1435.002; Solano Group

**Project Received:** 07/02/2013

Analytical Report reviewed & approved for release on 07/08/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

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## **Glossary of Terms & Qualifier Definitions**

**Client:** Pangea Environmental Svcs., Inc.

**Project:** #1435.002; Solano Group

WorkOrder: 1307070

Glossary Description
Abbreviation

95% Interval 95% Confident Interval

DF Dilution Factor
DUP Duplicate

LCS Laboratory Control Sample

MB Method Blank

MB % Rec % Recovery of Surrogate in Method Blank, if applicable

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

ND Not detected at or above the indicated MDL or RL

NR Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water

matrix; or sample diluted due to high matrix or analyte content.

RD Relative Difference
RL Reporting Limit

RPD Relative Percent Deviation

SPK Val Spike Value

SPKRef Val Spike Reference Value

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrum	ent Batch ID
SSPO-1	1307070-001A	Air	07/02/20	13 13:55 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 12:24
Bromodichloromethane	ND		0.25	1	07/03/2013 12:24
Bromoform	ND		0.25	1	07/03/2013 12:24
Bromomethane	ND		0.25	1	07/03/2013 12:24
Carbon Tetrachloride	ND		0.25	1	07/03/2013 12:24
Chlorobenzene	ND		0.25	1	07/03/2013 12:24
Chloroethane	ND		0.25	1	07/03/2013 12:24
Chloroform	ND		0.25	1	07/03/2013 12:24
Chloromethane	ND		0.25	1	07/03/2013 12:24
Dibromochloromethane	ND		0.25	1	07/03/2013 12:24
1,2-Dibromoethane (EDB)	ND		0.50	1	07/03/2013 12:24
1,2-Dichlorobenzene	ND		0.25	1	07/03/2013 12:24
1,3-Dichlorobenzene	ND		0.25	1	07/03/2013 12:24
1,4-Dichlorobenzene	ND		0.25	1	07/03/2013 12:24
Dichlorodifluoromethane	ND		0.25	1	07/03/2013 12:24
1,1-Dichloroethane	ND		0.25	1	07/03/2013 12:24
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1	07/03/2013 12:24
1,1-Dichloroethene	ND		0.25	1	07/03/2013 12:24
cis-1,2-Dichloroethene	ND		0.25	1	07/03/2013 12:24
trans-1,2-Dichloroethene	ND		0.25	1	07/03/2013 12:24
1,2-Dichloropropane	ND		0.25	1	07/03/2013 12:24
cis-1,3-Dichloropropene	ND		0.25	1	07/03/2013 12:24
trans-1,3-Dichloropropene	ND		0.25	1	07/03/2013 12:24
Freon 113	ND		0.50	1	07/03/2013 12:24
Ethylbenzene	ND		0.50	1	07/03/2013 12:24
Methylene chloride	ND		0.25	1	07/03/2013 12:24
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/03/2013 12:24
1,1,2,2-Tetrachloroethane	ND		0.25	1	07/03/2013 12:24
Tetrachloroethene	0.73		0.25	1	07/03/2013 12:24
Toluene	ND		0.50	1	07/03/2013 12:24
1,1,1-Trichloroethane	ND		0.25	1	07/03/2013 12:24
1,1,2-Trichloroethane	ND		0.25	1	07/03/2013 12:24
Trichloroethene	ND		0.25	1	07/03/2013 12:24
Trichlorofluoromethane	ND		0.25	1	07/03/2013 12:24
Vinyl Chloride	ND		0.25	1	07/03/2013 12:24
Xylenes	ND		0.50	1	07/03/2013 12:24

(Cont.)

BB Analyst's Initial

Angela Rydelius, Lab Manager

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	d Instrument	Batch ID
SSPO-1	1307070-001A	Air	07/02/2013 13:5	5 GC18	79056
<u>Analytes</u>	Result		<u>RL</u> <u>DF</u>		Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	94		70-130		07/03/2013 12:24
Toluene-d8	95		70-130		07/03/2013 12:24
4-BFB	73		70-130		07/03/2013 12:24

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrume	ent Batch ID
1185 Hall	1307070-002A	Air	07/02/20	13 15:30 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 13:04
Bromodichloromethane	ND		0.25	1	07/03/2013 13:04
Bromoform	ND		0.25	1	07/03/2013 13:04
Bromomethane	ND		0.25	1	07/03/2013 13:04
Carbon Tetrachloride	ND		0.25	1	07/03/2013 13:04
Chlorobenzene	ND		0.25	1	07/03/2013 13:04
Chloroethane	ND		0.25	1	07/03/2013 13:04
Chloroform	ND		0.25	1	07/03/2013 13:04
Chloromethane	ND		0.25	1	07/03/2013 13:04
Dibromochloromethane	ND		0.25	1	07/03/2013 13:04
1,2-Dibromoethane (EDB)	ND		0.50	1	07/03/2013 13:04
1,2-Dichlorobenzene	ND		0.25	1	07/03/2013 13:04
1,3-Dichlorobenzene	ND		0.25	1	07/03/2013 13:04
1,4-Dichlorobenzene	ND		0.25	1	07/03/2013 13:04
Dichlorodifluoromethane	ND		0.25	1	07/03/2013 13:04
1,1-Dichloroethane	ND		0.25	1	07/03/2013 13:04
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1	07/03/2013 13:04
1,1-Dichloroethene	ND		0.25	1	07/03/2013 13:04
cis-1,2-Dichloroethene	ND		0.25	1	07/03/2013 13:04
trans-1,2-Dichloroethene	ND		0.25	1	07/03/2013 13:04
1,2-Dichloropropane	ND		0.25	1	07/03/2013 13:04
cis-1,3-Dichloropropene	ND		0.25	1	07/03/2013 13:04
trans-1,3-Dichloropropene	ND		0.25	1	07/03/2013 13:04
Freon 113	ND		0.50	1	07/03/2013 13:04
Ethylbenzene	ND		0.50	1	07/03/2013 13:04
Methylene chloride	ND		0.25	1	07/03/2013 13:04
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/03/2013 13:04
1,1,2,2-Tetrachloroethane	ND		0.25	1	07/03/2013 13:04
Tetrachloroethene	14		0.25	1	07/03/2013 13:04
Toluene	ND		0.50	1	07/03/2013 13:04
1,1,1-Trichloroethane	ND		0.25	1	07/03/2013 13:04
1,1,2-Trichloroethane	ND		0.25	1	07/03/2013 13:04
Trichloroethene	0.74		0.25	1	07/03/2013 13:04
Trichlorofluoromethane	ND		0.25	1	07/03/2013 13:04
Vinyl Chloride	ND		0.25	1	07/03/2013 13:04
Xylenes	ND		0.50	1	07/03/2013 13:04

(Cont.)

\_\_\_BB \_\_ Analyst's Initial

Angela Rydelius, Lab Manager

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ g/L

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	I Instrument	Batch ID
1185 Hall	1307070-002A	Air	07/02/2013 15:30	) GC18	79056
Analytes	Result		<u>RL</u> <u>DF</u>		Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	96		70-130		07/03/2013 13:04
Toluene-d8	94		70-130		07/03/2013 13:04
4-BFB	71		70-130		07/03/2013 13:04

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ g/L

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instru	iment Batch ID
1185 Bath	1307070-003A	Air	07/02/20	13 15:00 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 13:45
Bromodichloromethane	ND		0.25	1	07/03/2013 13:45
Bromoform	ND		0.25	1	07/03/2013 13:45
Bromomethane	ND		0.25	1	07/03/2013 13:45
Carbon Tetrachloride	ND		0.25	1	07/03/2013 13:45
Chlorobenzene	ND		0.25	1	07/03/2013 13:45
Chloroethane	ND		0.25	1	07/03/2013 13:45
Chloroform	ND		0.25	1	07/03/2013 13:45
Chloromethane	ND		0.25	1	07/03/2013 13:45
Dibromochloromethane	ND		0.25	1	07/03/2013 13:45
1,2-Dibromoethane (EDB)	ND		0.50	1	07/03/2013 13:45
1,2-Dichlorobenzene	ND		0.25	1	07/03/2013 13:45
1,3-Dichlorobenzene	ND		0.25	1	07/03/2013 13:45
1,4-Dichlorobenzene	ND		0.25	1	07/03/2013 13:45
Dichlorodifluoromethane	ND		0.25	1	07/03/2013 13:45
1,1-Dichloroethane	ND		0.25	1	07/03/2013 13:45
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1	07/03/2013 13:45
1,1-Dichloroethene	ND		0.25	1	07/03/2013 13:45
cis-1,2-Dichloroethene	ND		0.25	1	07/03/2013 13:45
trans-1,2-Dichloroethene	ND		0.25	1	07/03/2013 13:45
1,2-Dichloropropane	ND		0.25	1	07/03/2013 13:45
cis-1,3-Dichloropropene	ND		0.25	1	07/03/2013 13:45
trans-1,3-Dichloropropene	ND		0.25	1	07/03/2013 13:45
Freon 113	ND		0.50	1	07/03/2013 13:45
Ethylbenzene	ND		0.50	1	07/03/2013 13:45
Methylene chloride	ND		0.25	1	07/03/2013 13:45
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/03/2013 13:45
1,1,2,2-Tetrachloroethane	ND		0.25	1	07/03/2013 13:45
Tetrachloroethene	2.7		0.25	1	07/03/2013 13:45
Toluene	ND		0.50	1	07/03/2013 13:45
1,1,1-Trichloroethane	ND		0.25	1	07/03/2013 13:45
1,1,2-Trichloroethane	ND		0.25	1	07/03/2013 13:45
Trichloroethene	ND		0.25	1	07/03/2013 13:45
Trichlorofluoromethane	ND		0.25	1	07/03/2013 13:45
Vinyl Chloride	ND		0.25	1	07/03/2013 13:45
Xylenes	ND		0.50	1	07/03/2013 13:45

(Cont.)

BB Analyst's Initial

Angela Rydelius, Lab Manager

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collecte	d Instrument	Batch ID
1185 Bath	1307070-003A	Air	07/02/2013 15:0	0 GC18	79056
Analytes	Result		RL DF		Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	95		70-130		07/03/2013 13:45
Toluene-d8	95		70-130		07/03/2013 13:45
4-BFB	70		70-130		07/03/2013 13:45

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SS-15	1307070-004A	Air	07/02/20	13 13:30 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 11:37
Bromodichloromethane	ND		0.25	1	07/03/2013 11:37
Bromoform	ND		0.25	1	07/03/2013 11:37
Bromomethane	ND		0.25	1	07/03/2013 11:37
Carbon Tetrachloride	ND		0.25	1	07/03/2013 11:37
Chlorobenzene	ND		0.25	1	07/03/2013 11:37
Chloroethane	ND		0.25	1	07/03/2013 11:37
Chloroform	ND		0.25	1	07/03/2013 11:37
Chloromethane	ND		0.25	1	07/03/2013 11:37
Dibromochloromethane	ND		0.25	1	07/03/2013 11:37
1,2-Dibromoethane (EDB)	ND		0.50	1	07/03/2013 11:37
1,2-Dichlorobenzene	ND		0.25	1	07/03/2013 11:37
1,3-Dichlorobenzene	ND		0.25	1	07/03/2013 11:37
1,4-Dichlorobenzene	ND		0.25	1	07/03/2013 11:37
Dichlorodifluoromethane	ND		0.25	1	07/03/2013 11:37
1,1-Dichloroethane	ND		0.25	1	07/03/2013 11:37
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1	07/03/2013 11:37
1,1-Dichloroethene	ND		0.25	1	07/03/2013 11:37
cis-1,2-Dichloroethene	ND		0.25	1	07/03/2013 11:37
trans-1,2-Dichloroethene	ND		0.25	1	07/03/2013 11:37
1,2-Dichloropropane	ND		0.25	1	07/03/2013 11:37
cis-1,3-Dichloropropene	ND		0.25	1	07/03/2013 11:37
trans-1,3-Dichloropropene	ND		0.25	1	07/03/2013 11:37
Freon 113	ND		0.50	1	07/03/2013 11:37
Ethylbenzene	ND		0.50	1	07/03/2013 11:37
Methylene chloride	ND		0.25	1	07/03/2013 11:37
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/03/2013 11:37
1,1,2,2-Tetrachloroethane	ND		0.25	1	07/03/2013 11:37
Tetrachloroethene	0.34		0.25	1	07/03/2013 11:37
Toluene	ND		0.50	1	07/03/2013 11:37
1,1,1-Trichloroethane	ND		0.25	1	07/03/2013 11:37
1,1,2-Trichloroethane	ND		0.25	1	07/03/2013 11:37
Trichloroethene	ND		0.25	1	07/03/2013 11:37
Trichlorofluoromethane	ND		0.25	1	07/03/2013 11:37
Vinyl Chloride	ND		0.25	1	07/03/2013 11:37
Xylenes	ND		0.50	1	07/03/2013 11:37

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BB Analyst's Initial

Angela Rydelius, Lab Manager

# **Analytical Report**

**Client:** WorkOrder: Pangea Environmental Svcs., Inc. 1307070 **Project:** #1435.002; Solano Group **Extraction Method: SW5030B Date Received:** 7/2/13 18:05 **Analytical Method:** SW8260B

**Date Prepared:** 7/3/13 **Unit:** 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	<b>Date Collected</b>	Instrument	Batch ID
SS-15	1307070-004A	Air	07/02/2013 13:30	GC18	79056
<u>Analytes</u>	<u>Result</u>		<u>RL</u> <u>DF</u>		Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	94		70-130		07/03/2013 11:37
Toluene-d8	95		70-130		07/03/2013 11:37
4-BFB	72		70-130		07/03/2013 11:37

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrumen	t Batch ID
SS-7	1307070-005A	Air	07/02/20	13 12:45 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 14:25
Bromodichloromethane	ND		0.25	1	07/03/2013 14:25
Bromoform	ND		0.25	1	07/03/2013 14:25
Bromomethane	ND		0.25	1	07/03/2013 14:25
Carbon Tetrachloride	ND		0.25	1	07/03/2013 14:25
Chlorobenzene	ND		0.25	1	07/03/2013 14:25
Chloroethane	ND		0.25	1	07/03/2013 14:25
Chloroform	ND		0.25	1	07/03/2013 14:25
Chloromethane	ND		0.25	1	07/03/2013 14:25
Dibromochloromethane	ND		0.25	1	07/03/2013 14:25
1,2-Dibromoethane (EDB)	ND		0.50	1	07/03/2013 14:25
1,2-Dichlorobenzene	ND		0.25	1	07/03/2013 14:25
1,3-Dichlorobenzene	ND		0.25	1	07/03/2013 14:25
1,4-Dichlorobenzene	ND		0.25	1	07/03/2013 14:25
Dichlorodifluoromethane	ND		0.25	1	07/03/2013 14:25
1,1-Dichloroethane	ND		0.25	1	07/03/2013 14:25
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1	07/03/2013 14:25
1,1-Dichloroethene	ND		0.25	1	07/03/2013 14:25
cis-1,2-Dichloroethene	ND		0.25	1	07/03/2013 14:25
trans-1,2-Dichloroethene	ND		0.25	1	07/03/2013 14:25
1,2-Dichloropropane	ND		0.25	1	07/03/2013 14:25
cis-1,3-Dichloropropene	ND		0.25	1	07/03/2013 14:25
trans-1,3-Dichloropropene	ND		0.25	1	07/03/2013 14:25
Freon 113	ND		0.50	1	07/03/2013 14:25
Ethylbenzene	ND		0.50	1	07/03/2013 14:25
Methylene chloride	ND		0.25	1	07/03/2013 14:25
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/03/2013 14:25
1,1,2,2-Tetrachloroethane	ND		0.25	1	07/03/2013 14:25
Tetrachloroethene	0.68		0.25	1	07/03/2013 14:25
Toluene	ND		0.50	1	07/03/2013 14:25
1,1,1-Trichloroethane	ND		0.25	1	07/03/2013 14:25
1,1,2-Trichloroethane	ND		0.25	1	07/03/2013 14:25
Trichloroethene	ND		0.25	1	07/03/2013 14:25
Trichlorofluoromethane	ND		0.25	1	07/03/2013 14:25
Vinyl Chloride	ND		0.25	1	07/03/2013 14:25
Xylenes	ND		0.50	1	07/03/2013 14:25

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\_\_\_BB\_\_\_ Analyst's Initial

Angela Rydelius, Lab Manager



# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Col	lected Instrument	Batch ID
SS-7	1307070-005A	Air	07/02/2013	3 12:45 GC18	79056
Analytes	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	96		70-130		07/03/2013 14:25
Toluene-d8	91		70-130		07/03/2013 14:25
4-BFB	85		70-130		07/03/2013 14:25

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected Instrument		Batch ID
SS-16	1307070-006A	Air	07/02/20	13 13:10 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 15:06
Bromodichloromethane	ND		0.25	1	07/03/2013 15:06
Bromoform	ND		0.25	1	07/03/2013 15:06
Bromomethane	ND		0.25	1	07/03/2013 15:06
Carbon Tetrachloride	ND		0.25	1	07/03/2013 15:06
Chlorobenzene	ND		0.25	1	07/03/2013 15:06
Chloroethane	ND		0.25	1	07/03/2013 15:06
Chloroform	ND		0.25	1	07/03/2013 15:06
Chloromethane	ND		0.25	1	07/03/2013 15:06
Dibromochloromethane	ND		0.25	1	07/03/2013 15:06
1,2-Dibromoethane (EDB)	ND		0.50	1	07/03/2013 15:06
1,2-Dichlorobenzene	ND		0.25	1	07/03/2013 15:06
1,3-Dichlorobenzene	ND		0.25	1	07/03/2013 15:06
1,4-Dichlorobenzene	ND		0.25	1	07/03/2013 15:06
Dichlorodifluoromethane	ND		0.25	1	07/03/2013 15:06
1,1-Dichloroethane	ND		0.25	1	07/03/2013 15:06
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1	07/03/2013 15:06
1,1-Dichloroethene	ND		0.25	1	07/03/2013 15:06
cis-1,2-Dichloroethene	ND		0.25	1	07/03/2013 15:06
trans-1,2-Dichloroethene	ND		0.25	1	07/03/2013 15:06
1,2-Dichloropropane	ND		0.25	1	07/03/2013 15:06
cis-1,3-Dichloropropene	ND		0.25	1	07/03/2013 15:06
trans-1,3-Dichloropropene	ND		0.25	1	07/03/2013 15:06
Freon 113	ND		0.50	1	07/03/2013 15:06
Ethylbenzene	ND		0.50	1	07/03/2013 15:06
Methylene chloride	ND		0.25	1	07/03/2013 15:06
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/03/2013 15:06
1,1,2,2-Tetrachloroethane	ND		0.25	1	07/03/2013 15:06
Tetrachloroethene	ND		0.25	1	07/03/2013 15:06
Toluene	ND		0.50	1	07/03/2013 15:06
1,1,1-Trichloroethane	ND		0.25	1	07/03/2013 15:06
1,1,2-Trichloroethane	ND		0.25	1	07/03/2013 15:06
Trichloroethene	ND		0.25	1	07/03/2013 15:06
Trichlorofluoromethane	ND		0.25	1	07/03/2013 15:06
Vinyl Chloride	ND		0.25	1	07/03/2013 15:06
Xylenes	ND		0.50	1	07/03/2013 15:06

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BB Analyst's Initial

Angela Rydelius, Lab Manager

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Col	llected Instrument	Batch ID
SS-16	1307070-006A	Air	07/02/2013 13:10 GC18		79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Surrogates	REC (%)	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	94		70-130		07/03/2013 15:06
Toluene-d8	93		70-130		07/03/2013 15:06
4-BFB	98		70-130		07/03/2013 15:06

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ g/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrumer	nt Batch ID
SS-14	1307070-007A	Air	07/02/20	13 12:15 GC28	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 23:17
Bromodichloromethane	ND		0.25	1	07/03/2013 23:17
Bromoform	ND		0.25	1	07/03/2013 23:17
Bromomethane	ND		0.25	1	07/03/2013 23:17
Carbon Tetrachloride	ND		0.25	1	07/03/2013 23:17
Chlorobenzene	ND		0.25	1	07/03/2013 23:17
Chloroethane	ND		0.25	1	07/03/2013 23:17
Chloroform	ND		0.25	1	07/03/2013 23:17
Chloromethane	ND		0.25	1	07/03/2013 23:17
Dibromochloromethane	ND		0.25	1	07/03/2013 23:17
1,2-Dibromoethane (EDB)	ND		0.50	1	07/03/2013 23:17
1,2-Dichlorobenzene	ND		0.25	1	07/03/2013 23:17
1,3-Dichlorobenzene	ND		0.25	1	07/03/2013 23:17
1,4-Dichlorobenzene	ND		0.25	1	07/03/2013 23:17
Dichlorodifluoromethane	ND		0.25	1	07/03/2013 23:17
1,1-Dichloroethane	ND		0.25	1	07/03/2013 23:17
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1	07/03/2013 23:17
1,1-Dichloroethene	ND		0.25	1	07/03/2013 23:17
cis-1,2-Dichloroethene	ND		0.25	1	07/03/2013 23:17
trans-1,2-Dichloroethene	ND		0.25	1	07/03/2013 23:17
1,2-Dichloropropane	ND		0.25	1	07/03/2013 23:17
cis-1,3-Dichloropropene	ND		0.25	1	07/03/2013 23:17
trans-1,3-Dichloropropene	ND		0.25	1	07/03/2013 23:17
Freon 113	ND		0.50	1	07/03/2013 23:17
Ethylbenzene	ND		0.50	1	07/03/2013 23:17
Methylene chloride	ND		0.25	1	07/03/2013 23:17
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/03/2013 23:17
1,1,2,2-Tetrachloroethane	ND		0.25	1	07/03/2013 23:17
Tetrachloroethene	6.3		0.25	1	07/03/2013 23:17
Toluene	ND		0.50	1	07/03/2013 23:17
1,1,1-Trichloroethane	ND		0.25	1	07/03/2013 23:17
1,1,2-Trichloroethane	ND		0.25	1	07/03/2013 23:17
Trichloroethene	0.31		0.25	1	07/03/2013 23:17
Trichlorofluoromethane	ND		0.25	1	07/03/2013 23:17
Vinyl Chloride	ND		0.25	1	07/03/2013 23:17
Xylenes	ND		0.50	1	07/03/2013 23:17

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BB Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

Client ID	Lab ID	Matrix/ExtType	<b>Date Collected</b>	Instrument	Batch ID
SS-14	1307070-007A	Air	07/02/2013 12:15	GC28	79056
<u>Analytes</u>	Result		<u>RL</u> <u>DF</u>		Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	103		70-130		07/03/2013 23:17
Toluene-d8	100		70-130		07/03/2013 23:17
4-BFB	95		70-130		07/03/2013 23:17

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ g/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SS-13	1307070-008A	Air	07/02/20	13 11:55 GC10	79026
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		1.0	2	07/03/2013 21:18
Bromodichloromethane	ND		0.50	2	07/03/2013 21:18
Bromoform	ND		0.50	2	07/03/2013 21:18
Bromomethane	ND		0.50	2	07/03/2013 21:18
Carbon Tetrachloride	ND		0.50	2	07/03/2013 21:18
Chlorobenzene	ND		0.50	2	07/03/2013 21:18
Chloroethane	ND		0.50	2	07/03/2013 21:18
Chloroform	ND		0.50	2	07/03/2013 21:18
Chloromethane	ND		0.50	2	07/03/2013 21:18
Dibromochloromethane	ND		0.50	2	07/03/2013 21:18
1,2-Dibromoethane (EDB)	ND		1.0	2	07/03/2013 21:18
1,2-Dichlorobenzene	ND		0.50	2	07/03/2013 21:18
1,3-Dichlorobenzene	ND		0.50	2	07/03/2013 21:18
1,4-Dichlorobenzene	ND		0.50	2	07/03/2013 21:18
Dichlorodifluoromethane	ND		0.50	2	07/03/2013 21:18
1,1-Dichloroethane	ND		0.50	2	07/03/2013 21:18
1,2-Dichloroethane (1,2-DCA)	ND		0.50	2	07/03/2013 21:18
1,1-Dichloroethene	ND		0.50	2	07/03/2013 21:18
cis-1,2-Dichloroethene	3.5		0.50	2	07/03/2013 21:18
trans-1,2-Dichloroethene	ND		0.50	2	07/03/2013 21:18
1,2-Dichloropropane	ND		0.50	2	07/03/2013 21:18
cis-1,3-Dichloropropene	ND		0.50	2	07/03/2013 21:18
trans-1,3-Dichloropropene	ND		0.50	2	07/03/2013 21:18
Freon 113	ND		1.0	2	07/03/2013 21:18
Ethylbenzene	ND		1.0	2	07/03/2013 21:18
Methylene chloride	ND		0.50	2	07/03/2013 21:18
1,1,1,2-Tetrachloroethane	ND		1.0	2	07/03/2013 21:18
1,1,2,2-Tetrachloroethane	ND		0.50	2	07/03/2013 21:18
Tetrachloroethene	22		0.50	2	07/03/2013 21:18
Toluene	ND		1.0	2	07/03/2013 21:18
1,1,1-Trichloroethane	ND		0.50	2	07/03/2013 21:18
1,1,2-Trichloroethane	ND		0.50	2	07/03/2013 21:18
Trichloroethene	18		0.50	2	07/03/2013 21:18
Trichlorofluoromethane	ND		0.50	2	07/03/2013 21:18
Vinyl Chloride	ND		0.50	2	07/03/2013 21:18
Xylenes	ND		1.0	2	07/03/2013 21:18

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BB Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Collected	l Instrument	Batch ID
SS-13	1307070-008A	Air	07/02/2013 11:55	5 GC10	79026
<u>Analytes</u>	Result		<u>RL</u> <u>DF</u>		Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	107		70-130		07/03/2013 21:18
Toluene-d8	98		70-130		07/03/2013 21:18
4-BFB	90		70-130		07/03/2013 21:18

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ g/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Insti	rument Batch ID
SS-6	1307070-009A	Air	07/02/20	13 11:45 GC28	3 79058
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 20:49
Bromodichloromethane	ND		0.25	1	07/03/2013 20:49
Bromoform	ND		0.25	1	07/03/2013 20:49
Bromomethane	ND		0.25	1	07/03/2013 20:49
Carbon Tetrachloride	ND		0.25	1	07/03/2013 20:49
Chlorobenzene	ND		0.25	1	07/03/2013 20:49
Chloroethane	ND		0.25	1	07/03/2013 20:49
Chloroform	ND		0.25	1	07/03/2013 20:49
Chloromethane	ND		0.25	1	07/03/2013 20:49
Dibromochloromethane	ND		0.25	1	07/03/2013 20:49
1,2-Dibromoethane (EDB)	ND		0.50	1	07/03/2013 20:49
1,2-Dichlorobenzene	ND		0.25	1	07/03/2013 20:49
1,3-Dichlorobenzene	ND		0.25	1	07/03/2013 20:49
1,4-Dichlorobenzene	ND		0.25	1	07/03/2013 20:49
Dichlorodifluoromethane	ND		0.25	1	07/03/2013 20:49
1,1-Dichloroethane	ND		0.25	1	07/03/2013 20:49
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1	07/03/2013 20:49
1,1-Dichloroethene	ND		0.25	1	07/03/2013 20:49
cis-1,2-Dichloroethene	ND		0.25	1	07/03/2013 20:49
trans-1,2-Dichloroethene	ND		0.25	1	07/03/2013 20:49
1,2-Dichloropropane	ND		0.25	1	07/03/2013 20:49
cis-1,3-Dichloropropene	ND		0.25	1	07/03/2013 20:49
trans-1,3-Dichloropropene	ND		0.25	1	07/03/2013 20:49
Freon 113	ND		0.50	1	07/03/2013 20:49
Ethylbenzene	ND		0.50	1	07/03/2013 20:49
Methylene chloride	ND		0.25	1	07/03/2013 20:49
1,1,1,2-Tetrachloroethane	ND		0.50	1	07/03/2013 20:49
1,1,2,2-Tetrachloroethane	ND		0.25	1	07/03/2013 20:49
Tetrachloroethene	18		0.25	1	07/03/2013 20:49
Toluene	ND		0.50	1	07/03/2013 20:49
1,1,1-Trichloroethane	ND		0.25	1	07/03/2013 20:49
1,1,2-Trichloroethane	ND		0.25	1	07/03/2013 20:49
Trichloroethene	3.1		0.25	1	07/03/2013 20:49
Trichlorofluoromethane	ND		0.25	1	07/03/2013 20:49
Vinyl Chloride	ND		0.25	1	07/03/2013 20:49
Xylenes	ND		0.50	1	07/03/2013 20:49

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BB Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Collected	l Instrument	Batch ID
SS-6	1307070-009A	Air	07/02/2013 11:4	5 GC28	79058
<u>Analytes</u>	Result		<u>RL</u> <u>DF</u>		Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	105		70-130		07/03/2013 20:49
Toluene-d8	98		70-130		07/03/2013 20:49
4-BFB	91		70-130		07/03/2013 20:49

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Coll	lected Instrument	Batch ID
SS-12	1307070-010A	Air	07/02/2013	3 10:10 GC28	79058
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		5.0	10	07/03/2013 22:40
Bromodichloromethane	ND		2.5	10	07/03/2013 22:40
Bromoform	ND		2.5	10	07/03/2013 22:40
Bromomethane	ND		2.5	10	07/03/2013 22:40
Carbon Tetrachloride	ND		2.5	10	07/03/2013 22:40
Chlorobenzene	ND		2.5	10	07/03/2013 22:40
Chloroethane	ND		2.5	10	07/03/2013 22:40
Chloroform	ND		2.5	10	07/03/2013 22:40
Chloromethane	ND		2.5	10	07/03/2013 22:40
Dibromochloromethane	ND		2.5	10	07/03/2013 22:40
1,2-Dibromoethane (EDB)	ND		5.0	10	07/03/2013 22:40
1,2-Dichlorobenzene	ND		2.5	10	07/03/2013 22:40
1,3-Dichlorobenzene	ND		2.5	10	07/03/2013 22:40
1,4-Dichlorobenzene	ND		2.5	10	07/03/2013 22:40
Dichlorodifluoromethane	ND		2.5	10	07/03/2013 22:40
1,1-Dichloroethane	ND		2.5	10	07/03/2013 22:40
1,2-Dichloroethane (1,2-DCA)	ND		2.5	10	07/03/2013 22:40
1,1-Dichloroethene	ND		2.5	10	07/03/2013 22:40
cis-1,2-Dichloroethene	ND		2.5	10	07/03/2013 22:40
trans-1,2-Dichloroethene	ND		2.5	10	07/03/2013 22:40
1,2-Dichloropropane	ND		2.5	10	07/03/2013 22:40
cis-1,3-Dichloropropene	ND		2.5	10	07/03/2013 22:40
trans-1,3-Dichloropropene	ND		2.5	10	07/03/2013 22:40
Freon 113	ND		5.0	10	07/03/2013 22:40
Ethylbenzene	ND		5.0	10	07/03/2013 22:40
Methylene chloride	ND		2.5	10	07/03/2013 22:40
1,1,1,2-Tetrachloroethane	ND		5.0	10	07/03/2013 22:40
1,1,2,2-Tetrachloroethane	ND		2.5	10	07/03/2013 22:40
Tetrachloroethene	120		2.5	10	07/03/2013 22:40
Toluene	ND		5.0	10	07/03/2013 22:40
1,1,1-Trichloroethane	ND		2.5	10	07/03/2013 22:40
1,1,2-Trichloroethane	ND		2.5	10	07/03/2013 22:40
Trichloroethene	15		2.5	10	07/03/2013 22:40
Trichlorofluoromethane	ND		2.5	10	07/03/2013 22:40
Vinyl Chloride	ND		2.5	10	07/03/2013 22:40
Xylenes	ND		5.0	10	07/03/2013 22:40

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BB Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu g/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Collecte	d Instrument	Batch ID
SS-12	1307070-010A	Air	07/02/2013 10:1	0 GC28	79058
Analytes	Result		<u>RL</u> <u>DF</u>		Date Analyzed
Surrogates	REC (%)		<u>Limits</u>		
Dibromofluoromethane	102		70-130		07/03/2013 22:40
Toluene-d8	99		70-130		07/03/2013 22:40
4-BFB	93		70-130		07/03/2013 22:40

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ g/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date C	ollected I	nstrument	Batch ID
SS-11	1307070-011A	Air	07/02/20	)13 09:40 G	C28	79058
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>		Date Analyzed
Benzene	ND		0.50	1		07/03/2013 22:03
Bromodichloromethane	ND		0.25	1		07/03/2013 22:03
Bromoform	ND		0.25	1		07/03/2013 22:03
Bromomethane	ND		0.25	1		07/03/2013 22:03
Carbon Tetrachloride	ND		0.25	1		07/03/2013 22:03
Chlorobenzene	ND		0.25	1		07/03/2013 22:03
Chloroethane	ND		0.25	1		07/03/2013 22:03
Chloroform	ND		0.25	1		07/03/2013 22:03
Chloromethane	ND		0.25	1		07/03/2013 22:03
Dibromochloromethane	ND		0.25	1		07/03/2013 22:03
1,2-Dibromoethane (EDB)	ND		0.50	1		07/03/2013 22:03
1,2-Dichlorobenzene	ND		0.25	1		07/03/2013 22:03
1,3-Dichlorobenzene	ND		0.25	1		07/03/2013 22:03
1,4-Dichlorobenzene	ND		0.25	1		07/03/2013 22:03
Dichlorodifluoromethane	ND		0.25	1		07/03/2013 22:03
1,1-Dichloroethane	ND		0.25	1		07/03/2013 22:03
1,2-Dichloroethane (1,2-DCA)	ND		0.25	1		07/03/2013 22:03
1,1-Dichloroethene	ND		0.25	1		07/03/2013 22:03
cis-1,2-Dichloroethene	ND		0.25	1		07/03/2013 22:03
trans-1,2-Dichloroethene	ND		0.25	1		07/03/2013 22:03
1,2-Dichloropropane	ND		0.25	1		07/03/2013 22:03
cis-1,3-Dichloropropene	ND		0.25	1		07/03/2013 22:03
trans-1,3-Dichloropropene	ND		0.25	1		07/03/2013 22:03
Freon 113	ND		0.50	1		07/03/2013 22:03
Ethylbenzene	ND		0.50	1		07/03/2013 22:03
Methylene chloride	ND		0.25	1		07/03/2013 22:03
1,1,1,2-Tetrachloroethane	ND		0.50	1		07/03/2013 22:03
1,1,2,2-Tetrachloroethane	ND		0.25	1		07/03/2013 22:03
Tetrachloroethene	1.5		0.25	1		07/03/2013 22:03
Toluene	ND		0.50	1		07/03/2013 22:03
1,1,1-Trichloroethane	ND		0.25	1		07/03/2013 22:03
1,1,2-Trichloroethane	ND		0.25	1		07/03/2013 22:03
Trichloroethene	ND		0.25	1		07/03/2013 22:03
Trichlorofluoromethane	ND		0.25	1		07/03/2013 22:03
Vinyl Chloride	ND		0.25	1		07/03/2013 22:03
Xylenes	ND		0.50	1		07/03/2013 22:03

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 Unit:  $\mu g/L$ 

Client ID	Lab ID	Matrix/ExtType	<b>Date Collected</b>	Instrument	Batch ID
SS-11	1307070-011A	Air	07/02/2013 09:40	GC28	79058
<u>Analytes</u>	Result		<u>RL</u> <u>DF</u>		Date Analyzed
<u>Surrogates</u>	REC (%)		<u>Limits</u>		
Dibromofluoromethane	103		70-130		07/03/2013 22:03
Toluene-d8	98		70-130		07/03/2013 22:03
4-BFB	95		70-130		07/03/2013 22:03

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit:μL/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SSPO-1	1307070-001A	Air	07/02/20	13 13:55 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 12:24
Bromodichloromethane	ND		0.036	1	07/03/2013 12:24
Bromoform	ND		0.024	1	07/03/2013 12:24
Bromomethane	ND		0.063	1	07/03/2013 12:24
Carbon Tetrachloride	ND		0.039	1	07/03/2013 12:24
Chlorobenzene	ND		0.053	1	07/03/2013 12:24
Chloroethane	ND		0.093	1	07/03/2013 12:24
Chloroform	ND		0.050	1	07/03/2013 12:24
Chloromethane	ND		0.12	1	07/03/2013 12:24
Dibromochloromethane	ND		0.029	1	07/03/2013 12:24
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 12:24
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 12:24
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 12:24
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 12:24
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 12:24
1,1-Dichloroethane	ND		0.061	1	07/03/2013 12:24
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 12:24
1,1-Dichloroethene	ND		0.062	1	07/03/2013 12:24
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 12:24
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 12:24
1,2-Dichloropropane	ND		0.053	1	07/03/2013 12:24
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 12:24
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 12:24
Freon 113	ND		0.064	1	07/03/2013 12:24
Ethylbenzene	ND		0.50	1	07/03/2013 12:24
Methylene chloride	ND		0.071	1	07/03/2013 12:24
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 12:24
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 12:24
Tetrachloroethene	0.11		0.036	1	07/03/2013 12:24
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 12:24
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 12:24
Trichloroethene	ND		0.046	1	07/03/2013 12:24
Trichlorofluoromethane	ND		0.044	1	07/03/2013 12:24
Vinyl Chloride	ND		0.096	1	07/03/2013 12:24
Xylenes	ND		0.50	1	07/03/2013 12:24

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu L/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SSPO-1	1307070-001A	Air	07/02/2013 13:55	GC18	79056
<u>Analytes</u>	Result		<u>RL</u> <u>DF</u>		Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	94		70-130		07/03/2013 12:24
Toluene-d8	95		70-130		07/03/2013 12:24
4-BFB	73		70-130		07/03/2013 12:24

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu L/L$ 

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
1185 Hall	1307070-002A	Air	07/02/20	13 15:30 GC18	79056
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 13:04
Bromodichloromethane	ND		0.036	1	07/03/2013 13:04
Bromoform	ND		0.024	1	07/03/2013 13:04
Bromomethane	ND		0.063	1	07/03/2013 13:04
Carbon Tetrachloride	ND		0.039	1	07/03/2013 13:04
Chlorobenzene	ND		0.053	1	07/03/2013 13:04
Chloroethane	ND		0.093	1	07/03/2013 13:04
Chloroform	ND		0.050	1	07/03/2013 13:04
Chloromethane	ND		0.12	1	07/03/2013 13:04
Dibromochloromethane	ND		0.029	1	07/03/2013 13:04
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 13:04
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 13:04
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 13:04
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 13:04
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 13:04
1,1-Dichloroethane	ND		0.061	1	07/03/2013 13:04
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 13:04
1,1-Dichloroethene	ND		0.062	1	07/03/2013 13:04
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 13:04
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 13:04
1,2-Dichloropropane	ND		0.053	1	07/03/2013 13:04
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 13:04
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 13:04
Freon 113	ND		0.064	1	07/03/2013 13:04
Ethylbenzene	ND		0.50	1	07/03/2013 13:04
Methylene chloride	ND		0.071	1	07/03/2013 13:04
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 13:04
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 13:04
Tetrachloroethene	2.0		0.036	1	07/03/2013 13:04
Toluene	ND		0.50	1	07/03/2013 13:04
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 13:04
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 13:04
Trichloroethene	0.14		0.046	1	07/03/2013 13:04
Trichlorofluoromethane	ND		0.044	1	07/03/2013 13:04
Vinyl Chloride	ND		0.096	1	07/03/2013 13:04
Xylenes	ND		0.50	1	07/03/2013 13:04

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BB Analyst's Initial



# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit:μL/L

Client ID	Lab ID	Matrix/ExtType	Date Col	llected Instrument	Batch ID
1185 Hall	1307070-002A	Air	07/02/201	3 15:30 GC18	79056
Analytes	<u>Result</u>		<u>RL</u>	<u>DF</u>	Date Analyzed
Surrogates	REC (%)		<u>Limits</u>		
Dibromofluoromethane	96		70-130		07/03/2013 13:04
Toluene-d8	94		70-130		07/03/2013 13:04
4-BFB	71		70-130		07/03/2013 13:04

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit:μL/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	llected Instrument	Batch ID
1185 Bath	1307070-003A	Air	07/02/201	13 15:00 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 13:45
Bromodichloromethane	ND		0.036	1	07/03/2013 13:45
Bromoform	ND		0.024	1	07/03/2013 13:45
Bromomethane	ND		0.063	1	07/03/2013 13:45
Carbon Tetrachloride	ND		0.039	1	07/03/2013 13:45
Chlorobenzene	ND		0.053	1	07/03/2013 13:45
Chloroethane	ND		0.093	1	07/03/2013 13:45
Chloroform	ND		0.050	1	07/03/2013 13:45
Chloromethane	ND		0.12	1	07/03/2013 13:45
Dibromochloromethane	ND		0.029	1	07/03/2013 13:45
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 13:45
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 13:45
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 13:45
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 13:45
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 13:45
1,1-Dichloroethane	ND		0.061	1	07/03/2013 13:45
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 13:45
1,1-Dichloroethene	ND		0.062	1	07/03/2013 13:45
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 13:45
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 13:45
1,2-Dichloropropane	ND		0.053	1	07/03/2013 13:45
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 13:45
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 13:45
Freon 113	ND		0.064	1	07/03/2013 13:45
Ethylbenzene	ND		0.50	1	07/03/2013 13:45
Methylene chloride	ND		0.071	1	07/03/2013 13:45
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 13:45
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 13:45
Tetrachloroethene	0.40		0.036	1	07/03/2013 13:45
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 13:45
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 13:45
Trichloroethene	ND		0.046	1	07/03/2013 13:45
Trichlorofluoromethane	ND		0.044	1	07/03/2013 13:45
Vinyl Chloride	ND		0.096	1	07/03/2013 13:45
Xylenes	ND		0.50	1	07/03/2013 13:45

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit:μL/L

Client ID	Lab ID	Matrix/ExtType	Date Colle	ected Instrument	Batch ID
1185 Bath	1307070-003A	Air	07/02/2013	15:00 GC18	79056
Analytes	Result		<u>RL</u>	<u>DE</u>	Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	95		70-130		07/03/2013 13:45
Toluene-d8	95		70-130		07/03/2013 13:45
4-BFB	70		70-130		07/03/2013 13:45

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit:μL/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SS-15	1307070-004A	Air	07/02/20	13 13:30 GC18	79056
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 11:37
Bromodichloromethane	ND		0.036	1	07/03/2013 11:37
Bromoform	ND		0.024	1	07/03/2013 11:37
Bromomethane	ND		0.063	1	07/03/2013 11:37
Carbon Tetrachloride	ND		0.039	1	07/03/2013 11:37
Chlorobenzene	ND		0.053	1	07/03/2013 11:37
Chloroethane	ND		0.093	1	07/03/2013 11:37
Chloroform	ND		0.050	1	07/03/2013 11:37
Chloromethane	ND		0.12	1	07/03/2013 11:37
Dibromochloromethane	ND		0.029	1	07/03/2013 11:37
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 11:37
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 11:37
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 11:37
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 11:37
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 11:37
1,1-Dichloroethane	ND		0.061	1	07/03/2013 11:37
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 11:37
1,1-Dichloroethene	ND		0.062	1	07/03/2013 11:37
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 11:37
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 11:37
1,2-Dichloropropane	ND		0.053	1	07/03/2013 11:37
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 11:37
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 11:37
Freon 113	ND		0.064	1	07/03/2013 11:37
Ethylbenzene	ND		0.50	1	07/03/2013 11:37
Methylene chloride	ND		0.071	1	07/03/2013 11:37
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 11:37
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 11:37
Tetrachloroethene	0.049		0.036	1	07/03/2013 11:37
Toluene	ND		0.50	1	07/03/2013 11:37
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 11:37
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 11:37
Trichloroethene	ND		0.046	1	07/03/2013 11:37
Trichlorofluoromethane	ND		0.044	1	07/03/2013 11:37
Vinyl Chloride	ND		0.096	1	07/03/2013 11:37
Xylenes	ND		0.50	1	07/03/2013 11:37

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BB Analyst's Initial



# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit: $\mu L/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-15	1307070-004A	Air	07/02/2013 13:30	GC18	79056
Analytes	<u>Result</u>		<u>RL</u> <u>DF</u>		Date Analyzed
<u>Surrogates</u>	REC (%)		<u>Limits</u>		
Dibromofluoromethane	94		70-130		07/03/2013 11:37
Toluene-d8	95		70-130		07/03/2013 11:37
4-BFB	72		70-130		07/03/2013 11:37

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

Date Prepared: 7/3/13 Unit:  $\mu L/L$ 

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV							
Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID		
SS-7	1307070-005A	Air	07/02/20	13 12:45 GC18	79056		
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed		
Benzene	ND		0.50	1	07/03/2013 14:25		
Bromodichloromethane	ND		0.036	1	07/03/2013 14:25		
Bromoform	ND		0.024	1	07/03/2013 14:25		
Bromomethane	ND		0.063	1	07/03/2013 14:25		
Carbon Tetrachloride	ND		0.039	1	07/03/2013 14:25		
Chlorobenzene	ND		0.053	1	07/03/2013 14:25		
Chloroethane	ND		0.093	1	07/03/2013 14:25		
Chloroform	ND		0.050	1	07/03/2013 14:25		
Chloromethane	ND		0.12	1	07/03/2013 14:25		
Dibromochloromethane	ND		0.029	1	07/03/2013 14:25		
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 14:25		
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 14:25		
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 14:25		
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 14:25		
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 14:25		
1,1-Dichloroethane	ND		0.061	1	07/03/2013 14:25		
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 14:25		
1,1-Dichloroethene	ND		0.062	1	07/03/2013 14:25		
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 14:25		
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 14:25		
1,2-Dichloropropane	ND		0.053	1	07/03/2013 14:25		
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 14:25		
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 14:25		
Freon 113	ND		0.064	1	07/03/2013 14:25		
Ethylbenzene	ND		0.50	1	07/03/2013 14:25		
Methylene chloride	ND		0.071	1	07/03/2013 14:25		
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 14:25		
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 14:25		
Tetrachloroethene	0.099		0.036	1	07/03/2013 14:25		
Toluene	ND		0.50	1	07/03/2013 14:25		
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 14:25		
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 14:25		
Trichloroethene	ND		0.046	1	07/03/2013 14:25		
Trichlorofluoromethane	ND		0.044	1	07/03/2013 14:25		
Vinyl Chloride	ND		0.096	1	07/03/2013 14:25		

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**Xylenes** 

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Angela Rydelius, Lab Manager

ND

07/03/2013 14:25

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu L/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Col	lected Instrument	Batch ID
SS-7	1307070-005A	Air	07/02/2013	3 12:45 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Surrogates	REC (%)	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	96		70-130		07/03/2013 14:25
Toluene-d8	91		70-130		07/03/2013 14:25
4-BFB	85		70-130		07/03/2013 14:25

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ L/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SS-16	1307070-006A	Air	07/02/20	13 13:10 GC18	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 15:06
Bromodichloromethane	ND		0.036	1	07/03/2013 15:06
Bromoform	ND		0.024	1	07/03/2013 15:06
Bromomethane	ND		0.063	1	07/03/2013 15:06
Carbon Tetrachloride	ND		0.039	1	07/03/2013 15:06
Chlorobenzene	ND		0.053	1	07/03/2013 15:06
Chloroethane	ND		0.093	1	07/03/2013 15:06
Chloroform	ND		0.050	1	07/03/2013 15:06
Chloromethane	ND		0.12	1	07/03/2013 15:06
Dibromochloromethane	ND		0.029	1	07/03/2013 15:06
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 15:06
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 15:06
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 15:06
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 15:06
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 15:06
1,1-Dichloroethane	ND		0.061	1	07/03/2013 15:06
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 15:06
1,1-Dichloroethene	ND		0.062	1	07/03/2013 15:06
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 15:06
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 15:06
1,2-Dichloropropane	ND		0.053	1	07/03/2013 15:06
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 15:06
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 15:06
Freon 113	ND		0.064	1	07/03/2013 15:06
Ethylbenzene	ND		0.50	1	07/03/2013 15:06
Methylene chloride	ND		0.071	1	07/03/2013 15:06
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 15:06
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 15:06
Tetrachloroethene	ND		0.036	1	07/03/2013 15:06
Toluene	ND		0.50	1	07/03/2013 15:06
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 15:06
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 15:06
Trichloroethene	ND		0.046	1	07/03/2013 15:06
Trichlorofluoromethane	ND		0.044	1	07/03/2013 15:06
Vinyl Chloride	ND		0.096	1	07/03/2013 15:06
Xylenes	ND		0.50	1	07/03/2013 15:06

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit:μL/L

Client ID	Lab ID	Matrix/ExtType	Date Col	lected Instrument	Batch ID
SS-16	1307070-006A	Air	07/02/2013	3 13:10 GC18	79056
Analytes	<u>Result</u>		<u>RL</u>	DF	Date Analyzed
Surrogates	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	94		70-130		07/03/2013 15:06
Toluene-d8	93		70-130		07/03/2013 15:06
4-BFB	98		70-130		07/03/2013 15:06

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu L/L$ 

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SS-14	1307070-007A	Air	07/02/20	13 12:15 GC28	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 23:17
Bromodichloromethane	ND		0.036	1	07/03/2013 23:17
Bromoform	ND		0.024	1	07/03/2013 23:17
Bromomethane	ND		0.063	1	07/03/2013 23:17
Carbon Tetrachloride	ND		0.039	1	07/03/2013 23:17
Chlorobenzene	ND		0.053	1	07/03/2013 23:17
Chloroethane	ND		0.093	1	07/03/2013 23:17
Chloroform	ND		0.050	1	07/03/2013 23:17
Chloromethane	ND		0.12	1	07/03/2013 23:17
Dibromochloromethane	ND		0.029	1	07/03/2013 23:17
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 23:17
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 23:17
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 23:17
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 23:17
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 23:17
1,1-Dichloroethane	ND		0.061	1	07/03/2013 23:17
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 23:17
1,1-Dichloroethene	ND		0.062	1	07/03/2013 23:17
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 23:17
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 23:17
1,2-Dichloropropane	ND		0.053	1	07/03/2013 23:17
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 23:17
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 23:17
Freon 113	ND		0.064	1	07/03/2013 23:17
Ethylbenzene	ND		0.50	1	07/03/2013 23:17
Methylene chloride	ND		0.071	1	07/03/2013 23:17
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 23:17
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 23:17
Tetrachloroethene	0.92		0.036	1	07/03/2013 23:17
Toluene	ND		0.50	1	07/03/2013 23:17
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 23:17
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 23:17
Trichloroethene	0.057		0.046	1	07/03/2013 23:17
Trichlorofluoromethane	ND		0.044	1	07/03/2013 23:17
Vinyl Chloride	ND		0.096	1	07/03/2013 23:17
Xylenes	ND		0.50	1	07/03/2013 23:17

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit: $\mu L/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Colle	ected Instrument	Batch ID
SS-14	1307070-007A	Air	07/02/2013	12:15 GC28	79056
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	103		70-130		07/03/2013 23:17
Toluene-d8	100		70-130		07/03/2013 23:17
4-BFB	95		70-130		07/03/2013 23:17

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ L/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SS-13	1307070-008A	Air	07/02/20	13 11:55 GC10	79026
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		1.0	2	07/03/2013 21:18
Bromodichloromethane	ND		0.072	2	07/03/2013 21:18
Bromoform	ND		0.048	2	07/03/2013 21:18
Bromomethane	ND		0.13	2	07/03/2013 21:18
Carbon Tetrachloride	ND		0.078	2	07/03/2013 21:18
Chlorobenzene	ND		0.11	2	07/03/2013 21:18
Chloroethane	ND		0.19	2	07/03/2013 21:18
Chloroform	ND		0.10	2	07/03/2013 21:18
Chloromethane	ND		0.24	2	07/03/2013 21:18
Dibromochloromethane	ND		0.058	2	07/03/2013 21:18
1,2-Dibromoethane (EDB)	ND		0.13	2	07/03/2013 21:18
1,2-Dichlorobenzene	ND		0.082	2	07/03/2013 21:18
1,3-Dichlorobenzene	ND		0.082	2	07/03/2013 21:18
1,4-Dichlorobenzene	ND		0.082	2	07/03/2013 21:18
Dichlorodifluoromethane	ND		0.10	2	07/03/2013 21:18
1,1-Dichloroethane	ND		0.12	2	07/03/2013 21:18
1,2-Dichloroethane (1,2-DCA)	ND		0.12	2	07/03/2013 21:18
1,1-Dichloroethene	ND		0.12	2	07/03/2013 21:18
cis-1,2-Dichloroethene	0.86		0.12	2	07/03/2013 21:18
trans-1,2-Dichloroethene	ND		0.12	2	07/03/2013 21:18
1,2-Dichloropropane	ND		0.11	2	07/03/2013 21:18
cis-1,3-Dichloropropene	ND		0.11	2	07/03/2013 21:18
trans-1,3-Dichloropropene	ND		0.11	2	07/03/2013 21:18
Freon 113	ND		0.13	2	07/03/2013 21:18
Ethylbenzene	ND		1.0	2	07/03/2013 21:18
Methylene chloride	ND		0.14	2	07/03/2013 21:18
1,1,1,2-Tetrachloroethane	ND		0.072	2	07/03/2013 21:18
1,1,2,2-Tetrachloroethane	ND		0.072	2	07/03/2013 21:18
Tetrachloroethene	3.2		0.072	2	07/03/2013 21:18
Toluene	ND		1.0	2	07/03/2013 21:18
1,1,1-Trichloroethane	ND		0.090	2	07/03/2013 21:18
1,1,2-Trichloroethane	ND		0.090	2	07/03/2013 21:18
Trichloroethene	3.2		0.092	2	07/03/2013 21:18
Trichlorofluoromethane	ND		0.088	2	07/03/2013 21:18
Vinyl Chloride	ND		0.19	2	07/03/2013 21:18
Xylenes	ND		1.0	2	07/03/2013 21:18

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BB Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu L/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Colle	ected Instrument	Batch ID
SS-13	1307070-008A	Air	07/02/2013	11:55 GC10	79026
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	107		70-130		07/03/2013 21:18
Toluene-d8	98		70-130		07/03/2013 21:18
4-BFB	90		70-130		07/03/2013 21:18

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu L/L$ 

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SS-6	1307070-009A	Air	07/02/20	13 11:45 GC28	79058
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 20:49
Bromodichloromethane	ND		0.036	1	07/03/2013 20:49
Bromoform	ND		0.024	1	07/03/2013 20:49
Bromomethane	ND		0.063	1	07/03/2013 20:49
Carbon Tetrachloride	ND		0.039	1	07/03/2013 20:49
Chlorobenzene	ND		0.053	1	07/03/2013 20:49
Chloroethane	ND		0.093	1	07/03/2013 20:49
Chloroform	ND		0.050	1	07/03/2013 20:49
Chloromethane	ND		0.12	1	07/03/2013 20:49
Dibromochloromethane	ND		0.029	1	07/03/2013 20:49
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 20:49
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 20:49
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 20:49
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 20:49
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 20:49
1,1-Dichloroethane	ND		0.061	1	07/03/2013 20:49
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 20:49
1,1-Dichloroethene	ND		0.062	1	07/03/2013 20:49
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 20:49
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 20:49
1,2-Dichloropropane	ND		0.053	1	07/03/2013 20:49
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 20:49
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 20:49
Freon 113	ND		0.064	1	07/03/2013 20:49
Ethylbenzene	ND		0.50	1	07/03/2013 20:49
Methylene chloride	ND		0.071	1	07/03/2013 20:49
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 20:49
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 20:49
Tetrachloroethene	2.7		0.036	1	07/03/2013 20:49
Toluene	ND		0.50	1	07/03/2013 20:49
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 20:49
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 20:49
Trichloroethene	0.57		0.046	1	07/03/2013 20:49
Trichlorofluoromethane	ND		0.044	1	07/03/2013 20:49
Vinyl Chloride	ND		0.096	1	07/03/2013 20:49
Xylenes	ND		0.50	1	07/03/2013 20:49

(Cont.)

BB Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit: $\mu L/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Colle	ected Instrument	Batch ID
SS-6	1307070-009A	Air	07/02/2013	11:45 GC28	79058
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Surrogates	REC (%)		<u>Limits</u>		
Dibromofluoromethane	105		70-130		07/03/2013 20:49
Toluene-d8	98		70-130		07/03/2013 20:49
4-BFB	91		70-130		07/03/2013 20:49

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu$ L/L

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	llected Instrument	Batch ID
SS-12	1307070-010A	Air	07/02/201	13 10:10 GC28	79058
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Benzene	ND		5.0	10	07/03/2013 22:40
Bromodichloromethane	ND		0.36	10	07/03/2013 22:40
Bromoform	ND		0.24	10	07/03/2013 22:40
Bromomethane	ND		0.63	10	07/03/2013 22:40
Carbon Tetrachloride	ND		0.39	10	07/03/2013 22:40
Chlorobenzene	ND		0.53	10	07/03/2013 22:40
Chloroethane	ND		0.93	10	07/03/2013 22:40
Chloroform	ND		0.50	10	07/03/2013 22:40
Chloromethane	ND		1.2	10	07/03/2013 22:40
Dibromochloromethane	ND		0.29	10	07/03/2013 22:40
1,2-Dibromoethane (EDB)	ND		0.64	10	07/03/2013 22:40
1,2-Dichlorobenzene	ND		0.41	10	07/03/2013 22:40
1,3-Dichlorobenzene	ND		0.41	10	07/03/2013 22:40
1,4-Dichlorobenzene	ND		0.41	10	07/03/2013 22:40
Dichlorodifluoromethane	ND		0.50	10	07/03/2013 22:40
1,1-Dichloroethane	ND		0.61	10	07/03/2013 22:40
1,2-Dichloroethane (1,2-DCA)	ND		0.61	10	07/03/2013 22:40
1,1-Dichloroethene	ND		0.62	10	07/03/2013 22:40
cis-1,2-Dichloroethene	ND		0.62	10	07/03/2013 22:40
trans-1,2-Dichloroethene	ND		0.62	10	07/03/2013 22:40
1,2-Dichloropropane	ND		0.53	10	07/03/2013 22:40
cis-1,3-Dichloropropene	ND		0.54	10	07/03/2013 22:40
trans-1,3-Dichloropropene	ND		0.54	10	07/03/2013 22:40
Freon 113	ND		0.64	10	07/03/2013 22:40
Ethylbenzene	ND		5.0	10	07/03/2013 22:40
Methylene chloride	ND		0.71	10	07/03/2013 22:40
1,1,1,2-Tetrachloroethane	ND		0.36	10	07/03/2013 22:40
1,1,2,2-Tetrachloroethane	ND		0.36	10	07/03/2013 22:40
Tetrachloroethene	17		0.36	10	07/03/2013 22:40
Toluene	ND		5.0	10	07/03/2013 22:40
1,1,1-Trichloroethane	ND		0.45	10	07/03/2013 22:40
1,1,2-Trichloroethane	ND		0.45	10	07/03/2013 22:40
Trichloroethene	2.8		0.46	10	07/03/2013 22:40
Trichlorofluoromethane	ND		0.44	10	07/03/2013 22:40
Vinyl Chloride	ND		0.96	10	07/03/2013 22:40
Xylenes	ND		5.0	10	07/03/2013 22:40

(Cont.)

BB Analyst's Initial



# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu L/L$ 

Client ID	Lab ID	Matrix/ExtType	Date Collected	l Instrument	Batch ID
SS-12	1307070-010A	Air	07/02/2013 10:10	0 GC28	79058
Analytes	<u>Result</u>		<u>RL</u> <u>DF</u>		Date Analyzed
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
Dibromofluoromethane	102		70-130		07/03/2013 22:40
Toluene-d8	99		70-130		07/03/2013 22:40
4-BFB	93		70-130		07/03/2013 22:40

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260B

**Date Prepared:** 7/3/13 **Unit:**  $\mu L/L$ 

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SS-11	1307070-011A	Air	07/02/20	13 09:40 GC28	79058
<u>Analytes</u>	Result		<u>RL</u>	DF	Date Analyzed
Benzene	ND		0.50	1	07/03/2013 22:03
Bromodichloromethane	ND		0.036	1	07/03/2013 22:03
Bromoform	ND		0.024	1	07/03/2013 22:03
Bromomethane	ND		0.063	1	07/03/2013 22:03
Carbon Tetrachloride	ND		0.039	1	07/03/2013 22:03
Chlorobenzene	ND		0.053	1	07/03/2013 22:03
Chloroethane	ND		0.093	1	07/03/2013 22:03
Chloroform	ND		0.050	1	07/03/2013 22:03
Chloromethane	ND		0.12	1	07/03/2013 22:03
Dibromochloromethane	ND		0.029	1	07/03/2013 22:03
1,2-Dibromoethane (EDB)	ND		0.064	1	07/03/2013 22:03
1,2-Dichlorobenzene	ND		0.041	1	07/03/2013 22:03
1,3-Dichlorobenzene	ND		0.041	1	07/03/2013 22:03
1,4-Dichlorobenzene	ND		0.041	1	07/03/2013 22:03
Dichlorodifluoromethane	ND		0.050	1	07/03/2013 22:03
1,1-Dichloroethane	ND		0.061	1	07/03/2013 22:03
1,2-Dichloroethane (1,2-DCA)	ND		0.061	1	07/03/2013 22:03
1,1-Dichloroethene	ND		0.062	1	07/03/2013 22:03
cis-1,2-Dichloroethene	ND		0.062	1	07/03/2013 22:03
trans-1,2-Dichloroethene	ND		0.062	1	07/03/2013 22:03
1,2-Dichloropropane	ND		0.053	1	07/03/2013 22:03
cis-1,3-Dichloropropene	ND		0.054	1	07/03/2013 22:03
trans-1,3-Dichloropropene	ND		0.054	1	07/03/2013 22:03
Freon 113	ND		0.064	1	07/03/2013 22:03
Ethylbenzene	ND		0.50	1	07/03/2013 22:03
Methylene chloride	ND		0.071	1	07/03/2013 22:03
1,1,1,2-Tetrachloroethane	ND		0.036	1	07/03/2013 22:03
1,1,2,2-Tetrachloroethane	ND		0.036	1	07/03/2013 22:03
Tetrachloroethene	0.22		0.036	1	07/03/2013 22:03
Toluene	ND		0.50	1	07/03/2013 22:03
1,1,1-Trichloroethane	ND		0.045	1	07/03/2013 22:03
1,1,2-Trichloroethane	ND		0.045	1	07/03/2013 22:03
Trichloroethene	ND		0.046	1	07/03/2013 22:03
Trichlorofluoromethane	ND		0.044	1	07/03/2013 22:03
Vinyl Chloride	ND		0.096	1	07/03/2013 22:03
Xylenes	ND		0.50	1	07/03/2013 22:03

(Cont.)

BB Analyst's Initial



# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1307070Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:7/2/13 18:05Analytical Method:SW8260BDate Prepared:7/3/13Unit:μL/L

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List) in PPMV										
Client ID	Lab ID	Matrix/ExtType	Date Collected Instrument	Batch ID						
SS-11	1307070-011A	Air	07/02/2013 09:40 GC28	79058						
Analytes	Result		RL DF	Date Analyzed						
<u>Surrogates</u>	REC (%)		<u>Limits</u>							
Dibromofluoromethane	103		70-130	07/03/2013 22:03						
Toluene-d8	98		70-130	07/03/2013 22:03						
4-BFB	95		70-130	07/03/2013 22:03						

#### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 79026 WorkOrder: 1307070

EPA Method: SW8260B Extraction: SW5030B								ple ID:	1307072-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	10	102	90.9	11.7	91	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	102	105	2.56	89.8	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	92	84.2	8.82	89.5	70 - 130	20	70 - 130
1,1-Dichloroethene	ND	10	98.7	92.7	6.27	87.6	70 - 130	20	70 - 130
Trichloroethene	ND	10	104	96.1	7.49	90.4	70 - 130	20	70 - 130
%SS1:	102	25	102	104	2.39	97	70 - 130	20	70 - 130
%SS2:	94	25	98	103	5.51	95	70 - 130	20	70 - 130
%SS3:	78	2.5	87	102	16.6	89	70 - 130	20	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 79026 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307070-008A	07/02/13 11:55 AN	M 07/03/13	07/03/13 9:18 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

#### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 79056 WorkOrder: 1307070

EPA Method: SW8260B Extraction: SW5030B Spiked Sample ID: N/A								N/A	
Analyte	Sample	Spiked	MS MSD MS-MSD LCS Acceptance Crite			Criteria (%)			
, wally to	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	N/A	10	N/A	N/A	N/A	87	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	N/A	10	N/A	N/A	N/A	92.5	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	N/A	10	N/A	N/A	N/A	111	N/A	N/A	70 - 130
1,1-Dichloroethene	N/A	10	N/A	N/A	N/A	80.9	N/A	N/A	70 - 130
Trichloroethene	N/A	10	N/A	N/A	N/A	96	N/A	N/A	70 - 130
%SS1:	N/A	25	N/A	N/A	N/A	95	N/A	N/A	70 - 130
%SS2:	N/A	25	N/A	N/A	N/A	93	N/A	N/A	70 - 130
%SS3:	N/A	2.5	N/A	N/A	N/A	70	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 79056 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307070-001A	07/02/13 1:55 PM	07/03/13	07/03/13 12:24 PM	1307070-002A	07/02/13 3:30 PM	07/03/13	07/03/13 1:04 PM
1307070-003A	07/02/13 3:00 PM	07/03/13	07/03/13 1:45 PM	1307070-004A	07/02/13 1:30 PM	07/03/13	07/03/13 11:37 AM
1307070-005A	07/02/13 12:45 PM	07/03/13	07/03/13 2:25 PM	1307070-006A	07/02/13 1:10 PM	07/03/13	07/03/13 3:06 PM
1307070-007A	07/02/13 12:15 PM	07/03/13	07/03/13 11:17 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

#### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Air QC Matrix: Water BatchID: 79058 WorkOrder: 1307070

EPA Method: SW8260B Extraction: SW5030B Spiked Sample ID: 1306632-00										
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
, mayte	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Chlorobenzene	ND	20	95.3	91	4.61	85	70 - 130	30	70 - 130	
1,2-Dibromoethane (EDB)	ND	20	114	108	5.93	104	70 - 130	30	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	20	100	98	2.00	101	70 - 130	30	70 - 130	
1,1-Dichloroethene	ND	20	91.3	87.1	4.67	87.4	70 - 130	30	70 - 130	
Trichloroethene	ND	20	102	98.4	3.55	97.2	70 - 130	30	70 - 130	
%SS1:	106	25	104	103	0.708	106	70 - 130	30	70 - 130	
%SS2:	98	25	99	95	4.30	99	70 - 130	30	70 - 130	
%SS3:	92	2.5	89	88	0.904	90	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 79058 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307070-009A	07/02/13 11:45 AM	07/03/13	07/03/13 8:49 PM	1307070-010A	07/02/13 10:10 AM	07/03/13	07/03/13 10:40 PM
1307070-011A	07/02/13 9:40 AM	07/03/13	07/03/13 10:03 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

QA/QC Officer

## McCampbell Analytical, Inc.

SS-6

SS-12

SS-11

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd

Pittsburg, CA 94565-1701 WorkOrder: 1307070

Air

Air

Air

(925) 252-9262					WorkOrder: 1307070 Clie					entCo	tCode: PEO							
		WaterTrax	WriteOn	<b>✓</b> EDF		Excel		EQuIS	<b>✓</b> E	Email		HardCop	у	ThirdP	arty	,	J-flag	
Report to:						В	ill to:					R	leque	sted TAT	's		5 days	5
•	rironmental Svcs., Inc. in Street, Ste. 200 A 94612	cc: PO:	mgillies@pange #1435.002; Sol	eaenv.com; tdelafu	uente@	<b>ў</b> ра	Pang 1710	Clark-Ric gea Envir ) Franklin land, CA	onmer	, Ste. 2		L		Receivea Printed:			02/2013 02/2013	
							Requested Tests (See legend below)								_			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	1	11 1	12
1307070-001	SSPO-1		Air	7/2/2013 13:55		Α	Α	Α								$\top$		
1307070-002	1185 Hall		Air	7/2/2013 15:30		Α	Α											
1307070-003	1185 Bath		Air	7/2/2013 15:00		Α	Α											
1307070-004	SS-15		Air	7/2/2013 13:30		Α	Α											
1307070-005	SS-7		Air	7/2/2013 12:45		Α	Α											
1307070-006	SS-16		Air	7/2/2013 13:10		Α	Α											
1307070-007	SS-14		Air	7/2/2013 12:15		Α	Α											
1307070-008	SS-13		Air	7/2/2013 11:55		Α	Α											

#### Test Legend:

1307070-009

1307070-010

1307070-011

1	8010BMS_A	2	8010BMS_PPMV	3	PREDF REPORT	4	5
6		7		8		9	10
11		12		1			

7/2/2013 11:45

7/2/2013 10:10

7/2/2013 9:40

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Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

13.07070

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SAMPLE ID	(Field Point		m.	tain	Con			4						TPHg/BTEX	el o	y EP											1	8			
	Name)	Date	Time	8	be (	Water	= 1	100	Other	ICE	HCL	9	Other	Hg/I	e fu	VOCs b												138			
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55-16			1310													X															
55-14			1215													X								- 14		-		-			
55 - 13			1155													X															
35-6			1145													X															
55-12			1010	1				T	T							X									8						
55-11		1/	940	A	1		4									X			T				1								
								Т																	7						
Alexander de Maria	7 - 2 - 2 - 2 - 2		(		$\vdash$	П		T	T																						
								+	+								$\top$	$\top$	+					7						T	
Relingationed By:	-	Date:	Time:	Rece	eived B	v:		_		1		-	$\dashv$	ICI	E/t°				-	_						CC	MM	ENTS		_	
In 1	1111	717	M46	1	20	1		^	-	7				GO	OD		DITIO														
Relinquished By:									HEAD SPACE ABSENT_ DECHLORINATED IN LAB																						
* 100															TEC			RS_													
Relinquished By: Date: Time: Received By:							_			$\dashv$	PK	ESE	KVEI	) IN L	AB_																
Relinquished By: Date: Time: Received By:												VOAS O&G METALS OTHER PRESERVATION pH<2																			

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date and	d Time Received:	7/2/2013 6:05:19 PM
Project Name:	#1435.002; Solano 0	Group			LogIn Re	eviewed by:	Jena Alfaro
WorkOrder N°:	1307070	Matrix: <u>Air</u>			Carrier:	Client Drop-In	
		<u>Cha</u>	in of Cu	ustody (COC	) Informatio	<u>on</u>	
Chain of custody	present?		Yes	<b>✓</b>	No 🗌		
Chain of custody	signed when relinquis	hed and received?	Yes	<b>✓</b>	No 🗌		
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌		
Sample IDs noted	d by Client on COC?		Yes	✓	No 🗌		
Date and Time of	collection noted by Cl	lient on COC?	Yes	✓	No 🗌		
Sampler's name i	noted on COC?		Yes	<b>✓</b>	No 🗌		
			Sample	Receipt Info	ormation		
Custody seals into	act on shipping contai	ner/cooler?	Yes		No 🗌		NA 🗹
Shipping contained	er/cooler in good condi	ition?	Yes	<b>✓</b>	No 🗌		
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌		
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌		
Sufficient sample	volume for indicated t	test?	Yes	<b>✓</b>	No $\square$		
		Sample Pres	servatio	n and Hold 1	ime (HT) In	<u>nformation</u>	
All samples recei	ved within holding time	e?	Yes	<b>✓</b>	No $\square$		
Container/Temp B	Blank temperature		Coole	er Temp:			NA 🗹
Water - VOA vials	s have zero headspac	e / no bubbles?	Yes		No 🗆 N	lo VOA vials submit	tted 🗹
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌		
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗹
Samples Receive	ed on Ice?		Yes		No 🗹		
* NOTE: If the "N	o" box is checked, see	e comments below.	===			:=====	=========

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1365.002; 1187 Solano	Date Sampled: 07/03/13
1710 Franklin Street, Ste. 200		Date Received: 07/03/13
1770 17411111111 54664, 566. 200	Client Contact: Morgan Gillies	Date Reported: 07/11/13
Oakland, CA 94612	Client P.O.:	Date Completed: 07/11/13

WorkOrder: 1307132

July 11, 2013

### Dear Morgan:

### Enclosed within are:

- 1) The results of the 5 analyzed samples from your project: #1365.002; 1187 Solano,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

													_																			
M	cCAMP1	BELL	ANA	LYT	ГIC	AL	, II	NC.				, ,	2					C	H	AI	N	OF	C	US	ST	OI	Y	R	EC	CO	RD	
			Villow Pass					10	ot	1	13	5	4	T	UR	N	AR		ND											)		×
Web	site: www.mcc		ourg, CA 9		ain@	mcca	mpb	ell.co	m				-1											RUS		24			48 F		72 HI	Claim transfer Toute Vita Service
	ne: (925) 252		Com Com					5) 25		69				ED	FR	tequ	iired	120	oel	t (N	orn	nal	1	lo	W	rite	e On	(D	W)	N	0	
Report To: Morg	an Gillies		В	ill To	e: Pa	nge	1	,											A	nal	ysis	Rec	ues	t						C	ther	Comments
Company: Pange	a Environme	ental Ser	vices, In	c.																												Ella
1710 Franklin Str	eet, Suite 20	0, Oakla	nd, CA	94612	2									3E	dn	(F)														097		Filter Samples
		10-10-	E	-Mai	l: mg	illie	s@p	ange	aen	v.cc	m			SW15)/MTBE	lear	8/B&	3									8310				Method 8260		for Metals
Tele: (510) 836-3'				ax: (	-									115)/	elc	E&	(418		0.0164							-				etho		analysis:
Project #: 1270.0		5,007		rojec										康	65	8520	OIIS		20)		Y					/82	6	_		A M		Yes / No
Project Location:		runo Ave	e., San F	ranei	560	-168	1	Soke	101	they	Al	bas	y	8020	Sili	ase (	arb		/ 80		NE					625 / 8270	6020)	020	6	EPA		
Sampler Signatur	e:	1	1	-	_	_	_							(602/8020	/M	Gre	dro	=	602		3,8			09	_	PA	/01	9/0	601	by		
		SAMI	PLING	, o	ers		MA	TRE	(		IETI ESE			Gas (	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 (8010) 8021	BTEX ONLY (EPA 602 / 8020)		EPA 608 / 8082 PCB's ONLY	-	11	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA	CAM-17 Metals (6010 /	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Five fuel oxygenates		
SAMPLE ID	LOCATION			Containers	Type Containers									Has	issel	enm	B (	801	LY.	EPA 608 / 8081	8082	EPA 8140 / 8141	EPA 8150 / 8151	/62	625	VA's	feta	etal	8/2	xyge		
SAMPLEID	(Field Point	D-4-	701	ţā.	18	L		9						BTEX & TPH	s Di	trol	etro	10	O	/80	/80	140	150	24.2	125/	/P	17.1	S M	2007	el o:		
	Name)	Date	Time	Ö	be d	Water	=	Air	Other	ICE	HCL.	HNO3	Other	EX	На	al Po	E I	9 V	EX	9 V	9 V	A 8	A 8	A S	A S	H's	W.	E	ad (	e fu		L. Y
				#	E	3	Soil	Slud	0	$\cong$	开	王	이	BI	F	To	To	E	BI	E	EF	E	E	E	E	PA	0	=	Le	E		
A-13-8		7/2/13	1300	1	Score		X			X			$\exists$					X														
A-12-8		1	1305	1						1								X														
A-11-8			1100										$\exists$					X														
A-13-5			1120	1			1						T					/											П			HOLA
1-11-5			915				1			1			T																			HOLD
4-12-3			920				1						1																Н			NO10
A-12-5			1105	+	1			-	+			+	+					V														noce
1123		V	11	1	1	-	5	-	-	V		+	+	-	-			$\bigcirc$				-					-	-	Н			
4-10-0		7.557	925	V	V		•	+				_	$\dashv$		-			X,				_	$\blacksquare$									
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Relinquished By:	//	Daje:	Time: 1	Rege	iveg I	V.	7				1		+	ICE	/t°	14	.2	_	_									CON	IME	NTS:		
		7/3/13	1750.	/	//	10	N	m	+	4	6				OD O				NT													
Relinquished By:		Date:	Time:	Rece	ived I	By:			_				$\dashv$		AD S				N L	AB	= 16	2										
																			TAI	NEF	RS		-									
Relinquished By:		Date:	Time:	Rece	ived I	By:							$\neg$	FRI	ESEI	VE	D-IIN	LAD	_													
														PRI	ESEF	RVA	110		AS	08		ME pH<		S	OTH	ER						

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1307132 ClientCode: PEO

☐ WaterTrax ☐ WriteOn **▼**EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag Report to: Bill to: Requested TAT: 5 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 07/03/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1365.002; 1187 Solano Oakland, CA 94612 Date Printed: 07/05/2013 (510) 836-3700 FAX: (510) 836-3709

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1307132-001	A-13-8	Soil	7/3/2013 13:00		Α	Α										
1307132-002	A-12-8	Soil	7/3/2013 13:05		Α											
1307132-003	A-11-8	Soil	7/3/2013 11:00		Α											
1307132-007	A-12-5	Soil	7/3/2013 11:05		Α											
1307132-008	A-13-3	Soil	7/3/2013 9:25		Α											

#### **Test Legend:**

1	8010BMS_S		2 PREDF REPORT		3	]	4	5
6			7	]	8		9	10
11		1	12	1				

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

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## **Sample Receipt Checklist**

Pangea Environmen	itai 3vcs., iiic.			Date	anu	Time Received:	7/3/2013 9:	ZI:II PW
#1365.002; 1187 So	lano			Logli	n Rev	iewed by:		Jena Alfaro
1307132	Matrix: Soil			Carri	er:	Client Drop-In		
	<u>Chai</u>	n of Cւ	ustody (C	OC) Inform	<u>ation</u>			
present?		Yes	<b>✓</b>	No 🗌				
signed when relinquis	hed and received?	Yes	<b>✓</b>	No 🗌				
agrees with sample la	ibels?	Yes	<b>✓</b>	No 🗌				
d by Client on COC?		Yes	✓	No 🗌				
collection noted by C	lient on COC?	Yes	✓	No 🗌				
noted on COC?		Yes	✓	No 🗌				
	<u> </u>	Sample	Receipt	Information	<u>n</u>			
act on shipping contai	ner/cooler?	Yes		No 🗌			NA 🗸	
er/cooler in good cond	ition?	Yes	<b>✓</b>	No 🗌				
er containers/bottles?		Yes	<b>✓</b>	No 🗌				
rs intact?		Yes	<b>✓</b>	No 🗌				
volume for indicated t	test?	Yes	<b>✓</b>	No 🗌				
	Sample Prese	ervatio	n and Ho	ld Time (HT	「) Info	ormation		
ved within holding time	e?	Yes	<b>✓</b>	No 🗌				
Blank temperature		Coole	er Temp:	14.2°C			NA $\square$	
s have zero headspac	e / no bubbles?	Yes		No 🗌	No	VOA vials submit	tted 🗹	
ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌				
table upon receipt (pH	l<2)?	Yes		No 🗌			NA 🗸	
ed on Ice?		Yes	✓	No 🗌				
	(Ice Type	e: WE	TICE )	)				
o" box is checked, see	e comments below.							
	======		=					
	present? signed when relinquis agrees with sample la d by Client on COC? collection noted by Conoted on COC? act on shipping container/cooler in good conductor containers/bottles? sintact? volume for indicated wed within holding times have zero headspace ecked for correct presentable upon receipt (pH) and on Ice?	chain present? signed when relinquished and received? agrees with sample labels? d by Client on COC? f collection noted by Client on COC? noted on COC? act on shipping container/cooler? er/cooler in good condition? er containers/bottles? es intact? volume for indicated test?  Sample Preserved within holding time? Blank temperature s have zero headspace / no bubbles? ecked for correct preservation? table upon receipt (pH<2)? ed on Ice?	Chain of Cu present?  Present?  Signed when relinquished and received?  A signees with sample labels?  Collection noted by Client on COC?  Present on COC?  Collection noted by Client on COC?  Present on CoC?  Present on CoC?  Present on CoC?  Present on CoC?  Present on CoC?  Present on CoC?  Present on CoC?  Present on CoC?  Present on CoC?  Present on CoC?  Present on CoC?  P	Chain of Custody (Copresent? Yes ✓ signed when relinquished and received? Yes ✓ agrees with sample labels? Yes ✓ sollection noted by Client on COC? Yes ✓ noted on COC? Yes ✓ sample Receipt act on shipping container/cooler? Yes ✓ recontainers/bottles? Yes ✓ recontainers/bottles? Yes ✓ resintact?	Chain of Custody (COC) Inform    Chain of Custody (COC) Inform   Present?	Chain of Custody (COC) Information    Chain of Custody (COC) Information	Chain of Custody (COC) Information    Present?	Carrier: Client Drop-In

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~ ;		
Pangea Environmental Svcs., Inc.	Client Project ID: #1365.002; 1187	Date Sampled: 07/03/13
1710 Franklin Street, Ste. 200	Solano	Date Received: 07/03/13
1710 Plankim Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 07/03/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/08/13
Halogenated Volatile	e Organics by P&T and GC-MS (8010 Ba	nsic Target List)*
Extraction Method: SW5030B	Analytical Method: SW8260B	Work Order: 1307132

1307132-001A

Client ID				A-13-8			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

	Surrogate Re	ecoveries (%)											
%SS1:	99	%SS2:	108										
%SS3:	97												
Comments:	omments;												

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu g$ /wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1365.002; 1187	Date Sampled: 07/03/13
1710 Franklin Street, Ste. 200	Solano	Date Received: 07/03/13
1710 Plankim Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 07/03/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/10/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307132-002A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307132

Client ID				A-12-8			
Client ID  Matrix				A-12-8 Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	94	%SS2:	89			
%SS3:	106					
Comments:						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1365.002; 1187	Date Sampled: 07/03/13
1710 Franklin Street, Ste. 200	Solano	Date Received: 07/03/13
1710 Plankiii Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 07/03/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/08/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307132-003A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307132

Cl:+ ID		A 11 0					
Client ID  Matrix		A-11-8 Soil					
	C	Poporting			C	DE	Reporting
Compound	Concentration *	DF	Limit	Compound	Concentration *	DF	Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)							
%SS1: 100		%SS2:	109				
%SS3:	99						
Comments:	·						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1365.002; 1187	Date Sampled: 07/03/13
1710 Franklin Street, Ste. 200	Solano	Date Received: 07/03/13
1710 Plankini Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 07/03/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/08/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307132-007A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307132

Client ID		A-12-5						
Matrix		Soil						
Compound	Concentration *	DF Reporting Limit		Compound	Concentration *	DF	Reporting Limit	
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005	
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005	
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005	
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005	
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004	
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005	
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005	
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005	
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005	
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005	
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005	
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005	
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005	
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005	
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005	

Surrogate Recoveries (%)						
%SS1:	97	%SS2:	108			
%SS3:	98					
Comments						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1365.002; 1187	Date Sampled: 07/03/13
1710 Franklin Street, Ste. 200	Solano	Date Received: 07/03/13
1710 Plankiii Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted 07/03/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 07/09/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1307132-008A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1307132

Client ID		A-13-3						
Matrix		Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005	
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005	
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005	
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005	
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004	
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005	
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005	
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005	
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005	
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005	
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005	
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005	
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005	
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005	
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005	

Surrogate Recoveries (%)						
%SS1:	97	%SS2:	89			
%SS3:	106					
Comments:						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 79050 WorkOrder: 1307132

EPA Method: SW8260B Extraction: S	SW5030B					;	Spiked Sam	ple ID:	1307132-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, mayte	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	79.4	79.2	0.340	84.8	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	80.3	80.1	0.326	84.8	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	75.3	74.5	1.11	78.7	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	77.4	78.9	1.92	81.7	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	79.8	79.6	0.325	84.1	60 - 116	30	70 - 130
%SS1:	99	0.12	97	96	0.461	94	70 - 130	30	70 - 130
%SS2:	108	0.12	87	88	0.490	88	70 - 130	30	70 - 130
%SS3:	97	0.012	105	101	3.72	99	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 79050 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307132-001A	07/03/13 1:00 PM	07/03/13	07/08/13 11:38 PM	1307132-002A	07/03/13 1:05 PM	07/03/13	07/10/13 10:06 PM
1307132-003A	07/03/13 11:00 AM	07/03/13	07/08/13 9:43 PM	1307132-007A	07/03/13 11:05 AM	07/03/13	07/08/13 10:22 PM
1307132-008A	07/03/13 9:25 AM	07/03/13	07/09/13 8:03 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1365.002; 1187 Solano Ave	Date Sampled: 07/03/13
1710 Franklin Street, Ste. 200		Date Received: 07/03/13
1770 17411111111 54664, 566. 200	Client Contact: Morgan Gillies	Date Reported: 07/10/13
Oakland, CA 94612	Client P.O.:	Date Completed: 07/10/13

WorkOrder: 1307138

July 10, 2013

### Dear Morgan:

### Enclosed within are:

- 1) The results of the 9 analyzed samples from your project: #1365.002; 1187 Solano Ave,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1307138

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 72 HR Website: www.mccampbell.com Email: main@mccampbell.com RUSH 24 HR 48 HR EDF Required? Coelt (Normal) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Write On (DW) No Report To: Morgan Gillies Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200, Oakland, CA 94612 Filter TPH as Diesel (8015) w/ Silica Gel Cleanup Fotal Petroleum Oil & Grease (5520 E&F/B&F) Five fuel oxygenates by EPA Method 8260 Samples PAH's / PNA's by EPA 625 / 8270 / 8310 E-Mail: mgillies@pangeaenv.com Fotal Petroleum Hydrocarbons (418.1) for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project #: 1270.002 1365.002 Project Name: 2400 San Brano 1/8 75 BTEX ONLY (EPA 602 / 8020) Yes / No Project Location: 2400 San Bruno Ave., San Francisco 1187 Stano Ave, Alban EPA 608 / 8082 PCB's ONLY CAM-17 Metals (6010 / 6020) LUFT 5 Metals (6010 / 6020) Lead (200.8 / 200.9 / 6010) Sampler Signature: EPA 524,2 / 624 / 8260 EPA 601 / 8010 / 8021 METHOD EPA 525 / 625 / 8270 SAMPLING MATRIX PRESERVED EPA 8140 / 8141 Containers EPA 8150 / 8151 EPA 608 / 8081 LOCATION SAMPLE ID BTEX & TPH (Field Point Sludge Name) Time Date Other HNO, 839 945 5580-4 Relinquished By: Received By Time: GOOD CONDITION COMMENTS: 130 HEAD SPACE ABSENT Relinquished By: Time: Received By: Date: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Time: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1307138

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

**EQuIS** ☐ WaterTrax WriteOn **▼** EDF Excel ✓ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 5 days Morgan Gillies Email: mgillies@pangeaenv.com; tdelafuente@pa Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 07/03/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1365.002; 1187 Solano Ave Oakland, CA 94612 Date Printed: 07/05/2013 (510) 836-3700 FAX: (510) 836-3709

								Re	questec	Tests	(See leg	end bel	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1307138-001	SS-20	Soil Gas	7/3/2013 8:39		Α	Α	Α									
1307138-002	SS-19	Soil Gas	7/3/2013 9:45				A									
1307138-003	SS-10	Soil Gas	7/3/2013 10:40				Α									
1307138-004	SS-8	Soil Gas	7/3/2013 12:18				Α									
1307138-005	SS-17	Soil Gas	7/3/2013 13:44				Α									
1307138-006	SS-18	Soil Gas	7/3/2013 14:08				Α									
1307138-007	SSPO-2	Soil Gas	7/3/2013 14:56				Α									
1307138-008	SSPO-3	Soil Gas	7/3/2013 15:24				Α									
1307138-009	SSPO-4	Soil Gas	7/3/2013 15:46				Α									

#### **Test Legend:**

1 PREDF REPORT	2 PRUNUSEDSUMMA	3 TO15_SOIL(UG/M3)	4	5
6	7	8	9	10
11	12			

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A contain testgroup.

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Prepared by: Maria Venegas

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environment	al Svcs., Inc.			Date an	id Time Received:	7/3/2013 5:50	0:00 PM
Project Name:	#1365.002; 1187 Sol	ano Ave			LogIn R	Reviewed by:		Maria Venegas
WorkOrder N°:	1307138	Matrix: Soil Gas			Carrier:	Client Drop-In		
		<u>Chai</u>	n of Cu	ıstody (COC)	Information	<u>on</u>		
Chain of custody	present?		Yes	•	No 🗌			
Chain of custody	signed when relinquish	ned and received?	Yes	•	No $\square$			
Chain of custody	agrees with sample lal	bels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$			
Date and Time of	collection noted by Cl	ient on COC?	Yes	✓	No $\square$			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌			
		<u> </u>	Sample	Receipt Info	rmation			
Custody seals int	act on shipping contair	ner/cooler?	Yes		No 🗌		NA 🗹	
Shipping contained	er/cooler in good condi	tion?	Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No $\square$			
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indicated to	est?	Yes	✓	No 🗌			
		Sample Prese	ervatio	n and Hold T	ime (HT) lı	nformation		
All samples recei	ved within holding time	?	Yes	•	No 🗌			
Container/Temp I	Blank temperature		Coole	er Temp:			NA 🗸	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes		No 🗆 🗈	No VOA vials submit	ted 🗸	
Sample labels ch	ecked for correct prese	ervation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?		Yes		No 🗸			
* NOTE: If the "N	'o" box is checked, see	comments below.			====			:======

Pange	a Environmental Svcs., Inc.			#1365.002; 1187	Date Sampled: 07/03	/13				
1710 F	Franklin Street, Ste. 200	Solano	Ave		Date Received: 07/03	/13				
1,101			Contact: Mo	rgan Gillies	Date Extracted: 07/09	Date Extracted: 07/09/13				
Oaklaı	nd, CA 94612	Client	P.O.:		Date Analyzed: 07/09	/13				
Extractio	n method: ASTM D 1946 90			Helium* ical methods: ASTM I	D 1946-90	Work	Order: 1	307138		
Lab ID		Matrix		Final Pressure	Helium	DF	% SS	Comments		
004A	SS-8	Soil Gas	12.58	25.12	0.21	1	N/A			
							- " - "			
		W	psia	psia	NA			NA		
	above the reporting limit	SoilGas	psia	psia	0.005			%		
		i								
DF = Dil	ution Factor									
CDPH	ELAP 1644 ♦ NELAP 12283C	CA	K	F Analyst's In	nitial <u>R</u> Angela F	Rydelius,	Lab M	anager		

Page 5 of 12

Pangea Environmental Svcs., Inc.	Client Project ID: #1365.002; 1187	Date Sampled: 07/03/13
1710 Franklin Street, Ste. 200	Solano Ave	Date Received: 07/03/13
	Client Contact: Morgan Gillies	Date Extracted: 07/05/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 07/05/13

### Leak Check Compound\*

Extraction method: TO15 Analytical methods: TO15 Work Order: 1307138

LAtitotic	m method. 1015	Analytical methods. 1015						
Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Isopropyl Alcohol	DF	% SS	Comments
001A	SS-20	Soil Gas	12.62	25.16	ND	1	N/A	
002A	SS-19	Soil Gas	13.06	26.08	51	1	N/A	
003A	SS-10	Soil Gas	13.26	26.42	ND	1	N/A	
005A	SS-17	Soil Gas	13.05	26.00	ND	1	N/A	
006A	SS-18	Soil Gas	12.41	24.73	ND	1	N/A	
007A	SSPO-2	Soil Gas	12.68	25.30	ND	1	N/A	
008A	SSPO-3	Soil Gas	13.56	27.05	ND	1	N/A	
009A	SSPO-4	Soil Gas	12.78	25.46	ND	1	N/A	
	Reporting Limit for DF =1; ND means not detected at or	W	psia	psia	NA			NA
	above the reporting limit	SoilGas	psia	psia	50		μ	ıg/m³

	*	leak	check	compound	is reported	in μg/m <sup>3</sup> .
--	---	------	-------	----------	-------------	------------------------

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

The (liquid) Leak Check reference is:

DTSC, Advisory-Active Soil Gas Investigations, April 2012, page 17, section 4.2.2.1:

"The laboratory reports should quantify and annotate all detections of the leak check compound at the reporting limit of the target analytes."

%SS = Percent Recovery of Surrogate Standard

CDPH ELAP 1644 ♦ NELAP 12283CA

DF = Dilution Factor

KF Analyst's Initial

Angela Rydelius, Lab Manager

## McCampbell Analytical, Inc. "When Quality Counts"

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Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1307138

Extraction Method: TO15		Analytical	Method:	TO15	Work Order: 1307	138		
Lab ID			130′	7138-001A	Initial Pressur	e (psia)	12.62	
Client ID				SS-20	Final Pressur	e (psia)	25.16	
Matrix			S	Soil Gas				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	310	1.0	120	Acrylonitrile	ND	1.0	4.4	
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5	
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14	
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9	
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150	
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3	
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4	
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9	
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180	
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20	
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12	
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12	
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2	
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1	
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1	
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2	
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14	
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3	
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19	
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8	
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16	
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22	
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210	
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3	
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11	
Propene	ND	1.0	88	Styrene	ND	1.0	8.6	
1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14	
Tetrachloroethene	59	1.0	14	Tetrahydrofuran	71	1.0	6.0	
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15	
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11	
Trichloroethene	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11	
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10	
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2	
Xylenes, Total	ND	1.0	27					
	· · · · · · · · · · · · · · · · · · ·	Sur	rogate R	ecoveries (%)				
%SS1:	84			%SS2:	85			
%SS3:	8							
Comments:								

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard



<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

## McCampbell Analytical, Inc. "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1307138

Lab ID         1307138-002A           Client ID         SS-19           Matrix         Soil Gas		ssure (psia)	13.06 26.08			
	Final Pre	ssure (psia)	26.08			
Matrix Soil Gos			26.08			
Maura Son Gas						
Compound Concentration * DF Reporting Limit Co	ompound Concentratio	n* DF	Reporting Limit			
Acetone 250 1.0 120 Acrylonitrile	ND	1.0	4.4			
tert-Amyl methyl ether (TAME) ND 1.0 8.5 Benzene	ND	1.0	6.5			
Benzyl chloride ND 1.0 11 Bromodichloro	omethane ND	1.0	14			
Bromoform ND 1.0 21 Bromomethan	e ND	1.0	7.9			
1,3-Butadiene ND 1.0 4.5 2-Butanone (N	MEK) ND	1.0	150			
t-Butyl alcohol (TBA) ND 1.0 62 Carbon Disulf	ide 7.1	1.0	6.3			
Carbon Tetrachloride ND 1.0 13 Chlorobenzeno	e ND	1.0	9.4			
Chloroethane ND 1.0 5.4 Chloroform	ND	1.0	9.9			
Chloromethane ND 1.0 4.2 Cyclohexane	ND	1.0	180			
Dibromochloromethane ND 1.0 17 1,2-Dibromo-3	3-chloropropane ND	1.0	20			
1,2-Dibromoethane (EDB) ND 1.0 16 1,2-Dichlorobe	enzene ND	1.0	12			
1,3-Dichlorobenzene ND 1.0 12 1,4-Dichlorobe	enzene ND	1.0	12			
Dichlorodifluoromethane ND 1.0 10 1,1-Dichloroet	hane ND	1.0	8.2			
1,2-Dichloroethane (1,2-DCA) ND 1.0 8.2 1,1-Dichloroet	hene ND	1.0	8.1			
cis-1,2-Dichloroethene ND 1.0 8.1 trans-1,2-Dich	loroethene ND	1.0	8.1			
1,2-Dichloropropane ND 1.0 9.4 cis-1,3-Dichlo	ropropene ND	1.0	9.2			
trans-1,3-Dichloropropene ND 1.0 9.2 1,2-Dichloro-1	,1,2,2-tetrafluoroethane ND	1.0	14			
Diisopropyl ether (DIPE) ND 1.0 8.5 1,4-Dioxane	ND	1.0	7.3			
Ethanol ND 1.0 96 Ethyl acetate	ND	1.0	19			
Ethyl tert-butyl ether (ETBE) ND 1.0 8.5 Ethylbenzene	ND	1.0	8.8			
4-Ethyltoluene ND 1.0 10 Freon 113	ND	1.0	16			
Heptane ND 1.0 210 Hexachlorobut	tadiene ND	1.0	22			
Hexane ND 1.0 180 2-Hexanone	ND	1.0	210			
Isopropyl Alcohol 51 1.0 50 4-Methyl-2-pe	ntanone (MIBK) 8.9	1.0	8.3			
Methyl-t-butyl ether (MTBE) ND 1.0 7.3 Methylene chl		1.0	7.1			
Naphthalene ND 1.0 11 Propene	ND	1.0	88			
Styrene 29 1.0 8.6 1,1,1,2-Tetrac.	hloroethane ND	1.0	14			
1,1,2,2-Tetrachloroethane ND 1.0 14 Tetrachloroeth	i	1.0	14			
Toluene 15 1.0 7.7 1,2,4-Trichloro	obenzene ND	1.0	15			
1,1,1-Trichloroethane ND 1.0 11 1,1,2-Trichloro		1.0	11			
Trichloroethene ND 1.0 11 Trichlorofluor		1.0	11			
1,2,4-Trimethylbenzene ND 1.0 10 1,3,5-Trimethy		1.0	10			
Vinyl Acetate ND 1.0 180 Vinyl Chlorido		1.0	5.2			
Xylenes, Total ND 1.0 27	ı	, , , , , , , , , , , , , , , , , , ,				
Surrogate Recoveries (%)						
%SS1: 85 %SS2:		84				
%SS3: 81	1					
Comments:						

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard



<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

## McCampbell Analytical, Inc. "When Quality Counts"

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Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Work Order: 1307138 Extraction Method: TO15

WOIK OIGCI. 130/1	.50		
Initial Pressure	e (psia)	13.26	
Final Pressure	e (psia)	26.42	
Concentration *	DF	Reporting Limit	
ND	1.0	4.4	
ND	1.0	6.5	
ND	1.0	14	
ND	1.0	7.9	
ND	1.0	150	
ND	1.0	6.3	
ND	1.0	9.4	
ND	1.0	9.9	
ND	1.0	180	
ND	1.0	20	
ND	1.0	12	
ND	1.0	12	
ND	1.0	8.2	
ND	1.0	8.1	
ND	1.0	8.1	
ND		9.2	
ND	1.0	14	
ND	1.0	7.3	
ND	1.0	19	
ND	1.0	8.8	
ND	1.0	16	
ND	1.0	22	
ND	1.0	210	
ND	1.0	7.3	
ND	1.0	11	
13	1.0	8.6	
ND	1.0	14	
38	1.0	6.0	
ND	1.0	15	
ND	1.0	11	
ND	1.0	11	
ND	1.0	10	
ND	1.0	5.2	
	-		
84			
-			
·	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND	

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard



<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1307138

Extraction Method: TO15		Analytical	Method:	TO15	Work Order: 1307	138		
Lab ID			130′	7138-004A	Initial Pressur	e (psia)	12.58	
Client ID				SS-8	Final Pressur	e (psia)	25.12	
Matrix			S	Soil Gas				
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	320	1.0	120	Acrylonitrile	ND	1.0	4.4	
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5	
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14	
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9	
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150	
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3	
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4	
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9	
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180	
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20	
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12	
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12	
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2	
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1	
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1	
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2	
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14	
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3	
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19	
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8	
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16	
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22	
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210	
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3	
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11	
Propene	ND	1.0	88	Styrene	ND	1.0	8.6	
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14	
Tetrachloroethene	56	1.0	14	Tetrahydrofuran	61	1.0	6.0	
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15	
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11	
Trichloroethene	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11	
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10	
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2	
Xylenes, Total	ND	1.0	27					
		Sur	rogate R	ecoveries (%)				
%SS1:	8:			%SS2:	85			
%SS3:	8	1						
Comments:								

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard



<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Work Order: 1307138 Extraction Method: TO15

Extraction Method. 1013		rmarytical	i wictiou.	1013	WOIK Officer. 1307	130	
Lab ID			130′	7138-005A	Initial Pressure	e (psia)	13.05
Client ID				SS-17	Final Pressure	e (psia)	26.00
Matrix		Soil Gas					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	240	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	670	1.0	14	Tetrahydrofuran	39	1.0	6.0
Toluene	ND	1.0	7.7	1.2.4-Trichlorobenzene	ND	1.0	15
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11
Trichloroethene	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				
· ·	, <u>, , , , , , , , , , , , , , , , , , </u>	Sur		ecoveries (%)			
			%SS2:	85	5		
%SS3:	82				, , ,		
Comments:							
Comments:							

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard



<sup>\*</sup>vapor samples are reported in  $\mu g/m^3$ .

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Work Order: 1307138 Extraction Method: TO15

ion * DF 0 1.0 1.0 1.0	Reporting Limit 120 8.5	7138-006A SS-18 Soil Gas Compound Acrylonitrile	Initial Pressure Final Pressure Concentration *	u /	12.41 24.73
0 1.0 1.0 1.0	Reporting Limit 120 8.5	Compound  Acrylonitrile	Concentration *		
0 1.0 1.0 1.0	Reporting Limit  120  8.5	Compound Acrylonitrile		DF	Reporting
0 1.0 1.0 1.0	120 8.5	Acrylonitrile		DF	Reporting
1.0 1.0	8.5	*	ND	D1	Limit
1.0		D.	ND	1.0	4.4
	1.1	Benzene	ND	1.0	6.5
1.0	11	Bromodichloromethane	ND	1.0	14
	21	Bromomethane	ND	1.0	7.9
1.0	4.5	2-Butanone (MEK)	ND	1.0	150
1.0	62	Carbon Disulfide	9.0	1.0	6.3
1.0	13	Chlorobenzene	ND	1.0	9.4
1.0	5.4	Chloroform	ND	1.0	9.9
1.0	4.2	Cyclohexane	ND	1.0	180
1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1.0	12	1,4-Dichlorobenzene	ND	1.0	12
1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
1.0	8.5	1,4-Dioxane	ND	1.0	7.3
1.0	96	Ethyl acetate	ND	1.0	19
1.0	8.5	Ethylbenzene	ND	1.0	8.8
1.0	10	Freon 113	ND	1.0	16
1.0	210	Hexachlorobutadiene	ND	1.0	22
1.0	180	2-Hexanone	ND	1.0	210
1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
1.0	7.1	Naphthalene	ND	1.0	11
1.0	88	Styrene	ND	1.0	8.6
1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
0 1.0	14	Tetrahydrofuran	22	1.0	6.0
1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15
1.0	11	1,1,2-Trichloroethane	ND	1.0	11
1.0	11	Trichlorofluoromethane	ND	1.0	11
1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
1.0	180	Vinyl Chloride	ND	1.0	5.2
1.0	27				
Su	rrogate R	ecoveries (%)			
%SS1: 87			85	5	
%SS3: 81					
	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	1.0 210 1.0 180 1.0 8.3 1.0 7.1 1.0 88 1.0 14 0 1.0 14 1.0 7.7 1.0 11 1.0 10 1.0 10 1.0 180 1.0 27  Surrogate R	1.0   210   Hexachlorobutadiene   1.0   180   2-Hexanone   1.0   8.3   Methyl-t-butyl ether (MTBE)   1.0   7.1   Naphthalene   1.0   88   Styrene   1.0   14   1,1,2,2-Tetrachloroethane   1.0   14   Tetrahydrofuran   1.0   7.7   1,2,4-Trichlorobenzene   1.0   11   1,1,2-Trichloroethane   1.0   11   Trichlorofluoromethane   1.0   10   1,3,5-Trimethylbenzene   1.0   180   Vinyl Chloride   1.0   27     Surrogate Recoveries (%)   87   %SS2:	1.0   210   Hexachlorobutadiene   ND	1.0   210   Hexachlorobutadiene   ND   1.0     1.0   180   2-Hexanone   ND   1.0     1.0   8.3   Methyl-t-butyl ether (MTBE)   ND   1.0     1.0   7.1   Naphthalene   ND   1.0     1.0   88   Styrene   ND   1.0     1.0   14   1,1,2,2-Tetrachloroethane   ND   1.0     0   1.0   14   Tetrahydrofuran   22   1.0     1.0   7.7   1,2,4-Trichlorobenzene   ND   1.0     1.0   11   1,1,2-Trichloroethane   ND   1.0     1.0   1.0   1.1   Trichlorofluoromethane   ND   1.0     1.0   1.0   1,3,5-Trimethylbenzene   ND   1.0     1.0   180   Vinyl Chloride   ND   1.0     1.0   27     Surrogate Recoveries (%)   87   %SS2:   85

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard



<sup>\*</sup>vapor samples are reported in  $\mu g/m^3$ .

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Work Order: 1307138 Extraction Method: TO15

Extraction Method: TO15		Anaiyticai	Method:	1015	Work Order: 1307	138	
Lab ID			130′	7138-007A	Initial Pressur	e (psia)	12.68
Client ID			9	SSPO-2	Final Pressur	e (psia)	25.30
Matrix		Soil Gas				<u> </u>	
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	200	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	20	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	450	1.0	14	Tetrahydrofuran	29	1.0	6.0
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11
Trichloroethene	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27		· ·		
	· '	Sur	rogate R	ecoveries (%)			
%SS1:	8	%SS2:	8	6			
%SS3:	8:						
Comments:							

Comments:

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard

<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1307138

Client ID	Extraction Method: TO15		Analytical	Method:	TO15	Work Order: 1307	138	
Compound   Concentration   DF	Lab ID			130′	7138-008A	Initial Pressur	e (psia)	13.56
Compound   Concentration   DF   Republic   Republic   Compound   Concentration   DF   Acetone   180   1.0   120   Acrylonitrile   ND   1.0	Client ID			9	SSPO-3	Final Pressur	e (psia)	27.05
Compound   Concentration   DF   Limi   Compound   Concentration   DF   Limi   Compound   Concentration   DF   Limi   Compound   Concentration   DF   Limi   Compound   Concentration   DF   Limi   Compound   Limit	Matrix		Soil Gas					
tert-Amyl methyl ether (TAME)   ND   1.0   8.5   Benzene   ND   1.0   1.0   Benzyl chloride   ND   1.0   1.1   Bromodichloromethane   ND   1.0   1.0   1.0   Benzyl chloride   ND   1.0   1.1   Bromodichloromethane   ND   1.0	Compound	Concentration *	DF		Compound	Concentration *	DF	Reporting Limit
Benzyl chloride	Acetone	180	1.0	120	Acrylonitrile	ND	1.0	4.4
Bromoform	tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
1.3-Butadiene	Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
LButyl alcohol (TBA)	Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
Carbon Tetrachloride	1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
Chloroethane	t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Chloromethane	Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Dibromochloromethane   ND	Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
1,2-Dibromoethane (EDB)	Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
1,3-Dichlorobenzene	Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
Dichlorodifluoromethane	1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,2-Dichloroethane (1,2-DCA)	1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
cis-1,2-Dichloroethene         ND         1.0         8.1         trans-1,2-Dichloroethene         ND         1.0           1,2-Dichloropropane         ND         1.0         9.4         cis-1,3-Dichloropropene         ND         1.0           Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND         1.0           Ethanol         ND         1.0         8.5         1,4-Dioxane         ND         1.0           Ethyl ether (ETBE)         ND         1.0         8.5         Ethyl acetate         ND         1.0           Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND         1.0           4-Ethyltoluene         ND         1.0         10         Freon 113         ND         1.0           4-Ethyltoluene         ND         1.0         10         Freon 113         ND         1.0           4-Ethyltoluene         ND         1.0         180         2-Hexanone         ND         1.0           4-Ethyltoluene         ND         1.0         180         2-Hexanone         ND         1.0           4-Methyl-2-pentanone (MIBK)         ND         1.0         180         2-Hexanone         ND<	Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloropropane	1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
trans-1,3-Dichloropropene         ND         1.0         9.2         1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND         1.0           Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND         1.0           Ethanol         ND         1.0         96         Ethyl acetate         ND         1.0           Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND         1.0           4-Ethyltoluene         ND         1.0         10         Freon 113         ND         1.0           Heptane         ND         1.0         210         Hexachlorobutadiene         ND         1.0           Hexane         ND         1.0         180         2-Hexanone         ND         1.0           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND         1.0           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND         1.0           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND         1.0           4-Euthyllouere         ND         1.0 <td>cis-1,2-Dichloroethene</td> <td>ND</td> <td>1.0</td> <td>8.1</td> <td>trans-1,2-Dichloroethene</td> <td>ND</td> <td>1.0</td> <td>8.1</td>	cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
Diisopropyl ether (DIPE)	1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
Diisopropyl ether (DIPE)	trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Ethanol	Diisopropyl ether (DIPE)	ND	1.0	8.5		ND	1.0	7.3
A-Ethyltoluene	1 12	ND	1.0	96	Ethyl acetate	ND	1.0	19
A-Ethyltoluene	Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
Hexane		ND	1.0	10	Freon 113	ND	1.0	16
4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND         1.0           Methylene chloride         ND         1.0         7.1         Naphthalene         ND         1.0           Propene         ND         1.0         88         Styrene         ND         1.0           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND         1.0           Tetrachloroethene         140         1.0         14         Tetrahydrofuran         32         1.0           Toluene         ND         1.0         7.7         1,2,4-Trichlorobenzene         ND         1.0           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND         1.0           Trichloroethene         ND         1.0         11         Trichloroethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         11         Trichloroethane         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         180         Vinyl Chlo	Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Methylene chloride         ND         1.0         7.1         Naphthalene         ND         1.0           Propene         ND         1.0         88         Styrene         ND         1.0           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND         1.0           Tetrachloroethene         140         1.0         14         Tetrahydrofuran         32         1.0           Toluene         ND         1.0         7.7         1,2,4-Trichloroethane         ND         1.0           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND         1.0           Trichloroethene         ND         1.0         11         Trichlorofluoromethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27         ND         1.0         ND         1.0           Surrogate Recoveries (%)           %SS1:         85	•	ND	1.0	180	2-Hexanone	ND	1.0	210
Methylene chloride         ND         1.0         7.1         Naphthalene         ND         1.0           Propene         ND         1.0         88         Styrene         ND         1.0           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND         1.0           Tetrachloroethene         140         1.0         14         Tetrahydrofuran         32         1.0           Toluene         ND         1.0         7.7         1,2,4-Trichlorobenzene         ND         1.0           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND         1.0           Trichloroethene         ND         1.0         11         Trichlorofluoromethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27         ND         1.0         ND         1.0           Surrogate Recoveries (%)         85         85         85	4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Propene         ND         1.0         88         Styrene         ND         1.0           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND         1.0           Tetrachloroethene         140         1.0         14         Tetrahydrofuran         32         1.0           Toluene         ND         1.0         7.7         1,2,4-Trichlorobenzene         ND         1.0           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND         1.0           Trichloroethene         ND         1.0         11         Trichlorofluoromethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27         Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         ***********************************		ND	1.0	7.1	Naphthalene	ND	1.0	11
1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND         1.0           Tetrachloroethene         140         1.0         14         Tetrahydrofuran         32         1.0           Toluene         ND         1.0         7.7         1,2,4-Trichloroetnee         ND         1.0           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND         1.0           Trichloroethene         ND         1.0         11         Trichlorofluoromethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27         Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         85		ND	1.0	1	1	ND	1.0	8.6
Tetrachloroethene         140         1.0         14         Tetrahydrofuran         32         1.0           Toluene         ND         1.0         7.7         1,2,4-Trichlorobenzene         ND         1.0           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND         1.0           Trichloroethene         ND         1.0         11         Trichlorofluoromethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27         Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         ***********************************	•	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Toluene         ND         1.0         7.7         1,2,4-Trichlorobenzene         ND         1.0           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND         1.0           Trichloroethene         ND         1.0         11         Trichlorofluoromethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27               85           %SS1:         87         %SS2:         85           %SS3:         82             ND         1.0	Tetrachloroethene	140	1.0	14	1	32		6.0
1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND         1.0           Trichloroethene         ND         1.0         11         Trichlorofluoromethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27           Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         85				+	1			15
Trichloroethene         ND         1.0         11         Trichlorofluoromethane         ND         1.0           1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27         Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         85								11
1,2,4-Trimethylbenzene         ND         1.0         10         1,3,5-Trimethylbenzene         ND         1.0           Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         85	, ,	<u> </u>			, ,			11
Vinyl Acetate         ND         1.0         180         Vinyl Chloride         ND         1.0           Xylenes, Total         ND         1.0         27         Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         85				- <del> </del>				10
Xylenes, Total         ND         1.0         27           Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         85				- <del> </del>				5.2
Surrogate Recoveries (%)           %SS1:         87         %SS2:         85           %SS3:         82         85	•							
%SS1:     87     %SS2:     85       %SS3:     82		· · · · · · · · · · · · · · · · · · ·	Sur	rogate R	ecoveries (%)			
%SS3: 82	%SS1:	8'				8	5	
Comments.	Comments:					<del>,</del>		

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard



<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

Pangea Environmental Svcs., Inc. Client Project ID: #1365.002; 1187 Date Sampled: 07/03/13 Solano Ave Date Received: 07/03/13 1710 Franklin Street, Ste. 200 Client Contact: Morgan Gillies Date Extracted: 07/05/13-07/08/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 07/05/13-07/08/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Work Order: 1307138 Extraction Method: TO15

Extraction Method: 1013		Analytical	wicthou.	1013	Work Order. 1307.	136	
Lab ID			130′	7138-009A	Initial Pressure	e (psia)	12.78
Client ID			S	SSPO-4	Final Pressure	e (psia)	25.46
Matrix		Soil Gas					
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	210	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	57	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	1800	4.0	14	Tetrahydrofuran	35	1.0	6.0
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11
Trichloroethene	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				
		Sur	rogate R	ecoveries (%)			
%SS1: 87			%SS2:	8:	5		
%SS3:	8						
Comments				•			

Comments:

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard



<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

### QC SUMMARY REPORT FOR ASTM D 1946-90

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 79227 WorkOrder: 1307138

EPA Method: ASTM D 1946-90 Extraction:	thod: ASTM D 1946-90 Extraction: ASTM D 1946-90							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)		
, analyte	%	%	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
Helium	N/A	0.010	N/A	N/A	N/A	101	N/A	N/A	60 - 140		

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 79227 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307138-004A	07/03/13 12:18 PM	07/09/13	07/09/13 12:34 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

### **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 79137 WorkOrder: 1307138

EPA Method: TO15 Extraction:	TO15					5	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, mayte	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acrylonitrile	N/A	25	N/A	N/A	N/A	102	N/A	N/A	60 - 140
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140
Benzene	N/A	25	N/A	N/A	N/A	90.6	N/A	N/A	60 - 140
Benzyl chloride	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
Bromodichloromethane	N/A	25	N/A	N/A	N/A	97.6	N/A	N/A	60 - 140
Bromoform	N/A	25	N/A	N/A	N/A	83.8	N/A	N/A	60 - 140
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	96.5	N/A	N/A	60 - 140
Carbon Disulfide	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	97.2	N/A	N/A	60 - 140
Chlorobenzene	N/A	25	N/A	N/A	N/A	94.9	N/A	N/A	60 - 140
Chloroethane	N/A	25	N/A	N/A	N/A	109	N/A	N/A	60 - 140
Chloroform	N/A	25	N/A	N/A	N/A	96.5	N/A	N/A	60 - 140
Chloromethane	N/A	25	N/A	N/A	N/A	97	N/A	N/A	60 - 140
Dibromochloromethane	N/A	25	N/A	N/A	N/A	97	N/A	N/A	60 - 140
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	107	N/A	N/A	60 - 140
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	92.4	N/A	N/A	60 - 140
1,2-Dichlorobenzene	N/A	25	N/A	N/A	N/A	83.7	N/A	N/A	60 - 140
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	88	N/A	N/A	60 - 140
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	81.8	N/A	N/A	60 - 140
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	93	N/A	N/A	60 - 140
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	95.4	N/A	N/A	60 - 140
1,1-Dichloroethene	N/A	25	N/A	N/A	N/A	113	N/A	N/A	60 - 140
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	98	N/A	N/A	60 - 140
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	99.2	N/A	N/A	60 - 140
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	95.5	N/A	N/A	60 - 140
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	109	N/A	N/A	60 - 140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	N/A	25	N/A	N/A	N/A	96.5	N/A	N/A	60 - 140
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	97.9	N/A	N/A	60 - 140
1,4-Dioxane	N/A	25	N/A	N/A	N/A	93.9	N/A	N/A	60 - 140
Ethyl acetate	N/A	25	N/A	N/A	N/A	98.2	N/A	N/A	60 - 140

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

<sup>%</sup> Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

<sup>\*</sup> MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

### **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 79137 WorkOrder: 1307138

EPA Method: TO15 Extraction: T	O15					5	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, wayte	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	106	N/A	N/A	60 - 140
Ethylbenzene	N/A	25	N/A	N/A	N/A	95.5	N/A	N/A	60 - 140
Freon 113	N/A	25	N/A	N/A	N/A	95.9	N/A	N/A	60 - 140
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	85	N/A	N/A	60 - 140
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	98.7	N/A	N/A	60 - 140
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	99.2	N/A	N/A	60 - 140
Methylene chloride	N/A	25	N/A	N/A	N/A	91.6	N/A	N/A	60 - 140
Naphthalene	N/A	50	N/A	N/A	N/A	88.9	N/A	N/A	60 - 140
Styrene	N/A	25	N/A	N/A	N/A	93.8	N/A	N/A	60 - 140
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	100	N/A	N/A	60 - 140
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	87.6	N/A	N/A	60 - 140
Tetrachloroethene	N/A	25	N/A	N/A	N/A	88.6	N/A	N/A	60 - 140
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140
Toluene	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	82.8	N/A	N/A	60 - 140
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	95.8	N/A	N/A	60 - 140
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	92.7	N/A	N/A	60 - 140
Trichloroethene	N/A	25	N/A	N/A	N/A	96	N/A	N/A	60 - 140
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	93.2	N/A	N/A	60 - 140
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	90.4	N/A	N/A	60 - 140
Vinyl Chloride	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
Xylenes, Total	N/A	75	N/A	N/A	N/A	90.5	N/A	N/A	60 - 140
%SS1:	N/A	500	N/A	N/A	N/A	123	N/A	N/A	60 - 140
%SS2:	N/A	500	N/A	N/A	N/A	125	N/A	N/A	60 - 140
%SS3:	N/A	500	N/A	N/A	N/A	120	N/A	N/A	60 - 140

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

### **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 79137 WorkOrder: 1307138

EPA Method: TO15 Extraction: TO15							Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
,a.y.c	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS

#### BATCH 79137 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307138-001A	07/03/13 8:39 AM	07/05/13	07/05/13 4:15 PM	1307138-002A	07/03/13 9:45 AM	07/05/13	07/05/13 4:56 PM
1307138-003A	07/03/13 10:40 AM	07/05/13	07/05/13 5:37 PM	1307138-005A	07/03/13 1:44 PM	07/05/13	07/05/13 6:59 PM
1307138-006A	07/03/13 2:08 PM	07/05/13	07/05/13 7:40 PM	1307138-007A	07/03/13 2:56 PM	07/05/13	07/05/13 8:22 PM
1307138-008A	07/03/13 3:24 PM	07/05/13	07/05/13 9:03 PM	1307138-009A	07/03/13 3:46 PM	07/05/13	07/05/13 9:44 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 08/01/13
1710 Franklin Street, Ste. 200		Date Received: 08/01/13
1710 Hailkini Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Reported: 08/09/13
Oakland, CA 94612	Client P.O.:	Date Completed: 08/09/13

WorkOrder: 1308051

August 09, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 4 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1308051

McCAMPBELL ANALYTICAL INC.  1534 WILLOW PASS ROAD / PITTSBURG, CA 94565-1701  Website: www.mccampbell.com / Email: main@mccampbell.com  Telephone: (877) 252-9262 / Fax: (925) 252-9269  Report To: 130 13 CLANLE 12 Physical Physic					CHAIN OF CUSTODY RECORD  TURN AROUND TIME  RUSH 24 HR 48 HR 72 HR 5 DAY  EDF Required? Coelt (Normal) No Write On (DW) No  Lab Use Only							
					along a special		E Telephone	P	ressurizat	ion Gas		
L710 Frankling St #200				Pressurized By Date								
OAKLAND 946/2 E-Mail: bridgelle Panger												
Tele: (570) 435 - 8664 Fax: ( )												
Project #: /435			Project Name:	Solano Con	Helium Shroud SN#:	1.42		138	2	341		
1450	07	0		Solano Chay	Other:					-		
Sampler Signature:	87	200	my we	HIBMY	Notes:							
Field Sample ID	Colle	ection	Canister SN#	Manifold / Sampler		Soil	Co	nister Due	ster Pressure/Vacuum			
(Location)	Date Tim	Time	a ser mentales valves a secondo	Kit SN#	Analysis Requested	Indoor Air	Gas	Initial	Final	Receipt	Final	
							Ons				(psi)	
35-9	8/1/13	1200	6136	984	TO-15		X	-30	-4	B	414	
55 PO-5	1	1221	6311	989				-28	-4	Marie To	W. J. T.	
53-16	V	1236	A7523	988			W	-30	-4	12.1.1.	1. m 1. m. n.	
							177			Ten to the	4	
		_								4		
	-										14	
	+							1				
	-									Spr. W		
	+			1						1. 5. 1. 5. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		
Relinquished By:  Relinquished By:	Date: Blilis Date: Date:	Time: Time:  Time:  Time:	Received By:  Received By:		Temp (°C) :  Equipment Condition: Shipped Via:	Work Order	#:			P = 22		

## McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

✓ Email

EQuIS

ClientCode: PEO

HardCopy

Page 1 of 1

☐ J-flag

08/01/2013

☐ ThirdParty

Date Received:

1534 Willow Pass Rd (925) 252-9262

Report to:

Pittsburg, CA 94565-1701 WorkOrder: 1308051

☐ WriteOn

			Bill to:	Requested TAT:	5 days
rk Diddoll	Email:	PDiddell@nengecony.com	Rob Clark Diddoll		

Excel

Bob Clark-Riddell BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. cc:

☐ WaterTrax

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200

Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 08/01/2013 (510) 836-3700 FAX: (510) 836-3709

□ EDF

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1308051-001	SS-9	Air	8/1/2013 12:00			А										
1308051-002	SSPO-5	Air	8/1/2013 12:21			Α										
1308051-003	SS-16	Air	8/1/2013 12:36			Α										
1308051-004	Unused Summa	Air	8/1/2013		Α											

#### Test Legend:

1 PRUNUSEDSUMMA	2 TO15_SOIL(UG/M3)	3	4	5
6	7	8	9	10
11	12			

The following SampIDs: 001A, 002A, 003A contain testgroup. Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

## **Sample Receipt Checklist**

Client Name:	Pangea Environme	ental Svcs., Inc.			Date a	and Time Received:	8/1/2013 4	:08:05 PM
Project Name:	#1435.002; Soland	Group			LogIn	Reviewed by:		Jena Alfaro
WorkOrder N°:	1308051	Matrix: Air			Carrie	r: Rob Pringle (M	IAI Courier)	
		Cha	ain of Cu	ustody (CC	OC) Informa	<u>tion</u>		
Chain of custody	/ present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	/ signed when relinqu	ished and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody	/ agrees with sample	labels?	Yes	<b>✓</b>	No 🗌			
Sample IDs note	ed by Client on COC?		Yes	<b>✓</b>	No 🗌			
Date and Time o	of collection noted by	Client on COC?	Yes	✓	No 🗌			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌			
			Sample	Receipt I	<u>nformation</u>			
Custody seals in	itact on shipping conf	tainer/cooler?	Yes		No 🗌		NA 🗸	
Shipping contain	ner/cooler in good cor	ndition?	Yes	<b>✓</b>	No 🗌			
Samples in proper containers/bottles?			Yes	<b>✓</b>	No 🗌			
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicate	d test?	Yes	<b>✓</b>	No $\square$			
		Sample Pre	servatio	n and Hole	d Time (HT)	<u>Information</u>		
All samples rece	eived within holding ti	me?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗸	
Water - VOA via	ls have zero headspa	ace / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗹	
Sample labels ch	hecked for correct pro	eservation?	Yes	<b>✓</b>	No 🗌			
Metal - pH acceptable upon receipt (pH<2)?			Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🗸			
* NOTE: If the "N	No" box is checked, s	see comments below.						
=====					:			



Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 08/01/13
1710 Franklin Street, Ste. 200	Group	Date Received: 08/01/13
Oakland, CA 94612	Client Contact: Bob Clark-Riddell	Date Reported: 08/08/13
Oukland, OH 74012	Client P.O.:	Date Completed: 08/08/13

Work Order: 1308051

August 08, 2013

### CASE NARRATIVE REGARDING TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.

Pangea E	Environmental Svcs., Inc.		Project ID: #	‡1435.002; Se	olano	Date Sampled: 08	8/01/13		
1710 Fra	anklin Street, Ste. 200	Group				Date Received: 08	8/01/13		
1,1011		Client	Contact: Bob	Clark-Ridde	11	Date Extracted: 08	8/07/13		
Oakland,	, CA 94612	Client	P.O.:			Date Analyzed: 08	8/07/13		
		Volatile	e Organics by			n μg/m³*			
	nethod: SW5030B			cal methods: SV	V8260B			Order: 13	
Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure		Tetrachloroethene	DF	% SS	Comments
001A	SS-9	A	14.88	29.72		4800	1	114	
	Reporting Limit for DF =1;	W	psia	psia		NA	<u> </u>		NA
N	ND means not detected at or above the reporting limit	SoilGas	psia	psia		500			ıg/m³
*soil vapor	samples are reported in µg/m³.								
ND means r	not detected above the reporting limit/n	nethod detec	tion limit; N/A m	neans analyte no	t applicable	e to this analysis.			
# surrogate	diluted out of range or coelutes with an	other peak;	&) low surrogate	due to matrix ir	iterference.				
%SS = Perc DF = Dilution	cent Recovery of Surrogate Standard								

CDPH ELAP 1644 ♦ NELAP 12283CA

GM Analyst's Initial

Angela Rydelius, Lab Manager

Pange	a Environmental Svcs., Inc.		Project ID: #	#1435.002; So	olano	Date Sampled:	08/01/13	3			
17101	Franklin Street, Ste. 200	Group				Date Received:	08/01/13	3			
1/101	Tankini Street, Stc. 200	Client	Contact: Bob	Clark-Ridde	11	Date Extracted:	08/07/13	3			
Oakla	nd, CA 94612	Client	Client P.O.: Date Analyzed: 08/07/13								
		Volatile	e Organics by			n μg/m³*					
	on method: SW5030B			ical methods: SW	V8260B				Order: 13	08051	
Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure		Ethanol		DF	% SS	Comments	
003A	SS-16	A	13.23	26.38		26,000		1	96		
	Reporting Limit for DF =1; ND means not detected at or	W	psia	psia		NA				NA	
	above the reporting limit	SoilGas	psia	psia		25000			μ	.g/m³	
*soil vap	oor samples are reported in μg/m³.										
ND mean	ns not detected above the reporting limit/	method detec	tion limit; N/A m	neans analyte not	applicable	e to this analysis.					
# surroga	ate diluted out of range or coelutes with a	nother peak;	&) low surrogate	due to matrix in	terference.						
	Percent Recovery of Surrogate Standard lution Factor										

CDPH ELAP 1644 ♦ NELAP 12283CA

GM Analyst's Initial

\_\_\_\_Angela Rydelius, Lab Manager

Pange	a Environmental Svcs., Inc.		Project ID: #	#1435.002; Sc	olano	Date Sampled:	08/01/1	3		
1710	Franklin Street, Ste. 200	Group				Date Received:	08/01/1	3		
1/10	Tunkin Succe, Sec. 200	Client	Contact: Bob	Clark-Ridde	11	Date Extracted:	08/02/1	3-08/09	9/13	
Oakla	nd, CA 94612	Client	P.O.:			Date Analyzed:	08/02/1	3-08/09	9/13	
Extractio	on method: TO15			neck Compou				Work	Order: 13	308051
Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure		Isopropyl Alcohol		DF	% SS	Comments
001A	SS-9	A	14.88	29.72		ND		1	N/A	
002A	SSPO-5	A	12.94	25.78		ND		1	N/A	
003A	SS-16	A	13.23	26.38		210		4	N/A	
	Reporting Limit for DF =1; ND means not detected at or	W	psia	psia		NA				NA
	above the reporting limit	SoilGas	psia	psia		50			ļ	ıg/m³

\* leak check compound is reported in  $\mu g/m^3$ .

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

The (liquid) Leak Check reference is:

DTSC, Advisory-Active Soil Gas Investigations, April 2012, page 17, section 4.2.2.1:

"The laboratory reports should quantify and annotate all detections of the leak check compound at the reporting limit of the target analytes."

%SS = Percent Recovery of Surrogate Standard

CDPH ELAP 1644 ♦ NELAP 12283CA

DF = Dilution Factor

KF Analyst's Initial

Angela Rydelius, Lab Manager

# McCampbell Analytical, Inc. "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc. Client Project ID: #1435.002; Solano Date Sampled: 08/01/13 Group Date Received: 08/01/13 1710 Franklin Street, Ste. 200 Client Contact: Bob Clark-Riddell Date Extracted: 08/02/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 08/02/13

### Volatile Organic Compounds in μg/m³\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1308051

Lab ID			1308	8051-001A	Initial Pressur	e (psia)	14.88
Client ID				SS-9	Final Pressur	e (psia)	29.72
Matrix				Air			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	6.2	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrahydrofuran	ND	1.0	6.0	Toluene	ND<7.7	1.0	7.71
1,2,4-Trichlorobenzene	ND	1.0	15	1,1,1-Trichloroethane	ND	1.0	11
1,1,2-Trichloroethane	ND	1.0	11	Trichloroethene	75	1.0	11
Trichlorofluoromethane ND 1.0		11	1,2,4-Trimethylbenzene	ND	1.0	10	
1,3,5-Trimethylbenzene ND 1.0 10			10	Vinyl Acetate	ND	1.0	180
Vinyl Chloride ND 1.0 5.2							
		Sur	rogate R	ecoveries (%)			
%SS1:	11			%SS2:	10	)7	-
%SS3:	10						
Comments:	·						

Comments:

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



<sup>\*</sup>vapor samples are reported in µg/m3.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

# McCampbell Analytical, Inc. "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  $http://www.mccampbell.com \, / \, E\text{-mail: } main@mccampbell.com$ 

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 08/01/13
1710 5 11 0 4 0 200	Group	Date Received: 08/01/13
1710 Franklin Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted: 08/02/13
Oakland, CA 94612	Client P.O.:	Date Analyzed: 08/02/13

### Volatile Organic Compounds in μg/m3\*

Analytical Method: TO15 Work Order: 1308051 Extraction Method: TO15

Compound   Concentration   DF	1308051-002A Initial Pressure (psia	) 12.94
Compound         Concentration *         DF         Reporting Land         Compound         Concentration *           Acetone         ND         1.0         120         Acrylonitrile         ND           Bernyl entry chloride         ND         1.0         8.5         Benzene         ND           Bernyl chloride         ND         1.0         11         Bromodichloromethane         ND           Bernyl chloride         ND         1.0         21         Bromodichloromethane         ND           Bernyl chloride         ND         1.0         21         Bromodichloromethane         ND           1,3-Butadiene         ND         1.0         4.5         2-Butanone (MEK)         ND           1,3-Butadiene         ND         1.0         6.2         Carbon Disulfide         ND           1,0         1.0         1.3         Chlorobenzene         ND           Chlorotertanic         ND         1.0         1.3         Chloroform         ND           Chloromethane         ND         1.0         4.2         Cyclohexane         ND           ND         1.0         1.7         1,2-Dichloroformane         ND         1.0         1.7         1,2-Dichloroformane         ND </td <td>SSPO-5 Final Pressure (psia</td> <td>25.78</td>	SSPO-5 Final Pressure (psia	25.78
Compound   Concentration   DF	Air	
tert-Amyl methyl ether (TAME)         ND         1.0         8.5         Benzene         ND           Benzyl chloride         ND         1.0         11         Bromodichloromethane         ND           Bromoform         ND         1.0         21         Bromomethane         ND           1,3-Butadiene         ND         1.0         4.5         2-Butanone (MEK)         ND           Li-Butyl alcohol (TBA)         ND         1.0         6.2         Carbon Disulfide         ND           Carbon Tetrachloride         ND         1.0         13         Chlorobenzene         ND           Chloroethane         ND         1.0         13         Chloroform         ND           Chloromethane         ND         1.0         4.2         Cyclohexane         ND           ND         1.0         1.7         1,2-Dibromochloropropane         ND         ND           1,2-Dibromochlane (EDB)         ND         1.0         16         1,2-Dichlorobenzene         ND           ND         1.0         1.0         1.2-Dichlorobenzene         ND         ND         1.0         1.1-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         1.1         1,1-Dichlorob		Reporting Limit
Benzyl chloride	120 Acrylonitrile ND 1.0	4.4
Bromoform	8.5 Benzene ND 1.0	6.5
1,3-Butadiene	11 Bromodichloromethane ND 1.0	14
t-Butyl alcohol (TBA)         ND         1.0         6.2         Carbon Disulfide         ND           Carbon Tetrachloride         ND         1.0         13         Chlorobenzene         ND           Chloroethane         ND         1.0         5.4         Chloroform         ND           Chloromethane         ND         1.0         4.2         Cyclohexane         ND           Dibromochloromethane         ND         1.0         17         1,2-Dibromo-3-chloropropane         ND           1,2-Dibromoethane (EDB)         ND         1.0         16         1,2-Dibrlorobenzene         ND           1,3-Dichlorobenzene         ND         1.0         12         1,4-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         10         1,1-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         8.2         1,1-Dichlorobenzene         ND           L2-Dichlorodifluoromethane         ND         1.0         8.1         trans-1,2-Dichlorobenzene         ND           Sice-1,2-Dichlorodifluoromethane         ND         1.0         8.1         trans-1,2-Dichlorobenzene         ND           1,2-Dichlorodifluoromethane         ND         1.0	21 Bromomethane ND 1.0	7.9
Carbon Tetrachloride         ND         1.0         13         Chlorobenzene         ND           Chloroethane         ND         1.0         5.4         Chloroform         ND           Chloromethane         ND         1.0         4.2         Cyclohexane         ND           Dibromochloromethane         ND         1.0         17         1,2-Dibromoe-3-chloropropane         ND           L2-Dibromochloromethane (EDB)         ND         1.0         16         1,2-Dichlorobenzene         ND           1,3-Dichlorobenzene         ND         1.0         12         1,4-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         10         1,1-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         10         1,1-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         10         1,1-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         1.0         1,1-Dichlorobenzene         ND           Dichloropholocothane         ND         1.0         8.2         1,1-Dichlorobenzene         ND           ND         1.0         8.1         trans-1,3-Dichlorophone	4.5 2-Butanone (MEK) ND 1.0	150
Chloroethane         ND         1.0         5.4         Chloroform         ND           Chloromethane         ND         1.0         4.2         Cyclohexane         ND           Dibromochloromethane         ND         1.0         17         1,2-Dibromo-3-chloropropane         ND           1,2-Dibromochlane (EDB)         ND         1.0         16         1,2-Dichlorobenzene         ND           1,3-Dichlorobenzene         ND         1.0         12         1,4-Dichlorobenzene         ND           Dichlorodiffluoromethane         ND         1.0         10         1,1-Dichlorobenzene         ND           Dichlorodthane (1,2-DCA)         ND         1.0         8.2         1,1-Dichlorocthane         ND           1,2-Dichlorocthane (1,2-DCA)         ND         1.0         8.2         1,1-Dichlorocthene         ND           1,2-Dichloroptopene         ND         1.0         8.1         trans-1,2-Dichlorocthene         ND           1,2-Dichloroptopane         ND         1.0         8.1         trans-1,3-Dichloroptopene         ND           ND         1.0         9.4         cis-1,3-Dichloroptopene         ND           Diisopropyl ether (DIPE)         ND         1.0         8.5         Ethylosane	6.2 Carbon Disulfide ND 1.0	6.3
Chloromethane         ND         1.0         4.2         Cyclohexane         ND           Dibromochloromethane         ND         1.0         17         1,2-Dibromo-3-chloropropane         ND           1,2-Dibromoethane (EDB)         ND         1.0         16         1,2-Dichlorobenzene         ND           1,3-Dichlorobenzene         ND         1.0         12         1,4-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         10         1,1-Dichloroethane         ND           1,2-Dichloroethane (1,2-DCA)         ND         1.0         8.2         1,1-Dichloroethene         ND           1,2-Dichloroethene         ND         1.0         8.1         trans-1,2-Dichloroethene         ND           1,2-Dichloropropane         ND         1.0         8.1         trans-1,2-Dichloroethene         ND           1,2-Dichloropropane         ND         1.0         9.4         cis-1,3-Dichloropropene         ND           1,0         9.4         cis-1,3-Dichloropropene         ND         1.0         9.2         1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND           Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND           Ethyl tert-butyl	13 Chlorobenzene ND 1.0	9.4
Dibromochloromethane         ND         1.0         17         1,2-Dibromo-3-chloropropane         ND           1,2-Dibromoethane (EDB)         ND         1.0         16         1,2-Dichlorobenzene         ND           1,3-Dichlorobenzene         ND         1.0         12         1,4-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         10         1,1-Dichloroethane         ND           1,2-Dichloroethane (1,2-DCA)         ND         1.0         8.2         1,2-Dichloroethane         ND           1,0         9.4         cis-1,3-Dichloroethane         ND         1.0         9.2         1,2-Dichloroethane         ND	5.4 Chloroform ND 1.0	9.9
1,2-Dibromoethane (EDB)         ND         1.0         16         1,2-Dichlorobenzene         ND           1,3-Dichlorobenzene         ND         1.0         12         1,4-Dichlorobenzene         ND           Dichlorodifluoromethane         ND         1.0         10         1,1-Dichloroethane         ND           1,2-Dichloroethane (1,2-DCA)         ND         1.0         8.2         1,1-Dichloroethene         ND           1,2-Dichloroptoethene         ND         1.0         8.1         trans-1,2-Dichloroethene         ND           1,2-Dichloroptopopane         ND         1.0         9.4         cis-1,3-Dichloroptopene         ND           1,2-Dichloroptopopane         ND         1.0         9.2         1,2-Dichloroptopene         ND           1,0         9.2         1,2-Dichloroptopene         ND         ND         1.0         ND           1,0         9.2         1,2-Dichloroptopene         ND	4.2 Cyclohexane ND 1.0	180
1,3-Dichlorobenzene	17 1,2-Dibromo-3-chloropropane ND 1.0	20
Dichlorodifluoromethane         ND         1.0         10         1,1-Dichloroethane         ND           1,2-Dichloroethane (1,2-DCA)         ND         1.0         8.2         1,1-Dichloroethene         ND           cis-1,2-Dichloroethene         ND         1.0         8.1         trans-1,2-Dichloroethene         ND           1,2-Dichloropropane         ND         1.0         9.4         cis-1,3-Dichloropropene         ND           trans-1,3-Dichloropropene         ND         1.0         9.2         1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND           Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND           Ethanol         ND         1.0         96         Ethyl acetate         ND           Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heyane         ND         1.0         1.0         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         <	16 1,2-Dichlorobenzene ND 1.0	12
1,2-Dichloroethane (1,2-DCA)         ND         1.0         8.2         1,1-Dichloroethene         ND           cis-1,2-Dichloroethene         ND         1.0         8.1         trans-1,2-Dichloroethene         ND           1,2-Dichloropropane         ND         1.0         9.4         cis-1,3-Dichloropropene         ND           trans-1,3-Dichloropropene         ND         1.0         9.2         1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND           Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND           Ethanol         ND         1.0         96         Ethyl acetate         ND           Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heptane         ND         1.0         180         2-Hexanone         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         88         Styrene	12 1,4-Dichlorobenzene ND 1.0	12
cis-1,2-Dichloroethene         ND         1.0         8.1         trans-1,2-Dichloroethene         ND           1,2-Dichloropropane         ND         1.0         9.4         cis-1,3-Dichloropropene         ND           trans-1,3-Dichloropropene         ND         1.0         9.2         1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND           Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND           Ethanol         ND         1.0         96         Ethyl acetate         ND           Ethyl tetr-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heptane         ND         1.0         10         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37     <	10 1,1-Dichloroethane ND 1.0	8.2
1,2-Dichloropropane         ND         1.0         9.4         cis-1,3-Dichloropropene         ND           trans-1,3-Dichloropropene         ND         1.0         9.2         1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND           Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND           Ethanol         ND         1.0         96         Ethyl acetate         ND           Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heptane         ND         1.0         210         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         8.8         Styrene         37           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Toluene         ND         7.71         1.0         7.71         1,2,4-Trichlor	8.2 1,1-Dichloroethene ND 1.0	8.1
trans-1,3-Dichloropropene         ND         1.0         9.2         1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND           Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND           Ethanol         ND         1.0         96         Ethyl acetate         ND           Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heptane         ND         1.0         210         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Toluene         ND         1.0         1.1         1,2,4-Trichloroethane         ND      <	8.1 trans-1,2-Dichloroethene ND 1.0	8.1
Diisopropyl ether (DIPE)         ND         1.0         8.5         1,4-Dioxane         ND           Ethanol         ND         1.0         96         Ethyl acetate         ND           Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heptane         ND         1.0         210         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Toluene         ND         1.0         7.71         1,2,4-Trichloroethane         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2,4-Trichloroethane         ND	9.4 cis-1,3-Dichloropropene ND 1.0	9.2
Ethanol         ND         1.0         96         Ethyl acetate         ND           Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heptane         ND         1.0         210         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Toluene         ND         7.71         1,2,4-Trichloroethane         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	9.2 1,2-Dichloro-1,1,2,2-tetrafluoroethane ND 1.0	14
Ethyl tert-butyl ether (ETBE)         ND         1.0         8.5         Ethylbenzene         ND           4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heptane         ND         1.0         210         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Toluene         ND         1.0         7.71         1,2,4-Trichloroethane         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	8.5 1,4-Dioxane ND 1.0	7.3
4-Ethyltoluene         ND         1.0         10         Freon 113         ND           Heptane         ND         1.0         210         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Tetrachloroethene         41         1.0         14         Tetrahydrofuran         ND           Toluene         ND         7.71         1,2,4-Trichloroethane         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	96 Ethyl acetate ND 1.0	19
Heptane         ND         1.0         210         Hexachlorobutadiene         ND           Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Tetrachloroethene         41         1.0         14         Tetrahydrofuran         ND           Toluene         ND         7.71         1,2,4-Trichloroethane         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	8.5 Ethylbenzene ND 1.0	8.8
Hexane         ND         1.0         180         2-Hexanone         ND           4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Tetrachloroethene         41         1.0         14         Tetrahydrofuran         ND           Toluene         ND         7.71         1,2,4-Trichloroebenzene         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	10 Freon 113 ND 1.0	16
4-Methyl-2-pentanone (MIBK)         ND         1.0         8.3         Methyl-t-butyl ether (MTBE)         ND           Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Tetrachloroethene         41         1.0         14         Tetrahydrofuran         ND           Toluene         ND         7.71         1,2,4-Trichlorobenzene         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	210 Hexachlorobutadiene ND 1.0	22
Methylene chloride         ND         1.0         7.1         Naphthalene         ND           Propene         ND         1.0         88         Styrene         37           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Tetrachloroethene         41         1.0         14         Tetrahydrofuran         ND           Toluene         ND         7.71         1,2,4-Trichloroethane         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	180 2-Hexanone ND 1.0	210
Propene         ND         1.0         88         Styrene         37           1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Tetrachloroethene         41         1.0         14         Tetrahydrofuran         ND           Toluene         ND         7.71         1,2,4-Trichloroethane         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	8.3 Methyl-t-butyl ether (MTBE) ND 1.0	7.3
1,1,1,2-Tetrachloroethane         ND         1.0         14         1,1,2,2-Tetrachloroethane         ND           Tetrachloroethene         41         1.0         14         Tetrahydrofuran         ND           Toluene         ND         7.7         1.0         7.71         1,2,4-Trichloroethane         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	7.1 Naphthalene ND 1.0	11
Tetrachloroethene         41         1.0         14         Tetrahydrofuran         ND           Toluene         ND         7.71         1,2,4-Trichlorobenzene         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	88 Styrene 37 1.0	8.6
Toluene         ND<7.7         1.0         7.71         1,2,4-Trichlorobenzene         ND           1,1,1-Trichloroethane         ND         1.0         11         1,1,2-Trichloroethane         ND	14 1,1,2,2-Tetrachloroethane ND 1.0	14
1,1,1-Trichloroethane ND 1.0 11 1,1,2-Trichloroethane ND	14 Tetrahydrofuran ND 1.0	6.0
	7.71 1,2,4-Trichlorobenzene ND 1.0	15
Trichloroethene ND 1.0 11 Trichlorofluoromethane ND	11 1,1,2-Trichloroethane ND 1.0	11
	11 Trichlorofluoromethane ND 1.0	11
1,2,4-Trimethylbenzene ND 1.0 10 1,3,5-Trimethylbenzene ND	10 1,3,5-Trimethylbenzene ND 1.0	10
Vinyl Acetate ND 1.0 180 Vinyl Chloride ND		5.2
Xylenes, Total ND 1.0 27		
Surrogate Recoveries (%)	urrogate Recoveries (%)	
%SS3: 110		
Comments:		

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

# McCampbell Analytical, Inc. "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc. Client Project ID: #1435.002; Solano Date Sampled: 08/01/13 Group Date Received: 08/01/13 1710 Franklin Street, Ste. 200 Client Contact: Bob Clark-Riddell Date Extracted: 08/02/13-08/09/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 08/02/13-08/09/13

### Volatile Organic Compounds in μg/m³\*

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1308051

Lab ID			1308	8051-003A	Initial Pressur	e (psia)	13.23
Client ID				SS-16	Final Pressur	e (psia)	26.38
Matrix				Air			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	1500	4.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	6.2	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethyl acetate	350	1.0	19	Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5
Ethylbenzene	ND	1.0	8.8	4-Ethyltoluene	ND	1.0	10
Freon 113	ND	1.0	16	Heptane	ND	1.0	210
Hexachlorobutadiene	ND	1.0	22	Hexane	ND	1.0	180
2-Hexanone	ND	1.0	210	4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3
Methyl-t-butyl ether (MTBE)	ND	1.0	7.3	Methylene chloride	ND	1.0	7.1
Naphthalene	ND	1.0	11	Propene	ND	1.0	88
Styrene	ND	1.0	8.6	1,1,1,2-Tetrachloroethane	ND	1.0	14
1,1,2,2-Tetrachloroethane	ND	1.0	14	Tetrachloroethene	1400	1.0	14
Tetrahydrofuran	ND	1.0	6.0	Toluene	ND<7.7	1.0	7.71
1,2,4-Trichlorobenzene	ND	1.0	15	1,1,1-Trichloroethane	ND	1.0	11
1,1,2-Trichloroethane	ND	1.0	11	Trichloroethene	ND	1.0	11
Trichlorofluoromethane ND		1.0	11	1,2,4-Trimethylbenzene	ND	1.0	10
1,3,5-Trimethylbenzene ND 1.0			10	Vinyl Acetate	ND	1.0	180
Vinyl Chloride	ND	5.2					
		Sur	rogate R	ecoveries (%)			
%SS1:	10	)8		%SS2:	10	)9	
%SS3:	11	13					
Commonto							

Comments:

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



<sup>\*</sup>vapor samples are reported in µg/m3.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soilgas QC Matrix: Water BatchID: 80313 WorkOrder: 1308051

EPA Method: SW8260B Extraction:	SW5030B						Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, maye	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	N/A	20	N/A	N/A	N/A	94.3	N/A	N/A	70 - 130
Benzene	N/A	20	N/A	N/A	N/A	93.9	N/A	N/A	70 - 130
t-Butyl alcohol (TBA)	N/A	80	N/A	N/A	N/A	85.8	N/A	N/A	70 - 130
Chlorobenzene	N/A	20	N/A	N/A	N/A	90.1	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	N/A	20	N/A	N/A	N/A	90.9	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	N/A	20	N/A	N/A	N/A	87.5	N/A	N/A	70 - 130
1,1-Dichloroethene	N/A	20	N/A	N/A	N/A	104	N/A	N/A	70 - 130
Diisopropyl ether (DIPE)	N/A	20	N/A	N/A	N/A	97.8	N/A	N/A	70 - 130
Ethyl tert-butyl ether (ETBE)	N/A	20	N/A	N/A	N/A	95.3	N/A	N/A	70 - 130
Methyl-t-butyl ether (MTBE)	N/A	20	N/A	N/A	N/A	90.4	N/A	N/A	70 - 130
Toluene	N/A	20	N/A	N/A	N/A	90.6	N/A	N/A	70 - 130
Trichloroethene	N/A	20	N/A	N/A	N/A	92.1	N/A	N/A	70 - 130
%SS1:	N/A	25	N/A	N/A	N/A	95	N/A	N/A	70 - 130
%SS2:	N/A	25	N/A	N/A	N/A	89	N/A	N/A	70 - 130
%SS3:	N/A	2.5	N/A	N/A	N/A	91	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

### BATCH 80313 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1308051-003A	08/01/13 12:36 PM	1 08/07/13	08/07/13 9:33 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soilgas QC Matrix: Water BatchID: 80328 WorkOrder: 1308051

EPA Method: SW8260B Extraction: S	W5030B					5	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, mary c	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	N/A	10	N/A	N/A	N/A	132, F1	N/A	N/A	70 - 130
Benzene	N/A	10	N/A	N/A	N/A	105	N/A	N/A	70 - 130
t-Butyl alcohol (TBA)	N/A	40	N/A	N/A	N/A	98.2	N/A	N/A	70 - 130
Chlorobenzene	N/A	10	N/A	N/A	N/A	96.7	N/A	N/A	70 - 130
1,2-Dibromoethane (EDB)	N/A	10	N/A	N/A	N/A	103	N/A	N/A	70 - 130
1,2-Dichloroethane (1,2-DCA)	N/A	10	N/A	N/A	N/A	103	N/A	N/A	70 - 130
1,1-Dichloroethene	N/A	10	N/A	N/A	N/A	100	N/A	N/A	70 - 130
Diisopropyl ether (DIPE)	N/A	10	N/A	N/A	N/A	116	N/A	N/A	70 - 130
Ethyl tert-butyl ether (ETBE)	N/A	10	N/A	N/A	N/A	112	N/A	N/A	70 - 130
Methyl-t-butyl ether (MTBE)	N/A	10	N/A	N/A	N/A	105	N/A	N/A	70 - 130
Toluene	N/A	10	N/A	N/A	N/A	98.5	N/A	N/A	70 - 130
Trichloroethene	N/A	10	N/A	N/A	N/A	102	N/A	N/A	70 - 130
%SS1:	N/A	25	N/A	N/A	N/A	120	N/A	N/A	70 - 130
%SS2:	N/A	25	N/A	N/A	N/A	109	N/A	N/A	70 - 130
%SS3:	N/A	2.5	N/A	N/A	N/A	100	N/A	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

F1 = MS/MSD recovery and/or %RPD was out of acceptance criteria; LCS validated the prep batch.

### BATCH 80328 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1308051-001A	08/01/13 12:00 PM	1 08/07/13	08/07/13 9:08 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

### **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 80224 WorkOrder: 1308051

EPA Method: TO15 Extrac	tion: TO15						Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, may c	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acrylonitrile	N/A	25	N/A	N/A	N/A	94.3	N/A	N/A	60 - 140
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	93.6	N/A	N/A	60 - 140
Benzene	N/A	25	N/A	N/A	N/A	86.7	N/A	N/A	60 - 140
Benzyl chloride	N/A	25	N/A	N/A	N/A	112	N/A	N/A	60 - 140
Bromodichloromethane	N/A	25	N/A	N/A	N/A	98.5	N/A	N/A	60 - 140
Bromoform	N/A	25	N/A	N/A	N/A	113	N/A	N/A	60 - 140
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	83.3	N/A	N/A	60 - 140
Carbon Disulfide	N/A	25	N/A	N/A	N/A	91.1	N/A	N/A	60 - 140
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	98.9	N/A	N/A	60 - 140
Chlorobenzene	N/A	25	N/A	N/A	N/A	97.5	N/A	N/A	60 - 140
Chloroethane	N/A	25	N/A	N/A	N/A	97	N/A	N/A	60 - 140
Chloroform	N/A	25	N/A	N/A	N/A	92.1	N/A	N/A	60 - 140
Chloromethane	N/A	25	N/A	N/A	N/A	78.5	N/A	N/A	60 - 140
Dibromochloromethane	N/A	25	N/A	N/A	N/A	107	N/A	N/A	60 - 140
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	98.4	N/A	N/A	60 - 140
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	99.4	N/A	N/A	60 - 140
1,2-Dichlorobenzene	N/A	25	N/A	N/A	N/A	96.6	N/A	N/A	60 - 140
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	96.1	N/A	N/A	60 - 140
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
Dichlorodifluoromethane	N/A	25	N/A	N/A	N/A	91.4	N/A	N/A	60 - 140
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	90.2	N/A	N/A	60 - 140
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	95.7	N/A	N/A	60 - 140
1,1-Dichloroethene	N/A	25	N/A	N/A	N/A	95.2	N/A	N/A	60 - 140
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	94.8	N/A	N/A	60 - 140
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	92.4	N/A	N/A	60 - 140
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	99.4	N/A	N/A	60 - 140
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	N/A	25	N/A	N/A	N/A	88.1	N/A	N/A	60 - 140
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	87.7	N/A	N/A	60 - 140
1,4-Dioxane	N/A	25	N/A	N/A	N/A	97.7	N/A	N/A	60 - 140

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

<sup>%</sup> Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

<sup>\*</sup> MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

### **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 80224 WorkOrder: 1308051

EPA Method: TO15 Extraction:	ГО15					;	Spiked Sam	ple ID:	N/A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, mayte	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Ethyl acetate	N/A	25	N/A	N/A	N/A	87.2	N/A	N/A	60 - 140
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	91.7	N/A	N/A	60 - 140
Ethylbenzene	N/A	25	N/A	N/A	N/A	90.3	N/A	N/A	60 - 140
Freon 113	N/A	25	N/A	N/A	N/A	90.4	N/A	N/A	60 - 140
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	93.5	N/A	N/A	60 - 140
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	91	N/A	N/A	60 - 140
Methylene chloride	N/A	25	N/A	N/A	N/A	73.8	N/A	N/A	60 - 140
Naphthalene	N/A	50	N/A	N/A	N/A	101	N/A	N/A	60 - 140
Styrene	N/A	25	N/A	N/A	N/A	99.2	N/A	N/A	60 - 140
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	97.4	N/A	N/A	60 - 140
Tetrachloroethene	N/A	25	N/A	N/A	N/A	95.6	N/A	N/A	60 - 140
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	89.1	N/A	N/A	60 - 140
Toluene	N/A	25	N/A	N/A	N/A	83.8	N/A	N/A	60 - 140
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	105	N/A	N/A	60 - 140
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	95.4	N/A	N/A	60 - 140
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	96.6	N/A	N/A	60 - 140
Trichloroethene	N/A	25	N/A	N/A	N/A	97.7	N/A	N/A	60 - 140
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	95.3	N/A	N/A	60 - 140
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	97.1	N/A	N/A	60 - 140
Vinyl Chloride	N/A	25	N/A	N/A	N/A	98.2	N/A	N/A	60 - 140
Xylenes, Total	N/A	75	N/A	N/A	N/A	94.7	N/A	N/A	60 - 140
%SS1:	N/A	500	N/A	N/A	N/A	106	N/A	N/A	60 - 140
%SS2:	N/A	500	N/A	N/A	N/A	107	N/A	N/A	60 - 140
%SS3:	N/A	500	N/A	N/A	N/A	110	N/A	N/A	60 - 140

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

### **QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas QC Matrix: Soilgas BatchID: 80224 WorkOrder: 1308051

EPA Method: TO15 Extraction: TO15 Spiked Sample ID: N/A									N/A	
	Analyte	Sample	Spiked	MS	MSD	D MS-MSD LCS Acceptance Crit			Criteria (%)	
	,, c	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS

### **BATCH 80224 SUMMARY**

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1308051-001A	08/01/13 12:00 PM	08/02/13	08/02/13 8:41 PM	1308051-002A	08/01/13 12:21 PM	08/02/13	08/02/13 9:25 PM
1308051-003A	08/01/13 12:36 PM	08/02/13	08/02/13 10:09 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 08/07/13
1710 Franklin Street, Ste. 200		Date Received: 08/13/13
1770 17411111111 54664, 566. 200	Client Contact: Bob Clark-Riddell	Date Reported: 08/16/13
Oakland, CA 94612	Client P.O.:	Date Completed: 08/15/13

WorkOrder: 1308416

August 16, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager

McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

CHAIN OF CUSTODY RECORD COUND TIME McCAMPBELL ANALYTICAL, INC. TURN AROUND TIME PITTSBURG, CA 94565-1701 RUSH 24 HR 48 HR 72 HR 5 DAY Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) Telephone: (925) 252-9262 Fax: (925) 798-1622 Bill To: Bob Clark-Riddell Report To: Bob Clark-Riddell Analysis Request Comments Other Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Fotal Petroleum Oil & Grease (5520 E&F/B&F) Samples PAH's / PNA's by EPA 625 / 8270 / 8310 E-Mail: briddell@pangeaenv.com for Metals Tele: (510) 836-3702 Fax: (510) 836-3709 analysis: Project #: 1435 002 Project Name: Sokuo Group BTEX ONLY (EPA 602 / 8020) Yes / No EPA 608 / 8082 PCB's ONLY Project Location: (187 Sakus Ale Alban y Sampler Signature: Proposition of the Alban y CAM-17 Metals (6010 / 6020) LUFT 5 Metals (6010 / 6020) EPA 601 8010/8021 EPA 524.2 / 624 / 8260 TPH as Diesel (8015) METHOD EPA 525 / 625 / 8270 SAMPLING MATRIX PRESERVED EPA 8140 / 8141 EPA 8150 / 8151 SAMPLE ID BTEX & TPH LOCATION (Field Point Name) Time Date HNO, Other HCL ICE Relinguished By Received By: GOOD CONDITION Time: COMMENTS: 200 HEAD SPACE ABSENT Relinquished By: Received By: Date: Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB

VOAS O&G METALS OTHER

pH<2

PRESERVATION

Relinguished By

Bate:

Time:

Received By:

# McCampbell Analytical, Inc.

F-1-2

F-2-2.5

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1308416

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

ab ID Client ID		Matrix	Collection Date	Hold	1	2	3	Reque 4	sted Tes 5 6	ts (See le	gend b	elow)	10	11	12
Bob Clark-Riddell Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 (510) 836-3700 FAX: (510) 836-3709	cc: PO: ProjectNo: #	Riddell@pang 1435.002; Sola				Pange 1710		onmental Street, S		nc.		Received: Printed:	•	08/13/2 08/13/2	
Report to:	WaterTrax	WriteOn	<b>✓</b> EDF	E>		l to:	EQuIS	<b>✓</b> Em	ail	Hard		☐ ThirdPar	ty	☐ J-fla	ag d <b>ays</b>
(923) 232-9262															

Α

Α

Α

8/7/2013 16:45

8/7/2013 16:15

Soil

Soil

### Test Legend:

1308416-001

1308416-002

1 8010BMS_S	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

**Comments:** 

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Prepared by: Jena Alfaro

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date a	and Time Received:	8/13/2013 6	:02:18 PM
Project Name:	#1435.002; Solano G	Group			LogIn	Reviewed by:		Jena Alfaro
WorkOrder N°:	1308416	Matrix: Soil			Carrie	er: Rob Pringle (M	IAI Courier)	
		Chain	of Cu	ıstody (CO	C) Informa	tion		
Chain of custody	present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquish	ned and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody agrees with sample labels?			Yes	<b>✓</b>	No 🗌			
Sample IDs noted by Client on COC?			Yes	<b>✓</b>	No 🗌			
Date and Time of collection noted by Client on COC?			Yes	<b>✓</b>	No 🗌			
Sampler's name noted on COC?			Yes	<b>✓</b>	No 🗌			
		<u>s</u>	ample	Receipt In	<u>formation</u>			
Custody seals int	act on shipping contain	ner/cooler?	Yes		No 🗌		NA 🗹	
Shipping containe	er/cooler in good condi	tion?	Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bottles?		Yes	✓	No 🗌			
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No 🗌			
		Sample Prese	rvatio	n and Hold	Time (HT)	Information		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌			
Container/Temp I	Blank temperature		Coole	r Temp: 2	2.3°C		NA $\square$	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗸	
Sample labels ch	ecked for correct pres	ervation?	Yes	✓	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?		Yes	✓	No 🗌			
		(Ice Type	: WE	TICE )				
* NOTE: If the "N	lo" box is checked, see	comments below.						
								======

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Pangea Environmental Svcs., Inc.	,	Date Sampled: 08/07/13
1710 Franklin Street, Ste. 200	Group	Date Received: 08/13/13
	Client Contact: Bob Clark-Riddell	Date Extracted 08/13/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 08/14/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1308416-001A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1308416

Client ID		F-1-2											
Matrix				Soil									
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit						
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005						
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005						
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005						
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005						
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004						
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005						
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005						
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004						
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005						
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005						
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005						
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005						
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005						
Tetrachloroethene	0.0075	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005						
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005						
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005						

Surrogate Recoveries (%)								
%SS1:	111	%SS2:	123					
%SS3:	119							
Comments:								

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	3	Date Sampled: 08/07/13
1710 Franklin Street, Ste. 200	Group	Date Received: 08/13/13
	Client Contact: Bob Clark-Riddell	Date Extracted 08/13/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 08/14/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1308416-002A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1308416

Client ID				F-2-2.5			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.014	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
%SS1:	110	%SS2:	124						
%SS3:	117								
Comments:									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 80520 WorkOrder: 1308416

EPA Method: SW8260B Extraction: SW5030B Spiked Sample ID: N/A											
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	Criteria (%)			
, maye	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS		
Chlorobenzene	N/A	0.050	N/A	N/A	N/A	91.3	N/A	N/A	70 - 130		
1,2-Dibromoethane (EDB)	N/A	0.050	N/A	N/A	N/A	89.6	N/A	N/A	70 - 130		
1,2-Dichloroethane (1,2-DCA)	N/A	0.050	N/A	N/A	N/A	88	N/A	N/A	70 - 130		
1,1-Dichloroethene	N/A	0.050	N/A	N/A	N/A	101	N/A	N/A	70 - 130		
Trichloroethene	N/A	0.050	N/A	N/A	N/A	93.3	N/A	N/A	70 - 130		
%SS1:	N/A	0.12	N/A	N/A	N/A	107	N/A	N/A	70 - 130		
%SS2:	N/A	0.12	N/A	N/A	N/A	104	N/A	N/A	70 - 130		
%SS3:	N/A	0.012	N/A	N/A	N/A	105	N/A	N/A	70 - 130		

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 80520 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1308416-001A	08/07/13 4:45 PM	08/13/13	08/14/13 2:45 PM	1308416-002A	08/07/13 4:15 PM	08/13/13	08/14/13 3:22 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

SH QA/QC Officer

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 08/15/13
1710 Franklin Street, Ste. 200		Date Received: 08/15/13
1710 Hailkini Street, Sec. 200	Client Contact: Bob Clark-Riddell	Date Reported: 08/21/13
Oakland, CA 94612	Client P.O.:	Date Completed: 08/21/13

WorkOrder: 1308563

August 21, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 5 analyzed samples from your project: #1435.002; Solano Group,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR 48 HR 72 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Bob Clark-Riddell Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: briddell@pangeaenv.com for Metals Tele: (510) 435-8664 Fax: (510) 836-3709 analysis: Project Name: Solano Group Project #: 1435.002 Yes / No VOCs by EPA MEthod 8010 Project Location: 1187 Solano Ave, Albany VOCs by EPA Method 8260 Brightellis Sampler Signature: METHOD SAMPLING MATRIX Type Containers PRESERVED Containers LOCATION SAMPLE ID TPHg/BTEX (Field Point Sludge HNO3 Name) Date Time ICE SW-N1-21 8/15/13 10:00 5W- N2-11 10:15 10.30 SW-W-1' 11213 11:30 Relinquished By: Received By: ICE/tº COMMENTS: GOOD CONDITION HEAD SPACE ABSENT ESTIMATE Relinquished By Date: Received By Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS LOW TO ND PRESERVED IN LAB Relinquished By: , Date: Received By: VOAS O&G METALS OTHER PRESERVATION pH<2

#### McCAMPBELL ANALYTICAL, INC. **CHAIN OF CUSTODY RECORD** 1534 Willow Pass Road **TURN AROUND TIME** Pittsburg, CA 94565 RUSH 24 HR 48 HR 72 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) No Fax: (925) 252-9269 Telephone: (925) 252-9262 Report To: Bob Clark-Riddell Bill To: Pangea **Analysis Request** Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: briddell@pangeaenv.com for Metals Fax: (510) 836-3709 Tele: (510) 435-8664 analysis: Project #: 1435.002 Project Name: Solano Group Yes / No Five fuel oxygenates (8260B) Project Location: 1187 Solano Ave, Albany Got Suddell Sampler Signature: METHOD MATRIX SAMPLING Type Containers PRESERVED Containers LOCATION SAMPLE ID (Field Point Sludge Water Other HNO3 Name) Date Time SW-N1-21 10:00 5W-N2-11 10:15 SW-W-1' F-3-3! 10:30 11213 11:30 3 per Bob 8/16/13 Time: Relinquished By: Received By: ICE/t° COMMENTS: GOOD CONDITION HEAD SPACE ABSENT ESTIMATE LOW TO ND Relinquished By: Date: Received By Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Received By: Time: VOAS O&G METALS OTHER PRESERVATION pH<2

# McCampbell Analytical, Inc.

FAX: (510) 836-3709

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1308563

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(510) 836-3700

☐ WaterTrax WriteOn **▼** EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag Report to: Bill to: Requested TAT: 5 days Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 08/15/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 08/16/2013

					Requested Tests (See legend below)												
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3		4	5	6	7	8	9	10	11	12
1308563-001	SW-N1-2'	Soil	8/15/2013 10:00		Α	Α											
1308563-002	SW-N2-1'	Soil	8/15/2013 10:15		Α												
1308563-003	SW-W-1'	Soil	8/15/2013 10:30		Α												
1308563-004	F-3-3'	Soil	8/15/2013 11:15		Α												
1308563-005	F-4-3'	Soil	8/15/2013 11:30		Α												

#### **Test Legend:**

1	8010BMS_S	2 PREDF REPORT	3	]	4	5
6		7	8		9	10
11		12				

Prepared by: Zoraida Cortez

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

# **Sample Receipt Checklist**

Jilent Name:	Pangea Enviro								1 Time Received: 8/15/2013	6:44:19 PW
Project Name:	#1435.002; Sc	olano Group	)				LogI	n Re	eviewed by:	Zoraida Cortez
WorkOrder N°:	1308563	Mat	rix: <u>Soil</u>				Carr	ier:	Rob Pringle (MAI Courier)	
				Chain o	of Cu	stody (	COC) Inform	atio	<u>n</u>	
Chain of custody	present?			Υ	'es	<b>✓</b>	No 🗌			
Chain of custody	signed when re	linquished a	ınd receive	d? Y	'es	<b>✓</b>	No 🗌			
Chain of custody	agrees with sar	mple labels?	•	Υ	'es	<b>✓</b>	No 🗌			
Sample IDs note	d by Client on C	OC?		Υ	'es	<b>✓</b>	No 🗌			
Date and Time of	f collection note	d by Client o	on COC?	Υ	'es	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?			Υ	'es	<b>✓</b>	No 🗌			
				<u>Sar</u>	nple	Receip	<u>t Informatio</u>	<u>n</u>		
Custody seals int	tact on shipping	container/c	ooler?	Υ	'es		No 🗌		NA 🗸	
Shipping contain	er/cooler in good	d condition?		Υ	'es	<b>✓</b>	No 🗌			
Samples in prope	er containers/bo	ttles?		Υ	'es	<b>✓</b>	No 🗌			
Sample containe	rs intact?			Υ	'es	<b>✓</b>	No 🗌			
Sufficient sample	volume for indi	cated test?		Υ	'es	<b>✓</b>	No 🗌			
			Sample	Preserv	atio	n and H	old Time (H	Γ) Inf	<u>formation</u>	
All samples recei	ived within holdi	ng time?		Υ	'es	<b>✓</b>	No 🗌			
Container/Temp	Blank temperatu	ure		С	oole	r Temp:	2°C		NA 🗌	
Water - VOA vial	s have zero hea	adspace / no	bubbles?	Υ	'es		No 🗌	No	o VOA vials submitted 🗹	
Sample labels ch	necked for corre	ct preservat	ion?	Υ	'es	<b>✓</b>	No 🗌			
Metal - pH accep	table upon rece	ipt (pH<2)?		Υ	'es		No 🗌		NA 🗹	
Samples Receive	ed on Ice?			Υ	'es	<b>✓</b>	No 🗌			
			(Ic	e Type:	WE.	T ICE	)			
* NOTE: If the "N	tell besselves to selves to		manta hale	2147						

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	,	Date Sampled: 08/15/13
1710 Franklin Street, Ste. 200	Group	Date Received: 08/15/13
1710 Plankiii Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 08/15/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 08/20/13

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1308563-001A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1308563

Client ID				SW-N1-2'			
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.016	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)									
%SS1:	106	%SS2:	103						
%SS3:	105								
Comments:									

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 08/15/13		
1710 Franklin Street, Ste. 200	Group	Date Received: 08/15/13		
1710 Plankim Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 08/15/13		
Oakland, CA 94612	Client P.O.:	Date Analyzed 08/20/13		
Oakland, CA 94612	Client P.O.:	Date Analyzed 08/20/13		

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1308563-002A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1308563

Client ID				SW-N2-1'			-
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	0.017	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	108	%SS2:	104			
%SS3:	105					
Comments:						

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	3	Date Sampled: 08/15/13
1710 Franklin Street, Ste. 200	Group	Date Received: 08/15/13
	Client Contact: Bob Clark-Riddell	Date Extracted 08/15/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 08/20/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1308563-003A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1308563

Client ID		SW-W-1'						
Matrix		Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005	
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005	
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005	
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005	
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004	
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005	
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005	
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005	
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005	
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005	
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005	
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005	
Tetrachloroethene	0.015	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005	
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005	
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005	

Surrogate Recoveries (%)					
%SS1:	108	%SS2:	103		
%SS3:	105				
Comments:					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 08/15/13
1710 Franklin Street, Ste. 200	Group	Date Received: 08/15/13
	Client Contact: Bob Clark-Riddell	Date Extracted 08/15/13
Oakland, CA 94612 Client P.O.:		Date Analyzed 08/20/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1308563-004A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1308563

Client ID		F-3-3'					
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinyl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)						
%SS1:	106	%SS2:	104			
%SS3:	108					
Comments:	·					

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 08/15/13
1710 Franklin Street, Ste. 200	Group	Date Received: 08/15/13
1710 Plankim Street, Ste. 200	Client Contact: Bob Clark-Riddell	Date Extracted 08/15/13
Oakland, CA 94612	Client P.O.:	Date Analyzed 08/21/13

### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

1308563-005A

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1308563

Client ID	F-4-3'						
Matrix				Soil			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	Vinvl Chloride	ND	1.0	0.005

Surrogate Recoveries (%)					
%SS1:	108	%SS2:	102		
%SS3:	104				

<sup>\*</sup> water and vapor samples are reported in  $\mu$ g/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 80606 WorkOrder: 1308563

EPA Method: SW8260B Extraction: S	W5030B					;	Spiked Sam	ple ID:	1308489-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%		Criteria (%)
, wally to	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	103	102	0.688	98.9	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	107	108	0.848	104	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	89.5	89	0.545	88.3	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	109	109	0	105	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	104	104	0	99.9	60 - 116	30	70 - 130
%SS1:	107	0.12	111	111	0	112	70 - 130	30	70 - 130
%SS2:	106	0.12	126	122	3.18	122	70 - 130	30	70 - 130
%SS3:	100	0.012	120	120	0	121	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 80606 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1308563-001A	08/15/13 10:00 AM	08/15/13	08/20/13 4:16 PM	1308563-002A	08/15/13 10:15 AM	08/15/13	08/20/13 4:59 PM
1308563-003A	08/15/13 10:30 AM	08/15/13	08/20/13 5:42 PM	1308563-004A	08/15/13 11:15 AM	08/15/13	08/20/13 6:24 PM
1308563-005A	08/15/13 11:30 AM	08/15/13	08/21/13 4:25 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.

# **Analytical Report**

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano Group	Date Sampled: 08/19/13
1710 Franklin Street, Ste. 200		Date Received: 08/19/13
1710 Hailkini Street, Sec. 200	Client Contact: Bob Clark-Riddell	Date Reported: 08/23/13
Oakland, CA 94612	Client P.O.:	Date Completed: 08/23/13

WorkOrder: 1308655

August 23, 2013

Dear Bob:

### Enclosed within are:

- 1) The results of the 1 analyzed sample from your project: #1435.002; Solano Group,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

#### McCAMPBELL ANALYTICAL, INC. 1534 Willow Pass Road 308 655 CHAIN OF CUSTODY RECORD TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR 48 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) Write On (DW) No Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Bob Clark-Riddell Bill To: Pangea **Analysis Request** Comments Other Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: briddell@pangeaenv.com for Metals Tele: (510) 435-8664 Fax: (510) 836-3709 analysis: Project #: 1435.002 Project Name: Solano Group Yes / No VOCs by EPA MEthod 8010 Project Location: 1187 Solano Ave, Albany Sampler Signature: METHOD Five fuel oxygenates SAMPLING MATRIX Type Containers PRESERVED Containers LOCATION SAMPLE ID (Field Point Sludge VOCs by Name) Date Time Other HNO3 Other HCL ICE Soil 5-2,5' 8/19/01/201 TVBE Received By Relinquished By: Date: Time: ICE/to COMMENTS: GOOD CONDITION HEAD SPACE ABSENT Received By: Relinguished Ba Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Date: Received By: Time: VOAS O&G METALS OTHER PRESERVATION pH<2

# McCampbell Analytical, Inc.

F-5-2.5'

Soil

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1308655 ClientCode: PEO ☐ WaterTrax WriteOn □ EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 5 days Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 08/19/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 08/19/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 5 8 Lab ID 2 3 10 12 Client ID Matrix Collection Date Hold 4 11

Α

8/19/2013 12:00

### **Test Legend:**

1308655-001

1 8010BMS_S	2	3	4	5	
6	7	8	9	10	
11	12				

**Prepared by: Zoraida Cortez** 

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Comments:

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# **Sample Receipt Checklist**

Client Name:	Pangea Environment	tal Svcs., Inc.			Date a	and Ti	me Received:	8/19/2013 6	i:10:17 PM			
Project Name:	#1435.002; Solano G	Group			LogIn	Revie	ewed by:		Zoraida Cortez			
WorkOrder N°:	1308655	Matrix: Soil			Carrie	er:	Rob Pringle (MA	I Courier)				
	Chain of Custody (COC) Information											
Chain of custody	present?		Yes	<b>✓</b>	No 🗌							
Chain of custody	signed when relinquisl	ned and received?	Yes	✓	No 🗌							
Chain of custody	agrees with sample la	bels?	Yes	✓	No $\square$							
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No $\square$							
Date and Time of	collection noted by Cl	ient on COC?	Yes	<b>✓</b>	No $\square$							
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$							
		<u>s</u>	ample	Receipt	<u>Information</u>	Į						
Custody seals int	act on shipping contain	ner/cooler?	Yes		No 🗆		1	NA 🗸				
Shipping contained	er/cooler in good condi	tion?	Yes	✓	No 🗌							
Samples in prope	er containers/bottles?		Yes	✓	No $\square$							
Sample container	rs intact?		Yes	✓	No 🗌							
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No $\square$							
		Sample Prese	rvatio	n and Hol	d Time (HT)	) Infor	<u>mation</u>					
All samples recei	ved within holding time	9?	Yes	<b>✓</b>	No $\square$							
Container/Temp I	Blank temperature		Coole	er Temp:	5.4°C		1	NA 🗌				
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes		No 🗌	No V	OA vials submitt	ed 🗸				
Sample labels ch	ecked for correct pres	ervation?	Yes	✓	No 🗌							
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No $\square$		1	VA 🗸				
Samples Receive	ed on Ice?		Yes	✓	No 🗌							
		(Ice Type	: WE	TICE )								
* NOTE: If the "N	* NOTE: If the "No" box is checked, see comments below.											
							=====					

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1435.002; Solano	Date Sampled: 08/19/13				
1710 Franklin Street, Ste. 200	Group	Date Received: 08/19/13				
	Client Contact: Bob Clark-Riddell	Date Extracted 08/19/13				
Oakland, CA 94612	Client P.O.:	Date Analyzed 08/22/13				
Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)*						

Extraction Method: SW5030B Work Order: 1308655 Analytical Method: SW8260B

1308655-001A

Client ID	F-5-2.5' Soil									
Matrix										
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit			
Bromodichloromethane	ND	1.0	0.005	Bromoform	ND	1.0	0.005			
Bromomethane	ND	1.0	0.005	Carbon Tetrachloride	ND	1.0	0.005			
Chlorobenzene	ND	1.0	0.005	Chloroethane	ND	1.0	0.005			
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005			
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromoethane (EDB)	ND	1.0	0.004			
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005			
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005			
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004			
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005			
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005			
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005			
Freon 113	ND	1.0	0.1	Methylene chloride	ND	1.0	0.005			
1,1,1,2-Tetrachloroethane	ND	1.0	0.005	1,1,2,2-Tetrachloroethane	ND	1.0	0.005			
Tetrachloroethene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005			
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005			
			1			1	1			

Surrogate Recoveries (%)									
%SS1:	88	%SS2:	110						
%SS3:	105								
Comments:									

0.005 Vinyl Chloride

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

Trichlorofluoromethane

0.005

<sup>\*</sup> water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in  $\mu$ g/wipe.

### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 80756 WorkOrder: 1308655

EPA Method: SW8260B Extraction: S	W5030B					,	Spiked Sam	ple ID:	1308655-001A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acc	eptance	Criteria (%)
, analyte	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Chlorobenzene	ND	0.050	93.6	94.6	1.06	98	61 - 108	30	70 - 130
1,2-Dibromoethane (EDB)	ND	0.050	91.7	95	3.59	96	54 - 119	30	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	0.050	86.3	87.5	1.40	89.7	48 - 115	30	70 - 130
1,1-Dichloroethene	ND	0.050	97.5	100	2.77	102	46 - 111	30	70 - 130
Trichloroethene	ND	0.050	93.3	95.3	2.12	98.2	60 - 116	30	70 - 130
%SS1:	88	0.12	108	109	1.08	107	70 - 130	30	70 - 130
%SS2:	110	0.12	107	107	0	106	70 - 130	30	70 - 130
%SS3:	105	0.012	108	107	0.860	108	70 - 130	30	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

#### BATCH 80756 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1308655-001A	08/19/13 12:00 PN	M 08/19/13	08/22/13 3:51 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1308845

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project Name:** #1435.002; Solano Group

**Project P.O.:** 

**Project Received:** 08/23/2013

Analytical Report reviewed & approved for release on 08/30/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.



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NELAP: 12283CA ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308845Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/23/13 20:34Analytical Method:SW8260B

**Date Prepared:** 8/23/13 **Unit:** mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	<b>Date Collected</b>	Instrument	Batch ID
SW-W2-1'	1308845-001A	Soil	08/21/2013 15:45	GC10	80945
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/26/2013 16:14
Bromoform	ND		0.0050	1	08/26/2013 16:14
Bromomethane	ND		0.0050	1	08/26/2013 16:14
Carbon Tetrachloride	ND		0.0050	1	08/26/2013 16:14
Chlorobenzene	ND		0.0050	1	08/26/2013 16:14
Chloroethane	ND		0.0050	1	08/26/2013 16:14
Chloroform	ND		0.0050	1	08/26/2013 16:14
Chloromethane	ND		0.0050	1	08/26/2013 16:14
Dibromochloromethane	ND		0.0050	1	08/26/2013 16:14
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/26/2013 16:14
1,2-Dichlorobenzene	ND		0.0050	1	08/26/2013 16:14
1,3-Dichlorobenzene	ND		0.0050	1	08/26/2013 16:14
1,4-Dichlorobenzene	ND		0.0050	1	08/26/2013 16:14
Dichlorodifluoromethane	ND		0.0050	1	08/26/2013 16:14
1,1-Dichloroethane	ND		0.0050	1	08/26/2013 16:14
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/26/2013 16:14
1,1-Dichloroethene	ND		0.0050	1	08/26/2013 16:14
cis-1,2-Dichloroethene	ND		0.0050	1	08/26/2013 16:14
trans-1,2-Dichloroethene	ND		0.0050	1	08/26/2013 16:14
1,2-Dichloropropane	ND		0.0050	1	08/26/2013 16:14
cis-1,3-Dichloropropene	ND		0.0050	1	08/26/2013 16:14
trans-1,3-Dichloropropene	ND		0.0050	1	08/26/2013 16:14
Freon 113	ND		0.10	1	08/26/2013 16:14
Methylene chloride	ND		0.0050	1	08/26/2013 16:14
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/26/2013 16:14
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/26/2013 16:14
Tetrachloroethene	ND		0.0050	1	08/26/2013 16:14
1,1,1-Trichloroethane	ND		0.0050	1	08/26/2013 16:14
1,1,2-Trichloroethane	ND		0.0050	1	08/26/2013 16:14
Trichloroethene	ND		0.0050	1	08/26/2013 16:14
Trichlorofluoromethane	ND		0.0050	1	08/26/2013 16:14
Vinyl Chloride	ND		0.0050	1	08/26/2013 16:14
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	98		70-130		08/26/2013 16:14
toluene-d8	107		70-130		08/26/2013 16:14
4-BFB	94		70-130		08/26/2013 16:14

(Cont.)

\_\_\_KF \_\_ Analyst's Initial

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308845Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/23/13 20:34Analytical Method:SW8260BDate Prepared:8/23/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	<b>Date Collected</b>	Instrument	Batch ID
F-5'-3'	1308845-002A	Soil	08/21/2013 15:50	GC10	80945
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/26/2013 16:56
Bromoform	ND		0.0050	1	08/26/2013 16:56
Bromomethane	ND		0.0050	1	08/26/2013 16:56
Carbon Tetrachloride	ND		0.0050	1	08/26/2013 16:56
Chlorobenzene	ND		0.0050	1	08/26/2013 16:56
Chloroethane	ND		0.0050	1	08/26/2013 16:56
Chloroform	ND		0.0050	1	08/26/2013 16:56
Chloromethane	ND		0.0050	1	08/26/2013 16:56
Dibromochloromethane	ND		0.0050	1	08/26/2013 16:56
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/26/2013 16:56
1,2-Dichlorobenzene	ND		0.0050	1	08/26/2013 16:56
1,3-Dichlorobenzene	ND		0.0050	1	08/26/2013 16:56
1,4-Dichlorobenzene	ND		0.0050	1	08/26/2013 16:56
Dichlorodifluoromethane	ND		0.0050	1	08/26/2013 16:56
1,1-Dichloroethane	ND		0.0050	1	08/26/2013 16:56
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/26/2013 16:56
1,1-Dichloroethene	ND		0.0050	1	08/26/2013 16:56
cis-1,2-Dichloroethene	ND		0.0050	1	08/26/2013 16:56
trans-1,2-Dichloroethene	ND		0.0050	1	08/26/2013 16:56
1,2-Dichloropropane	ND		0.0050	1	08/26/2013 16:56
cis-1,3-Dichloropropene	ND		0.0050	1	08/26/2013 16:56
trans-1,3-Dichloropropene	ND		0.0050	1	08/26/2013 16:56
Freon 113	ND		0.10	1	08/26/2013 16:56
Methylene chloride	ND		0.0050	1	08/26/2013 16:56
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/26/2013 16:56
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/26/2013 16:56
Tetrachloroethene	0.015		0.0050	1	08/26/2013 16:56
1,1,1-Trichloroethane	ND		0.0050	1	08/26/2013 16:56
1,1,2-Trichloroethane	ND		0.0050	1	08/26/2013 16:56
Trichloroethene	ND		0.0050	1	08/26/2013 16:56
Trichlorofluoromethane	ND		0.0050	1	08/26/2013 16:56
Vinyl Chloride	ND		0.0050	1	08/26/2013 16:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	96		70-130		08/26/2013 16:56
toluene-d8	107		70-130		08/26/2013 16:56
4-BFB	90		70-130		08/26/2013 16:56

(Cont.)

\_\_\_KF\_\_ Analyst's Initial

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308845Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/23/13 20:34Analytical Method:SW8260B

**Date Prepared:** 8/23/13 **Unit:** mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	<b>Date Collected</b>	Instrument	Batch ID
F-6-3'	1308845-003A	Soil	08/21/2013 16:00	GC10	80945
Analytes	<u>Result</u>		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/26/2013 17:38
Bromoform	ND		0.0050	1	08/26/2013 17:38
Bromomethane	ND		0.0050	1	08/26/2013 17:38
Carbon Tetrachloride	ND		0.0050	1	08/26/2013 17:38
Chlorobenzene	ND		0.0050	1	08/26/2013 17:38
Chloroethane	ND		0.0050	1	08/26/2013 17:38
Chloroform	ND		0.0050	1	08/26/2013 17:38
Chloromethane	ND		0.0050	1	08/26/2013 17:38
Dibromochloromethane	ND		0.0050	1	08/26/2013 17:38
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/26/2013 17:38
1,2-Dichlorobenzene	ND		0.0050	1	08/26/2013 17:38
1,3-Dichlorobenzene	ND		0.0050	1	08/26/2013 17:38
1,4-Dichlorobenzene	ND		0.0050	1	08/26/2013 17:38
Dichlorodifluoromethane	ND		0.0050	1	08/26/2013 17:38
1,1-Dichloroethane	ND		0.0050	1	08/26/2013 17:38
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/26/2013 17:38
1,1-Dichloroethene	ND		0.0050	1	08/26/2013 17:38
cis-1,2-Dichloroethene	ND		0.0050	1	08/26/2013 17:38
trans-1,2-Dichloroethene	ND		0.0050	1	08/26/2013 17:38
1,2-Dichloropropane	ND		0.0050	1	08/26/2013 17:38
cis-1,3-Dichloropropene	ND		0.0050	1	08/26/2013 17:38
trans-1,3-Dichloropropene	ND		0.0050	1	08/26/2013 17:38
Freon 113	ND		0.10	1	08/26/2013 17:38
Methylene chloride	ND		0.0050	1	08/26/2013 17:38
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/26/2013 17:38
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/26/2013 17:38
Tetrachloroethene	0.036		0.0050	1	08/26/2013 17:38
1,1,1-Trichloroethane	ND		0.0050	1	08/26/2013 17:38
1,1,2-Trichloroethane	ND		0.0050	1	08/26/2013 17:38
Trichloroethene	ND		0.0050	1	08/26/2013 17:38
Trichlorofluoromethane	ND		0.0050	1	08/26/2013 17:38
Vinyl Chloride	ND		0.0050	1	08/26/2013 17:38
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	102		70-130		08/26/2013 17:38
toluene-d8	106		70-130		08/26/2013 17:38
4-BFB	91		70-130		08/26/2013 17:38



### **Quality Control Report**

**Client:** WorkOrder: Pangea Environmental Svcs., Inc. 1308845 **Date Prepared:** 8/23/13 BatchID: 80945

Date Analyzed: 8/23/13 Extraction Method SW5030B GC10 **Instrument: Analytical Method:** SW8260B **Matrix:** Soil **Unit:** mg/kg

**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-80945

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS	LCS %REC	LCS Limits
Acetone	ND	-	0.050	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	-	0.0050	-	-	-	-
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04601	0.0050	0.050	-	92	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.05141	0.0040	0.050	-	103	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04898	0.0040	0.050	-	98	70-130
1,1-Dichloroethene	ND	0.05414	0.0050	0.050	-	108	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



### **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308845Date Prepared:8/23/13BatchID:80945

Date Analyzed:8/23/13Extraction MethodSW5030BInstrument:GC10Analytical Method:SW8260BMatrix:SoilUnit:mg/kg

**Project:** #1435.002; Solano Group Sample ID: MB/LCS-80945

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS	LCS %REC	LCS Limits
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	-	0.0050	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04721	0.0050	0.050	-	94.4	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
dibromofluromethane	0.1116	0.1288		0.12	89	103	70-130
toluene-d8	0.1374	0.1341		0.12	110	107	70-130
4-BFB	0.01239	0.01207		0.012	99	97	70-130

#### McCampbell Analytical, Inc.

## **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1308845

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

☐ WaterTrax ☐ WriteOn **▼**EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag Report to: Bill to: Requested TAT: 5 days Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 08/23/2013 1710 Franklin Street, Ste. 200 1710 Franklin Street, Ste. 200 PO: Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 08/26/2013 (510) 836-3700 FAX: (510) 836-3709

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date H	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1308845-001	SW-W2-1'	Soil	8/21/2013 15:45		Α	Α										
1308845-002	F-5'-3'	Soil	8/21/2013 15:50		Α											
1308845-003	F-6-3'	Soil	8/21/2013 16:00		Α											

#### Test Legend:

1	8010BMS_S	2	PREDF REPORT	3		4	5
6		7		8	]	9	10
11		12					

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR 48 HR 72 HR Website: www.mccampbell.com Email: main@mccampbell.com EDF Required? Coelt (Normal) No Write On (DW) Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Bob Clark-Riddell Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: briddell@pangeaenv.com for Metals Tele: (510) 435-8664 Fax: (510) 836-3709 analysis: Project #: 1435.002 Project Name: Solano Group Yes / No Five fuel oxygenates (8260B) VOCs by EPA MEthod 8010 Project Location: 1187 Solano Ave, Albany Sampler Signature: METHOD SAMPLING MATRIX Type Containers PRESERVED Containers LOCATION SAMPLE ID TPHg/BTEX (Field Point Sludge Other HNO, Name) Date Time Soil ICE 1600 Received By: Relinquished By: COMMENTS: GOOD CONDITION HEAD SPACE ABSENT Received By: Relinquished By Time: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Received By: Date: Time: VOAS O&G METALS OTHER PRESERVATION pH<2

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

#### **Sample Receipt Checklist**

Client Name:	Pangea Environment	tal Svcs., Inc.			Date	and T	ime Received:	8/23/2013 8	3:34:16 PM
Project Name:	#1435.002; Solano G	Froup			LogIr	n Revi	ewed by:		Jena Alfaro
WorkOrder N°:	1308845	Matrix: Soil			Carrie	er:	Rob Pringle (M/	Al Courier)	
		<u>Chair</u>	of Cu	ustody (C	OC) Informa	ation			
Chain of custody	present?		Yes	<b>✓</b>	No 🗆				
Chain of custody	signed when relinquisl	ned and received?	Yes	✓	No 🗌				
Chain of custody	agrees with sample la	bels?	Yes	✓	No 🗌				
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No 🗌				
Date and Time of	collection noted by Cl	ient on COC?	Yes	✓	No 🗌				
Sampler's name	noted on COC?		Yes	✓	No 🗌				
		<u>s</u>	ample	Receipt	Information	<u>1</u>			
Custody seals int	act on shipping contain	ner/cooler?	Yes		No 🗆			NA 🗸	
Shipping contained	er/cooler in good condi	tion?	Yes	✓	No $\square$				
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌				
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌				
Sufficient sample	volume for indicated t	est?	Yes	✓	No 🗌				
		Sample Prese	rvatio	n and Ho	ld Time (HT	) Info	rmation		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌				
Container/Temp I	Blank temperature		Coole	er Temp:	3.8°C			NA $\square$	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes		No 🗌	No '	VOA vials submit	ted 🗸	
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌				
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌			NA 🗸	
Samples Receive	ed on Ice?		Yes	✓	No 🗌				
		(Ice Type	: WE	TICE )					
* NOTE: If the "N	o" box is checked, see	e comments below.							
							=====		



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

WorkOrder: 1308A45

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Morgan Gillies

**Project Name:** #1435.002; Solano Group

**Project P.O.:** 

**Project Received:** 08/29/2013

Analytical Report reviewed & approved for release on 09/05/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.



1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com NELAP: 12283CA ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3



### Glossary of Terms & Qualifier Definitions

**Client:** Pangea Environmental Svcs., Inc.

**Project:** #1435.002; Solano Group

WorkOrder: 1308A45

Glossary Description
Abbreviation

DF Dilution Factor

LCS Laboratory Control Sample

MB Method Blank

MB % Rec % Recovery of Surrogate in Method Blank, if applicable

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

ND Not detected at or above the indicated MDL or RL

NR Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water

matrix; or sample diluted due to high matrix or analyte content.

RL Reporting Limit

RPD Relative Percent Deviation

SPK Val Spike Value

SPKRef Val Spike Reference Value

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
HA-2-5	1308A45-012A	Soil	08/29/2013 16:05	GC16	81182
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/30/2013 02:50
Bromoform	ND		0.0050	1	08/30/2013 02:50
Bromomethane	ND		0.0050	1	08/30/2013 02:50
Carbon Tetrachloride	ND		0.0050	1	08/30/2013 02:50
Chlorobenzene	ND		0.0050	1	08/30/2013 02:50
Chloroethane	ND		0.0050	1	08/30/2013 02:50
Chloroform	ND		0.0050	1	08/30/2013 02:50
Chloromethane	ND		0.0050	1	08/30/2013 02:50
Dibromochloromethane	ND		0.0050	1	08/30/2013 02:50
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/30/2013 02:50
1,2-Dichlorobenzene	ND		0.0050	1	08/30/2013 02:50
1,3-Dichlorobenzene	ND		0.0050	1	08/30/2013 02:50
1,4-Dichlorobenzene	ND		0.0050	1	08/30/2013 02:50
Dichlorodifluoromethane	ND		0.0050	1	08/30/2013 02:50
1,1-Dichloroethane	ND		0.0050	1	08/30/2013 02:50
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/30/2013 02:50
1,1-Dichloroethene	ND		0.0050	1	08/30/2013 02:50
cis-1,2-Dichloroethene	ND		0.0050	1	08/30/2013 02:50
trans-1,2-Dichloroethene	ND		0.0050	1	08/30/2013 02:50
1,2-Dichloropropane	ND		0.0050	1	08/30/2013 02:50
cis-1,3-Dichloropropene	ND		0.0050	1	08/30/2013 02:50
trans-1,3-Dichloropropene	ND		0.0050	1	08/30/2013 02:50
Freon 113	ND		0.10	1	08/30/2013 02:50
Methylene chloride	ND		0.0050	1	08/30/2013 02:50
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/30/2013 02:50
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/30/2013 02:50
Tetrachloroethene	ND		0.0050	1	08/30/2013 02:50
1,1,1-Trichloroethane	ND		0.0050	1	08/30/2013 02:50
1,1,2-Trichloroethane	ND		0.0050	1	08/30/2013 02:50
Trichloroethene	ND		0.0050	1	08/30/2013 02:50
Trichlorofluoromethane	ND		0.0050	1	08/30/2013 02:50
Vinyl Chloride	ND		0.0050	1	08/30/2013 02:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	89		70-130		08/30/2013 02:50
toluene-d8	106		70-130		08/30/2013 02:50
4-BFB	116		70-130		08/30/2013 02:50

(Cont.)

\_\_\_KF\_\_ Analyst's Initial

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	<b>Date Collected</b>	Instrument	Batch ID
HA-3-NW-3	1308A45-015A	Soil	08/29/2013 17:20	GC16	81182
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/30/2013 03:32
Bromoform	ND		0.0050	1	08/30/2013 03:32
Bromomethane	ND		0.0050	1	08/30/2013 03:32
Carbon Tetrachloride	ND		0.0050	1	08/30/2013 03:32
Chlorobenzene	ND		0.0050	1	08/30/2013 03:32
Chloroethane	ND		0.0050	1	08/30/2013 03:32
Chloroform	ND		0.0050	1	08/30/2013 03:32
Chloromethane	ND		0.0050	1	08/30/2013 03:32
Dibromochloromethane	ND		0.0050	1	08/30/2013 03:32
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/30/2013 03:32
1,2-Dichlorobenzene	ND		0.0050	1	08/30/2013 03:32
1,3-Dichlorobenzene	ND		0.0050	1	08/30/2013 03:32
1,4-Dichlorobenzene	ND		0.0050	1	08/30/2013 03:32
Dichlorodifluoromethane	ND		0.0050	1	08/30/2013 03:32
1,1-Dichloroethane	ND		0.0050	1	08/30/2013 03:32
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/30/2013 03:32
1,1-Dichloroethene	ND		0.0050	1	08/30/2013 03:32
cis-1,2-Dichloroethene	ND		0.0050	1	08/30/2013 03:32
trans-1,2-Dichloroethene	ND		0.0050	1	08/30/2013 03:32
1,2-Dichloropropane	ND		0.0050	1	08/30/2013 03:32
cis-1,3-Dichloropropene	ND		0.0050	1	08/30/2013 03:32
trans-1,3-Dichloropropene	ND		0.0050	1	08/30/2013 03:32
Freon 113	ND		0.10	1	08/30/2013 03:32
Methylene chloride	ND		0.0050	1	08/30/2013 03:32
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/30/2013 03:32
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/30/2013 03:32
Tetrachloroethene	ND		0.0050	1	08/30/2013 03:32
1,1,1-Trichloroethane	ND		0.0050	1	08/30/2013 03:32
1,1,2-Trichloroethane	ND		0.0050	1	08/30/2013 03:32
Trichloroethene	ND		0.0050	1	08/30/2013 03:32
Trichlorofluoromethane	ND		0.0050	1	08/30/2013 03:32
Vinyl Chloride	ND		0.0050	1	08/30/2013 03:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	88		70-130		08/30/2013 03:32
toluene-d8	108		70-130		08/30/2013 03:32
4-BFB	116		70-130		08/30/2013 03:32

(Cont.)

KF Analyst's Initial

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	<b>Date Collected</b>	Instrument	Batch ID
SS-1183-1	1308A45-016A	Soil	08/29/2013 17:30	GC16	81182
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/30/2013 04:15
Bromoform	ND		0.0050	1	08/30/2013 04:15
Bromomethane	ND		0.0050	1	08/30/2013 04:15
Carbon Tetrachloride	ND		0.0050	1	08/30/2013 04:15
Chlorobenzene	ND		0.0050	1	08/30/2013 04:15
Chloroethane	ND		0.0050	1	08/30/2013 04:15
Chloroform	ND		0.0050	1	08/30/2013 04:15
Chloromethane	ND		0.0050	1	08/30/2013 04:15
Dibromochloromethane	ND		0.0050	1	08/30/2013 04:15
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/30/2013 04:15
1,2-Dichlorobenzene	ND		0.0050	1	08/30/2013 04:15
1,3-Dichlorobenzene	ND		0.0050	1	08/30/2013 04:15
1,4-Dichlorobenzene	ND		0.0050	1	08/30/2013 04:15
Dichlorodifluoromethane	ND		0.0050	1	08/30/2013 04:15
1,1-Dichloroethane	ND		0.0050	1	08/30/2013 04:15
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/30/2013 04:15
1,1-Dichloroethene	ND		0.0050	1	08/30/2013 04:15
cis-1,2-Dichloroethene	ND		0.0050	1	08/30/2013 04:15
trans-1,2-Dichloroethene	ND		0.0050	1	08/30/2013 04:15
1,2-Dichloropropane	ND		0.0050	1	08/30/2013 04:15
cis-1,3-Dichloropropene	ND		0.0050	1	08/30/2013 04:15
trans-1,3-Dichloropropene	ND		0.0050	1	08/30/2013 04:15
Freon 113	ND		0.10	1	08/30/2013 04:15
Methylene chloride	ND		0.0050	1	08/30/2013 04:15
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/30/2013 04:15
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/30/2013 04:15
Tetrachloroethene	ND		0.0050	1	08/30/2013 04:15
1,1,1-Trichloroethane	ND		0.0050	1	08/30/2013 04:15
1,1,2-Trichloroethane	ND		0.0050	1	08/30/2013 04:15
Trichloroethene	ND		0.0050	1	08/30/2013 04:15
Trichlorofluoromethane	ND		0.0050	1	08/30/2013 04:15
Vinyl Chloride	ND		0.0050	1	08/30/2013 04:15
Surrogates	REC (%)		<u>Limits</u>		
dibromofluromethane	87		70-130		08/30/2013 04:15
toluene-d8	108		70-130		08/30/2013 04:15
4-BFB	120		70-130		08/30/2013 04:15

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collec	cted Instrument	Batch ID
F-7-2.5	1308A45-001A	Soil	08/29/2013 1	4:00 GC16	81162
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/31/2013 01:02
Bromoform	ND		0.0050	1	08/31/2013 01:02
Bromomethane	ND		0.0050	1	08/31/2013 01:02
Carbon Tetrachloride	ND		0.0050	1	08/31/2013 01:02
Chlorobenzene	ND		0.0050	1	08/31/2013 01:02
Chloroethane	ND		0.0050	1	08/31/2013 01:02
Chloroform	ND		0.0050	1	08/31/2013 01:02
Chloromethane	ND		0.0050	1	08/31/2013 01:02
Dibromochloromethane	ND		0.0050	1	08/31/2013 01:02
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/31/2013 01:02
1,2-Dichlorobenzene	ND		0.0050	1	08/31/2013 01:02
1,3-Dichlorobenzene	ND		0.0050	1	08/31/2013 01:02
1,4-Dichlorobenzene	ND		0.0050	1	08/31/2013 01:02
Dichlorodifluoromethane	ND		0.0050	1	08/31/2013 01:02
1,1-Dichloroethane	ND		0.0050	1	08/31/2013 01:02
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/31/2013 01:02
1,1-Dichloroethene	ND		0.0050	1	08/31/2013 01:02
cis-1,2-Dichloroethene	ND		0.0050	1	08/31/2013 01:02
trans-1,2-Dichloroethene	ND		0.0050	1	08/31/2013 01:02
1,2-Dichloropropane	ND		0.0050	1	08/31/2013 01:02
cis-1,3-Dichloropropene	ND		0.0050	1	08/31/2013 01:02
trans-1,3-Dichloropropene	ND		0.0050	1	08/31/2013 01:02
Freon 113	ND		0.10	1	08/31/2013 01:02
Methylene chloride	ND		0.0050	1	08/31/2013 01:02
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/31/2013 01:02
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/31/2013 01:02
Tetrachloroethene	ND		0.0050	1	08/31/2013 01:02
1,1,1-Trichloroethane	ND		0.0050	1	08/31/2013 01:02
1,1,2-Trichloroethane	ND		0.0050	1	08/31/2013 01:02
Trichloroethene	ND		0.0050	1	08/31/2013 01:02
Trichlorofluoromethane	ND		0.0050	1	08/31/2013 01:02
Vinyl Chloride	ND		0.0050	1	08/31/2013 01:02
<u>Surrogates</u>	REC (%)		<u>Limits</u>		
dibromofluromethane	87		70-130		08/31/2013 01:02
toluene-d8	105		70-130		08/31/2013 01:02
4-BFB	120		70-130		08/31/2013 01:02

(Cont.)

\_\_\_KF\_\_ Analyst's Initial

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType Date Col	llected Instrument	Batch ID
F-8-4	1308A45-002A	Soil 08/29/201	3 14:30 GC16	81182
Analytes	Result	RL	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND	0.0050	) 1	08/31/2013 01:45
Bromoform	ND	0.0050	) 1	08/31/2013 01:45
Bromomethane	ND	0.0050	) 1	08/31/2013 01:45
Carbon Tetrachloride	ND	0.0050	) 1	08/31/2013 01:45
Chlorobenzene	ND	0.0050	) 1	08/31/2013 01:45
Chloroethane	ND	0.0050	) 1	08/31/2013 01:45
Chloroform	ND	0.0050	) 1	08/31/2013 01:45
Chloromethane	ND	0.0050	) 1	08/31/2013 01:45
Dibromochloromethane	ND	0.0050	) 1	08/31/2013 01:45
1,2-Dibromoethane (EDB)	ND	0.0040	) 1	08/31/2013 01:45
1,2-Dichlorobenzene	ND	0.0050	) 1	08/31/2013 01:45
1,3-Dichlorobenzene	ND	0.0050	) 1	08/31/2013 01:45
1,4-Dichlorobenzene	ND	0.0050	) 1	08/31/2013 01:45
Dichlorodifluoromethane	ND	0.0050	) 1	08/31/2013 01:45
1,1-Dichloroethane	ND	0.0050	) 1	08/31/2013 01:45
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	) 1	08/31/2013 01:45
1,1-Dichloroethene	ND	0.0050	) 1	08/31/2013 01:45
cis-1,2-Dichloroethene	ND	0.0050	) 1	08/31/2013 01:45
trans-1,2-Dichloroethene	ND	0.0050	) 1	08/31/2013 01:45
1,2-Dichloropropane	ND	0.0050	) 1	08/31/2013 01:45
cis-1,3-Dichloropropene	ND	0.0050	) 1	08/31/2013 01:45
trans-1,3-Dichloropropene	ND	0.0050	) 1	08/31/2013 01:45
Freon 113	ND	0.10	1	08/31/2013 01:45
Methylene chloride	ND	0.0050	) 1	08/31/2013 01:45
1,1,1,2-Tetrachloroethane	ND	0.0050	) 1	08/31/2013 01:45
1,1,2,2-Tetrachloroethane	ND	0.0050	) 1	08/31/2013 01:45
Tetrachloroethene	ND	0.0050	) 1	08/31/2013 01:45
1,1,1-Trichloroethane	ND	0.0050	) 1	08/31/2013 01:45
1,1,2-Trichloroethane	ND	0.0050	) 1	08/31/2013 01:45
Trichloroethene	ND	0.0050	) 1	08/31/2013 01:45
Trichlorofluoromethane	ND	0.0050	) 1	08/31/2013 01:45
Vinyl Chloride	ND	0.0050	1	08/31/2013 01:45
<u>Surrogates</u>	REC (%)	<u>Limits</u>		
dibromofluromethane	87	70-130		08/31/2013 01:45
toluene-d8	105	70-130		08/31/2013 01:45
4-BFB	118	70-130		08/31/2013 01:45

(Cont.)

KF Analyst's Initial

### **Analytical Report**

**Client:** WorkOrder: Pangea Environmental Svcs., Inc. 1308A45 **Project:** #1435.002; Solano Group Extraction Method SW5030B **Date Received:** 8/29/13 20:47 **Analytical Method:** SW8260B **Date Prepared:** 8/29/13

**Unit:** 

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collec	cted Instrument	Batch ID
HA-1-3	1308A45-006A	Soil	08/29/2013 1	5:30 GC16	81182
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	DF	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/31/2013 02:28
Bromoform	ND		0.0050	1	08/31/2013 02:28
Bromomethane	ND		0.0050	1	08/31/2013 02:28
Carbon Tetrachloride	ND		0.0050	1	08/31/2013 02:28
Chlorobenzene	ND		0.0050	1	08/31/2013 02:28
Chloroethane	ND		0.0050	1	08/31/2013 02:28
Chloroform	ND		0.0050	1	08/31/2013 02:28
Chloromethane	ND		0.0050	1	08/31/2013 02:28
Dibromochloromethane	ND		0.0050	1	08/31/2013 02:28
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/31/2013 02:28
1,2-Dichlorobenzene	ND		0.0050	1	08/31/2013 02:28
1,3-Dichlorobenzene	ND		0.0050	1	08/31/2013 02:28
1,4-Dichlorobenzene	ND		0.0050	1	08/31/2013 02:28
Dichlorodifluoromethane	ND		0.0050	1	08/31/2013 02:28
1,1-Dichloroethane	ND		0.0050	1	08/31/2013 02:28
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/31/2013 02:28
1,1-Dichloroethene	ND		0.0050	1	08/31/2013 02:28
cis-1,2-Dichloroethene	ND		0.0050	1	08/31/2013 02:28
trans-1,2-Dichloroethene	ND		0.0050	1	08/31/2013 02:28
1,2-Dichloropropane	ND		0.0050	1	08/31/2013 02:28
cis-1,3-Dichloropropene	ND		0.0050	1	08/31/2013 02:28
trans-1,3-Dichloropropene	ND		0.0050	1	08/31/2013 02:28
Freon 113	ND		0.10	1	08/31/2013 02:28
Methylene chloride	ND		0.0050	1	08/31/2013 02:28
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/31/2013 02:28
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/31/2013 02:28
Tetrachloroethene	ND		0.0050	1	08/31/2013 02:28
1,1,1-Trichloroethane	ND		0.0050	1	08/31/2013 02:28
1,1,2-Trichloroethane	ND		0.0050	1	08/31/2013 02:28
Trichloroethene	ND		0.0050	1	08/31/2013 02:28
Trichlorofluoromethane	ND		0.0050	1	08/31/2013 02:28
Vinyl Chloride	ND		0.0050	1	08/31/2013 02:28
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	87		70-130		08/31/2013 02:28
toluene-d8	105		70-130		08/31/2013 02:28
4-BFB	116		70-130		08/31/2013 02:28

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### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType Date	Collected Instrument	Batch ID
HA-2-3	1308A45-007A	Soil 08/29	/2013 15:40 GC16	81182
Analytes	Result	RI	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND	0.0	0050 1	08/31/2013 03:11
Bromoform	ND	0.0	0050 1	08/31/2013 03:11
Bromomethane	ND	0.0	0050 1	08/31/2013 03:11
Carbon Tetrachloride	ND	0.0	0050 1	08/31/2013 03:11
Chlorobenzene	ND	0.0	0050 1	08/31/2013 03:11
Chloroethane	ND	0.0	0050 1	08/31/2013 03:11
Chloroform	ND	0.0	0050 1	08/31/2013 03:11
Chloromethane	ND	0.0	0050 1	08/31/2013 03:11
Dibromochloromethane	ND	0.0	0050 1	08/31/2013 03:11
1,2-Dibromoethane (EDB)	ND	0.0	0040 1	08/31/2013 03:11
1,2-Dichlorobenzene	ND	0.0	0050 1	08/31/2013 03:11
1,3-Dichlorobenzene	ND	0.0	0050 1	08/31/2013 03:11
1,4-Dichlorobenzene	ND	0.0	0050 1	08/31/2013 03:11
Dichlorodifluoromethane	ND	0.0	0050 1	08/31/2013 03:11
1,1-Dichloroethane	ND	0.0	0050 1	08/31/2013 03:11
1,2-Dichloroethane (1,2-DCA)	ND	0.0	0040 1	08/31/2013 03:11
1,1-Dichloroethene	ND	0.0	0050 1	08/31/2013 03:11
cis-1,2-Dichloroethene	ND	0.0	0050 1	08/31/2013 03:11
trans-1,2-Dichloroethene	ND	0.0	0050 1	08/31/2013 03:11
1,2-Dichloropropane	ND	0.0	0050 1	08/31/2013 03:11
cis-1,3-Dichloropropene	ND	0.0	0050 1	08/31/2013 03:11
trans-1,3-Dichloropropene	ND	0.0	0050 1	08/31/2013 03:11
Freon 113	ND	0.	10 1	08/31/2013 03:11
Methylene chloride	ND	0.0	0050 1	08/31/2013 03:11
1,1,1,2-Tetrachloroethane	ND	0.0	0050 1	08/31/2013 03:11
1,1,2,2-Tetrachloroethane	ND	0.0	0050 1	08/31/2013 03:11
Tetrachloroethene	ND	0.0	0050 1	08/31/2013 03:11
1,1,1-Trichloroethane	ND	0.0	0050 1	08/31/2013 03:11
1,1,2-Trichloroethane	ND	0.0	0050 1	08/31/2013 03:11
Trichloroethene	ND	0.0	0050 1	08/31/2013 03:11
Trichlorofluoromethane	ND	0.0	0050 1	08/31/2013 03:11
Vinyl Chloride	ND	0.0	0050 1	08/31/2013 03:11
<u>Surrogates</u>	<u>REC (%)</u>	<u>Lim</u> i	<u>its</u>	
dibromofluromethane	87	70-1	130	08/31/2013 03:11
toluene-d8	105	70-1	130	08/31/2013 03:11
4-BFB	114	70-1	130	08/31/2013 03:11

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KF Analyst's Initial

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType Da	te Collected Ins	trument Batch ID
HA-1-5	1308A45-010A	Soil 08/2	29/2013 15:55 GC1	16 81182
<u>Analytes</u>	<u>Result</u>		RL DF	<u>Date Analyzed</u>
Bromodichloromethane	ND		0.0050 1	08/31/2013 03:53
Bromoform	ND		0.0050 1	08/31/2013 03:53
Bromomethane	ND		0.0050 1	08/31/2013 03:53
Carbon Tetrachloride	ND		0.0050 1	08/31/2013 03:53
Chlorobenzene	ND		0.0050 1	08/31/2013 03:53
Chloroethane	ND		0.0050 1	08/31/2013 03:53
Chloroform	ND		0.0050 1	08/31/2013 03:53
Chloromethane	ND		0.0050 1	08/31/2013 03:53
Dibromochloromethane	ND		0.0050 1	08/31/2013 03:53
1,2-Dibromoethane (EDB)	ND		0.0040 1	08/31/2013 03:53
1,2-Dichlorobenzene	ND		0.0050 1	08/31/2013 03:53
1,3-Dichlorobenzene	ND		0.0050 1	08/31/2013 03:53
1,4-Dichlorobenzene	ND		0.0050 1	08/31/2013 03:53
Dichlorodifluoromethane	ND		0.0050 1	08/31/2013 03:53
1,1-Dichloroethane	ND	-	0.0050 1	08/31/2013 03:53
1,2-Dichloroethane (1,2-DCA)	ND	-	0.0040 1	08/31/2013 03:53
1,1-Dichloroethene	ND		0.0050 1	08/31/2013 03:53
cis-1,2-Dichloroethene	ND		0.0050 1	08/31/2013 03:53
trans-1,2-Dichloroethene	ND		0.0050 1	08/31/2013 03:53
1,2-Dichloropropane	ND		0.0050 1	08/31/2013 03:53
cis-1,3-Dichloropropene	ND		0.0050 1	08/31/2013 03:53
trans-1,3-Dichloropropene	ND		0.0050 1	08/31/2013 03:53
Freon 113	ND		0.10 1	08/31/2013 03:53
Methylene chloride	ND		0.0050 1	08/31/2013 03:53
1,1,1,2-Tetrachloroethane	ND		0.0050 1	08/31/2013 03:53
1,1,2,2-Tetrachloroethane	ND		0.0050 1	08/31/2013 03:53
Tetrachloroethene	ND		0.0050 1	08/31/2013 03:53
1,1,1-Trichloroethane	ND		0.0050 1	08/31/2013 03:53
1,1,2-Trichloroethane	ND		0.0050 1	08/31/2013 03:53
Trichloroethene	ND		0.0050 1	08/31/2013 03:53
Trichlorofluoromethane	ND		0.0050 1	08/31/2013 03:53
Vinyl Chloride	ND		0.0050 1	08/31/2013 03:53
<u>Surrogates</u>	<u>REC (%)</u>	<u>Li</u>	<u>mits</u>	
dibromofluromethane	88	70	)-130	08/31/2013 03:53
toluene-d8	104	70	)-130	08/31/2013 03:53
4-BFB	116	70	)-130	08/31/2013 03:53

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## **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType Date Collect	ted Instrument	Batch ID
SW-SW-2.5	1308A45-011A	Soil 08/29/2013 16	:00 GC16	81182
<u>Analytes</u>	<u>Result</u>	<u>RL</u>	DF	Date Analyzed
Bromodichloromethane	ND	0.0050	1	08/31/2013 04:36
Bromoform	ND	0.0050	1	08/31/2013 04:36
Bromomethane	ND	0.0050	1	08/31/2013 04:36
Carbon Tetrachloride	ND	0.0050	1	08/31/2013 04:36
Chlorobenzene	ND	0.0050	1	08/31/2013 04:36
Chloroethane	ND	0.0050	1	08/31/2013 04:36
Chloroform	ND	0.0050	1	08/31/2013 04:36
Chloromethane	ND	0.0050	1	08/31/2013 04:36
Dibromochloromethane	ND	0.0050	1	08/31/2013 04:36
1,2-Dibromoethane (EDB)	ND	0.0040	1	08/31/2013 04:36
1,2-Dichlorobenzene	ND	0.0050	1	08/31/2013 04:36
1,3-Dichlorobenzene	ND	0.0050	1	08/31/2013 04:36
1,4-Dichlorobenzene	ND	0.0050	1	08/31/2013 04:36
Dichlorodifluoromethane	ND	0.0050	1	08/31/2013 04:36
1,1-Dichloroethane	ND	0.0050	1	08/31/2013 04:36
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	08/31/2013 04:36
1,1-Dichloroethene	ND	0.0050	1	08/31/2013 04:36
cis-1,2-Dichloroethene	ND	0.0050	1	08/31/2013 04:36
trans-1,2-Dichloroethene	ND	0.0050	1	08/31/2013 04:36
1,2-Dichloropropane	ND	0.0050	1	08/31/2013 04:36
cis-1,3-Dichloropropene	ND	0.0050	1	08/31/2013 04:36
trans-1,3-Dichloropropene	ND	0.0050	1	08/31/2013 04:36
Freon 113	ND	0.10	1	08/31/2013 04:36
Methylene chloride	ND	0.0050	1	08/31/2013 04:36
1,1,1,2-Tetrachloroethane	ND	0.0050	1	08/31/2013 04:36
1,1,2,2-Tetrachloroethane	ND	0.0050	1	08/31/2013 04:36
Tetrachloroethene	ND	0.0050	1	08/31/2013 04:36
1,1,1-Trichloroethane	ND	0.0050	1	08/31/2013 04:36
1,1,2-Trichloroethane	ND	0.0050	1	08/31/2013 04:36
Trichloroethene	ND	0.0050	1	08/31/2013 04:36
Trichlorofluoromethane	ND	0.0050	1	08/31/2013 04:36
Vinyl Chloride	ND	0.0050	1	08/31/2013 04:36
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
dibromofluromethane	89	70-130		08/31/2013 04:36
toluene-d8	105	70-130		08/31/2013 04:36
4-BFB	119	70-130		08/31/2013 04:36

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### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260BDate Prepared:8/29/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collec	ted Instrument	Batch ID
SW-W-2.5	1308A45-013A	Soil	08/29/2013 16	6:30 GC16	81182
<u>Analytes</u>	Result		<u>RL</u>	DF	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/31/2013 05:19
Bromoform	ND		0.0050	1	08/31/2013 05:19
Bromomethane	ND		0.0050	1	08/31/2013 05:19
Carbon Tetrachloride	ND		0.0050	1	08/31/2013 05:19
Chlorobenzene	ND		0.0050	1	08/31/2013 05:19
Chloroethane	ND		0.0050	1	08/31/2013 05:19
Chloroform	ND		0.0050	1	08/31/2013 05:19
Chloromethane	ND		0.0050	1	08/31/2013 05:19
Dibromochloromethane	ND		0.0050	1	08/31/2013 05:19
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/31/2013 05:19
1,2-Dichlorobenzene	ND		0.0050	1	08/31/2013 05:19
1,3-Dichlorobenzene	ND		0.0050	1	08/31/2013 05:19
1,4-Dichlorobenzene	ND		0.0050	1	08/31/2013 05:19
Dichlorodifluoromethane	ND		0.0050	1	08/31/2013 05:19
1,1-Dichloroethane	ND		0.0050	1	08/31/2013 05:19
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/31/2013 05:19
1,1-Dichloroethene	ND		0.0050	1	08/31/2013 05:19
cis-1,2-Dichloroethene	ND		0.0050	1	08/31/2013 05:19
trans-1,2-Dichloroethene	ND		0.0050	1	08/31/2013 05:19
1,2-Dichloropropane	ND		0.0050	1	08/31/2013 05:19
cis-1,3-Dichloropropene	ND		0.0050	1	08/31/2013 05:19
trans-1,3-Dichloropropene	ND		0.0050	1	08/31/2013 05:19
Freon 113	ND		0.10	1	08/31/2013 05:19
Methylene chloride	ND		0.0050	1	08/31/2013 05:19
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/31/2013 05:19
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/31/2013 05:19
Tetrachloroethene	ND		0.0050	1	08/31/2013 05:19
1,1,1-Trichloroethane	ND		0.0050	1	08/31/2013 05:19
1,1,2-Trichloroethane	ND		0.0050	1	08/31/2013 05:19
Trichloroethene	ND		0.0050	1	08/31/2013 05:19
Trichlorofluoromethane	ND		0.0050	1	08/31/2013 05:19
Vinyl Chloride	ND		0.0050	1	08/31/2013 05:19
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	88		70-130		08/31/2013 05:19
toluene-d8	104		70-130		08/31/2013 05:19
4-BFB	116		70-130		08/31/2013 05:19

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\_\_\_KF\_\_ Analyst's Initial

**Date Prepared:** 8/29/13

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1308A45Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:8/29/13 20:47Analytical Method:SW8260B

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

**Unit:** 

Client ID	Lab ID	Matrix/ExtType	Date Collec	cted Instrument	Batch ID
SW-NW-2.5	1308A45-014 <i>A</i>	A Soil	08/29/2013 1	6:35 GC16	81182
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	08/31/2013 06:02
Bromoform	ND		0.0050	1	08/31/2013 06:02
Bromomethane	ND		0.0050	1	08/31/2013 06:02
Carbon Tetrachloride	ND		0.0050	1	08/31/2013 06:02
Chlorobenzene	ND		0.0050	1	08/31/2013 06:02
Chloroethane	ND		0.0050	1	08/31/2013 06:02
Chloroform	ND		0.0050	1	08/31/2013 06:02
Chloromethane	ND		0.0050	1	08/31/2013 06:02
Dibromochloromethane	ND		0.0050	1	08/31/2013 06:02
1,2-Dibromoethane (EDB)	ND		0.0040	1	08/31/2013 06:02
1,2-Dichlorobenzene	ND		0.0050	1	08/31/2013 06:02
1,3-Dichlorobenzene	ND		0.0050	1	08/31/2013 06:02
1,4-Dichlorobenzene	ND		0.0050	1	08/31/2013 06:02
Dichlorodifluoromethane	ND		0.0050	1	08/31/2013 06:02
1,1-Dichloroethane	ND		0.0050	1	08/31/2013 06:02
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	08/31/2013 06:02
1,1-Dichloroethene	ND		0.0050	1	08/31/2013 06:02
cis-1,2-Dichloroethene	ND		0.0050	1	08/31/2013 06:02
trans-1,2-Dichloroethene	ND		0.0050	1	08/31/2013 06:02
1,2-Dichloropropane	ND		0.0050	1	08/31/2013 06:02
cis-1,3-Dichloropropene	ND		0.0050	1	08/31/2013 06:02
trans-1,3-Dichloropropene	ND		0.0050	1	08/31/2013 06:02
Freon 113	ND		0.10	1	08/31/2013 06:02
Methylene chloride	ND		0.0050	1	08/31/2013 06:02
1,1,1,2-Tetrachloroethane	ND		0.0050	1	08/31/2013 06:02
1,1,2,2-Tetrachloroethane	ND		0.0050	1	08/31/2013 06:02
Tetrachloroethene	ND		0.0050	1	08/31/2013 06:02
1,1,1-Trichloroethane	ND		0.0050	1	08/31/2013 06:02
1,1,2-Trichloroethane	ND		0.0050	1	08/31/2013 06:02
Trichloroethene	ND		0.0050	1	08/31/2013 06:02
Trichlorofluoromethane	ND		0.0050	1	08/31/2013 06:02
Vinyl Chloride	ND		0.0050	1	08/31/2013 06:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	88		70-130		08/31/2013 06:02
toluene-d8	104		70-130		08/31/2013 06:02
4-BFB	111		70-130		08/31/2013 06:02

### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 8/29/13

**Date Analyzed:** 8/29/13 - 8/30/13

Instrument: GC16
Matrix: Soil

**Project:** #1435.002; Solano Group

WorkOrder: 1308A45

**BatchID:** 81162

**Extraction Method:** SW5030B **Analytical Method:** SW8260B

**Unit:** mg/kg

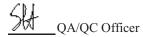
Sample ID: MB/LCS-81162

1308A31-001AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.050	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	-	0.0050	-	-	-	-
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04835	0.0050	0.050	-	96.7	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04487	0.0040	0.050	-	89.7	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04418	0.0040	0.050	-	88.4	70-130
1,1-Dichloroethene	ND	0.04591	0.0050	0.050	-	91.8	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 8/29/13

**Date Analyzed:** 8/29/13 - 8/30/13

Instrument: GC16
Matrix: Soil

**Project:** #1435.002; Solano Group

WorkOrder: 1308A45

**BatchID:** 81162

**Extraction Method:** SW5030B **Analytical Method:** SW8260B

Unit: mg/kg

Sample ID: MB/LCS-81162

1308A31-001AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	-	0.0050	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04398	0.0050	0.050	-	88	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
dibromofluromethane	0.1279	0.1119		0.12	102	89	70-130
toluene-d8	0.1444	0.1318		0.12	115	105	70-130
4-BFB	0.01441	0.01352		0.012	115	108	70-130

### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 8/29/13

**Date Analyzed:** 8/29/13 - 8/30/13

Instrument: GC16
Matrix: Soil

**Project:** #1435.002; Solano Group

WorkOrder: 1308A45

**BatchID:** 81162

**Extraction Method:** SW5030B **Analytical Method:** SW8260B

Unit: mg/kg

Sample ID: MB/LCS-81162

1308A31-001AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chlorobenzene	0.04507	0.04638	0.050	ND	90.1	92.8	61-108	2.88	30
1,2-Dibromoethane (EDB)	0.04064	0.0417	0.050	ND	81.3	83.4	54-119	2.57	30
1,2-Dichloroethane (1,2-DCA)	0.04076	0.04118	0.050	ND	81.5	82.4	48-115	1.04	30
1,1-Dichloroethene	0.04255	0.04431	0.050	ND	85.1	88.6	46-111	4.04	30
Trichloroethene	0.04064	0.04106	0.050	ND	81.3	82.1	60-116	1.02	30
Surrogate Recovery									
dibromofluromethane	0.1127	0.1119	0.12	89	90	89	70-130	0.742	30
toluene-d8	0.1312	0.1306	0.12	109	105	105	70-130	0	30
4-BFB	0.01359	0.01354	0.012	118	109	108	70-130	0.348	30

### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 8/29/13

**Date Analyzed:** 8/29/13 - 8/30/13

Instrument: GC28
Matrix: Soil

**Project:** #1435.002; Solano Group

WorkOrder: 1308A45

**BatchID:** 81182

**Extraction Method:** SW5030B **Analytical Method:** SW8260B

**Unit:** mg/kg

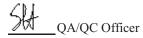
Sample ID: MB/LCS-81182

1308A45-016AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.050	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	-	0.0050	-	-	-	-
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04807	0.0050	0.050	-	96.1	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04794	0.0040	0.050	-	95.9	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0428	0.0040	0.050	-	85.6	70-130
1,1-Dichloroethene	ND	0.05058	0.0050	0.050	-	101	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 8/29/13

**Date Analyzed:** 8/29/13 - 8/30/13

Instrument: GC28
Matrix: Soil

**Project:** #1435.002; Solano Group

WorkOrder: 1308A45

**BatchID:** 81182

**Extraction Method:** SW5030B **Analytical Method:** SW8260B

**Unit:** mg/kg

Sample ID: MB/LCS-81182

1308A45-016AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	-	0.0050	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04544	0.0050	0.050	-	90.9	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
dibromofluromethane	0.1158	0.1221		0.12	93	98	70-130
toluene-d8	0.1378	0.1356		0.12	110	108	70-130
4-BFB	0.01399	0.01325		0.012	112	106	70-130



### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 8/29/13

**Date Analyzed:** 8/29/13 - 8/30/13

Instrument: GC28
Matrix: Soil

**Project:** #1435.002; Solano Group

WorkOrder: 1308A45

**BatchID:** 81182

**Extraction Method:** SW5030B

**Analytical Method:** SW8260B **Unit:** mg/kg

Sample ID: MB/LCS-81182

1308A45-016AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chlorobenzene	0.03653	0.04273	0.050	ND	73.1	85.5	61-108	15.6	30
1,2-Dibromoethane (EDB)	0.03713	0.043	0.050	ND	74.3	86	54-119	14.7	30
1,2-Dichloroethane (1,2-DCA)	0.02889	0.03396	0.050	ND	57.8	67.9	48-115	16.1	30
1,1-Dichloroethene	0.02203	0.02507	0.050	ND	44.1,F1	50.1	46-111	12.9	30
Trichloroethene	0.02795	0.03365	0.050	ND	55.9,F1	67.3	60-116	18.5	30
Surrogate Recovery									
dibromofluromethane	0.1223	0.1235	0.12	87	98	99	70-130	0.985	30
toluene-d8	0.1313	0.132	0.12	108	105	106	70-130	0.565	30
4-BFB	0.01326	0.01355	0.012	120	106	108	70-130	2.20	30

#### McCampbell Analytical, Inc.

### **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

Requested TAT:

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

Report to:

WorkOrder: 1308A45 ClientCode: PEO □WaterTrax ☐ WriteOn **▼**EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty ☐ J-flag

Morgan Gillies Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200

Oakland, CA 94612

(510) 836-3700

FAX: (510) 836-3709

Email: mgillies@pangeaenv.com; tdelafuente@pa cc:

PO: ProjectNo: #1435.002; Solano Group Bob Clark-Riddell

Bill to:

Pangea Environmental Svcs., Inc.

Date Received: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 Date Printed:

08/29/2013

5 days

08/29/2013

								R	equeste	d Tests	(See leg	end be	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1308A45-001	F-7-2.5	Soil	8/29/2013 14:00		Α	Α										
1308A45-002	F-8-4	Soil	8/29/2013 14:30		Α											
1308A45-006	HA-1-3	Soil	8/29/2013 15:30		Α											
1308A45-007	HA-2-3	Soil	8/29/2013 15:40		Α											
1308A45-010	HA-1-5	Soil	8/29/2013 15:55		Α											
1308A45-011	SW-SW-2.5	Soil	8/29/2013 16:00		Α											
1308A45-012	HA-2-5	Soil	8/29/2013 16:05		Α											
1308A45-013	SW-W-2.5	Soil	8/29/2013 16:30		Α											
1308A45-014	SW-NW-2.5	Soil	8/29/2013 16:35		Α											
1308A45-015	HA-3-NW-3	Soil	8/29/2013 17:20		Α											
1308A45-016	SS-1183-1	Soil	8/29/2013 17:30		Α											

#### Test Legend:

1 8010BMS_S	2 PREDF REPORT	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Jena Alfaro

012, 015 and 016 are 24hr RUSH! Comments:

> NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

1308A45

19. lot 2

													*	177			- /		
	McCAMPBELL ANALYTICAL, INC.  1534 Willow Pass Road Pittsburg, CA 94565 Website: www.mccampbell.com Telephone: (925) 252-9262 Email: main@mccampbell.com Fax: (925) 252-9269									1				CHAIN OF CUSTODY I	48 HR	72 H	R 5 DAY		
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Report To: Morgan Gillies			Bill To	o: Pa	ngea						-				_	Analysis Request		Other	Comments
Company: Pangea Environn																			Filter
1710 Franklin Street, Suite 2	00, Oakl	and, CA	94612	2															Samples
			E-Mai	-		-	- 341	aenv	.com										for Metals
Tele: (510) 836-3702			Fax: (	-		_													analysis:
Project #: 1435.002			Projec	et Nar	ne: S	Solar	no G	rou	p				8		-10				Yes / No
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Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

#### **Sample Receipt Checklist**

Client Name:	Pangea Environmer	ntal Svcs., Inc.			Date and	d Time Received:	8/29/2013 8:47:29 PM
Project Name:	#1435.002; Solano	Group			LogIn Re	eviewed by:	Jena Alfaro
WorkOrder N°:	1308A45	Matrix: Soil			Carrier:	Client Drop-In	
		<u>Chai</u>	n of Cւ	ustody (COC	) Informatio	<u>on</u>	
Chain of custody	present?		Yes	<b>✓</b>	No $\square$		
Chain of custody	signed when relinquis	shed and received?	Yes	<b>✓</b>	No 🗌		
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No 🗌		
Sample IDs note	d by Client on COC?		Yes	<b>✓</b>	No 🗌		
Date and Time of	f collection noted by C	lient on COC?	Yes	<b>✓</b>	No 🗌		
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗌		
		9	Sample	Receipt Inf	ormation		
Custody seals int	tact on shipping conta	iner/cooler?	Yes		No 🗌		NA 🗸
Shipping containe	er/cooler in good cond	lition?	Yes	<b>✓</b>	No $\square$		
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌		
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗌		
Sufficient sample	e volume for indicated	test?	Yes	<b>✓</b>	No 🗌		
		Sample Prese	ervatio	n and Hold	Time (HT) In	<u>nformation</u>	
All samples recei	ived within holding tim	e?	Yes	<b>✓</b>	No $\square$		
Container/Temp	Blank temperature		Coole	er Temp: 4.	4°C		NA 🗆
Water - VOA vial	s have zero headspac	ce / no bubbles?	Yes		No 🗆 N	lo VOA vials submi	itted 🗸
Sample labels ch	necked for correct pres	servation?	Yes	<b>✓</b>	No 🗌		
Metal - pH accep	table upon receipt (pF	H<2)?	Yes		No 🗌		NA 🗹
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗌		
		(Ice Type	e: WE	TICE )			
* NOTE: If the "N	lo" box is checked, se	e comments below.					



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1309014

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project Name:** #1435.002; Solano Group

**Project P.O.:** 

**Project Received:** 09/03/2013

Analytical Report reviewed & approved for release on 09/09/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.



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### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309014Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/3/13 16:32Analytical Method:SW8260BDate Prepared:9/3/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collec	cted Instrument	Batch ID
HA-2D-1'ss	1309014-001A	Soil	08/30/2013 1	5:00 GC10	81244
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/04/2013 13:16
Bromoform	ND		0.0050	1	09/04/2013 13:16
Bromomethane	ND		0.0050	1	09/04/2013 13:16
Carbon Tetrachloride	ND		0.0050	1	09/04/2013 13:16
Chlorobenzene	ND		0.0050	1	09/04/2013 13:16
Chloroethane	ND		0.0050	1	09/04/2013 13:16
Chloroform	ND		0.0050	1	09/04/2013 13:16
Chloromethane	ND		0.0050	1	09/04/2013 13:16
Dibromochloromethane	ND		0.0050	1	09/04/2013 13:16
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/04/2013 13:16
1,2-Dichlorobenzene	ND		0.0050	1	09/04/2013 13:16
1,3-Dichlorobenzene	ND		0.0050	1	09/04/2013 13:16
1,4-Dichlorobenzene	ND		0.0050	1	09/04/2013 13:16
Dichlorodifluoromethane	ND		0.0050	1	09/04/2013 13:16
1,1-Dichloroethane	ND		0.0050	1	09/04/2013 13:16
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/04/2013 13:16
1,1-Dichloroethene	ND		0.0050	1	09/04/2013 13:16
cis-1,2-Dichloroethene	ND		0.0050	1	09/04/2013 13:16
trans-1,2-Dichloroethene	ND		0.0050	1	09/04/2013 13:16
1,2-Dichloropropane	ND		0.0050	1	09/04/2013 13:16
cis-1,3-Dichloropropene	ND		0.0050	1	09/04/2013 13:16
trans-1,3-Dichloropropene	ND		0.0050	1	09/04/2013 13:16
Freon 113	ND		0.10	1	09/04/2013 13:16
Methylene chloride	ND		0.0050	1	09/04/2013 13:16
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/04/2013 13:16
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/04/2013 13:16
Tetrachloroethene	ND		0.0050	1	09/04/2013 13:16
1,1,1-Trichloroethane	ND		0.0050	1	09/04/2013 13:16
1,1,2-Trichloroethane	ND		0.0050	1	09/04/2013 13:16
Trichloroethene	ND		0.0050	1	09/04/2013 13:16
Trichlorofluoromethane	ND		0.0050	1	09/04/2013 13:16
Vinyl Chloride	ND		0.0050	1	09/04/2013 13:16
Surrogates	REC (%)		<u>Limits</u>		
dibromofluromethane	95		70-130		09/04/2013 13:16
toluene-d8	99		70-130		09/04/2013 13:16
4-BFB	95		70-130		09/04/2013 13:16

### **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309014Date Prepared:9/3/13BatchID:81244Date Analyzed:9/3/13Extraction MethodSW5030BInstrument:GC10Analytical Method:SW8260B

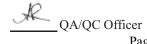
Matrix: Soil Unit: mg/kg

**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-81244

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.050	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	-	0.0050	-	-	-	-
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04777	0.0050	0.050	-	95.5	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04845	0.0040	0.050	-	96.9	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04292	0.0040	0.050	-	85.8	70-130
1,1-Dichloroethene	ND	0.04741	0.0050	0.050	-	94.8	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	_	0.0050	_	_	_	

(Cont.)



### **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309014Date Prepared:9/3/13BatchID:81244Date Analyzed:9/3/13Extraction MethodSW5030BInstrument:GC10Analytical Method:SW8260B

Matrix: Soil Unit: mg/kg

**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-81244

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	-	0.0050	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04491	0.0050	0.050	-	89.8	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
dibromofluromethane	0.1227	0.1228		0.12	98	98	70-130
toluene-d8	0.1283	0.1208		0.12	103	97	70-130
4-BFB	0.01279	0.0121		0.012	102	97	70-130

### McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd

Pittsburg, CA 94565-1701

(925) 25	52-9262				W	orkO	rder: 1	309014		Clie	ntCod	e: PEC	)				
		WaterTrax	WriteOn	<b>✓</b> EDF	ШΕ	xcel		EQuIS	<b>✓</b> E	Email		HardCo	ру	ThirdP	arty	J-fla	ıg
Report to:						Bi	ll to:					ı	Reques	ted TAT	:	5 c	lays
0	vironmental Svcs., Inc. in Street, Ste. 200 A 94612	Email: cc: PO: ProjectNo:	BRiddell@pang #1435.002; Sola				Pang 1710	Clark-Rid ea Envir Franklir and, CA	ronmer Street	t, Ste. 2	,			Received Printed:		09/03/2 09/03/2	
									Red	uested '	Tests (S	See lege	nd bel	ow)			
Lab ID	Client ID		Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1309014-001	HA-2D-1'ss		Soil	8/30/2013 15:00		Α	Α										

#### Test Legend:

1	8010BMS_S	2	PREDF REPORT	3	4	5	
6		7		8	9	10	
11		12					

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

We Telepho	decamp bsite: www.mc one: (925) 252	Pitts campbell 2-9262	com Em	94565 iail: m	ain@n F	necar Fax: (	mpbe (925)	II.co	m	900	7(	) '	- 1					OU	ND oek	TIN (No	ME rma	D)	RUS No	) Н :	24 H		48 H	IR No		
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Tele: (510) 435-8	8664			Fax:	(510)	836-	3709																							analysis:
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SAMPLE ID	LOCATION			ners	taine			T	П				1000	(801)	cygen	PAN	PAN									1				
SAMPLE ID	(Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO3	Other	TPHg/BTEX (8015Cm/8021B)	Five fuel oxygenates (8260B)	VOCs by EPA	VOCs by EPA Method 8260											è		
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Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

#### **Sample Receipt Checklist**

Client Name:	Pangea Environme	ntal Svcs., Inc.			Date a	and Time Received:	9/3/2013 4	:32:48 PM
Project Name:	#1435.002; Solano	Group			LogIn	Reviewed by:		Jena Alfaro
WorkOrder N°:	1309014	Matrix: Soil			Carrie	er: Rob Pringle (M	IAI Courier)	
		Cha	ain of Cu	ustody (0	COC) Informa	tion		
Chain of custody	/ present?		Yes	<b>✓</b>	No 🗌			
Chain of custody	/ signed when relinqui	shed and received?	Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with sample I	abels?	Yes	<b>✓</b>	No 🗌			
Sample IDs note	ed by Client on COC?		Yes	<b>✓</b>	No 🗌			
Date and Time o	of collection noted by 0	Client on COC?	Yes	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$			
			Sample	e Receip	t Information			
Custody seals in	itact on shipping conta	ainer/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	ner/cooler in good con-	dition?	Yes	<b>✓</b>	No 🗌			
Samples in prop	er containers/bottles?		Yes	<b>✓</b>	No 🗌			
Sample containe	ers intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicated	test?	Yes	<b>✓</b>	No 🗌			
		Sample Pres	servatio	n and H	old Time (HT)	Information		
All samples rece	eived within holding tim	ne?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature		Coole	er Temp:	3.8°C		NA 🗌	
Water - VOA via	ls have zero headspa	ce / no bubbles?	Yes		No 🗌	No VOA vials subm	itted 🗹	
Sample labels ch	hecked for correct pre	servation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	otable upon receipt (pl	H<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?		Yes	<b>✓</b>	No 🗌			
		(Ісе Тур	oe: WE	T ICE	)			
* NOTE: If the "N	No" box is checked, se	ee comments below.						



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1309013

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project Name:** #1435.002; Solano Group

**Project P.O.:** 

**Project Received:** 09/03/2013

Analytical Report reviewed & approved for release on 09/09/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

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1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com NELAP: 12283CA ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309013Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/3/13 16:32Analytical Method:SW8260BDate Prepared:9/3/13-9/5/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collec	cted Instrument	Batch ID
1183 Central N-4'	1309013-001A	Soil	09/02/2013	GC10	81244
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/04/2013 11:09
Bromoform	ND		0.0050	1	09/04/2013 11:09
Bromomethane	ND		0.0050	1	09/04/2013 11:09
Carbon Tetrachloride	ND		0.0050	1	09/04/2013 11:09
Chlorobenzene	ND		0.0050	1	09/04/2013 11:09
Chloroethane	ND		0.0050	1	09/04/2013 11:09
Chloroform	ND		0.0050	1	09/04/2013 11:09
Chloromethane	ND		0.0050	1	09/04/2013 11:09
Dibromochloromethane	ND		0.0050	1	09/04/2013 11:09
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/04/2013 11:09
1,2-Dichlorobenzene	ND		0.0050	1	09/04/2013 11:09
1,3-Dichlorobenzene	ND		0.0050	1	09/04/2013 11:09
1,4-Dichlorobenzene	ND		0.0050	1	09/04/2013 11:09
Dichlorodifluoromethane	ND		0.0050	1	09/04/2013 11:09
1,1-Dichloroethane	ND		0.0050	1	09/04/2013 11:09
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/04/2013 11:09
1,1-Dichloroethene	ND		0.0050	1	09/04/2013 11:09
cis-1,2-Dichloroethene	ND		0.0050	1	09/04/2013 11:09
trans-1,2-Dichloroethene	ND		0.0050	1	09/04/2013 11:09
1,2-Dichloropropane	ND		0.0050	1	09/04/2013 11:09
cis-1,3-Dichloropropene	ND		0.0050	1	09/04/2013 11:09
trans-1,3-Dichloropropene	ND		0.0050	1	09/04/2013 11:09
Freon 113	ND		0.10	1	09/04/2013 11:09
Methylene chloride	ND		0.0050	1	09/04/2013 11:09
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/04/2013 11:09
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/04/2013 11:09
Tetrachloroethene	ND		0.0050	1	09/04/2013 11:09
1,1,1-Trichloroethane	ND		0.0050	1	09/04/2013 11:09
1,1,2-Trichloroethane	ND		0.0050	1	09/04/2013 11:09
Trichloroethene	ND		0.0050	1	09/04/2013 11:09
Trichlorofluoromethane	ND		0.0050	1	09/04/2013 11:09
Vinyl Chloride	ND		0.0050	1	09/04/2013 11:09
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	96		70-130		09/04/2013 11:09
toluene-d8	103		70-130		09/04/2013 11:09
4-BFB	104		70-130		09/04/2013 11:09

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BB Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309013Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/3/13 16:32Analytical Method:SW8260BDate Prepared:9/3/13-9/5/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Colle	cted Instrument	Batch ID
1183 Central N-6'	1309013-002A	Soil	09/02/2013	GC10	81244
<u>Analytes</u>	Result		<u>RL</u>	DF	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/04/2013 11:51
Bromoform	ND		0.0050	1	09/04/2013 11:51
Bromomethane	ND		0.0050	1	09/04/2013 11:51
Carbon Tetrachloride	ND		0.0050	1	09/04/2013 11:51
Chlorobenzene	ND		0.0050	1	09/04/2013 11:51
Chloroethane	ND		0.0050	1	09/04/2013 11:51
Chloroform	ND		0.0050	1	09/04/2013 11:51
Chloromethane	ND		0.0050	1	09/04/2013 11:51
Dibromochloromethane	ND		0.0050	1	09/04/2013 11:51
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/04/2013 11:51
1,2-Dichlorobenzene	ND		0.0050	1	09/04/2013 11:51
1,3-Dichlorobenzene	ND		0.0050	1	09/04/2013 11:51
1,4-Dichlorobenzene	ND		0.0050	1	09/04/2013 11:51
Dichlorodifluoromethane	ND		0.0050	1	09/04/2013 11:51
1,1-Dichloroethane	ND		0.0050	1	09/04/2013 11:51
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/04/2013 11:51
1,1-Dichloroethene	ND		0.0050	1	09/04/2013 11:51
cis-1,2-Dichloroethene	ND		0.0050	1	09/04/2013 11:51
trans-1,2-Dichloroethene	ND		0.0050	1	09/04/2013 11:51
1,2-Dichloropropane	ND		0.0050	1	09/04/2013 11:51
cis-1,3-Dichloropropene	ND		0.0050	1	09/04/2013 11:51
trans-1,3-Dichloropropene	ND		0.0050	1	09/04/2013 11:51
Freon 113	ND		0.10	1	09/04/2013 11:51
Methylene chloride	ND		0.0050	1	09/04/2013 11:51
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/04/2013 11:51
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/04/2013 11:51
Tetrachloroethene	ND		0.0050	1	09/04/2013 11:51
1,1,1-Trichloroethane	ND		0.0050	1	09/04/2013 11:51
1,1,2-Trichloroethane	ND		0.0050	1	09/04/2013 11:51
Trichloroethene	ND		0.0050	1	09/04/2013 11:51
Trichlorofluoromethane	ND		0.0050	1	09/04/2013 11:51
Vinyl Chloride	ND		0.0050	1	09/04/2013 11:51
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	96		70-130		09/04/2013 11:51
toluene-d8	99		70-130		09/04/2013 11:51
4-BFB	98		70-130		09/04/2013 11:51

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309013Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/3/13 16:32Analytical Method:SW8260BDate Prepared:9/3/13-9/5/13Unit:mg/kg

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collec	cted Instrument	Batch ID
1183 North -2'	1309013-003A	Soil	09/02/2013	GC10	81359
Analytes	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/05/2013 23:26
Bromoform	ND		0.0050	1	09/05/2013 23:26
Bromomethane	ND		0.0050	1	09/05/2013 23:26
Carbon Tetrachloride	ND		0.0050	1	09/05/2013 23:26
Chlorobenzene	ND		0.0050	1	09/05/2013 23:26
Chloroethane	ND		0.0050	1	09/05/2013 23:26
Chloroform	ND		0.0050	1	09/05/2013 23:26
Chloromethane	ND		0.0050	1	09/05/2013 23:26
Dibromochloromethane	ND		0.0050	1	09/05/2013 23:26
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/05/2013 23:26
1,2-Dichlorobenzene	ND		0.0050	1	09/05/2013 23:26
1,3-Dichlorobenzene	ND		0.0050	1	09/05/2013 23:26
1,4-Dichlorobenzene	ND		0.0050	1	09/05/2013 23:26
Dichlorodifluoromethane	ND		0.0050	1	09/05/2013 23:26
1,1-Dichloroethane	ND		0.0050	1	09/05/2013 23:26
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/05/2013 23:26
1,1-Dichloroethene	ND		0.0050	1	09/05/2013 23:26
cis-1,2-Dichloroethene	ND		0.0050	1	09/05/2013 23:26
trans-1,2-Dichloroethene	ND		0.0050	1	09/05/2013 23:26
1,2-Dichloropropane	ND		0.0050	1	09/05/2013 23:26
cis-1,3-Dichloropropene	ND		0.0050	1	09/05/2013 23:26
trans-1,3-Dichloropropene	ND		0.0050	1	09/05/2013 23:26
Freon 113	ND		0.10	1	09/05/2013 23:26
Methylene chloride	ND		0.0050	1	09/05/2013 23:26
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/05/2013 23:26
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/05/2013 23:26
Tetrachloroethene	ND		0.0050	1	09/05/2013 23:26
1,1,1-Trichloroethane	ND		0.0050	1	09/05/2013 23:26
1,1,2-Trichloroethane	ND		0.0050	1	09/05/2013 23:26
Trichloroethene	ND		0.0050	1	09/05/2013 23:26
Trichlorofluoromethane	ND		0.0050	1	09/05/2013 23:26
Vinyl Chloride	ND		0.0050	1	09/05/2013 23:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	90		70-130		09/05/2013 23:26
toluene-d8	93		70-130		09/05/2013 23:26
4-BFB	83		70-130		09/05/2013 23:26

# **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309013Date Prepared:9/3/13BatchID:81244Date Analyzed:9/3/13Extraction MethodSW5030BInstrument:GC10Analytical Method:SW8260B

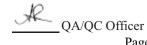
Matrix: Soil Unit: mg/kg

**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-81244

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.050	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	-	0.0050	-	-	-	-
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04777	0.0050	0.050	-	95.5	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04845	0.0040	0.050	-	96.9	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04292	0.0040	0.050	-	85.8	70-130
1,1-Dichloroethene	ND	0.04741	0.0050	0.050	-	94.8	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	_	0.0050	_	_	_	

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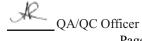
# **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309013Date Prepared:9/3/13BatchID:81244Date Analyzed:9/3/13Extraction MethodSW5030BInstrument:GC10Analytical Method:SW8260B

Matrix: Soil Unit: mg/kg

**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-81244

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	-	0.0050	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04491	0.0050	0.050	-	89.8	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
dibromofluromethane	0.1227	0.1228		0.12	98	98	70-130
toluene-d8	0.1283	0.1208		0.12	103	97	70-130
4-BFB	0.01279	0.0121		0.012	102	97	70-130



# **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 9/5/13

**Date Analyzed:** 9/5/13 - 9/6/13

Instrument: GC10
Matrix: Soil

**Project:** #1435.002; Solano Group

**WorkOrder:** 1309013

**BatchID:** 81359

**Extraction Method** SW5030B **Analytical Method:** SW8260B

**Unit:** mg/kg

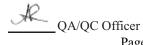
Sample ID: MB/LCS-81359

1308A84-008AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.050	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	-	0.0050	-	-	-	-
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04963	0.0050	0.050	-	99.3	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04645	0.0040	0.050	-	92.9	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04328	0.0040	0.050	-	86.6	70-130
1,1-Dichloroethene	ND	0.04226	0.0050	0.050	-	84.5	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	_	-	-
1,1-Dichloropropene	ND	-	0.0050	-	_	-	-
cis-1,3-Dichloropropene	ND	_	0.0050	_	_	_	_

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# **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 9/5/13

**Date Analyzed:** 9/5/13 - 9/6/13

Instrument: GC10
Matrix: Soil

**Project:** #1435.002; Solano Group

**WorkOrder:** 1309013

**BatchID:** 81359

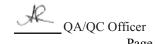
**Extraction Method** SW5030B **Analytical Method:** SW8260B

**Unit:** mg/kg

Sample ID: MB/LCS-81359

1308A84-008AMS/MSD

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	-	0.0050	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04758	0.0050	0.050	-	95.2	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
dibromofluromethane	0.1199	0.1755		0.18	96	100	70-130
toluene-d8	0.1252	0.1728		0.18	100	99	70-130
4-BFB	0.01164	0.01755		0.018	93	100	70-130



# **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 9/5/13

**Date Analyzed:** 9/5/13 - 9/6/13

Instrument: GC10
Matrix: Soil

**Project:** #1435.002; Solano Group

**WorkOrder:** 1309013

**BatchID:** 81359

**Extraction Method** SW5030B

**Analytical Method:** SW8260B

**Unit:** mg/kg

Sample ID: MB/LCS-81359

1308A84-008AMS/MSD

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chlorobenzene	0.04943	0.05031	0.050	ND	98.9	101	61-108	1.78	30
1,2-Dibromoethane (EDB)	0.05016	0.04612	0.050	ND	100	92.2	54-119	8.40	30
1,2-Dichloroethane (1,2-DCA)	0.0447	0.04497	0.050	ND	89.4	89.9	48-115	0.597	30
1,1-Dichloroethene	0.04319	0.04366	0.050	ND	86.4	87.3	46-111	1.08	30
Trichloroethene	0.04821	0.0479	0.050	ND	96.4	95.8	60-116	0.644	30
Surrogate Recovery									
dibromofluromethane	0.1799	0.1762	0.18	92	103	101	70-130	2.08	30
toluene-d8	0.1722	0.1719	0.18	99	98	98	70-130	0	30
4-BFB	0.01724	0.01723	0.018	87	99	98	70-130	0.0806	30

#### McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1309013

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

☐ WaterTrax ☐ WriteOn **▼**EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag Report to: Bill to: Requested TAT: 5 days Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 09/03/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 09/03/2013 (510) 836-3700 FAX: (510) 836-3709

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
1309013-001	1183 Central N-4'	Soil	9/2/2013		Α	Α										T
1309013-002	1183 Central N-6'	Soil	9/2/2013		Α											
1309013-003	1183 North -2'	Soil	9/2/2013		Α											

#### Test Legend:

1	8010BMS_S	2 PREDF REPORT	3	4	5	
6		7	8	9	10	
11		12				

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

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Report To: Bob	the same of the sa		E	Bill To	o: Pa		-	, ===	-				$^{\dagger}$						An	alys	s Re	que	st					0	ther	Comments
Company: Pange		A Control of the control	11 10 100 7 10 101						100																53					
1710 Franklin Str	eet, Suite 20	0, Oakla	and, CA	94612	2																									Filter Samples
	E-Mail: briddell@pangeaenv.com								1																	for Metals				
Tele: (510) 435-8		- 45-	Fax: (510) 836-3709						4																	analysis:				
Project #: 1435.0				rojec	et Nar	ne: S	Sola	no G	rou	р			4		6	_	525					100								Yes / No
	Project Location: 1187 Solano Ave, Albany						-	(8)	260E	801	8260																			
Sampler Signatur	Sampler Signature: Bot Classic						4	/802	8	poq	pod																			
SAMPLING MATRIX METHOD PRESERVE							D	(8015Cm/8021B)	enates	MEd	Meth											18								
SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO3		TPHg/BTEX (80	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010	VOCs by EPA Method 8260											ć		
1183 Control N-4	1	9/2/13		1	ME		X						+			X			7								Н			1
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Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

#### **Sample Receipt Checklist**

Client Name:	Pangea Environment	tal Svcs., Inc.			Date	and T	ime Received:	9/3/2013 4:	32:13 PM
Project Name:	#1435.002; Solano G	Froup			LogIn	n Revi	ewed by:		Jena Alfaro
WorkOrder N°:	1309013	Matrix: Soil			Carrie	er:	Rob Pringle (M/	Al Courier)	
		<u>Chair</u>	of Cu	ustody (C	OC) Informa	ation			
Chain of custody	present?		Yes	<b>✓</b>	No 🗌				
Chain of custody	signed when relinquisl	ned and received?	Yes	✓	No 🗌				
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌				
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$				
Date and Time of	collection noted by Cl	ient on COC?	Yes	✓	No $\square$				
Sampler's name r	noted on COC?		Yes	<b>✓</b>	No 🗌				
		<u>s</u>	ample	Receipt	Information	<u>1</u>			
Custody seals into	act on shipping contail	ner/cooler?	Yes		No 🗌			NA 🗸	
Shipping contained	er/cooler in good condi	tion?	Yes	✓	No 🗌				
Samples in prope	er containers/bottles?		Yes	✓	No 🗌				
Sample container	rs intact?		Yes	✓	No 🗌				
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No 🗌				
		Sample Prese	rvatio	n and Ho	ld Time (HT	) Info	<u>rmation</u>		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No 🗌				
Container/Temp B	Blank temperature		Coole	er Temp:	3.8°C			NA $\square$	
Water - VOA vials	s have zero headspace	e / no bubbles?	Yes		No 🗌	No۱	VOA vials submit	ted 🗸	
Sample labels ch	ecked for correct pres	ervation?	Yes	✓	No 🗌				
Metal - pH accept	table upon receipt (pH	<2)?	Yes		No 🗌			NA 🗸	
Samples Receive	ed on Ice?		Yes	✓	No 🗌				
		(Ice Type	: WE	TICE )					
* NOTE: If the "N	o" box is checked, see	comments below.							
						==			



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1309183

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project P.O.:** 

**Project Name:** #1435.002; Solano Group

**Project Received:** 09/09/2013

Analytical Report reviewed & approved for release on 09/13/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.



1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com NELAP: 12283CA ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3



### **Glossary of Terms & Qualifier Definitions**

**Client:** Pangea Environmental Svcs., Inc.

**Project:** #1435.002; Solano Group

WorkOrder: 1309183

Glossary Description
Abbreviation

95% Interval 95% Confident Interval

DF Dilution Factor

LCS Laboratory Control Sample

MB Method Blank

MB % Rec % Recovery of Surrogate in Method Blank, if applicable

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

ND Not detected at or above the indicated MDL or RL

NR Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water

matrix; or sample diluted due to high matrix or analyte content.

RL Reporting Limit

RPD Relative Percent Deviation

SPK Val Spike Value

SPKRef Val Spike Reference Value

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260BDate Prepared:9/9/13-9/12/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Coll	lected Instrun	nent Batch ID
F-9-3'	1309183-001A	Soil	09/05/2013	14:30 GC10	81459
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/11/2013 19:56
Bromoform	ND		0.0050	1	09/11/2013 19:56
Bromomethane	ND		0.0050	1	09/11/2013 19:56
Carbon Tetrachloride	ND		0.0050	1	09/11/2013 19:56
Chlorobenzene	ND		0.0050	1	09/11/2013 19:56
Chloroethane	ND		0.0050	1	09/11/2013 19:56
Chloroform	ND		0.0050	1	09/11/2013 19:56
Chloromethane	ND		0.0050	1	09/11/2013 19:56
Dibromochloromethane	ND		0.0050	1	09/11/2013 19:56
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/11/2013 19:56
1,2-Dichlorobenzene	ND		0.0050	1	09/11/2013 19:56
1,3-Dichlorobenzene	ND		0.0050	1	09/11/2013 19:56
1,4-Dichlorobenzene	ND		0.0050	1	09/11/2013 19:56
Dichlorodifluoromethane	ND		0.0050	1	09/11/2013 19:56
1,1-Dichloroethane	ND		0.0050	1	09/11/2013 19:56
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/11/2013 19:56
1,1-Dichloroethene	ND		0.0050	1	09/11/2013 19:56
cis-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 19:56
trans-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 19:56
1,2-Dichloropropane	ND		0.0050	1	09/11/2013 19:56
cis-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 19:56
trans-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 19:56
Freon 113	ND		0.10	1	09/11/2013 19:56
Methylene chloride	ND		0.0050	1	09/11/2013 19:56
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 19:56
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 19:56
Tetrachloroethene	ND		0.0050	1	09/11/2013 19:56
1,1,1-Trichloroethane	ND		0.0050	1	09/11/2013 19:56
1,1,2-Trichloroethane	ND		0.0050	1	09/11/2013 19:56
Trichloroethene	ND		0.0050	1	09/11/2013 19:56
Trichlorofluoromethane	ND		0.0050	1	09/11/2013 19:56
Vinyl Chloride	ND		0.0050	1	09/11/2013 19:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	108		70-130		09/11/2013 19:56
toluene-d8	118		70-130		09/11/2013 19:56
4-BFB	94		70-130		09/11/2013 19:56

(Cont.)

KF Analyst's Initial

# **Analytical Report**

**Client:** WorkOrder: Pangea Environmental Svcs., Inc. 1309183 **Project:** #1435.002; Solano Group Extraction Method SW5030B **Date Received:** 9/9/13 17:59 **Analytical Method:** SW8260B **Date Prepared:** 9/9/13-9/12/13

**Unit:** 

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Coll	lected Instrument	Batch ID
F-10-3'	1309183-002A	Soil	09/05/2013	3 14:35 GC10	81459
<u>Analytes</u>	Result		<u>RL</u>	DF	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/11/2013 20:39
Bromoform	ND		0.0050	1	09/11/2013 20:39
Bromomethane	ND		0.0050	1	09/11/2013 20:39
Carbon Tetrachloride	ND		0.0050	1	09/11/2013 20:39
Chlorobenzene	ND		0.0050	1	09/11/2013 20:39
Chloroethane	ND		0.0050	1	09/11/2013 20:39
Chloroform	ND		0.0050	1	09/11/2013 20:39
Chloromethane	ND		0.0050	1	09/11/2013 20:39
Dibromochloromethane	ND		0.0050	1	09/11/2013 20:39
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/11/2013 20:39
1,2-Dichlorobenzene	ND		0.0050	1	09/11/2013 20:39
1,3-Dichlorobenzene	ND		0.0050	1	09/11/2013 20:39
1,4-Dichlorobenzene	ND		0.0050	1	09/11/2013 20:39
Dichlorodifluoromethane	ND		0.0050	1	09/11/2013 20:39
1,1-Dichloroethane	ND		0.0050	1	09/11/2013 20:39
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/11/2013 20:39
1,1-Dichloroethene	ND		0.0050	1	09/11/2013 20:39
cis-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 20:39
trans-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 20:39
1,2-Dichloropropane	ND		0.0050	1	09/11/2013 20:39
cis-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 20:39
trans-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 20:39
Freon 113	ND		0.10	1	09/11/2013 20:39
Methylene chloride	ND		0.0050	1	09/11/2013 20:39
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 20:39
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 20:39
Tetrachloroethene	0.023		0.0050	1	09/11/2013 20:39
1,1,1-Trichloroethane	ND		0.0050	1	09/11/2013 20:39
1,1,2-Trichloroethane	ND		0.0050	1	09/11/2013 20:39
Trichloroethene	ND		0.0050	1	09/11/2013 20:39
Trichlorofluoromethane	ND		0.0050	1	09/11/2013 20:39
Vinyl Chloride	ND		0.0050	1	09/11/2013 20:39
<u>Surrogates</u>	REC (%)		<u>Limits</u>		
dibromofluromethane	108		70-130		09/11/2013 20:39
toluene-d8	112		70-130		09/11/2013 20:39
4-BFB	95		70-130		09/11/2013 20:39

(Cont.)

\_ Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260BDate Prepared:9/9/13-9/12/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Coll	lected Inst	rument Batch ID
F-11-2'	1309183-003A	Soil	09/05/2013	14:40 GC1	0 81584
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Bromodichloromethane	ND		0.0050	1	09/12/2013 18:00
Bromoform	ND		0.0050	1	09/12/2013 18:00
Bromomethane	ND		0.0050	1	09/12/2013 18:00
Carbon Tetrachloride	ND		0.0050	1	09/12/2013 18:00
Chlorobenzene	ND		0.0050	1	09/12/2013 18:00
Chloroethane	ND		0.0050	1	09/12/2013 18:00
Chloroform	ND		0.0050	1	09/12/2013 18:00
Chloromethane	ND		0.0050	1	09/12/2013 18:00
Dibromochloromethane	ND		0.0050	1	09/12/2013 18:00
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/12/2013 18:00
1,2-Dichlorobenzene	ND		0.0050	1	09/12/2013 18:00
1,3-Dichlorobenzene	ND		0.0050	1	09/12/2013 18:00
1,4-Dichlorobenzene	ND		0.0050	1	09/12/2013 18:00
Dichlorodifluoromethane	ND		0.0050	1	09/12/2013 18:00
1,1-Dichloroethane	ND		0.0050	1	09/12/2013 18:00
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/12/2013 18:00
1,1-Dichloroethene	ND		0.0050	1	09/12/2013 18:00
cis-1,2-Dichloroethene	ND		0.0050	1	09/12/2013 18:00
trans-1,2-Dichloroethene	ND		0.0050	1	09/12/2013 18:00
1,2-Dichloropropane	ND		0.0050	1	09/12/2013 18:00
cis-1,3-Dichloropropene	ND		0.0050	1	09/12/2013 18:00
trans-1,3-Dichloropropene	ND		0.0050	1	09/12/2013 18:00
Freon 113	ND		0.10	1	09/12/2013 18:00
Methylene chloride	ND		0.0050	1	09/12/2013 18:00
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/12/2013 18:00
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/12/2013 18:00
Tetrachloroethene	ND		0.0050	1	09/12/2013 18:00
1,1,1-Trichloroethane	ND		0.0050	1	09/12/2013 18:00
1,1,2-Trichloroethane	ND		0.0050	1	09/12/2013 18:00
Trichloroethene	ND		0.0050	1	09/12/2013 18:00
Trichlorofluoromethane	ND		0.0050	1	09/12/2013 18:00
Vinyl Chloride	ND		0.0050	1	09/12/2013 18:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	108		70-130		09/12/2013 18:00
toluene-d8	106		70-130		09/12/2013 18:00
4-BFB	84		70-130		09/12/2013 18:00

(Cont.)

\_\_\_KF\_\_ Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260BDate Prepared:9/9/13-9/12/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Coll	ected Instrumen	t Batch ID
F-12-2.5'	1309183-004A	Soil	09/05/2013	14:45 GC10	81459
Analytes	Result		<u>RL</u>	DF	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/11/2013 22:05
Bromoform	ND		0.0050	1	09/11/2013 22:05
Bromomethane	ND		0.0050	1	09/11/2013 22:05
Carbon Tetrachloride	ND		0.0050	1	09/11/2013 22:05
Chlorobenzene	ND		0.0050	1	09/11/2013 22:05
Chloroethane	ND		0.0050	1	09/11/2013 22:05
Chloroform	ND		0.0050	1	09/11/2013 22:05
Chloromethane	ND		0.0050	1	09/11/2013 22:05
Dibromochloromethane	ND		0.0050	1	09/11/2013 22:05
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/11/2013 22:05
1,2-Dichlorobenzene	ND		0.0050	1	09/11/2013 22:05
1,3-Dichlorobenzene	ND		0.0050	1	09/11/2013 22:05
1,4-Dichlorobenzene	ND		0.0050	1	09/11/2013 22:05
Dichlorodifluoromethane	ND		0.0050	1	09/11/2013 22:05
1,1-Dichloroethane	ND		0.0050	1	09/11/2013 22:05
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/11/2013 22:05
1,1-Dichloroethene	ND		0.0050	1	09/11/2013 22:05
cis-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 22:05
trans-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 22:05
1,2-Dichloropropane	ND		0.0050	1	09/11/2013 22:05
cis-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 22:05
trans-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 22:05
Freon 113	ND		0.10	1	09/11/2013 22:05
Methylene chloride	ND		0.0050	1	09/11/2013 22:05
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 22:05
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 22:05
Tetrachloroethene	ND		0.0050	1	09/11/2013 22:05
1,1,1-Trichloroethane	ND		0.0050	1	09/11/2013 22:05
1,1,2-Trichloroethane	ND		0.0050	1	09/11/2013 22:05
Trichloroethene	ND		0.0050	1	09/11/2013 22:05
Trichlorofluoromethane	ND		0.0050	1	09/11/2013 22:05
Vinyl Chloride	ND		0.0050	1	09/11/2013 22:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	112		70-130		09/11/2013 22:05
toluene-d8	114		70-130		09/11/2013 22:05
4-BFB	97		70-130		09/11/2013 22:05

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260B

**Date Prepared:** 9/9/13-9/12/13 **Unit:** mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Coll	ected Instru	iment Batch ID
F-13-2.5'	1309183-005A	Soil	09/05/2013	14:50 GC10	81459
Analytes	Result		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Bromodichloromethane	ND		0.0050	1	09/11/2013 22:48
Bromoform	ND		0.0050	1	09/11/2013 22:48
Bromomethane	ND		0.0050	1	09/11/2013 22:48
Carbon Tetrachloride	ND		0.0050	1	09/11/2013 22:48
Chlorobenzene	ND		0.0050	1	09/11/2013 22:48
Chloroethane	ND		0.0050	1	09/11/2013 22:48
Chloroform	ND		0.0050	1	09/11/2013 22:48
Chloromethane	ND		0.0050	1	09/11/2013 22:48
Dibromochloromethane	ND		0.0050	1	09/11/2013 22:48
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/11/2013 22:48
1,2-Dichlorobenzene	ND		0.0050	1	09/11/2013 22:48
1,3-Dichlorobenzene	ND		0.0050	1	09/11/2013 22:48
1,4-Dichlorobenzene	ND		0.0050	1	09/11/2013 22:48
Dichlorodifluoromethane	ND		0.0050	1	09/11/2013 22:48
1,1-Dichloroethane	ND		0.0050	1	09/11/2013 22:48
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/11/2013 22:48
1,1-Dichloroethene	ND		0.0050	1	09/11/2013 22:48
cis-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 22:48
trans-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 22:48
1,2-Dichloropropane	ND		0.0050	1	09/11/2013 22:48
cis-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 22:48
trans-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 22:48
Freon 113	ND		0.10	1	09/11/2013 22:48
Methylene chloride	ND		0.0050	1	09/11/2013 22:48
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 22:48
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 22:48
Tetrachloroethene	ND		0.0050	1	09/11/2013 22:48
1,1,1-Trichloroethane	ND		0.0050	1	09/11/2013 22:48
1,1,2-Trichloroethane	ND		0.0050	1	09/11/2013 22:48
Trichloroethene	ND		0.0050	1	09/11/2013 22:48
Trichlorofluoromethane	ND		0.0050	1	09/11/2013 22:48
Vinyl Chloride	ND		0.0050	1	09/11/2013 22:48
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	110		70-130		09/11/2013 22:48
toluene-d8	113		70-130		09/11/2013 22:48
4-BFB	94		70-130		09/11/2013 22:48

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KF Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260BDate Prepared:9/9/13-9/12/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Coll	lected Instrument	Batch ID
F-14-2.5'	1309183-006A	Soil	09/05/2013	15:00 GC10	81459
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/11/2013 23:30
Bromoform	ND		0.0050	1	09/11/2013 23:30
Bromomethane	ND		0.0050	1	09/11/2013 23:30
Carbon Tetrachloride	ND		0.0050	1	09/11/2013 23:30
Chlorobenzene	ND		0.0050	1	09/11/2013 23:30
Chloroethane	ND		0.0050	1	09/11/2013 23:30
Chloroform	ND		0.0050	1	09/11/2013 23:30
Chloromethane	ND		0.0050	1	09/11/2013 23:30
Dibromochloromethane	ND		0.0050	1	09/11/2013 23:30
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/11/2013 23:30
1,2-Dichlorobenzene	ND		0.0050	1	09/11/2013 23:30
1,3-Dichlorobenzene	ND		0.0050	1	09/11/2013 23:30
1,4-Dichlorobenzene	ND		0.0050	1	09/11/2013 23:30
Dichlorodifluoromethane	ND		0.0050	1	09/11/2013 23:30
1,1-Dichloroethane	ND		0.0050	1	09/11/2013 23:30
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/11/2013 23:30
1,1-Dichloroethene	ND		0.0050	1	09/11/2013 23:30
cis-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 23:30
trans-1,2-Dichloroethene	ND		0.0050	1	09/11/2013 23:30
1,2-Dichloropropane	ND		0.0050	1	09/11/2013 23:30
cis-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 23:30
trans-1,3-Dichloropropene	ND		0.0050	1	09/11/2013 23:30
Freon 113	ND		0.10	1	09/11/2013 23:30
Methylene chloride	ND		0.0050	1	09/11/2013 23:30
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 23:30
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/11/2013 23:30
Tetrachloroethene	ND		0.0050	1	09/11/2013 23:30
1,1,1-Trichloroethane	ND		0.0050	1	09/11/2013 23:30
1,1,2-Trichloroethane	ND		0.0050	1	09/11/2013 23:30
Trichloroethene	ND		0.0050	1	09/11/2013 23:30
Trichlorofluoromethane	ND		0.0050	1	09/11/2013 23:30
Vinyl Chloride	ND		0.0050	1	09/11/2013 23:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	113		70-130		09/11/2013 23:30
toluene-d8	122		70-130		09/11/2013 23:30
4-BFB	102		70-130		09/11/2013 23:30

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260B

**Date Prepared:** 9/9/13-9/12/13 **Unit:** mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Col	lected Instrument	Batch ID
F-15-2.5'	1309183-007A	Soil	09/05/2013	3 15:05 GC10	81459
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/12/2013 00:13
Bromoform	ND		0.0050	1	09/12/2013 00:13
Bromomethane	ND		0.0050	1	09/12/2013 00:13
Carbon Tetrachloride	ND		0.0050	1	09/12/2013 00:13
Chlorobenzene	ND		0.0050	1	09/12/2013 00:13
Chloroethane	ND		0.0050	1	09/12/2013 00:13
Chloroform	ND		0.0050	1	09/12/2013 00:13
Chloromethane	ND		0.0050	1	09/12/2013 00:13
Dibromochloromethane	ND		0.0050	1	09/12/2013 00:13
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/12/2013 00:13
1,2-Dichlorobenzene	ND		0.0050	1	09/12/2013 00:13
1,3-Dichlorobenzene	ND		0.0050	1	09/12/2013 00:13
1,4-Dichlorobenzene	ND		0.0050	1	09/12/2013 00:13
Dichlorodifluoromethane	ND		0.0050	1	09/12/2013 00:13
1,1-Dichloroethane	ND		0.0050	1	09/12/2013 00:13
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/12/2013 00:13
1,1-Dichloroethene	ND		0.0050	1	09/12/2013 00:13
cis-1,2-Dichloroethene	ND		0.0050	1	09/12/2013 00:13
trans-1,2-Dichloroethene	ND		0.0050	1	09/12/2013 00:13
1,2-Dichloropropane	ND		0.0050	1	09/12/2013 00:13
cis-1,3-Dichloropropene	ND		0.0050	1	09/12/2013 00:13
trans-1,3-Dichloropropene	ND		0.0050	1	09/12/2013 00:13
Freon 113	ND		0.10	1	09/12/2013 00:13
Methylene chloride	ND		0.0050	1	09/12/2013 00:13
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/12/2013 00:13
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/12/2013 00:13
Tetrachloroethene	ND		0.0050	1	09/12/2013 00:13
1,1,1-Trichloroethane	ND		0.0050	1	09/12/2013 00:13
1,1,2-Trichloroethane	ND		0.0050	1	09/12/2013 00:13
Trichloroethene	ND		0.0050	1	09/12/2013 00:13
Trichlorofluoromethane	ND		0.0050	1	09/12/2013 00:13
Vinyl Chloride	ND		0.0050	1	09/12/2013 00:13
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	110		70-130		09/12/2013 00:13
toluene-d8	116		70-130		09/12/2013 00:13
4-BFB	95		70-130		09/12/2013 00:13

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260B

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Col	lected Instrument	Batch ID
SW-S1-3'	1309183-008A	Soil	09/05/2013	3 15:10 GC10	81459
<u>Analytes</u>	Result		<u>RL</u>	DF	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/12/2013 00:55
Bromoform	ND		0.0050	1	09/12/2013 00:55
Bromomethane	ND		0.0050	1	09/12/2013 00:55
Carbon Tetrachloride	ND		0.0050	1	09/12/2013 00:55
Chlorobenzene	ND		0.0050	1	09/12/2013 00:55
Chloroethane	ND		0.0050	1	09/12/2013 00:55
Chloroform	ND		0.0050	1	09/12/2013 00:55
Chloromethane	ND		0.0050	1	09/12/2013 00:55
Dibromochloromethane	ND		0.0050	1	09/12/2013 00:55
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/12/2013 00:55
1,2-Dichlorobenzene	ND		0.0050	1	09/12/2013 00:55
1,3-Dichlorobenzene	ND		0.0050	1	09/12/2013 00:55
1,4-Dichlorobenzene	ND		0.0050	1	09/12/2013 00:55
Dichlorodifluoromethane	ND		0.0050	1	09/12/2013 00:55
1,1-Dichloroethane	ND		0.0050	1	09/12/2013 00:55
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/12/2013 00:55
1,1-Dichloroethene	ND		0.0050	1	09/12/2013 00:55
cis-1,2-Dichloroethene	ND		0.0050	1	09/12/2013 00:55
trans-1,2-Dichloroethene	ND		0.0050	1	09/12/2013 00:55
1,2-Dichloropropane	ND		0.0050	1	09/12/2013 00:55
cis-1,3-Dichloropropene	ND		0.0050	1	09/12/2013 00:55
trans-1,3-Dichloropropene	ND		0.0050	1	09/12/2013 00:55
Freon 113	ND		0.10	1	09/12/2013 00:55
Methylene chloride	ND		0.0050	1	09/12/2013 00:55
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/12/2013 00:55
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/12/2013 00:55
Tetrachloroethene	ND		0.0050	1	09/12/2013 00:55
1,1,1-Trichloroethane	ND		0.0050	1	09/12/2013 00:55
1,1,2-Trichloroethane	ND		0.0050	1	09/12/2013 00:55
Trichloroethene	ND		0.0050	1	09/12/2013 00:55
Trichlorofluoromethane	ND		0.0050	1	09/12/2013 00:55
Vinyl Chloride	ND		0.0050	1	09/12/2013 00:55
<u>Surrogates</u>	REC (%)		<u>Limits</u>		
dibromofluromethane	112		70-130		09/12/2013 00:55
toluene-d8	118		70-130		09/12/2013 00:55
4-BFB	97		70-130		09/12/2013 00:55

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# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260BDate Prepared:9/9/13-9/12/13Unit:mg/kg

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Coll	lected Instrument	Batch ID
SW-S2-3'	1309183-009A	Soil	09/05/2013	15:20 GC10	81459
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.0050	1	09/12/2013 01:38
Bromoform	ND		0.0050	1	09/12/2013 01:38
Bromomethane	ND		0.0050	1	09/12/2013 01:38
Carbon Tetrachloride	ND		0.0050	1	09/12/2013 01:38
Chlorobenzene	ND		0.0050	1	09/12/2013 01:38
Chloroethane	ND		0.0050	1	09/12/2013 01:38
Chloroform	ND		0.0050	1	09/12/2013 01:38
Chloromethane	ND		0.0050	1	09/12/2013 01:38
Dibromochloromethane	ND		0.0050	1	09/12/2013 01:38
1,2-Dibromoethane (EDB)	ND		0.0040	1	09/12/2013 01:38
1,2-Dichlorobenzene	ND		0.0050	1	09/12/2013 01:38
1,3-Dichlorobenzene	ND		0.0050	1	09/12/2013 01:38
1,4-Dichlorobenzene	ND		0.0050	1	09/12/2013 01:38
Dichlorodifluoromethane	ND		0.0050	1	09/12/2013 01:38
1,1-Dichloroethane	ND		0.0050	1	09/12/2013 01:38
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	09/12/2013 01:38
1,1-Dichloroethene	ND		0.0050	1	09/12/2013 01:38
cis-1,2-Dichloroethene	ND		0.0050	1	09/12/2013 01:38
trans-1,2-Dichloroethene	ND		0.0050	1	09/12/2013 01:38
1,2-Dichloropropane	ND		0.0050	1	09/12/2013 01:38
cis-1,3-Dichloropropene	ND		0.0050	1	09/12/2013 01:38
trans-1,3-Dichloropropene	ND		0.0050	1	09/12/2013 01:38
Freon 113	ND		0.10	1	09/12/2013 01:38
Methylene chloride	ND		0.0050	1	09/12/2013 01:38
1,1,1,2-Tetrachloroethane	ND		0.0050	1	09/12/2013 01:38
1,1,2,2-Tetrachloroethane	ND		0.0050	1	09/12/2013 01:38
Tetrachloroethene	ND		0.0050	1	09/12/2013 01:38
1,1,1-Trichloroethane	ND		0.0050	1	09/12/2013 01:38
1,1,2-Trichloroethane	ND		0.0050	1	09/12/2013 01:38
Trichloroethene	ND		0.0050	1	09/12/2013 01:38
Trichlorofluoromethane	ND		0.0050	1	09/12/2013 01:38
Vinyl Chloride	ND		0.0050	1	09/12/2013 01:38
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	107		70-130		09/12/2013 01:38
toluene-d8	117		70-130		09/12/2013 01:38
4-BFB	97		70-130		09/12/2013 01:38

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KF Analyst's Initial

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Project:#1435.002; Solano GroupExtraction MethodSW5030BDate Received:9/9/13 17:59Analytical Method:SW8260B

#### Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	ollected Instrument	Batch ID
SW-E-4'	1309183-010A	Soil	09/05/20	13 15:30 GC4	81459
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	Date Analyzed
Bromodichloromethane	ND		0.020	4	09/12/2013 17:39
Bromoform	ND		0.020	4	09/12/2013 17:39
Bromomethane	ND		0.020	4	09/12/2013 17:39
Carbon Tetrachloride	ND		0.020	4	09/12/2013 17:39
Chlorobenzene	ND		0.020	4	09/12/2013 17:39
Chloroethane	ND		0.020	4	09/12/2013 17:39
Chloroform	ND		0.020	4	09/12/2013 17:39
Chloromethane	ND		0.020	4	09/12/2013 17:39
Dibromochloromethane	ND		0.020	4	09/12/2013 17:39
1,2-Dibromoethane (EDB)	ND		0.016	4	09/12/2013 17:39
1,2-Dichlorobenzene	ND		0.020	4	09/12/2013 17:39
1,3-Dichlorobenzene	ND		0.020	4	09/12/2013 17:39
1,4-Dichlorobenzene	ND		0.020	4	09/12/2013 17:39
Dichlorodifluoromethane	ND		0.020	4	09/12/2013 17:39
1,1-Dichloroethane	ND		0.020	4	09/12/2013 17:39
1,2-Dichloroethane (1,2-DCA)	ND		0.016	4	09/12/2013 17:39
1,1-Dichloroethene	ND		0.020	4	09/12/2013 17:39
cis-1,2-Dichloroethene	ND		0.020	4	09/12/2013 17:39
trans-1,2-Dichloroethene	ND		0.020	4	09/12/2013 17:39
1,2-Dichloropropane	ND		0.020	4	09/12/2013 17:39
cis-1,3-Dichloropropene	ND		0.020	4	09/12/2013 17:39
trans-1,3-Dichloropropene	ND		0.020	4	09/12/2013 17:39
Freon 113	ND		0.40	4	09/12/2013 17:39
Methylene chloride	ND		0.020	4	09/12/2013 17:39
1,1,1,2-Tetrachloroethane	ND		0.020	4	09/12/2013 17:39
1,1,2,2-Tetrachloroethane	ND		0.020	4	09/12/2013 17:39
Tetrachloroethene	0.31		0.020	4	09/12/2013 17:39
1,1,1-Trichloroethane	ND		0.020	4	09/12/2013 17:39
1,1,2-Trichloroethane	ND		0.020	4	09/12/2013 17:39
Trichloroethene	ND		0.020	4	09/12/2013 17:39
Trichlorofluoromethane	ND		0.020	4	09/12/2013 17:39
Vinyl Chloride	ND		0.020	4	09/12/2013 17:39
Surrogates	<u>REC (%)</u>		<u>Limits</u>		
dibromofluromethane	88		70-130		09/12/2013 17:39
toluene-d8	104		70-130		09/12/2013 17:39
4-BFB	94		70-130		09/12/2013 17:39

# **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Date Prepared:9/9/13BatchID:81459Date Analyzed:9/10/13Extraction MethodSW5030B

Instrument:GC16Analytical Method:SW8260BMatrix:SoilUnit:mg/Kg

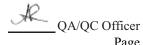
**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-81459

1309170-004AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.050	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	-	0.0050	-	-	-	-
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04477	0.0050	0.050	-	89.5	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04587	0.0040	0.050	-	91.7	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04511	0.0040	0.050	-	90.2	70-130
1,1-Dichloroethene	ND	0.04799	0.0050	0.050	-	96	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
A CONTRACTOR OF THE CONTRACTOR			*****				

(Cont.)



# **Quality Control Report**

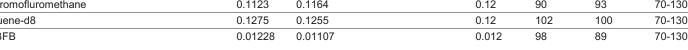
**Client:** Pangea Environmental Svcs., Inc. WorkOrder: 1309183 **Date Prepared:** 9/9/13 81459 BatchID: **Date Analyzed:** 9/10/13 Extraction Method SW5030B

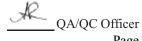
**Instrument:** GC16 **Analytical Method:** SW8260B Unit: Matrix: Soil mg/Kg

**Project:** #1435.002; Solano Group Sample ID: MB/LCS-81459

1309170-004AMS/MSD

	Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	-	0.0050	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.04338	0.0050	0.050	-	86.8	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
dibromofluromethane	0.1123	0.1164		0.12	90	93	70-130
toluene-d8	0.1275	0.1255		0.12	102	100	70-130
4-BFB	0.01228	0.01107		0.012	98	89	70-130





# **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Date Prepared:9/9/13BatchID:81459Date Analyzed:9/10/13Extraction MethodSW5030BInstrument:GC16Analytical Method:SW8260B

Matrix: Soil Unit: mg/Kg

**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-81459

1309170-004AMS/MSD

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chlorobenzene	0.0435	0.04337	0.050	ND	87	86.7	61-108	0.282	30
1,2-Dibromoethane (EDB)	0.04283	0.04219	0.050	ND	85.7	84.4	54-119	1.50	30
1,2-Dichloroethane (1,2-DCA)	0.04337	0.04304	0.050	ND	86.7	86.1	48-115	0.762	30
1,1-Dichloroethene	0.04807	0.04764	0.050	ND	96.1	95.3	46-111	0.899	30
Trichloroethene	0.05061	0.05459	0.050	ND	101	109	60-116	7.57	30
Surrogate Recovery									
dibromofluromethane	0.1168	0.115	0.12	91	93	92	70-130	1.60	30
toluene-d8	0.1256	0.1264	0.12	100	100	101	70-130	0.633	30
4-BFB	0.011	0.01178	0.012	97	88	94	70-130	6.84	30

# **Quality Control Report**

**Client:** Pangea Environmental Svcs., Inc. WorkOrder: 1309183 **Date Prepared:** 9/11/13 BatchID: 81584 **Date Analyzed:** 9/12/13 Extraction Method SW5030B **Instrument:** GC16 **Analytical Method:** SW8260B

Unit: Matrix: Soil mg/Kg

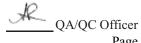
**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-81584

1309020-006AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.050	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.0050	-	-	-	-
Benzene	ND	-	0.0050	-	-	-	-
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.050	-	-	-	-
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.04613	0.0050	0.050	-	92.3	70-130
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.04963	0.0040	0.050	-	99.3	70-130
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.04517	0.0040	0.050	-	90.3	70-130
1,1-Dichloroethene	ND	0.03857	0.0050	0.050	-	77.1	70-130
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



# **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Date Prepared:9/11/13BatchID:81584Date Analyzed:9/12/13Extraction MethodSW5030BInstrument:GC16Analytical Method:SW8260B

Matrix: Soil Unit: mg/Kg

**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-81584

1309020-006AMS/MSD

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	-	0.0050	-	-	-	-
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	-	0.0050	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0418	0.0050	0.050	-	83.6	70-130
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
dibromofluromethane	0.1164	0.1173		0.12	93	94	70-130
toluene-d8	0.1221	0.1221		0.12	98	98	70-130
4-BFB	0.01172	0.01106		0.012	94	88	70-130

# **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309183Date Prepared:9/11/13BatchID:81584Date Analyzed:9/12/13Extraction MethodSW5030BInstrument:GC16Analytical Method:SW8260B

Matrix: Soil Unit: mg/Kg

Project: #1435.002; Solano Group Sample ID: MB/LCS-81584

1309020-006AMS/MSD

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chlorobenzene	0.03821	0.04395	0.050	ND	76.4	87.9	61-108	14.0	30
1,2-Dibromoethane (EDB)	0.04098	0.04644	0.050	ND	82	92.9	54-119	12.5	30
1,2-Dichloroethane (1,2-DCA)	0.03719	0.04082	0.050	ND	74.4	81.6	48-115	9.31	30
1,1-Dichloroethene	0.03383	0.03125	0.050	ND	67.7	62.5	46-111	7.94	30
Trichloroethene	0.03441	0.03693	0.050	ND	68.8	73.9	60-116	7.06	30
Surrogate Recovery									
dibromofluromethane	0.1186	0.1172	0.12	93	95	94	70-130	1.22	30
toluene-d8	0.1214	0.1212	0.12	95	97	97	70-130	0	30
4-BFB	0.01088	0.01095	0.012	90	87	88	70-130	0.647	30

#### McCampbell Analytical, Inc.

FAX: (510) 836-3709

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

WorkOrder: 1309183

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(510) 836-3700

□WaterTrax ☐ WriteOn **▼**EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag Report to: Bill to: Requested TAT: 5 days Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 09/09/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 09/09/2013

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	<b>Collection Date</b>	Hold	1	2	3	4	5	6	7	8	9	10	11	12
		1				T	1				_		T			
1309183-001	F-9-3'	Soil	9/5/2013 14:30		Α	Α										
1309183-002	F-10-3'	Soil	9/5/2013 14:35		Α											
1309183-003	F-11-2'	Soil	9/5/2013 14:40		Α											
1309183-004	F-12-2.5'	Soil	9/5/2013 14:45		Α											
1309183-005	F-13-2.5'	Soil	9/5/2013 14:50		Α											
1309183-006	F-14-2.5'	Soil	9/5/2013 15:00		Α											
1309183-007	F-15-2.5'	Soil	9/5/2013 15:05		Α											
1309183-008	SW-S1-3'	Soil	9/5/2013 15:10		Α											
1309183-009	SW-S2-3'	Soil	9/5/2013 15:20		Α											
1309183-010	SW-E-4'	Soil	9/5/2013 15:30		Α											

#### Test Legend:

1	8010BMS_S	2	PREDF REPORT	3	4	5	
6		7		8	9	10	
11		12					

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

1309183

Wel	McCAMPBELL ANALYTICAL, INC.  1534 Willow Pass Road Pittsburg, CA 94565  Website: www.mccampbell.com Telephone: (925) 252-9262  port To: Bob Clark-Riddell  Bill To: Pangea															OU	JNI	AI D T	IM	E	1		SH	2	☐ 4 HF		48 I	l HR	72	D HR	5 DAY		
Report To: Bob	Clark-Riddel	1	E	Bill T	o: Pa	nge	a						14						- 1	Anal	lysis	Re	qu	est						(	Other	r	Comments
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Tele: (510) 435-8					(510)							_	$\dashv$																		- 1		analysis:
Project #: 1435.0				roje	et Na	me:	Sola	ino	Gro	ир			$\dashv$		8)	0																	Yes / No
Project Location: 1187 Solano Ave, Albany Sampler Signature:										$\dashv$	18)	(8260B)	801	826																			
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SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Air	Other	ICE	HCL	HNO3	Other	TPHg/BTEX (80	Five fuel oxygenates	VOCs by EPA	VOCs by EPA													ř			
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F-15-2,5'					1		+	+	+	Н	+	+	+			1		-	-		1	-	+	+	-	-	+	+			$\vdash$	$\dashv$	
SW-51-3'			15:10	$\vdash$	1		+	+	-	Н	-	-	-		-	1		-	-	-		-	+	+	+	-	+	-	$\vdash$			$\dashv$	
SW-52-31		1	15:20	1	1			+	+	Н	-	1	+			1			-	-			+	+		+	+	+			$\vdash$	$\dashv$	
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Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

#### **Sample Receipt Checklist**

Client Name:	Pangea Environmen	tal Svcs., Inc.			Date	e and	Time Received:	9/9/2013 5:	59:18 PM	
Project Name:	#1435.002; Solano 0	Group			Log	In Rev	viewed by:		Jena Alfaro	
WorkOrder N°:	1309183	Matrix: Soil			Carı	rier:	Courier			
		<u>Chair</u>	n of Cւ	ustody (C	OC) Inforn	nation	1			
Chain of custody	present?		Yes	<b>✓</b>	No 🗆	]				
Chain of custody	signed when relinquis	hed and received?	Yes	<b>✓</b>	No 🗆	]				
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗆	]				
Sample IDs note	d by Client on COC?		Yes	<b>✓</b>	No 🗆	]				
Date and Time of	f collection noted by C	lient on COC?	Yes	<b>✓</b>	No 🗆	]				
Sampler's name	noted on COC?		Yes	<b>✓</b>	No 🗆	]				
		<u>s</u>	Sample	Receipt	Informatio	<u>n</u>				
Custody seals int	tact on shipping contai	ner/cooler?	Yes		No 🗆	]		NA 🗸		
Shipping containe	er/cooler in good cond	ition?	Yes	✓	No 🗆	]				
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗆	]				
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗆	]				
Sufficient sample	volume for indicated t	test?	Yes	<b>✓</b>	No 🗆	]				
		Sample Prese	ervatio	n and Ho	ld Time (H	T) Info	<u>ormation</u>			
All samples recei	ived within holding time	e?	Yes	<b>✓</b>	No 🗆	]				
Container/Temp	Blank temperature		Coole	er Temp:	3.2°C			NA 🗌		
Water - VOA vial	s have zero headspac	e / no bubbles?	Yes		No 🗆	No	VOA vials submi	tted 🗸		
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌	]				
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗆	]		NA 🗸		
Samples Receive	ed on Ice?		Yes	✓	No 🗆	]				
		(Ice Type	e: WE	TICE )						
* NOTE: If the "N	lo" box is checked, see	e comments below.								
=====		======								



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1309888

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project P.O.:** 

**Project Name:** Solano

**Project Received:** 09/27/2013

Analytical Report reviewed & approved for release on 10/01/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.



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### **Glossary of Terms & Qualifier Definitions**

**Client:** Pangea Environmental Svcs., Inc.

Project: Solano WorkOrder: 1309888

<u>Glossary</u>	
<b>Abbreviation</b>	

#### **Description**

95% Interval 95% Confident Interval

DF Dilution Factor
DUP Duplicate

LCS Laboratory Control Sample

MB Method Blank

MB % Rec % Recovery of Surrogate in Method Blank, if applicable

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

ND Not detected at or above the indicated MDL or RL

NR Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water

matrix; or sample diluted due to high matrix or analyte content.

RD Relative Difference
RL Reporting Limit

RPD Relative Percent Deviation

SPK Val Spike Value

SPKRef Val Spike Reference Value

Pangea Environmental Svcs., Inc. Client Project ID: Solano Date Sampled: 09/27/13 Date Received: 09/27/13 1710 Franklin Street, Ste. 200 Client Contact: Bob Clark-Riddell Date Extracted: 10/01/13 Oakland, CA 94612 Client P.O.: Date Analyzed: 10/01/13

#### Volatile Organic Compounds in μg/m<sup>3</sup>

Analytical Method: TO15 Extraction Method: TO15 Work Order: 1309888

Extraction Method: TO15	Analytical Method: TO15				Work Order: 13098	Work Order: 1309888		
Lab ID			1309	9888-001A	Initial Pressure	e (psia)	14.60	
Client ID			Α	ir 1187	Final Pressure	e (psia)	14.60	
Matrix			In	door Air		<i>d</i> /		
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit	
Acetone	100	5.0	6.04	Acrolein	ND<0.23	1.0	0.2331	
Acrylonitrile	ND	1.0	0.22	tert-Amyl methyl ether (TAME)	ND	1.0	0.42	
Benzene	0.52	1.0	0.0032	Benzyl chloride	ND	1.0	0.53	
Bromodichloromethane	ND	1.0	0.007	Bromoform	ND	1.0	1.1	
Bromomethane	0.82	1.0	0.39	1,3-Butadiene	ND	1.0	0.22	
2-Butanone (MEK)	120	5.0	7.5	t-Butyl alcohol (TBA)	ND	1.0	6.2	
Carbon Disulfide	ND	1.0	0.32	Carbon Tetrachloride	0.57	1.0	0.0064	
Chlorobenzene	ND	1.0	0.47	Chloroethane	ND	1.0	0.27	
Chloroform	0.20	1.0	0.0049	Chloromethane	ND	1.0	0.21	
Cyclohexane	ND<1.8	1.0	1.75	Dibromochloromethane	ND	1.0	0.87	
1,2-Dibromo-3-chloropropane	0.040	1.0	0.0049	1,2-Dibromoethane (EDB)	0.0086	1.0	0.0078	
1,2-Dichlorobenzene	ND	1.0	0.61	1,3-Dichlorobenzene	ND	1.0	0.61	
1,4-Dichlorobenzene	0.056	1.0	0.0061	Dichlorodifluoromethane	2.2	1.0	0.5	
1,1-Dichloroethane	ND	1.0	0.41	1,2-Dichloroethane (1,2-DCA)	0.084	1.0	0.0041	
1,1-Dichloroethene	ND	1.0	0.1	cis-1,2-Dichloroethene	ND	1.0	0.4	
trans-1,2-Dichloroethene	ND	1.0	0.4	1,2-Dichloropropane	0.014	1.0	0.0047	
cis-1,3-Dichloropropene	ND	1.0	0.12	trans-1,3-Dichloropropene	ND	1.0	0.12	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	0.71	Diisopropyl ether (DIPE)	ND	1.0	0.42	
1,4-Dioxane	ND	1.0	0.0037	Ethyl acetate	4.6	1.0	0.92	
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.42	Ethylbenzene	2.2	1.0	0.44	
4-Ethyltoluene	ND	1.0	0.5	Freon 113	ND	1.0	0.78	
Heptane	ND<2.1	1.0	2.08	Hexachlorobutadiene	ND	1.0	1.1	
Hexane	ND<1.8	1.0	1.79	2-Hexanone	ND	1.0	0.42	
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.42	Methyl-t-butyl ether (MTBE)	ND	1.0	0.37	
Methylene chloride	ND	1.0	0.35	Methyl methacrylate	ND<0.42	1.0	0.4163	
Naphthalene	0.25	1.0	0.05	Propene	ND<8.8	1.0	8.75	
Styrene	ND	1.0	0.43	1,1,1,2-Tetrachloroethane	ND	1.0	0.007	
1,1,2,2-Tetrachloroethane	ND	1.0	0.007	Tetrachloroethene	0.85	1.0	0.0345	
Tetrahydrofuran	310	20	0.6	Toluene	1.6	1.0	0.38	
1,2,4-Trichlorobenzene	ND	1.0	0.75	1,1,1-Trichloroethane	ND	1.0	0.55	
1,1,2-Trichloroethane	ND	1.0	0.0055	Trichloroethene	0.041	1.0	0.0055	
Trichlorofluoromethane	1.3	1.0	0.57	1,2,4-Trimethylbenzene	0.75	1.0	0.5	
1,3,5-Trimethylbenzene	ND	1.0	0.5	Vinyl Acetate	ND<0.36	1.0	0.358	
Vinyl Chloride	ND	1.0	0.0026		12	1.0	1.3	
	·	Sur	rogate R	ecoveries (%)	•			
%SS1:	10			%SS2: 107				
%SS3:	11	15			•			
Commonta				-				

Comments:

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

<sup>\*</sup>vapor samples are reported in μg/m³.

<sup>#</sup> surrogate diluted out of range or surrogate coelutes with another peak.



# **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 9/30/13

**Date Analyzed:** 9/30/13 - 10/1/13

**Instrument:** GC24 **Matrix:** Soilgas

**Project:** Solano

WorkOrder: 1309888

**BatchID:** 82307

**Extraction Method** TO15 **Analytical Method:** TO15

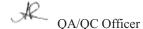
Unit: nL/L

Sample ID: MB/LCS-82307

$\Omega$ C	SHIM	MARV	<b>REPORT</b>	FOR	TO15
$\mathbf{v}$	SUMIN	VIAIN I		$\mathbf{r}(\mathbf{r})$	1013

Analyte	МВ	LCS	RL	SPK	МВ	LCS	LCS
	Result	Result		Val	SS %REC	%REC	Limits
Acetone	ND	-	25	-	-	_	-
Acrylonitrile	ND	25.52	0.50	25	-	102	60-140
tert-Amyl methyl ether (TAME)	ND	25.86	0.50	25	-	103	60-140
Benzene	ND	23.91	0.50	25	-	95.6	60-140
Benzyl chloride	ND	24.59	0.50	25	-	98.3	60-140
Bromodichloromethane	ND	22.36	0.50	25	-	89.4	60-140
Bromoform	ND	27.87	0.50	25	-	111	60-140
Bromomethane	ND	-	0.50	-	-	-	-
1,3-Butadiene	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	25	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	10	-	-	-	-
Carbon Disulfide	ND	25.37	0.50	25	-	101	60-140
Carbon Tetrachloride	ND	27.47	0.50	25	-	110	60-140
Chlorobenzene	ND	23.34	0.50	25	-	93.4	60-140
Chloroethane	ND	26.66	0.50	25	-	107	60-140
Chloroform	ND	20.82	0.50	25	-	83.3	60-140
Chloromethane	ND	25.56	0.50	25	-	102	60-140
Cyclohexane	ND	-	5.0	-	-	-	-
Dibromochloromethane	ND	30.09	0.50	25	-	120	60-140
1,2-Dibromo-3-chloropropane	ND	25.98	0.012	25	-	104	60-140
1,2-Dibromoethane (EDB)	ND	22.42	0.50	25	-	89.7	60-140
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	23.36	0.50	25	-	93.4	60-140
1,4-Dichlorobenzene	ND	20.59	0.50	25	-	82.4	60-140
Dichlorodifluoromethane	ND	23.83	0.50	25	-	95.3	60-140
1,1-Dichloroethane	ND	24.21	0.50	25	-	96.8	60-140
1,2-Dichloroethane (1,2-DCA)	ND	20.72	0.50	25	-	82.9	60-140
1,1-Dichloroethene	ND	-	0.50	-	-	-	-
cis-1,2-Dichloroethene	ND	25.48	0.50	25	-	102	60-140
trans-1,2-Dichloroethene	ND	26.04	0.50	25	-	104	60-140
1,2-Dichloropropane	ND	20.71	0.50	25	-	82.8	60-140
cis-1,3-Dichloropropene	ND	26.58	0.50	25	_	106	60-140
trans-1,3-Dichloropropene	ND	24.58	0.50	25	_	98.3	60-140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	24.09	0.50	25	-	96.4	60-140
Diisopropyl ether (DIPE)	ND	33.23	0.50	25	-	133	60-140
1,4-Dioxane	ND	23.11	0.50	25	_	92.5	60-140
Ethanol	ND	-	50	-	_	-	-
Ethyl acetate	ND	25.31	0.50	25	_	101	60-140
Ethyl tert-butyl ether (ETBE)	ND	25.24	0.50	25	-	101	60-140
Ethylbenzene	ND	24.18	0.50	25	_	96.7	60-140

(Cont.)



# **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 9/30/13

**Date Analyzed:** 9/30/13 - 10/1/13

Instrument: GC24
Matrix: Soilgas

**Project:** Solano

**WorkOrder:** 1309888

**BatchID:** 82307

**Extraction Method** TO15 **Analytical Method**: TO15

Unit: nL/L

Sample ID: MB/LCS-82307

	QC SUMN	MARY REPO	RT FOR TO	15			
Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
4-Ethyltoluene	ND	-	0.50	-	-	-	-
Freon 113	ND	24.75	0.50	25	-	99	60-140
Heptane	ND	-	5.0	-	-	-	-
Hexachlorobutadiene	ND	24.91	0.50	25	-	99.7	60-140
Hexane	ND	-	5.0	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	28.68	0.50	25	-	115	60-140
Methyl-t-butyl ether (MTBE)	ND	26.47	0.50	25	-	106	60-140
Methylene chloride	ND	21.94	0.50	25	-	87.7	60-140
Naphthalene	ND	44.38	1.0	50	-	88.8	60-140
Propene	ND	-	50	-	-	-	-
Styrene	ND	26.36	0.50	25	-	105	60-140
1,1,1,2-Tetrachloroethane	ND	25.75	0.50	25	-	103	60-140
1,1,2,2-Tetrachloroethane	ND	20.02	0.50	25	-	80.1	60-140
Tetrachloroethene	ND	23.91	0.50	25	-	95.6	60-140
Tetrahydrofuran	ND	21.48	0.50	25	-	85.9	60-140
Toluene	ND	22.64	0.50	25	-	90.5	60-140
1,2,4-Trichlorobenzene	ND	24.26	0.50	25	-	97	60-140
1,1,1-Trichloroethane	ND	26.87	0.50	25	-	107	60-140
1,1,2-Trichloroethane	ND	21.69	0.50	25	-	86.8	60-140
Trichloroethene	ND	19.78	0.50	25	-	79.1	60-140
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	23.45	0.50	25	-	93.8	60-140
1,3,5-Trimethylbenzene	ND	23.77	0.50	25	-	95.1	60-140
Vinyl Acetate	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	20.12	0.50	25	-	80.5	60-140
Kylenes, Total	ND	75.09	1.5	75	-	100	60-140
Surrogate Recovery							
1,2-DCA-d4	538.1	629.5		500	108	126	60-140
toluene-d8	527.3	527.3		500	105	105	60-140
4-BFB	526.8	533.2		500	105	107	60-140

#### McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1309888 ClientCode: PEO ☐ WaterTrax WriteOn □ EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty ☐ J-flag Report to: Bill to: Requested TAT: 2 days Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: Date Received: 09/27/2013 1710 Franklin Street, Ste. 200 PO: 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: Solano Oakland, CA 94612 Date Printed: 09/27/2013 (510) 836-3700 FAX: (510) 836-3709 Requested Tests (See legend below) 5 8 Lab ID 2 3 10 12 Client ID Matrix Collection Date Hold 4 11 1309888-001 Air 1187 9/27/2013 Α Indoor Air

#### Test Legend:

1 15_SCAN-SIM_Indoor(ug/m	2	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Zoraida Cortez

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

Mac Mac	AMPRE	LI. AN	ALYTICAL INC	, in		AINOF	CTIC			888	
1534 WILL Website: www	OW PASS I	ROAD / I	PITTSBURG, CA 9456 Email: main@mccamp 2 / Fax: (925) 252-9269	5-1701 dell.com	TURN AROUND TIME RUSH 24 HR 48 HR 72 HR 5 DAY  EDF Required? Coelt (Normal) No Write On (DW) No						DAY
Report To: Bob Clari	e- Dill	ell	Bill To:		The state of the s		Lab Us		Average a	THE	4
Company: PANGER	EN	POVM	enn			OF THE STATE OF TH		北海洲	P	ressurizat	ion Gas
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					Pressuriz	ed By		Date			
	4		E-Mail: bridd	ellopangenerus		14.14.12	A. 10 A. 1	Zit		N2	He
rele: (510) 435 -	8664		Fax: ( )								
Project #:	/		Project Name:	Soldmi	Helium Shroud SN#:						
Project Location: 118	7 Solo	ino J	Hbany, CA		Other:	1					
Sampler Signature:	me	200	ell		Notes:						
Field Sample ID	Collection			Manifold / Sampler	sampler						
(Location)	Canister SN# Kit SN# Analysis Requested Indoor Soil Canister Pressure/V	-	-								
	Date	Time				Air	Gas	Initial	Final	Receipt	Final (psi)
12-1100	9/27/13		3 - BATCH 503	BARU 507	TO-15			-30		The Parish of the	T
Air 1187	111111111111111111111111111111111111111									the state of the state of	212
THI IIS I			- 3 - A - A				- V			A	
AH 118-1										VZ.	
ATT 118.1										No. of the second	
A1 118 1										VZ.	
/HY 118*1										No. of the second	
A1 118 1					1 12					No. of the second	
A1 118 1										No. of the second	
ATT 118 1											
	Date:	Time: 2/200	Received By:	N	WHAT STATE STORES	Work Order	#:	1300	188		
Relinquished By:  Belinquished By:  Relinquished By:	Date:	Time:		M.	Temp (°C): Equipment Condition:	Work Order	#:	1300	188		

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

#### **Sample Receipt Checklist**

Client Name:	Pangea Environmental Svcs., Inc.	Date and	i ime Received:	9/2//2013	9:00:39 PM		
Project Name:	Solano			LogIn Re	eviewed by:		Zoraida Cortez
WorkOrder N°:	1309888 Matrix: Indoor A	<u>ir</u>		Carrier:	Client Drop-In		
	<u> </u>	Chain of Cı	ustody (0	COC) Informatio	<u>n</u>		
Chain of custody	present?	Yes	<b>✓</b>	No 🗌			
Chain of custody	signed when relinquished and received?	? Yes	<b>✓</b>	No 🗌			
Chain of custody	agrees with sample labels?	Yes	<b>✓</b>	No 🗌			
Sample IDs note	d by Client on COC?	Yes	<b>✓</b>	No 🗌			
Date and Time o	f collection noted by Client on COC?	Yes	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?	Yes	<b>✓</b>	No 🗆			
		Sample	e Receip	t Information			
Custody seals in	tact on shipping container/cooler?	Yes		No 🗌		NA 🗸	
Shipping contain	er/cooler in good condition?	Yes	<b>✓</b>	No 🗌			
Samples in prope	er containers/bottles?	Yes	<b>✓</b>	No 🗌			
Sample containe	rs intact?	Yes	<b>✓</b>	No 🗌			
Sufficient sample	e volume for indicated test?	Yes	<b>✓</b>	No 🗌			
	Sample P	reservatio	on and He	old Time (HT) In	<u>formation</u>		
All samples rece	ived within holding time?	Yes	<b>✓</b>	No 🗌			
Container/Temp	Blank temperature	Coole	er Temp:			NA 🗸	
Water - VOA vial	s have zero headspace / no bubbles?	Yes		No 🗌 N	o VOA vials submi	tted 🗸	
Sample labels ch	necked for correct preservation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	stable upon receipt (pH<2)?	Yes		No 🗌		NA 🗸	
Samples Receive	ed on Ice?	Yes	<b>✓</b>	No 🗌			
	(Ice	Type: WE	T ICE	)			
* NOTE: If the "N	lo" box is checked, see comments below	<b>/</b> .					



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1309889 **Amended:** 10/21/2013

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project P.O.:** 

**Project Name:** #1435.002; Solano Group

**Project Received:** 09/27/2013

Analytical Report reviewed & approved for release on 10/03/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

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#### Glossary of Terms & Qualifier Definitions

**Client:** Pangea Environmental Svcs., Inc.

**Project:** #1435.002; Solano Group

WorkOrder: 1309889

Glossary D Abbreviation

**Description** 

95% Interval 95% Confident Interval

DF Dilution Factor
DUP Duplicate

LCS Laboratory Control Sample

MB Method Blank

MB % Rec % Recovery of Surrogate in Method Blank, if applicable

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

ND Not detected at or above the indicated MDL or RL

NR Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water

matrix; or sample diluted due to high matrix or analyte content.

RD Relative Difference
RL Reporting Limit

RPD Relative Percent Deviation

SPK Val Spike Value

SPKRef Val Spike Reference Value

Analytical Qualifier

b1 aqueous sample that contains greater than ~1 vol. % sediment

Quality Control Qualifier

F1 MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309889Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:9/27/13 21:17Analytical Method:SW8260B

**Date Prepared:** 10/2/13 **Unit:**  $\mu g/L$ 

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-4	1309889-001A	Water	09/27/2013 20:00	GC28	82303
<u>Analytes</u>	<u>Result</u>		RL DF		Date Analyzed
Acetone	610		100 10		10/02/2013 00:47
tert-Amyl methyl ether (TAME)	ND		5.0 10		10/02/2013 00:47
Benzene	ND		5.0 10		10/02/2013 00:47
Bromobenzene	ND		5.0 10		10/02/2013 00:47
Bromochloromethane	ND		5.0 10		10/02/2013 00:47
Bromodichloromethane	ND		5.0 10		10/02/2013 00:47
Bromoform	ND		5.0 10		10/02/2013 00:47
Bromomethane	ND		5.0 10		10/02/2013 00:47
2-Butanone (MEK)	230		20 10		10/02/2013 00:47
t-Butyl alcohol (TBA)	ND		20 10		10/02/2013 00:47
n-Butyl benzene	ND		5.0 10		10/02/2013 00:47
sec-Butyl benzene	ND		5.0 10		10/02/2013 00:47
tert-Butyl benzene	ND		5.0 10		10/02/2013 00:47
Carbon Disulfide	ND		5.0 10		10/02/2013 00:47
Carbon Tetrachloride	ND		5.0 10		10/02/2013 00:47
Chlorobenzene	ND		5.0 10		10/02/2013 00:47
Chloroethane	ND		5.0 10		10/02/2013 00:47
Chloroform	ND		5.0 10		10/02/2013 00:47
Chloromethane	ND		5.0 10		10/02/2013 00:47
2-Chlorotoluene	ND		5.0 10		10/02/2013 00:47
4-Chlorotoluene	ND		5.0 10		10/02/2013 00:47
Dibromochloromethane	ND		5.0 10		10/02/2013 00:47
1,2-Dibromo-3-chloropropane	ND		2.0 10		10/02/2013 00:47
1,2-Dibromoethane (EDB)	ND		5.0 10		10/02/2013 00:47
Dibromomethane	ND		5.0 10		10/02/2013 00:47
1,2-Dichlorobenzene	ND		5.0 10		10/02/2013 00:47
1,3-Dichlorobenzene	ND		5.0 10		10/02/2013 00:47
1,4-Dichlorobenzene	ND		5.0 10		10/02/2013 00:47
Dichlorodifluoromethane	ND		5.0 10		10/02/2013 00:47
1,1-Dichloroethane	ND		5.0 10		10/02/2013 00:47
1,2-Dichloroethane (1,2-DCA)	ND		5.0 10		10/02/2013 00:47
1,1-Dichloroethene	ND		5.0 10		10/02/2013 00:47
cis-1,2-Dichloroethene	ND		5.0 10		10/02/2013 00:47
trans-1,2-Dichloroethene	ND		5.0 10		10/02/2013 00:47
1,2-Dichloropropane	ND		5.0 10		10/02/2013 00:47
1,3-Dichloropropane	ND		5.0 10		10/02/2013 00:47
2,2-Dichloropropane	ND		5.0 10		10/02/2013 00:47
1,1-Dichloropropene	ND		5.0 10		10/02/2013 00:47

(Cont.)

KF Analyst's Initial

Angela Rydelius, Lab Manager

**Date Received:** 9/27/13 21:17

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

**Analytical Method:** SW8260B

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309889Project:#1435.002; Solano GroupExtraction Method:SW5030B

Date Prepared: 10/2/13 Unit: μg/L

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Colle	cted Instrument	Batch ID
MW-4	1309889-001A	Water	09/27/2013 2	0:00 GC28	82303
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
cis-1,3-Dichloropropene	ND		5.0	10	10/02/2013 00:47
trans-1,3-Dichloropropene	ND		5.0	10	10/02/2013 00:47
Diisopropyl ether (DIPE)	ND		5.0	10	10/02/2013 00:47
Ethylbenzene	ND		5.0	10	10/02/2013 00:47
Ethyl tert-butyl ether (ETBE)	ND		5.0	10	10/02/2013 00:47
Freon 113	ND		5.0	10	10/02/2013 00:47
Hexachlorobutadiene	ND		5.0	10	10/02/2013 00:47
Hexachloroethane	ND		5.0	10	10/02/2013 00:47
2-Hexanone	ND		5.0	10	10/02/2013 00:47
Isopropylbenzene	ND		5.0	10	10/02/2013 00:47
4-Isopropyl toluene	ND		5.0	10	10/02/2013 00:47
Methyl-t-butyl ether (MTBE)	ND		5.0	10	10/02/2013 00:47
Methylene chloride	ND		5.0	10	10/02/2013 00:47
4-Methyl-2-pentanone (MIBK)	ND		5.0	10	10/02/2013 00:47
Naphthalene	ND		5.0	10	10/02/2013 00:47
n-Propyl benzene	ND		5.0	10	10/02/2013 00:47
Styrene	ND		5.0	10	10/02/2013 00:47
1,1,1,2-Tetrachloroethane	ND		5.0	10	10/02/2013 00:47
1,1,2,2-Tetrachloroethane	ND		5.0	10	10/02/2013 00:47
Tetrachloroethene	110		5.0	10	10/02/2013 00:47
Toluene	ND		5.0	10	10/02/2013 00:47
1,2,3-Trichlorobenzene	ND		5.0	10	10/02/2013 00:47
1,2,4-Trichlorobenzene	ND		5.0	10	10/02/2013 00:47
1,1,1-Trichloroethane	ND		5.0	10	10/02/2013 00:47
1,1,2-Trichloroethane	ND		5.0	10	10/02/2013 00:47
Trichloroethene	ND		5.0	10	10/02/2013 00:47
Trichlorofluoromethane	ND		5.0	10	10/02/2013 00:47
1,2,3-Trichloropropane	ND		5.0	10	10/02/2013 00:47
1,2,4-Trimethylbenzene	ND		5.0	10	10/02/2013 00:47
1,3,5-Trimethylbenzene	ND		5.0	10	10/02/2013 00:47
Vinyl Chloride	ND		5.0	10	10/02/2013 00:47
Xylenes, Total	ND		5.0	10	10/02/2013 00:47
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	Analytical Comments: b1	
Dibromofluoromethane	105		70-130		10/02/2013 00:47
Toluene-d8	104		70-130		10/02/2013 00:47
4-BFB	99		70-130		10/02/2013 00:47



### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 9/30/13 **Date Analyzed:** 9/30/13 **Instrument:** GC28

Matrix: Water

**Project:** #1435.002; Solano Group

WorkOrder: 1309889

**BatchID:** 82303 **Extraction Method:** SW5030B

**Analytical Method:** SW8260B

Unit:  $\mu g/L$ 

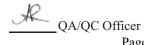
**Sample ID:** MB/LCS-82303

1309771-011AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	19.78	0.50	20	-	98.9	70-130
Benzene	ND	19.72	0.50	20	-	98.6	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	80.93	2.0	80	-	101	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	21.32	0.50	20	-	107	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	19.87	0.50	20	-	99.4	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	19.13	0.50	20	-	95.7	70-130
1,1-Dichloroethene	ND	15.17	0.50	20	-	75.8	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	_	-
trans-1,3-Dichloropropene	ND	_	0.50	_		_	_

(Cont.)





# **Quality Control Report**

**Client:** Pangea Environmental Svcs., Inc.

**Date Prepared:** 9/30/13 **Date Analyzed:** 9/30/13 **Instrument:** GC28

Matrix: Water

**Project:** #1435.002; Solano Group

**WorkOrder:** 1309889 **BatchID:** 82303

Extraction Method: SW5030B

**Analytical Method:** SW8260B

Unit:  $\mu g/L$ 

**Sample ID:** MB/LCS-82303

1309771-011AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	20.48	0.50	20	-	102	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	20.02	0.50	20	-	100	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	19.45	0.50	20	-	97.3	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	19.89	0.50	20	-	99.4	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	20.06	0.50	20	-	100	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	26.12	26.26		25	104	105	70-130
Toluene-d8	24.78	24.27		25	99	97	70-130
4-BFB	2.425	2.382		2.5	97	95	70-130

### **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1309889Date Prepared:9/30/13BatchID:82303

Date Analyzed:9/30/13Extraction Method:SW5030BInstrument:GC28Analytical Method:SW8260B

 $\textbf{Matrix:} \qquad \text{Water} \qquad \qquad \textbf{Unit:} \qquad \qquad \mu g/L$ 

Project: #1435.002; Solano Group Sample ID: MB/LCS-82303

1309771-011AMS/MSD

#### **QC SUMMARY REPORT FOR SW8260B**

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	18.95	20.13	20	ND	94.7	101	70-130	6.02	20
Benzene	17.67	17.93	20	ND	88.4	89.7	70-130	1.46	20
t-Butyl alcohol (TBA)	80.76	89.4	80	3.7	96.4	107	70-130	10.2	20
Chlorobenzene	19.17	19.41	20	ND	95.8	97.1	70-130	1.27	20
1,2-Dibromoethane (EDB)	20.25	20.56	20	ND	101	103	70-130	1.53	20
1,2-Dichloroethane (1,2-DCA)	17.63	18.28	20	ND	88.1	91.4	70-130	3.61	20
1,1-Dichloroethene	12.7	12.97	20	ND	63.5,F1	64.8,F1	70-130	2.09	20
Diisopropyl ether (DIPE)	18.62	19.07	20	ND	93.1	95.3	70-130	2.39	20
Ethyl tert-butyl ether (ETBE)	18	18.98	20	ND	90	94.9	70-130	5.31	20
Methyl-t-butyl ether (MTBE)	18.66	19.58	20	ND	93.3	97.9	70-130	4.81	20
Toluene	17.68	17.52	20	ND	88.4	87.6	70-130	0.898	20
Trichloroethene	16.73	17.4	20	ND	83.6	87	70-130	3.95	20
Surrogate Recovery									
Dibromofluoromethane	26.13	26.71	25		105	107	70-130	2.22	20
Toluene-d8	24.82	24.42	25		99	98	70-130	1.62	20
4-BFB	2.385	2.341	2.5		95	94	70-130	1.83	20

### McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

(925) 252-9262	2				W	orkO	rder: 13098	389	Cl	ientCod	le: PEC	)				
		WaterTrax	WriteOn	EDF	Ех	cel	EQui	3	Email		HardCo	ру	ThirdPa	ty	J-fla	g
Report to:		F " 5	D: 1.1.110			Bi	II to:	D:				Reques	sted TAT:		5 d	ays
Bob Clark-Riddell Pangea Environm 1710 Franklin Str Oakland, CA 946 (510) 836-3700	nental Svcs., Inc. eet, Ste. 200	cc: PO:	Riddell@pano				Bob Clark Pangea E 1710 Fran Oakland, (	nvironm klin Stre	et, Ste.		j		Received: Printed:		)9/27/2 )9/27/2	
								R	equeste	d Tests (	See lege	end be	low)			
				0 11 11 0 1						_		•				12
ab ID	Client ID		Matrix	Collection Date	Hold	1	2 3	4	5	6	7	8	9	10	11	12
ab ID 309889-001	Client ID		<b>Matrix</b> Water	9/27/2013 20:00	Hold	1 A	2 3	4	5	6	7	8	9	10	11	12

#### Test Legend:

1 8010BMS_W	2	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Zoraida Cortez

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

#### McCAMPBELL ANALYTICAL, INC. CHAIN OF CUSTODY RECORD 1534 Willow Pass Road TURN AROUND TIME Pittsburg, CA 94565 RUSH 24 HR Website: www.mccampbell.com Email: main@mccampbell.com 48 HR 72 HR EDF Required? Coelt (Normal) No Write On (DW) Telephone: (925) 252-9262 Fax: (925) 252-9269 Report To: Bob Clark-Riddell Bill To: Pangea Analysis Request Other Comments Company: Pangea Environmental Services, Inc. Filter 1710 Franklin Street, Suite 200, Oakland, CA 94612 Samples E-Mail: briddell@pangeaenv.com for Metals Tele: (510) 435-8664 Fax: (510) 836-3709 analysis: Project Name: Solano Group Project #: 1435.002 Yes / No VOCs by EPA MEthod 8010 Project Location: 1187 Solano Ave, Albany VOCs by EPA Method 8260 Sampler Signature: METHOD Five fuel oxygenates SAMPLING MATRIX Type Containers PRESERVED # Containers LOCATION SAMPLE ID (Field Point Sludge Water Name) Date Time HNO3 Other HCL ICE Soil MW-4 20:00 Relinquished By: Date: Time: Received By: ICE/to COMMENTS: GOOD CONDITION 9/27 21:00 HEAD SPACE ABSENT Relinquished By: Date: Time: Received By: DECHLORINATED IN LAB APPROPRIATE CONTAINERS PRESERVED IN LAB Relinquished By: Received By: Date: Time: VOAS O&G METALS OTHER PRESERVATION pH<2

Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

#### **Sample Receipt Checklist**

Client Name:	Pangea Environment		Date a	nd Time Received:	9/27/2013 9:	17:43 PM		
Project Name:	#1435.002; Solano G	Group			LogIn F	Reviewed by:		Zoraida Cortez
WorkOrder N°:	1309889	Matrix: Water			Carrier	: Client Drop-In		
		<u>Chai</u>	n of Cւ	ustody (COC)	<u>Informat</u>	<u>ion</u>		
Chain of custody	present?		Yes	<b>✓</b>	No $\square$			
Chain of custody	signed when relinquisl	ned and received?	Yes	<b>✓</b>	No $\square$			
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No 🗌			
Date and Time of	collection noted by Cl	ient on COC?	Yes	<b>✓</b>	No 🗌			
Sampler's name	noted on COC?		Yes	✓	No 🗌			
		<u> </u>	Sample	Receipt Info	ormation			
Custody seals int	act on shipping contain	ner/cooler?	Yes		No $\square$		NA 🗹	
Shipping containe	er/cooler in good condi	tion?	Yes	<b>✓</b>	No $\square$			
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No 🗌			
Sample containe	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No $\square$			
		Sample Prese	ervatio	n and Hold T	ime (HT)	<u>Information</u>		
All samples recei	ved within holding time	?	Yes	<b>✓</b>	No $\square$			
Container/Temp	Blank temperature		Coole	er Temp:			NA 🗹	
Water - VOA vial	s have zero headspace	e / no bubbles?	Yes	<b>✓</b>	No 🗌	No VOA vials submi	tted	
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No 🗌		NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🗹			
* NOTE: If the "N	'o" box is checked, see	comments below.				======	====	:======



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1310206

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project P.O.:** 

**Project Name:** Solano

**Project Received:** 10/07/2013

Analytical Report reviewed & approved for release on 10/09/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.



1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com NELAP: 12283CA ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3



### **Glossary of Terms & Qualifier Definitions**

**Client:** Pangea Environmental Svcs., Inc.

**Project:** Solano **WorkOrder:** 1310206

Glossary Abbreviation **Description** 

95% Interval 95% Confident Interval

DF Dilution Factor
DUP Duplicate

LCS Laboratory Control Sample

MB Method Blank

MB % Rec % Recovery of Surrogate in Method Blank, if applicable

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

ND Not detected at or above the indicated MDL or RL

NR Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water

matrix; or sample diluted due to high matrix or analyte content.

RD Relative Difference
RL Reporting Limit

RPD Relative Percent Deviation

SPK Val Spike Value

SPKRef Val Spike Reference Value

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit:μg/m³

#### Volatile Organic Compounds in µg/m³ Client ID Lab ID Matrix/ExtType Date Collected Instrument **Batch ID** Air 1183 8hr 1310206-001A **Indoor Air** 10/03/2013 09:55 GC24 82622 **Analytes** Result RL DF Date Analyzed Acetone 45 6.0 1 10/07/2013 20:37 Acrolein 3.5 0.23 1 10/07/2013 20:37 ND 0.22 1 10/07/2013 20:37 Acrylonitrile tert-Amyl methyl ether (TAME) ND 0.42 1 10/07/2013 20:37 Benzene 0.39 0.0032 1 10/07/2013 20:37 Benzyl chloride ND 0.53 1 10/07/2013 20:37 Bromodichloromethane ND 0.0070 1 10/07/2013 20:37 Bromoform ND 1.1 1 10/07/2013 20:37 Bromomethane 0.89 0.39 1 10/07/2013 20:37 1,3-Butadiene ND 0.22 1 10/07/2013 20:37 ND 2-Butanone (MEK) 7.5 1 10/07/2013 20:37 t-Butyl alcohol (TBA) ND 6.2 1 10/07/2013 20:37 Carbon Disulfide ND 0.32 1 10/07/2013 20:37 Carbon Tetrachloride 0.54 0.0064 1 10/07/2013 20:37 Chlorobenzene ND 0.47 1 10/07/2013 20:37 Chloroethane ND 0.27 1 10/07/2013 20:37 0.0049 Chloroform 0.28 1 10/07/2013 20:37 Chloromethane ND 0.21 1 10/07/2013 20:37 Cyclohexane 3.7 1.8 1 10/07/2013 20:37 Dibromochloromethane ND 0.87 1 10/07/2013 20:37 0.0049 1,2-Dibromo-3-chloropropane ND 1 10/07/2013 20:37 1,2-Dibromoethane (EDB) 0.023 0.0078 1 10/07/2013 20:37 ND 1 1,2-Dichlorobenzene 0.61 10/07/2013 20:37 1,3-Dichlorobenzene ND 0.61 1 10/07/2013 20:37 1,4-Dichlorobenzene 0.078 0.0061 1 10/07/2013 20:37 1 Dichlorodifluoromethane 1.9 0.50 10/07/2013 20:37 1,1-Dichloroethane NΠ 0.41 1 10/07/2013 20:37 1,2-Dichloroethane (1,2-DCA) 0.0041 1 10/07/2013 20:37 1.1 1,1-Dichloroethene ND 0.10 1 10/07/2013 20:37 cis-1,2-Dichloroethene ND 0.40 1 10/07/2013 20:37 ND 0.40 1 trans-1,2-Dichloroethene 10/07/2013 20:37 0.0047 0.019 1 10/07/2013 20:37 1,2-Dichloropropane ND 1 cis-1,3-Dichloropropene 0.12 10/07/2013 20:37 trans-1,3-Dichloropropene ND 0.12 1 10/07/2013 20:37 ND 0.71 1 10/07/2013 20:37 1,2-Dichloro-1,1,2,2-tetrafluoroethane Diisopropyl ether (DIPE) ND 0.42 1 10/07/2013 20:37 ND 0.0037 1,4-Dioxane 1 10/07/2013 20:37

(Cont.)

Ethyl acetate

GM Analyst's Initial

2.7

1

0.92

Angela Rydelius, Lab Manager

10/07/2013 20:37

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit: $\mu g/m^3$ 

Volatile Organic Compounds in μg/m³									
Client ID	Lab ID	Matrix/ExtType	Date Co	llected	Instrument	Batch ID			
Air 1183 8hr	1310206-001A	Indoor Air	10/03/201	3 09:55	GC24	82622			
Analytes	Result		<u>RL</u>	DF		Date Analyzed			
Ethyl tert-butyl ether (ETBE)	ND		0.42	1		10/07/2013 20:37			
Ethylbenzene	1.9		0.44	1		10/07/2013 20:37			
4-Ethyltoluene	ND		0.50	1		10/07/2013 20:37			
Freon 113	ND		0.78	1		10/07/2013 20:37			
Heptane	ND		2.1	1		10/07/2013 20:37			
Hexachlorobutadiene	ND		1.1	1		10/07/2013 20:37			
Hexane	40		1.8	1		10/07/2013 20:37			
2-Hexanone	ND		0.42	1		10/07/2013 20:37			
4-Methyl-2-pentanone (MIBK)	ND		0.42	1		10/07/2013 20:37			
Methyl-t-butyl ether (MTBE)	ND		0.37	1		10/07/2013 20:37			
Methylene chloride	ND		0.35	1		10/07/2013 20:37			
Methyl methacrylate	3.4		0.42	1		10/07/2013 20:37			
Naphthalene	0.61		0.050	1		10/07/2013 20:37			
Propene	ND		8.8	1		10/07/2013 20:37			
Styrene	ND		0.43	1		10/07/2013 20:37			
1,1,1,2-Tetrachloroethane	ND		0.0070	1		10/07/2013 20:37			
1,1,2,2-Tetrachloroethane	ND		0.0070	1		10/07/2013 20:37			
Tetrachloroethene	0.44		0.034	1		10/07/2013 20:37			
Tetrahydrofuran	13		0.60	1		10/07/2013 20:37			
Toluene	1.3		0.38	1		10/07/2013 20:37			
1,2,4-Trichlorobenzene	ND		0.75	1		10/07/2013 20:37			
1,1,1-Trichloroethane	ND		0.55	1		10/07/2013 20:37			
1,1,2-Trichloroethane	ND		0.0055	1		10/07/2013 20:37			
Trichloroethene	0.027		0.0055	1		10/07/2013 20:37			
Trichlorofluoromethane	1.2		0.57	1		10/07/2013 20:37			
1,2,4-Trimethylbenzene	ND		0.50	1		10/07/2013 20:37			
1,3,5-Trimethylbenzene	ND		0.50	1		10/07/2013 20:37			
Vinyl Acetate	ND		0.36	1		10/07/2013 20:37			
Vinyl Chloride	ND		0.0026	1		10/07/2013 20:37			

AP 1644 ♦ NELAP 12283CA GM A

Angela Rydelius, Lab Manager

1.3

Xylenes, Total

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10/07/2013 20:37

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit:μg/m³

#### Volatile Organic Compounds in µg/m<sup>3</sup> Client ID Lab ID Matrix/ExtType Date Collected Instrument **Batch ID** Air 1183 24hr 1310206-002A **Indoor Air** 10/03/2013 09:56 GC24 82622 **Analytes** Result RL DF Date Analyzed Acetone 46 6.0 1 10/07/2013 21:37 Acrolein 2.4 0.23 1 10/07/2013 21:37 ND 0.22 1 10/07/2013 21:37 Acrylonitrile tert-Amyl methyl ether (TAME) ND 0.42 1 10/07/2013 21:37 Benzene 0.29 0.0032 1 10/07/2013 21:37 Benzyl chloride ND 0.53 1 10/07/2013 21:37 Bromodichloromethane ND 0.0070 1 10/07/2013 21:37 10/07/2013 21:37 Bromoform ND 1.1 1 Bromomethane 0.72 0.39 1 10/07/2013 21:37 1,3-Butadiene ND 0.22 1 10/07/2013 21:37 2-Butanone (MEK) 8.7 7.5 1 10/07/2013 21:37 t-Butyl alcohol (TBA) ND 6.2 1 10/07/2013 21:37 Carbon Disulfide ND 0.32 1 10/07/2013 21:37 Carbon Tetrachloride 0.53 0.0064 1 10/07/2013 21:37 Chlorobenzene ND 0.47 1 10/07/2013 21:37 Chloroethane ND 0.27 1 10/07/2013 21:37 0.0049 Chloroform 0.19 1 10/07/2013 21:37 Chloromethane ND 0.21 1 10/07/2013 21:37 Cyclohexane 1.9 1.8 1 10/07/2013 21:37 Dibromochloromethane ND 0.87 1 10/07/2013 21:37 1,2-Dibromo-3-chloropropane ND 0.0049 1 10/07/2013 21:37 1,2-Dibromoethane (EDB) 0.017 0.0078 1 10/07/2013 21:37 ND 1 1,2-Dichlorobenzene 0.61 10/07/2013 21:37 1,3-Dichlorobenzene ND 0.61 1 10/07/2013 21:37 1,4-Dichlorobenzene 0.061 0.0061 1 10/07/2013 21:37 2.1 1 Dichlorodifluoromethane 0.50 10/07/2013 21:37 1,1-Dichloroethane NΠ 0.41 1 10/07/2013 21:37 1,2-Dichloroethane (1,2-DCA) 1.7 0.0041 1 10/07/2013 21:37 1,1-Dichloroethene ND 0.10 1 10/07/2013 21:37 cis-1,2-Dichloroethene ND 0.40 1 10/07/2013 21:37 ND 0.40 1 trans-1,2-Dichloroethene 10/07/2013 21:37 0.0047 0.020 1 10/07/2013 21:37 1,2-Dichloropropane ND 1 cis-1,3-Dichloropropene 0.12 10/07/2013 21:37 trans-1,3-Dichloropropene ND 0.12 1 10/07/2013 21:37 ND 0.71 1 10/07/2013 21:37 1,2-Dichloro-1,1,2,2-tetrafluoroethane Diisopropyl ether (DIPE) ND 0.42 1 10/07/2013 21:37 ND 0.0037 1,4-Dioxane 1 10/07/2013 21:37 1 10/07/2013 21:37 Ethyl acetate 1.4 0.92

(Cont.)

GM Analyst's Initial

Angela Rydelius, Lab Manager

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit: $\mu g/m^3$ 

Volatile Organic Compounds in μg/m³									
Client ID	Lab ID	Matrix/ExtType	Date Co	llected	Instrument	Batch ID			
Air 1183 24hr	1310206-002A	Indoor Air	10/03/201	3 09:56	GC24	82622			
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>		Date Analyzed			
Ethyl tert-butyl ether (ETBE)	ND		0.42	1		10/07/2013 21:37			
Ethylbenzene	2.3		0.44	1		10/07/2013 21:37			
4-Ethyltoluene	ND		0.50	1		10/07/2013 21:37			
Freon 113	ND		0.78	1		10/07/2013 21:37			
Heptane	ND		2.1	1		10/07/2013 21:37			
Hexachlorobutadiene	ND		1.1	1		10/07/2013 21:37			
Hexane	11		1.8	1		10/07/2013 21:37			
2-Hexanone	ND		0.42	1		10/07/2013 21:37			
4-Methyl-2-pentanone (MIBK)	ND		0.42	1		10/07/2013 21:37			
Methyl-t-butyl ether (MTBE)	ND		0.37	1		10/07/2013 21:37			
Methylene chloride	ND		0.35	1		10/07/2013 21:37			
Methyl methacrylate	4.3		0.42	1		10/07/2013 21:37			
Naphthalene	0.51		0.050	1		10/07/2013 21:37			
Propene	ND		8.8	1		10/07/2013 21:37			
Styrene	ND		0.43	1		10/07/2013 21:37			
1,1,1,2-Tetrachloroethane	ND		0.0070	1		10/07/2013 21:37			
1,1,2,2-Tetrachloroethane	ND		0.0070	1		10/07/2013 21:37			
Tetrachloroethene	1.1		0.034	1		10/07/2013 21:37			
Tetrahydrofuran	22		0.60	1		10/07/2013 21:37			
Toluene	1.9		0.38	1		10/07/2013 21:37			
1,2,4-Trichlorobenzene	ND		0.75	1		10/07/2013 21:37			
1,1,1-Trichloroethane	ND		0.55	1		10/07/2013 21:37			
1,1,2-Trichloroethane	ND		0.0055	1		10/07/2013 21:37			
Trichloroethene	0.048		0.0055	1		10/07/2013 21:37			
Trichlorofluoromethane	1.2		0.57	1		10/07/2013 21:37			
1,2,4-Trimethylbenzene	ND		0.50	1		10/07/2013 21:37			
1,3,5-Trimethylbenzene	ND		0.50	1		10/07/2013 21:37			
Vinyl Acetate	ND		0.36	1		10/07/2013 21:37			
Vinyl Chloride	ND		0.0026	1		10/07/2013 21:37			

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CDPH ELAP 1644 ♦ NELAP 12283CA

Xylenes, Total

GM Analyst's Initial

1.3

Angela Rydelius, Lab Manager

10/07/2013 21:37

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit: $\mu g/m^3$ 

#### Volatile Organic Compounds in μg/m<sup>3</sup>

Client ID	Lab ID	Matrix/ExtType	Date Co	llected Instrument	Batch ID
Air 1191 Break 8hr	1310206-003A	Indoor Air	10/03/201	3 10:15 GC24	82622
Analytes	<u>Result</u>		<u>RL</u>	DF	Date Analyzed
Acetone	30		6.0	1	10/07/2013 22:38
Acrolein	5.6		0.23	1	10/07/2013 22:38
Acrylonitrile	ND		0.22	1	10/07/2013 22:38
tert-Amyl methyl ether (TAME)	ND		0.42	1	10/07/2013 22:38
Benzene	0.37		0.0032	1	10/07/2013 22:38
Benzyl chloride	ND		0.53	1	10/07/2013 22:38
Bromodichloromethane	ND		0.0070	1	10/07/2013 22:38
Bromoform	ND		1.1	1	10/07/2013 22:38
Bromomethane	0.82		0.39	1	10/07/2013 22:38
1,3-Butadiene	ND		0.22	1	10/07/2013 22:38
2-Butanone (MEK)	ND		7.5	1	10/07/2013 22:38
t-Butyl alcohol (TBA)	ND		6.2	1	10/07/2013 22:38
Carbon Disulfide	ND		0.32	1	10/07/2013 22:38
Carbon Tetrachloride	0.66		0.0064	1	10/07/2013 22:38
Chlorobenzene	ND		0.47	1	10/07/2013 22:38
Chloroethane	ND		0.27	1	10/07/2013 22:38
Chloroform	0.30		0.0049	1	10/07/2013 22:38
Chloromethane	0.63		0.21	1	10/07/2013 22:38
Cyclohexane	2.2		1.8	1	10/07/2013 22:38
Dibromochloromethane	ND		0.87	1	10/07/2013 22:38
1,2-Dibromo-3-chloropropane	ND		0.0049	1	10/07/2013 22:38
1,2-Dibromoethane (EDB)	0.015		0.0078	1	10/07/2013 22:38
1,2-Dichlorobenzene	ND		0.61	1	10/07/2013 22:38
1,3-Dichlorobenzene	ND		0.61	1	10/07/2013 22:38
1,4-Dichlorobenzene	0.14		0.0061	1	10/07/2013 22:38
Dichlorodifluoromethane	2.6		0.50	1	10/07/2013 22:38
1,1-Dichloroethane	ND		0.41	1	10/07/2013 22:38
1,2-Dichloroethane (1,2-DCA)	0.093		0.0041	1	10/07/2013 22:38
1,1-Dichloroethene	ND		0.10	1	10/07/2013 22:38
cis-1,2-Dichloroethene	ND		0.40	1	10/07/2013 22:38
trans-1,2-Dichloroethene	ND		0.40	1	10/07/2013 22:38
1,2-Dichloropropane	0.023		0.0047	1	10/07/2013 22:38
cis-1,3-Dichloropropene	ND		0.12	1	10/07/2013 22:38
trans-1,3-Dichloropropene	ND		0.12	1	10/07/2013 22:38
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.71	1	10/07/2013 22:38
Diisopropyl ether (DIPE)	ND		0.42	1	10/07/2013 22:38
1,4-Dioxane	ND		0.0037	1	10/07/2013 22:38
Ethyl acetate	11		0.92	1	10/07/2013 22:38

(Cont.)

GM Analyst's Initial

Angela Rydelius, Lab Manager

#### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit:μg/m³

#### Volatile Organic Compounds in µg/m<sup>3</sup> Client ID Lab ID Matrix/ExtType Date Collected Instrument **Batch ID** Air 1191 Break 8hr 1310206-003A **Indoor Air** 10/03/2013 10:15 GC24 82622 **Analytes** Result <u>RL</u> DF Date Analyzed Ethyl tert-butyl ether (ETBE) ND 0.42 1 10/07/2013 22:38 Ethylbenzene 0.92 0.44 1 10/07/2013 22:38 0.50 4-Ethyltoluene ND 1 10/07/2013 22:38 Freon 113 ND 0.78 1 10/07/2013 22:38 Heptane ND 2.1 1 10/07/2013 22:38 Hexachlorobutadiene ND 1.1 1 10/07/2013 22:38 Hexane ND 1.8 1 10/07/2013 22:38 2-Hexanone ND 0.42 10/07/2013 22:38 1 4-Methyl-2-pentanone (MIBK) ND 0.42 1 10/07/2013 22:38 Methyl-t-butyl ether (MTBE) ND 0.37 1 10/07/2013 22:38 ND 10/07/2013 22:38 Methylene chloride 0.35 1 Methyl methacrylate ND 0.42 1 10/07/2013 22:38 0.050 Naphthalene 0.39 1 10/07/2013 22:38 Propene ND 8.8 1 10/07/2013 22:38 Styrene ND 0.43 1 10/07/2013 22:38 ND 1,1,1,2-Tetrachloroethane 0.0070 1 10/07/2013 22:38 1,1,2,2-Tetrachloroethane ND 0.0070 1 10/07/2013 22:38 Tetrachloroethene 0.40 0.034 1 10/07/2013 22:38 Tetrahydrofuran ND0.60 1 10/07/2013 22:38 Toluene 0.38 1 10/07/2013 22:38 4.1 1,2,4-Trichlorobenzene ND 0.75 1 10/07/2013 22:38 1,1,1-Trichloroethane ND 0.55 1 10/07/2013 22:38 ND 0.0055 1 10/07/2013 22:38 1,1,2-Trichloroethane Trichloroethene 0.023 0.0055 1 10/07/2013 22:38 Trichlorofluoromethane 1.8 0.57 1 10/07/2013 22:38 0.50 1 1,2,4-Trimethylbenzene ND 10/07/2013 22:38 1,3,5-Trimethylbenzene ND 0.50 1 10/07/2013 22:38 ND Vinyl Acetate 0.36 1 10/07/2013 22:38 Vinyl Chloride ND 0.0026 1 10/07/2013 22:38

Xylenes, Total



1.3

4.7

10/07/2013 22:38



Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit:μg/m³

#### Volatile Organic Compounds in µg/m<sup>3</sup> Client ID Lab ID Matrix/ExtType Date Collected Instrument **Batch ID** Air 1191 Front 24hr 1310206-005A **Indoor Air** 10/03/2013 10:17 GC24 82622 Result RL DF Date Analyzed **Analytes** Acetone 37 6.0 1 10/07/2013 23:34 Acrolein 7.7 0.23 1 10/07/2013 23:34 ND 0.22 1 10/07/2013 23:34 Acrylonitrile tert-Amyl methyl ether (TAME) ND 0.42 1 10/07/2013 23:34 Benzene 0.39 0.0032 1 10/07/2013 23:34 Benzyl chloride ND 0.53 1 10/07/2013 23:34 Bromodichloromethane ND 0.0070 1 10/07/2013 23:34 Bromoform ND 1.1 1 10/07/2013 23:34 Bromomethane 0.81 0.39 1 10/07/2013 23:34 1,3-Butadiene ND 0.22 1 10/07/2013 23:34 ND 2-Butanone (MEK) 7.5 1 10/07/2013 23:34 t-Butyl alcohol (TBA) ND 6.2 1 10/07/2013 23:34 Carbon Disulfide ND 0.32 1 10/07/2013 23:34 Carbon Tetrachloride 0.73 0.0064 1 10/07/2013 23:34 Chlorobenzene ND 0.47 1 10/07/2013 23:34 Chloroethane ND 0.27 1 10/07/2013 23:34 0.0049 Chloroform 0.41 1 10/07/2013 23:34 Chloromethane 0.65 0.21 1 10/07/2013 23:34 Cyclohexane 4.2 1.8 1 10/07/2013 23:34 Dibromochloromethane ND 0.87 1 10/07/2013 23:34 0.0049 1,2-Dibromo-3-chloropropane ND 1 10/07/2013 23:34 1,2-Dibromoethane (EDB) 0.013 0.0078 1 10/07/2013 23:34 ND 1 1,2-Dichlorobenzene 0.61 10/07/2013 23:34 1,3-Dichlorobenzene ND 0.61 1 10/07/2013 23:34 1,4-Dichlorobenzene 0.16 0.0061 1 10/07/2013 23:34 2.6 1 Dichlorodifluoromethane 0.50 10/07/2013 23:34

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1,4-Dioxane

Ethyl acetate

1,1-Dichloroethane

1,1-Dichloroethene

cis-1,2-Dichloroethene

1,2-Dichloropropane

trans-1,2-Dichloroethene

cis-1,3-Dichloropropene

Diisopropyl ether (DIPE)

trans-1,3-Dichloropropene

1,2-Dichloro-1,1,2,2-tetrafluoroethane

1,2-Dichloroethane (1,2-DCA)

GM Analyst's Initial

0.41

0.10

0.40

0.40

0.12

0.12

0.71

0.42

0.92

0.0037

0.0047

0.0041

1

1

1

1

1

1

1

1

1

1

1

1

Angela Rydelius, Lab Manager

NΠ

ND

ND

ND

ND

ND

ND

ND

ND

19

0.15

0.030

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

10/07/2013 23:34

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit: $\mu g/m^3$ 

	Volatile Oı	rganic Compoui	nds in μ	g/m³	
Client ID	Lab ID	Matrix/ExtType	Date Co	llected Instrument	Batch ID
Air 1191 Front 24hr	1310206-005A	Indoor Air	10/03/201	3 10:17 GC24	82622
<u>Analytes</u>	Result		<u>RL</u>	<u>DF</u>	Date Analyzed
Ethyl tert-butyl ether (ETBE)	ND		0.42	1	10/07/2013 23:34
Ethylbenzene	1.8		0.44	1	10/07/2013 23:34
4-Ethyltoluene	ND		0.50	1	10/07/2013 23:34
Freon 113	ND		0.78	1	10/07/2013 23:34
Heptane	ND		2.1	1	10/07/2013 23:34
Hexachlorobutadiene	ND		1.1	1	10/07/2013 23:34
Hexane	ND		1.8	1	10/07/2013 23:34
2-Hexanone	0.63		0.42	1	10/07/2013 23:34
4-Methyl-2-pentanone (MIBK)	0.53		0.42	1	10/07/2013 23:34
Methyl-t-butyl ether (MTBE)	ND		0.37	1	10/07/2013 23:34
Methylene chloride	ND		0.35	1	10/07/2013 23:34
Methyl methacrylate	ND		0.42	1	10/07/2013 23:34
Naphthalene	0.46		0.050	1	10/07/2013 23:34
Propene	ND		8.8	1	10/07/2013 23:34
Styrene	ND		0.43	1	10/07/2013 23:34
1,1,1,2-Tetrachloroethane	ND		0.0070	1	10/07/2013 23:34
1,1,2,2-Tetrachloroethane	ND		0.0070	1	10/07/2013 23:34
Tetrachloroethene	0.37		0.034	1	10/07/2013 23:34
Tetrahydrofuran	ND		0.60	1	10/07/2013 23:34
Toluene	6.3		0.38	1	10/07/2013 23:34
1,2,4-Trichlorobenzene	ND		0.75	1	10/07/2013 23:34
1,1,1-Trichloroethane	ND		0.55	1	10/07/2013 23:34
1,1,2-Trichloroethane	ND		0.0055	1	10/07/2013 23:34
Trichloroethene	0.021		0.0055	1	10/07/2013 23:34
Trichlorofluoromethane	1.6		0.57	1	10/07/2013 23:34
1,2,4-Trimethylbenzene	ND		0.50	1	10/07/2013 23:34
1,3,5-Trimethylbenzene	ND		0.50	1	10/07/2013 23:34
Vinyl Acetate	ND		0.36	1	10/07/2013 23:34
Vinyl Chloride	ND		0.0026	1	10/07/2013 23:34

Xylenes, Total



1.3

10/07/2013 23:34

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit: $\mu g/m^3$ 

### Volatile Organic Compounds in μg/m³

Client ID	Lab ID	Matrix/ExtType	Date Co	llected	Instrument	Batch ID
Air 1191 Front 8hr	1310206-006A	Indoor Air	10/03/201	3 10:40	GC24	82622
Analytes	Result		<u>RL</u>	<u>DF</u>		Date Analyzed
Acetone	36		6.0	1		10/08/2013 00:36
Acrolein	5.4		0.23	1		10/08/2013 00:36
Acrylonitrile	ND		0.22	1		10/08/2013 00:36
tert-Amyl methyl ether (TAME)	ND		0.42	1		10/08/2013 00:36
Benzene	0.39		0.0032	1		10/08/2013 00:36
Benzyl chloride	ND		0.53	1		10/08/2013 00:36
Bromodichloromethane	ND		0.0070	1		10/08/2013 00:36
Bromoform	ND		1.1	1		10/08/2013 00:36
Bromomethane	0.74		0.39	1		10/08/2013 00:36
1,3-Butadiene	ND		0.22	1		10/08/2013 00:36
2-Butanone (MEK)	ND		7.5	1		10/08/2013 00:36
t-Butyl alcohol (TBA)	ND		6.2	1		10/08/2013 00:36
Carbon Disulfide	ND		0.32	1		10/08/2013 00:36
Carbon Tetrachloride	0.68		0.0064	1		10/08/2013 00:36
Chlorobenzene	ND		0.47	1		10/08/2013 00:36
Chloroethane	ND		0.27	1		10/08/2013 00:36
Chloroform	0.41		0.0049	1		10/08/2013 00:36
Chloromethane	0.61		0.21	1		10/08/2013 00:36
Cyclohexane	2.6		1.8	1		10/08/2013 00:36
Dibromochloromethane	ND		0.87	1		10/08/2013 00:36
1,2-Dibromo-3-chloropropane	ND		0.0049	1		10/08/2013 00:36
1,2-Dibromoethane (EDB)	0.014		0.0078	1		10/08/2013 00:36
1,2-Dichlorobenzene	ND		0.61	1		10/08/2013 00:36
1,3-Dichlorobenzene	ND		0.61	1		10/08/2013 00:36
1,4-Dichlorobenzene	0.15		0.0061	1		10/08/2013 00:36
Dichlorodifluoromethane	2.7		0.50	1		10/08/2013 00:36
1,1-Dichloroethane	ND		0.41	1		10/08/2013 00:36
1,2-Dichloroethane (1,2-DCA)	0.12		0.0041	1		10/08/2013 00:36
1,1-Dichloroethene	ND		0.10	1		10/08/2013 00:36
cis-1,2-Dichloroethene	ND		0.40	1		10/08/2013 00:36
trans-1,2-Dichloroethene	ND		0.40	1		10/08/2013 00:36
1,2-Dichloropropane	0.026		0.0047	1		10/08/2013 00:36
cis-1,3-Dichloropropene	ND		0.12	1		10/08/2013 00:36
trans-1,3-Dichloropropene	ND		0.12	1		10/08/2013 00:36
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.71	1		10/08/2013 00:36
Diisopropyl ether (DIPE)	ND		0.42	1		10/08/2013 00:36
1,4-Dioxane	ND		0.0037	1		10/08/2013 00:36
Ethyl acetate	15		0.92	1		10/08/2013 00:36

(Cont.)

GM Analyst's Initial

Angela Rydelius, Lab Manager

#### **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit:μg/m³

#### Volatile Organic Compounds in µg/m<sup>3</sup> Client ID Lab ID Matrix/ExtType Date Collected Instrument **Batch ID** Air 1191 Front 8hr 1310206-006A **Indoor Air** 10/03/2013 10:40 GC24 82622 **Analytes** Result RL DF Date Analyzed ND Ethyl tert-butyl ether (ETBE) 0.42 1 10/08/2013 00:36 Ethylbenzene 1.1 0.44 1 10/08/2013 00:36 0.50 4-Ethyltoluene ND 1 10/08/2013 00:36 Freon 113 ND 0.78 1 10/08/2013 00:36 Heptane ND 2.1 1 10/08/2013 00:36 Hexachlorobutadiene ND 1.1 1 10/08/2013 00:36 ND Hexane 1.8 1 10/08/2013 00:36 2-Hexanone 0.42 10/08/2013 00:36 0.53 1 4-Methyl-2-pentanone (MIBK) 0.46 0.42 1 10/08/2013 00:36 Methyl-t-butyl ether (MTBE) ND 0.37 1 10/08/2013 00:36 ND 0.35 10/08/2013 00:36 Methylene chloride 1 Methyl methacrylate ND 0.42 1 10/08/2013 00:36 0.050 Naphthalene 0.38 1 10/08/2013 00:36 Propene ND 8.8 1 10/08/2013 00:36 ND Styrene 0.43 1 10/08/2013 00:36 ND 1,1,1,2-Tetrachloroethane 0.0070 1 10/08/2013 00:36 1,1,2,2-Tetrachloroethane ND 0.0070 1 10/08/2013 00:36 Tetrachloroethene 0.36 0.034 1 10/08/2013 00:36 Tetrahydrofuran ND0.60 1 10/08/2013 00:36 Toluene 7.7 0.38 1 10/08/2013 00:36 1,2,4-Trichlorobenzene ND 0.75 1 10/08/2013 00:36 1,1,1-Trichloroethane ND 0.55 1 10/08/2013 00:36 ND 0.0055 1 10/08/2013 00:36 1,1,2-Trichloroethane Trichloroethene 0.020 0.0055 1 10/08/2013 00:36 Trichlorofluoromethane 1.7 0.57 1 10/08/2013 00:36 0.50 1 1,2,4-Trimethylbenzene ND 10/08/2013 00:36 1,3,5-Trimethylbenzene ND 0.50 1 10/08/2013 00:36 ND Vinyl Acetate 0.36 1 10/08/2013 00:36 Vinyl Chloride ND 0.0026 1 10/08/2013 00:36

(Cont.)

Xylenes, Total



1.3

5.7

10/08/2013 00:36



Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit:μg/m³

#### Volatile Organic Compounds in µg/m<sup>3</sup> Client ID Lab ID Matrix/ExtType Date Collected Instrument **Batch ID** Air Ambient 1310206-007A **Indoor Air** 10/03/2013 10:45 GC24 82622 **Analytes** Result RL DF Date Analyzed Acetone 15 6.0 1 10/08/2013 01:33 Acrolein 3.0 0.23 1 10/08/2013 01:33 ND 0.22 1 10/08/2013 01:33 Acrylonitrile tert-Amyl methyl ether (TAME) ND 0.42 1 10/08/2013 01:33 Benzene 0.25 0.0032 1 10/08/2013 01:33 Benzyl chloride ND 0.53 1 10/08/2013 01:33 Bromodichloromethane ND 0.0070 1 10/08/2013 01:33 10/08/2013 01:33 Bromoform ND 1.1 1 Bromomethane 0.69 0.39 1 10/08/2013 01:33 1,3-Butadiene ND 0.22 1 10/08/2013 01:33 ND 2-Butanone (MEK) 7.5 1 10/08/2013 01:33 t-Butyl alcohol (TBA) ND 6.2 1 10/08/2013 01:33 Carbon Disulfide ND 0.32 1 10/08/2013 01:33 Carbon Tetrachloride 0.58 0.0064 1 10/08/2013 01:33 Chlorobenzene ND 0.47 1 10/08/2013 01:33 Chloroethane ND 0.27 1 10/08/2013 01:33 0.0049 Chloroform 0.24 1 10/08/2013 01:33 Chloromethane 0.61 0.21 1 10/08/2013 01:33 Cyclohexane ND 1.8 1 10/08/2013 01:33 ND Dibromochloromethane 0.87 1 10/08/2013 01:33 0.0049 1,2-Dibromo-3-chloropropane ND 1 10/08/2013 01:33 1,2-Dibromoethane (EDB) 0.0093 0.0078 1 10/08/2013 01:33 ND 1 1,2-Dichlorobenzene 0.61 10/08/2013 01:33 1,3-Dichlorobenzene ND 0.61 1 10/08/2013 01:33 1,4-Dichlorobenzene 0.029 0.0061 1 10/08/2013 01:33 1 Dichlorodifluoromethane 2.6 0.50 10/08/2013 01:33 1,1-Dichloroethane NΠ 0.41 1 10/08/2013 01:33 1,2-Dichloroethane (1,2-DCA) 0.038 0.0041 1 10/08/2013 01:33 1,1-Dichloroethene ND 0.10 1 10/08/2013 01:33 cis-1,2-Dichloroethene ND 0.40 1 10/08/2013 01:33 ND 0.40 1 trans-1,2-Dichloroethene 10/08/2013 01:33 0.0047 0.014 1 10/08/2013 01:33 1,2-Dichloropropane ND 1 cis-1,3-Dichloropropene 0.12 10/08/2013 01:33 trans-1,3-Dichloropropene ND 0.12 1 10/08/2013 01:33 ND 0.71 1 10/08/2013 01:33 1,2-Dichloro-1,1,2,2-tetrafluoroethane Diisopropyl ether (DIPE) ND 0.42 1 10/08/2013 01:33

(Cont.)

1,4-Dioxane

Ethyl acetate

GM Analyst's Initial

0.0037

0.92

1

1

Angela Rydelius, Lab Manager

ND

3.4

10/08/2013 01:33

10/08/2013 01:33

# **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310206Project:SolanoExtraction Method:TO15Date Received:10/7/13 11:54Analytical Method:TO15Date Prepared:10/7/13-10/8/13Unit: $\mu g/m^3$ 

Volatile Organic Compounds in μg/m³									
Client ID	Lab ID	Matrix/ExtType	Date Co	llected	Instrument	Batch ID			
Air Ambient	1310206-007A	Indoor Air	10/03/201	3 10:45	GC24	82622			
<u>Analytes</u>	Result		<u>RL</u>	DF		Date Analyzed			
Ethyl tert-butyl ether (ETBE)	ND		0.42	1		10/08/2013 01:33			
Ethylbenzene	ND		0.44	1		10/08/2013 01:33			
4-Ethyltoluene	ND		0.50	1		10/08/2013 01:33			
Freon 113	ND		0.78	1		10/08/2013 01:33			
Heptane	ND		2.1	1		10/08/2013 01:33			
Hexachlorobutadiene	ND		1.1	1		10/08/2013 01:33			
Hexane	ND		1.8	1		10/08/2013 01:33			
2-Hexanone	ND		0.42	1		10/08/2013 01:33			
4-Methyl-2-pentanone (MIBK)	ND		0.42	1		10/08/2013 01:33			
Methyl-t-butyl ether (MTBE)	ND		0.37	1		10/08/2013 01:33			
Methylene chloride	ND		0.35	1		10/08/2013 01:33			
Methyl methacrylate	ND		0.42	1		10/08/2013 01:33			
Naphthalene	0.16		0.050	1		10/08/2013 01:33			
Propene	ND		8.8	1		10/08/2013 01:33			
Styrene	ND		0.43	1		10/08/2013 01:33			
1,1,1,2-Tetrachloroethane	ND		0.0070	1		10/08/2013 01:33			
1,1,2,2-Tetrachloroethane	ND		0.0070	1		10/08/2013 01:33			
Tetrachloroethene	0.053		0.034	1		10/08/2013 01:33			
Tetrahydrofuran	ND		0.60	1		10/08/2013 01:33			
Toluene	0.47		0.38	1		10/08/2013 01:33			
1,2,4-Trichlorobenzene	ND		0.75	1		10/08/2013 01:33			
1,1,1-Trichloroethane	ND		0.55	1		10/08/2013 01:33			
1,1,2-Trichloroethane	ND		0.0055	1		10/08/2013 01:33			
Trichloroethene	ND		0.0055	1		10/08/2013 01:33			
Trichlorofluoromethane	1.3		0.57	1		10/08/2013 01:33			
1,2,4-Trimethylbenzene	ND		0.50	1		10/08/2013 01:33			
1,3,5-Trimethylbenzene	ND		0.50	1		10/08/2013 01:33			
Vinyl Acetate	ND		0.36	1		10/08/2013 01:33			
Vinyl Chloride	ND		0.0026	1		10/08/2013 01:33			
						•			

1.3

ND

Xylenes, Total

10/08/2013 01:33

### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 10/8/13

**Date Analyzed:** 10/7/13 - 10/8/13

**Instrument:** GC24 **Matrix:** Soilgas

**Project:** Solano

**WorkOrder:** 1310206

**BatchID:** 82622

**Extraction Method** TO15 **Analytical Method**: TO15

**Unit:** nL/L

Sample ID: MB/LCS-82622

#### **OC SUMMARY REPORT FOR TO15**

	QC SUMM	MB Result         LCS Result         RL Val         SPK Val         MB SS %REC         LCS WREC         LCS Limits           ND         -         25         -         -         -         -           ND         31.15         0.50         25         -         125         60-140           ND         26.08         0.50         25         -         104         60-140           ND         24.68         0.50         25         -         98.7         60-140           ND         26.3         0.50         25         -         105         60-140           ND         22.67         0.50         25         -         90.7         60-140           ND         29.24         0.50         25         -         117         60-140           ND         -         0.50         -         -         -         -           ND         25.02								
Analyte			RL							
Acetone	ND	-	25	-	-	_	-			
Acrylonitrile	ND	31.15	0.50	25	-	125	60-140			
tert-Amyl methyl ether (TAME)	ND	26.08	0.50	25	-	104	60-140			
Benzene	ND	24.68	0.50	25	-	98.7	60-140			
Benzyl chloride	ND	26.3	0.50	25	-	105	60-140			
Bromodichloromethane	ND	22.67	0.50	25	-	90.7	60-140			
Bromoform	ND	29.24	0.50	25	-	117	60-140			
Bromomethane	ND				-	-	-			
1,3-Butadiene	ND	_		-	-	-	-			
2-Butanone (MEK)	ND	_	25	-	-	-	-			
t-Butyl alcohol (TBA)	ND	_		-	-	-	-			
Carbon Disulfide	ND	25.02	0.50	25	-	100	60-140			
Carbon Tetrachloride	ND				-	115	60-140			
Chlorobenzene	ND				-	93.5				
Chloroethane	ND		0.50	25	-	138				
Chloroform	ND	20.82	0.50	25	-	83.3	60-140			
Chloromethane	ND	26.99	0.50	25	-	108	60-140			
Cyclohexane	ND	-	5.0	-	_	-	-			
Dibromochloromethane	ND	30.52	0.50	25	-	122	60-140			
1,2-Dibromo-3-chloropropane	ND	28.28	0.012	25	-	113	60-140			
1,2-Dibromoethane (EDB)	ND	22.67	0.50	25	-	90.7	60-140			
1,2-Dichlorobenzene	ND	-	0.50	_	-	-	_			
1,3-Dichlorobenzene	ND	24.79	0.50	25	-	99.2	60-140			
1,4-Dichlorobenzene	ND	21.7	0.50	25	-	86.8	60-140			
Dichlorodifluoromethane	ND	24.46	0.50	25	-	97.8	60-140			
1,1-Dichloroethane	ND	24.17	0.50	25	_	96.7	60-140			
1,2-Dichloroethane (1,2-DCA)	ND	20.21	0.50	25	_	80.9	60-140			
1,1-Dichloroethene	ND	-	0.50	-	_	-	-			
cis-1,2-Dichloroethene	ND	25.35	0.50	25	_	101	60-140			
trans-1,2-Dichloroethene	ND	26.03	0.50	25	-	104	60-140			
1,2-Dichloropropane	ND	21.25	0.50	25	-	85	60-140			
cis-1,3-Dichloropropene	ND	26.02	0.50	25	-	104	60-140			
trans-1,3-Dichloropropene	ND	24.3	0.50	25	-	97.2	60-140			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	25.3	0.50	25	-	101	60-140			
Diisopropyl ether (DIPE)	ND	31.68	0.50	25	-	127	60-140			
1,4-Dioxane	ND	23.18	0.50	25	-	92.7	60-140			
Ethanol	ND	-	50	-	-	-	-			
Ethyl acetate	ND	25.49	0.50	25	-	102	60-140			
Ethyl tert-butyl ether (ETBE)	ND	24.98	0.50	25	-	99.9	60-140			
Ethylbenzene	ND	24.52	0.50	25	-	98.1	60-140			
Luiyibelizelle	ND	24.02	0.50	23	-	30.1	00-140			

(Cont.)



### **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 10/8/13

**Date Analyzed:** 10/7/13 - 10/8/13

Instrument: GC24
Matrix: Soilgas

**Project:** Solano

WorkOrder: 1310206

**BatchID:** 82622

**Extraction Method** TO15

**Analytical Method: TO15** 

Unit: nL/L

Sample ID: MB/LCS-82622

QC SUMMARY REPORT FOR TO15									
Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits		
4-Ethyltoluene	ND	-	0.50	-	-	-	-		
Freon 113	ND	30.21	0.50	25	-	121	60-140		
Heptane	ND	-	5.0	-	-	-	-		
Hexachlorobutadiene	ND	26.3	0.50	25	-	105	60-140		
Hexane	ND	-	5.0	-	-	-	-		
2-Hexanone	ND	-	0.50	-	-	-	-		
4-Methyl-2-pentanone (MIBK)	ND	26.12	0.50	25	-	104	60-140		
Methyl-t-butyl ether (MTBE)	ND	26.4	0.50	25	-	106	60-140		
Methylene chloride	ND	22.04	0.50	25	-	88.1	60-140		
Naphthalene	ND	46.23	1.0	50	-	92.5	60-140		
Propene	ND	-	50	-	-	-	-		
Styrene	ND	26.7	0.50	25	-	107	60-140		
1,1,1,2-Tetrachloroethane	ND	25.99	0.50	25	-	104	60-140		
1,1,2,2-Tetrachloroethane	ND	20.49	0.50	25	-	81.9	60-140		
Tetrachloroethene	ND	24.55	0.50	25	-	98.2	60-140		
Tetrahydrofuran	ND	21.85	0.50	25	-	87.4	60-140		
Toluene	ND	22.65	0.50	25	-	90.6	60-140		
1,2,4-Trichlorobenzene	ND	25.62	0.50	25	-	102	60-140		
1,1,1-Trichloroethane	ND	27.16	0.50	25	-	109	60-140		
1,1,2-Trichloroethane	ND	21.79	0.50	25	-	87.1	60-140		
Trichloroethene	ND	20.34	0.50	25	-	81.3	60-140		
Trichlorofluoromethane	ND	-	0.50	-	-	-	-		
1,2,4-Trimethylbenzene	ND	24.48	0.50	25	-	97.9	60-140		
1,3,5-Trimethylbenzene	ND	24.22	0.50	25	-	96.9	60-140		
Vinyl Acetate	ND	-	0.50	-	-	-	-		
Vinyl Chloride	ND	20.4	0.50	25	-	81.6	60-140		
Xylenes, Total	ND	76.41	1.5	75	-	102	60-140		
Surrogate Recovery									
1,2-DCA-d4	516.3	531.3		500	103	106	60-140		
toluene-d8	540.7	534		500	108	107	60-140		
4-BFB	551.1	535.6		500	110	107	60-140		

#### McCampbell Analytical, Inc.

# **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

Page 1 of 1

J-flag

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WaterTrax WriteOn EDF Excel ■EQuIS Femail HardCopy ThirdParty

WorkOrder: 1310206

Report to: Requested TAT: 2 days

Bob Clark-Riddell Email: BRiddell@pangeaenv.com Bob Clark-Riddell

Pangea Environmental Svcs., Inc. cc: Pangea Environmental Svcs., Inc.

 1710 Franklin Street, Ste. 200
 PO:
 1710 Franklin Street, Ste. 200
 Date Received:
 10/07/2013

 Oakland, CA 94612
 ProjectNo: Solano
 Oakland, CA 94612
 Date Printed:
 10/07/2013

					Requested Tests (See legend below)												
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	5	6	7	8	9	10	11	12
1310206-001	Air 1183 8hr	Indoor Air	10/3/2013 9:55			Α											
1310206-002	Air 1183 24hr	Indoor Air	10/3/2013 9:56			Α											
1310206-003	Air 1191 Break 8hr	Indoor Air	10/3/2013 10:15			Α											
1310206-004	Air 1191 Front 8hr DUP	Indoor Air	10/3/2013 10:16	<b>✓</b>	Α												
1310206-005	Air 1191 Front 24hr	Indoor Air	10/3/2013 10:17			Α											
1310206-006	Air 1191 Front 8hr	Indoor Air	10/3/2013 10:40			Α											
1310206-007	Air Ambient	Indoor Air	10/3/2013 10:45			Α											

#### Test Legend:

1	PRSUMAHOLD	2 15_SCAN-SIM_Indoor(ug/m	3	4	5	
6		7	8	9	10	
11		12				

Prepared by: Jena Alfaro

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).

Hazardous samples will be returned to client or disposed of at client expense.

				DIICH			131	020	06		TAT	BILL.	
McCAMPBELL ANALYTICAL INC.  1534 WILLOW PASS ROAD / PITTSBURG, CA 94565-1701  Website: www.mccampbell.com / Email: main@mccampbell.com  Telephone: (877) 252-9262 / Fax: (925) 252-9269						CHAIN OF CUSTODY RECORD  TURN AROUND TIME  RUSH 24 HR 48 HR 72 HR 5 DAY  EDF Required? Coelt (Normal) No Write On (DW) No							
Report To: Bob alork Pitchell Bill To:						Lab Use Only							
Company: PANGER						Pressurization Gas							
1710 FRANKIN						Pressurized By Date							
OAKLANDER 94612 E-Mail: brillellepagearava						N2 He							
Tele: (570) 435-86	-		Fax: ( )	5		Section 1997				15 4.5			
Project #:			Project Name:	SOLAND	Helium S	hroud SN#:							
Project Location: SOLA	tho.	19,0			Other:		Well the more and						
Sampler Signature:	1001	eld	els		Notes:								
Field Sample ID	Collection			Manifold / Sampler									
(Location)	Manufacture Company		Canister SN#	Kit SN#	Analysis Requested		Indoor	Soil	The second secon		essure/Vacuum		
	Date	Time	56			A		Gas	Initial	Final	Receipt	Final (psi)	
Air 1183 8hr	10/3/13	9.55	Bata 503 #7	4888	TO-19	5	V		-30	-1.5	\$ 100		
Arr 1183 Juhr		9:56	11 503 #8	L4778					-30	-2	1 2 2 4 1 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1	# / L + F	
Air 1191 Break 8h		10.15	11 503 41	3650					-30	-3	Value of	100	
Ar 1191 Fruit 8hr	Dup.	10:16	11 503 #2	4755		(HOLD)			- 213	-2	15.00 mm		
Ar 1191 Front DYAr		10:17	BATEN 505 H/3	A 7741				0	-30	-4	為一二三		
AT 1191 Frint 8hr	-	10:40	BATICH 503 #6	A7790	+		+		-30	10	The second	6	
Air Ambrient	V	10:45	11 11 #14	3648	4		L		- 07	-2		12-2	
The second control of											52A. A		
				,							uffice to		
Relinquished By:	Date:	Time:	Received By:								14.		
Bolelilla.	194113	itto		~	Temp (°C	):	Work Order	#:					
Relinquished By:	Date:	Time:	Received By:		Equipment								
11	1/4/18	H30	MX		Condition:								
Relinquished By:	Date:	Time:	Received By:		Shipped V	/ia:							

Comments:

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#### **Sample Receipt Checklist**

Client Name:	Pangea Environmen	ital Svcs., Inc.			Date a	and Time Received:	10/7/2013 1	1:54:48 AM		
Project Name:	Solano				LogIn	Reviewed by:		Jena Alfaro		
WorkOrder N°:	1310206	Matrix: Indoor Air			Carrie	r: Rob Pringle (M	IAI Courier)			
Chain of Custody (COC) Information										
Chain of custody	present?		Yes	<b>✓</b>	No $\square$					
Chain of custody	signed when relinquis	hed and received?	Yes	<b>✓</b>	No 🗌					
Chain of custody	agrees with sample la	abels?	Yes	<b>✓</b>	No $\square$					
Sample IDs noted	d by Client on COC?		Yes	✓	No $\square$					
Date and Time of	collection noted by C	lient on COC?	Yes	✓	No $\square$					
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$					
Sample Receipt Information										
Custody seals int	act on shipping contai	iner/cooler?	Yes		No $\square$		NA 🗸			
Shipping contained	er/cooler in good cond	Yes	<b>✓</b>	No 🗌						
Samples in prope	er containers/bottles?		Yes	✓	No $\square$					
Sample container	rs intact?		Yes	✓	No $\square$					
Sufficient sample	volume for indicated	test?	Yes	<b>✓</b>	No $\square$					
		Sample Pres	ervatio	n and Hold	<u>Γime (HT)</u>	Information				
All samples recei	ved within holding time	e?	Yes	<b>✓</b>	No $\square$					
Container/Temp I	Blank temperature		Coole	er Temp:			NA 🗸			
Water - VOA vials	s have zero headspac	e / no bubbles?	Yes		No $\square$	No VOA vials subm	itted 🗹			
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌					
Metal - pH accept	table upon receipt (pH	l<2)?	Yes		No 🗌		NA 🗸			
Samples Receive	ed on Ice?		Yes		No 🗸					
* NOTE: If the "N	o" box is checked, see	e comments below.		===:	===:	=====	====	======		



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1310378 **Amended:** 10/21/2013

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project P.O.:** 

**Project Name:** #1435.002; Solano Group

**Project Received:** 10/10/2013

Analytical Report reviewed & approved for release on 10/11/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

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## Glossary of Terms & Qualifier Definitions

**Client:** Pangea Environmental Svcs., Inc.

**Project:** #1435.002; Solano Group

WorkOrder: 1310378

Glossary Description
Abbreviation

95% Interval 95% Confident Interval

DF Dilution Factor
DUP Duplicate

LCS Laboratory Control Sample

MB Method Blank

MB % Rec % Recovery of Surrogate in Method Blank, if applicable

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

ND Not detected at or above the indicated MDL or RL

NR Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water

matrix; or sample diluted due to high matrix or analyte content.

RD Relative Difference
RL Reporting Limit

RPD Relative Percent Deviation

SPK Val Spike Value

SPKRef Val Spike Reference Value

Analytical Qualifier

H samples were analyzed out of holding time

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/10/13 15:56Analytical Method:SW8260B

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Col	lected Instrument	Batch ID
SG-1187N	1310378-001A	Air	10/10/2013	3 11:25 GC28	82761
Analytes	Result	<u>Qualifiers</u>	<u>RL</u>	DF	Date Analyzed
Acetone	ND	Н	5.0	1	10/10/2013 22:02
tert-Amyl methyl ether (TAME)	ND	Н	0.25	1	10/10/2013 22:02
Benzene	ND	Н	0.25	1	10/10/2013 22:02
Bromobenzene	ND	Н	0.25	1	10/10/2013 22:02
Bromochloromethane	ND	Н	0.25	1	10/10/2013 22:02
Bromodichloromethane	ND	Н	0.25	1	10/10/2013 22:02
Bromoform	ND	Н	0.25	1	10/10/2013 22:02
Bromomethane	ND	Н	0.25	1	10/10/2013 22:02
2-Butanone (MEK)	ND	Н	1.0	1	10/10/2013 22:02
t-Butyl alcohol (TBA)	ND	Н	2.5	1	10/10/2013 22:02
n-Butyl benzene	ND	Н	0.25	1	10/10/2013 22:02
sec-Butyl benzene	ND	Н	0.25	1	10/10/2013 22:02
tert-Butyl benzene	ND	Н	0.25	1	10/10/2013 22:02
Carbon Disulfide	ND	Н	0.25	1	10/10/2013 22:02
Carbon Tetrachloride	ND	Н	0.25	1	10/10/2013 22:02
Chlorobenzene	ND	Н	0.25	1	10/10/2013 22:02
Chloroethane	ND	Н	0.25	1	10/10/2013 22:02
Chloroform	ND	Н	0.25	1	10/10/2013 22:02
Chloromethane	ND	Н	0.25	1	10/10/2013 22:02
2-Chlorotoluene	ND	Н	0.25	1	10/10/2013 22:02
4-Chlorotoluene	ND	Н	0.25	1	10/10/2013 22:02
Dibromochloromethane	ND	Н	0.25	1	10/10/2013 22:02
1,2-Dibromo-3-chloropropane	ND	Н	0.25	1	10/10/2013 22:02
1,2-Dibromoethane (EDB)	ND	Н	0.25	1	10/10/2013 22:02
Dibromomethane	ND	Н	0.25	1	10/10/2013 22:02
1,2-Dichlorobenzene	ND	Н	0.25	1	10/10/2013 22:02
1,3-Dichlorobenzene	ND	Н	0.25	1	10/10/2013 22:02
1,4-Dichlorobenzene	ND	Н	0.25	1	10/10/2013 22:02
Dichlorodifluoromethane	ND	Н	0.25	1	10/10/2013 22:02
1,1-Dichloroethane	ND	Н	0.25	1	10/10/2013 22:02
1,2-Dichloroethane (1,2-DCA)	ND	Н	0.25	1	10/10/2013 22:02
1,1-Dichloroethene	ND	Н	0.25	1	10/10/2013 22:02
cis-1,2-Dichloroethene	ND	Н	0.25	1	10/10/2013 22:02
trans-1,2-Dichloroethene	ND	Н	0.25	1	10/10/2013 22:02
1,2-Dichloropropane	ND	Н	0.25	1	10/10/2013 22:02
1,3-Dichloropropane	ND	Н	0.25	1	10/10/2013 22:02
2,2-Dichloropropane	ND	Н	0.25	1	10/10/2013 22:02
1,1-Dichloropropene	ND	Н	0.25	1	10/10/2013 22:02

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## **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/10/13 15:56Analytical Method:SW8260B

**Date Prepared:** 10/10/13 **Unit:**  $\mu$ g/L

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtT	ype Date Co	ollected Instrument	Batch ID
SG-1187N	1310378-001A	Air	10/10/20	13 11:25 GC28	82761
<u>Analytes</u>	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	Date Analyzed
cis-1,3-Dichloropropene	ND	Н	0.25	1	10/10/2013 22:02
trans-1,3-Dichloropropene	ND	Н	0.25	1	10/10/2013 22:02
Diisopropyl ether (DIPE)	ND	Н	0.25	1	10/10/2013 22:02
Ethylbenzene	ND	Н	0.25	1	10/10/2013 22:02
Ethyl tert-butyl ether (ETBE)	ND	Н	0.25	1	10/10/2013 22:02
Freon 113	ND	Н	5.0	1	10/10/2013 22:02
Hexachlorobutadiene	ND	Н	0.25	1	10/10/2013 22:02
Hexachloroethane	ND	Н	0.25	1	10/10/2013 22:02
2-Hexanone	ND	Н	0.25	1	10/10/2013 22:02
Isopropylbenzene	ND	Н	0.25	1	10/10/2013 22:02
4-Isopropyl toluene	ND	Н	0.25	1	10/10/2013 22:02
Methyl-t-butyl ether (MTBE)	ND	Н	0.25	1	10/10/2013 22:02
Methylene chloride	ND	Н	0.25	1	10/10/2013 22:02
4-Methyl-2-pentanone (MIBK)	ND	Н	0.25	1	10/10/2013 22:02
Naphthalene	ND	Н	0.25	1	10/10/2013 22:02
n-Propyl benzene	ND	Н	0.25	1	10/10/2013 22:02
Styrene	ND	Н	0.25	1	10/10/2013 22:02
1,1,1,2-Tetrachloroethane	ND	Н	0.25	1	10/10/2013 22:02
1,1,2,2-Tetrachloroethane	ND	Н	0.25	1	10/10/2013 22:02
Tetrachloroethene	0.29	Н	0.25	1	10/10/2013 22:02
Toluene	ND	Н	0.25	1	10/10/2013 22:02
1,2,3-Trichlorobenzene	ND	Н	0.25	1	10/10/2013 22:02
1,2,4-Trichlorobenzene	ND	Н	0.25	1	10/10/2013 22:02
1,1,1-Trichloroethane	ND	Н	0.25	1	10/10/2013 22:02
1,1,2-Trichloroethane	ND	Н	0.25	1	10/10/2013 22:02
Trichloroethene	ND	Н	0.25	1	10/10/2013 22:02
Trichlorofluoromethane	ND	Н	0.25	1	10/10/2013 22:02
1,2,3-Trichloropropane	ND	Н	0.25	1	10/10/2013 22:02
1,2,4-Trimethylbenzene	ND	Н	0.25	1	10/10/2013 22:02
1,3,5-Trimethylbenzene	ND	Н	0.25	1	10/10/2013 22:02
Vinyl Chloride	ND	Н	0.25	1	10/10/2013 22:02
Xylenes, Total	ND	Н	0.25	1	10/10/2013 22:02
<u>Surrogates</u>	REC (%)	Qualifiers	<u>Limits</u>		
Dibromofluoromethane	100	Н	70-130		10/10/2013 22:02
Toluene-d8	90	Н	70-130		10/10/2013 22:02
4-BFB	87	Н	70-130		10/10/2013 22:02

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Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/10/13 15:56Analytical Method:SW8260B

**Date Prepared:** 10/10/13 **Unit:**  $\mu g/L$ 

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Col	lected	Instrument	Batch ID
SG-1185N	1310378-002A	Air	10/10/2013	3 11:30	GC28	82761
Analytes	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
Acetone	ND	Н	5.0	1		10/10/2013 18:13
tert-Amyl methyl ether (TAME)	ND	Н	0.25	1		10/10/2013 18:13
Benzene	ND	Н	0.25	1		10/10/2013 18:13
Bromobenzene	ND	Н	0.25	1		10/10/2013 18:13
Bromochloromethane	ND	Н	0.25	1		10/10/2013 18:13
Bromodichloromethane	ND	Н	0.25	1		10/10/2013 18:13
Bromoform	ND	Н	0.25	1		10/10/2013 18:13
Bromomethane	ND	Н	0.25	1		10/10/2013 18:13
2-Butanone (MEK)	ND	Н	1.0	1		10/10/2013 18:13
t-Butyl alcohol (TBA)	ND	Н	2.5	1		10/10/2013 18:13
n-Butyl benzene	ND	Н	0.25	1		10/10/2013 18:13
sec-Butyl benzene	ND	Н	0.25	1		10/10/2013 18:13
tert-Butyl benzene	ND	Н	0.25	1		10/10/2013 18:13
Carbon Disulfide	ND	Н	0.25	1		10/10/2013 18:13
Carbon Tetrachloride	ND	Н	0.25	1		10/10/2013 18:13
Chlorobenzene	ND	Н	0.25	1		10/10/2013 18:13
Chloroethane	ND	Н	0.25	1		10/10/2013 18:13
Chloroform	ND	Н	0.25	1		10/10/2013 18:13
Chloromethane	ND	Н	0.25	1		10/10/2013 18:13
2-Chlorotoluene	ND	Н	0.25	1		10/10/2013 18:13
4-Chlorotoluene	ND	Н	0.25	1		10/10/2013 18:13
Dibromochloromethane	ND	Н	0.25	1		10/10/2013 18:13
1,2-Dibromo-3-chloropropane	ND	Н	0.25	1		10/10/2013 18:13
1,2-Dibromoethane (EDB)	ND	Н	0.25	1		10/10/2013 18:13
Dibromomethane	ND	Н	0.25	1		10/10/2013 18:13
1,2-Dichlorobenzene	ND	Н	0.25	1		10/10/2013 18:13
1,3-Dichlorobenzene	ND	Н	0.25	1		10/10/2013 18:13
1,4-Dichlorobenzene	ND	Н	0.25	1		10/10/2013 18:13
Dichlorodifluoromethane	ND	Н	0.25	1		10/10/2013 18:13
1,1-Dichloroethane	ND	Н	0.25	1		10/10/2013 18:13
1,2-Dichloroethane (1,2-DCA)	ND	Н	0.25	1		10/10/2013 18:13
1,1-Dichloroethene	ND	Н	0.25	1		10/10/2013 18:13
cis-1,2-Dichloroethene	ND	Н	0.25	1		10/10/2013 18:13
trans-1,2-Dichloroethene	ND	Н	0.25	1		10/10/2013 18:13
1,2-Dichloropropane	ND	Н	0.25	1		10/10/2013 18:13
1,3-Dichloropropane	ND	Н	0.25	1		10/10/2013 18:13
2,2-Dichloropropane	ND	Н	0.25	1		10/10/2013 18:13
1,1-Dichloropropene	ND	Н	0.25	1		10/10/2013 18:13

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**Date Received:** 10/10/13 15:56

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**Analytical Method:** SW8260B

## **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Project:#1435.002; Solano GroupExtraction Method:SW5030B

Date Prepared: 10/10/13 Unit: μg/L

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	llected	Instrument	Batch ID
SG-1185N	1310378-002A	Air	10/10/201	3 11:30	GC28	82761
<u>Analytes</u>	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
cis-1,3-Dichloropropene	ND	Н	0.25	1		10/10/2013 18:13
trans-1,3-Dichloropropene	ND	Н	0.25	1		10/10/2013 18:13
Diisopropyl ether (DIPE)	ND	Н	0.25	1		10/10/2013 18:13
Ethylbenzene	ND	Н	0.25	1		10/10/2013 18:13
Ethyl tert-butyl ether (ETBE)	ND	Н	0.25	1		10/10/2013 18:13
Freon 113	ND	Н	5.0	1		10/10/2013 18:13
Hexachlorobutadiene	ND	Н	0.25	1		10/10/2013 18:13
Hexachloroethane	ND	Н	0.25	1		10/10/2013 18:13
2-Hexanone	ND	Н	0.25	1		10/10/2013 18:13
Isopropylbenzene	ND	Н	0.25	1		10/10/2013 18:13
4-Isopropyl toluene	ND	Н	0.25	1		10/10/2013 18:13
Methyl-t-butyl ether (MTBE)	ND	Н	0.25	1		10/10/2013 18:13
Methylene chloride	ND	Н	0.25	1		10/10/2013 18:13
4-Methyl-2-pentanone (MIBK)	ND	Н	0.25	1		10/10/2013 18:13
Naphthalene	ND	Н	0.25	1		10/10/2013 18:13
n-Propyl benzene	ND	Н	0.25	1		10/10/2013 18:13
Styrene	ND	Н	0.25	1		10/10/2013 18:13
1,1,1,2-Tetrachloroethane	ND	Н	0.25	1		10/10/2013 18:13
1,1,2,2-Tetrachloroethane	ND	Н	0.25	1		10/10/2013 18:13
Tetrachloroethene	0.94	Н	0.25	1		10/10/2013 18:13
Toluene	ND	Н	0.25	1		10/10/2013 18:13
1,2,3-Trichlorobenzene	ND	Н	0.25	1		10/10/2013 18:13
1,2,4-Trichlorobenzene	ND	Н	0.25	1		10/10/2013 18:13
1,1,1-Trichloroethane	ND	Н	0.25	1		10/10/2013 18:13
1,1,2-Trichloroethane	ND	Н	0.25	1		10/10/2013 18:13
Trichloroethene	ND	Н	0.25	1		10/10/2013 18:13
Trichlorofluoromethane	ND	Н	0.25	1		10/10/2013 18:13
1,2,3-Trichloropropane	ND	Н	0.25	1		10/10/2013 18:13
1,2,4-Trimethylbenzene	ND	Н	0.25	1		10/10/2013 18:13
1,3,5-Trimethylbenzene	ND	Н	0.25	1		10/10/2013 18:13
Vinyl Chloride	ND	Н	0.25	1		10/10/2013 18:13
Xylenes, Total	ND	Н	0.25	1		10/10/2013 18:13
Surrogates	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>			
Dibromofluoromethane	101	Н	70-130			10/10/2013 18:13
Toluene-d8	92	Н	70-130			10/10/2013 18:13
4-BFB	88	Н	70-130			10/10/2013 18:13

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/10/13 15:56Analytical Method:SW8260B

**Date Prepared:** 10/10/13 **Unit:**  $\mu L/L$ 

#### Volatile Organics by P&T and GC/MS (Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Coll	lected I	nstrument	Batch ID
SG-1187N	1310378-001A	Air	10/10/2013	3 11:25	GC28	82761
Analytes	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
Acetone	ND	Н	2.1	1		10/10/2013 22:02
tert-Amyl methyl ether (TAME)	ND	Н	0.059	1		10/10/2013 22:02
Benzene	ND	Н	0.077	1		10/10/2013 22:02
Bromobenzene	ND	Н	0.038	1		10/10/2013 22:02
Bromochloromethane	ND	Н	0.047	1		10/10/2013 22:02
Bromodichloromethane	ND	Н	0.036	1		10/10/2013 22:02
Bromoform	ND	Н	0.024	1		10/10/2013 22:02
Bromomethane	ND	Н	0.063	1		10/10/2013 22:02
2-Butanone (MEK)	ND	Н	0.33	1		10/10/2013 22:02
t-Butyl alcohol (TBA)	ND	Н	0.81	1		10/10/2013 22:02
n-Butyl benzene	ND	Н	0.045	1		10/10/2013 22:02
sec-Butyl benzene	ND	Н	0.045	1		10/10/2013 22:02
tert-Butyl benzene	ND	Н	0.045	1		10/10/2013 22:02
Carbon Disulfide	ND	Н	0.079	1		10/10/2013 22:02
Carbon Tetrachloride	ND	Н	0.039	1		10/10/2013 22:02
Chlorobenzene	ND	Н	0.053	1		10/10/2013 22:02
Chloroethane	ND	Н	0.093	1		10/10/2013 22:02
Chloroform	ND	Н	0.050	1		10/10/2013 22:02
Chloromethane	ND	Н	0.12	1		10/10/2013 22:02
2-Chlorotoluene	ND	Н	0.048	1		10/10/2013 22:02
4-Chlorotoluene	ND	Н	0.048	1		10/10/2013 22:02
Dibromochloromethane	ND	Н	0.029	1		10/10/2013 22:02
1,2-Dibromo-3-chloropropane	ND	Н	0.025	1		10/10/2013 22:02
1,2-Dibromoethane (EDB)	ND	Н	0.064	1		10/10/2013 22:02
Dibromomethane	ND	Н	0.035	1		10/10/2013 22:02
1,2-Dichlorobenzene	ND	Н	0.041	1		10/10/2013 22:02
1,3-Dichlorobenzene	ND	Н	0.041	1		10/10/2013 22:02
1,4-Dichlorobenzene	ND	Н	0.041	1		10/10/2013 22:02
Dichlorodifluoromethane	ND	Н	0.050	1		10/10/2013 22:02
1,1-Dichloroethane	ND	Н	0.061	1		10/10/2013 22:02
1,2-Dichloroethane (1,2-DCA)	ND	Н	0.061	1		10/10/2013 22:02
1,1-Dichloroethene	ND	Н	0.062	1		10/10/2013 22:02
cis-1,2-Dichloroethene	ND	Н	0.062	1		10/10/2013 22:02
trans-1,2-Dichloroethene	ND	Н	0.062	1		10/10/2013 22:02
1,2-Dichloropropane	ND	Н	0.053	1		10/10/2013 22:02
1,3-Dichloropropane	ND	Н	0.053	1		10/10/2013 22:02
2,2-Dichloropropane	ND	Н	0.053	1		10/10/2013 22:02
1,1-Dichloropropene	ND	Н	0.054	1		10/10/2013 22:02

(Cont.)

KF Analyst's Initial

## **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/10/13 15:56Analytical Method:SW8260B

**Date Prepared:** 10/10/13 **Unit:**  $\mu L/L$ 

#### Volatile Organics by P&T and GC/MS (Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	e Date Co	ollected Instrument	Batch ID
SG-1187N	1310378-001A	Air	10/10/201	13 11:25 GC28	82761
Analytes	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	Date Analyzed
cis-1,3-Dichloropropene	ND	Н	0.054	1	10/10/2013 22:02
trans-1,3-Dichloropropene	ND	Н	0.054	1	10/10/2013 22:02
Diisopropyl ether (DIPE)	ND	Н	0.059	1	10/10/2013 22:02
Ethylbenzene	ND	Н	0.057	1	10/10/2013 22:02
Ethyl tert-butyl ether (ETBE)	ND	Н	0.059	1	10/10/2013 22:02
Freon 113	ND	Н	0.64	1	10/10/2013 22:02
Hexachlorobutadiene	ND	Н	0.023	1	10/10/2013 22:02
Hexachloroethane	ND	Н	0.025	1	10/10/2013 22:02
2-Hexanone	ND	Н	0.060	1	10/10/2013 22:02
Isopropylbenzene	ND	Н	0.050	1	10/10/2013 22:02
4-Isopropyl toluene	ND	Н	0.045	1	10/10/2013 22:02
Methyl-t-butyl ether (MTBE)	ND	Н	0.068	1	10/10/2013 22:02
Methylene chloride	ND	Н	0.071	1	10/10/2013 22:02
4-Methyl-2-pentanone (MIBK)	ND	Н	0.060	1	10/10/2013 22:02
Naphthalene	ND	Н	0.047	1	10/10/2013 22:02
n-Propyl benzene	ND	Н	0.050	1	10/10/2013 22:02
Styrene	ND	Н	0.058	1	10/10/2013 22:02
1,1,1,2-Tetrachloroethane	ND	Н	0.072	1	10/10/2013 22:02
1,1,2,2-Tetrachloroethane	ND	Н	0.036	1	10/10/2013 22:02
Tetrachloroethene	0.042	Н	0.036	1	10/10/2013 22:02
Toluene	ND	Н	0.065	1	10/10/2013 22:02
1,2,3-Trichlorobenzene	ND	Н	0.033	1	10/10/2013 22:02
1,2,4-Trichlorobenzene	ND	Н	0.033	1	10/10/2013 22:02
1,1,1-Trichloroethane	ND	Н	0.045	1	10/10/2013 22:02
1,1,2-Trichloroethane	ND	Н	0.045	1	10/10/2013 22:02
Trichloroethene	ND	Н	0.046	1	10/10/2013 22:02
Trichlorofluoromethane	ND	Н	0.044	1	10/10/2013 22:02
1,2,3-Trichloropropane	ND	Н	0.041	1	10/10/2013 22:02
1,2,4-Trimethylbenzene	ND	Н	0.050	1	10/10/2013 22:02
1,3,5-Trimethylbenzene	ND	Н	0.050	1	10/10/2013 22:02
Vinyl Chloride	ND	Н	0.096	1	10/10/2013 22:02
Xylenes, Total	ND	Н	0.057	1	10/10/2013 22:02
<u>Surrogates</u>	REC (%)	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	100	Н	70-130		10/10/2013 22:02
Toluene-d8	90	Н	70-130		10/10/2013 22:02
4-BFB	87	Н	70-130		10/10/2013 22:02

(Cont.)

KF Analyst's Initial



Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/10/13 15:56Analytical Method:SW8260B

**Date Prepared:** 10/10/13 **Unit:**  $\mu L/L$ 

#### Volatile Organics by P&T and GC/MS (Basic Target List) in PPMV

tert-Amyl methyl ether (TAME)         ND         H         0.059         1         10/10/2013 18:13           Benzene         ND         H         0.077         1         10/10/2013 18:13           Bromoeherzene         ND         H         0.038         1         10/10/2013 18:13           Bromochloromethane         ND         H         0.047         1         10/10/2013 18:13           Bromofelichloromethane         ND         H         0.036         1         10/10/2013 18:13           Bromofelmane         ND         H         0.024         1         10/10/2013 18:13           Bromofelmane         ND         H         0.063         1         10/10/2013 18:13           Bromofelmane         ND         H         0.063         1         10/10/2013 18:13           Bromofelmane         ND         H         0.033         1         10/10/2013 18:13           Bromofelmane         ND         H         0.81         1         10/10/2013 18:13           Bromofelmane         ND         H         0.045         1         10/10/2013 18:13           Browner         ND         H         0.045         1         10/10/2013 18:13           Browner         ND	Client ID	Lab ID	Matrix/ExtType	Date Coll	lected	Instrument	Batch ID
Acetone         ND         H         2.1         1         10/10/20/3 18-13           tert-Amyl methyl ether (TAME)         ND         H         0.059         1         10/10/20/3 18-13           Bernache         ND         H         0.077         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.038         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.047         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.036         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.036         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.033         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.033         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.033         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.045         1         10/10/20/3 18-13           Bromochoromethane         ND         H         0.045         1         10/10/20/3 18-13           E-Bu	SG-1185N	1310378-002A	Air	10/10/2013	11:30	GC28	82761
tert-Amyl methyl ether (TAME)         ND         H         0.059         1         10/10/2013 18:13           Benzene         ND         H         0.077         1         10/10/2013 18:13           Bromoeherzene         ND         H         0.038         1         10/10/2013 18:13           Bromochloromethane         ND         H         0.047         1         10/10/2013 18:13           Bromofelichloromethane         ND         H         0.036         1         10/10/2013 18:13           Bromofelmane         ND         H         0.024         1         10/10/2013 18:13           Bromofelmane         ND         H         0.063         1         10/10/2013 18:13           Bromofelmane         ND         H         0.063         1         10/10/2013 18:13           Bromofelmane         ND         H         0.033         1         10/10/2013 18:13           Bromofelmane         ND         H         0.81         1         10/10/2013 18:13           Bromofelmane         ND         H         0.045         1         10/10/2013 18:13           Browner         ND         H         0.045         1         10/10/2013 18:13           Browner         ND	<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		<u>Date Analyzed</u>
Benzene	Acetone	ND	Н	2.1	1		10/10/2013 18:13
Bromobenzene         ND         H         0.038         1         10/10/2013 18:13           Bromochloromethane         ND         H         0.047         1         10/10/2013 18:13           Bromochloromethane         ND         H         0.036         1         10/10/2013 18:13           Bromoform         ND         H         0.024         1         10/10/2013 18:13           Bromomethane         ND         H         0.063         1         10/10/2013 18:13           2-Butanone (MEK)         ND         H         0.033         1         10/10/2013 18:13           2-Butanone (MEK)         ND         H         0.81         1         10/10/2013 18:13           2-Butyl benzene         ND         H         0.81         1         10/10/2013 18:13           8ce-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           Carbon Disutifide         ND         H         0.045         1         10/10/2013 18:13           Carbon Disutifide         ND         H         0.079         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chlorochlane </td <td>tert-Amyl methyl ether (TAME)</td> <td>ND</td> <td>Н</td> <td>0.059</td> <td>1</td> <td></td> <td>10/10/2013 18:13</td>	tert-Amyl methyl ether (TAME)	ND	Н	0.059	1		10/10/2013 18:13
Bromochloromethane         ND         H         0.047         1         10/10/2013 18:13           Bromodichloromethane         ND         H         0.036         1         10/10/2013 18:13           Bromoform         ND         H         0.024         1         10/10/2013 18:13           Bromomethane         ND         H         0.063         1         10/10/2013 18:13           2-Butanone (MEK)         ND         H         0.33         1         10/10/2013 18:13           2-Butanone (MEK)         ND         H         0.81         1         10/10/2013 18:13           2-Butyl alcohol (TBA)         ND         H         0.81         1         10/10/2013 18:13           sec-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           sec-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           sec-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           ser-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           ser-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           carbo	Benzene	ND	Н	0.077	1		10/10/2013 18:13
Bromodichloromethane         ND         H         0.036         1         10/10/2013 18:13           Bromoform         ND         H         0.024         1         10/10/2013 18:13           Bromomethane         ND         H         0.063         1         10/10/2013 18:13           2-Butanone (MEK)         ND         H         0.033         1         10/10/2013 18:13           1-Butyl alcohol (TBA)         ND         H         0.81         1         10/10/2013 18:13           1-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           ser-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           tert-Butyl benzene         ND         H         0.079         1         10/10/2013 18:13           tert-Butyl benzene         ND         H         0.053         1         10/10/2013 18:13	Bromobenzene	ND	Н	0.038	1		10/10/2013 18:13
Bromoform         ND         H         0.024         1         10/10/2013 18:13           Bromomethane         ND         H         0.663         1         10/10/2013 18:13           2-Butanone (MEK)         ND         H         0.33         1         10/10/2013 18:13           EButyl achole (TBA)         ND         H         0.81         1         10/10/2013 18:13           n-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           sec-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           Carbon Disulfide         ND         H         0.045         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.079         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chlorodenzene         ND         H         0.039         1         10/10/2013 18:13           Chlorodenzene         ND         H         0.039         1         10/10/2013 18:13           Chlorodenzene         ND         H         0.050         1         10/10/2013 18:13           Chlorodenzene	Bromochloromethane	ND	Н	0.047	1		10/10/2013 18:13
Bromomethane	Bromodichloromethane	ND	Н	0.036	1		10/10/2013 18:13
2-Butanone (MEK)         ND         H         0.33         1         10/10/2013 18:13           LButyl alcohol (TBA)         ND         H         0.81         1         10/10/2013 18:13           n-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           ser-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           tert-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           Carbon Disulfide         ND         H         0.079         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chloropter         ND         H         0.053         1         10/10/2013 18:13           Chloropter         ND         H         0.093         1         10/10/2013 18:13           Chloropter         ND         H         0.053         1         10/10/2013 18:13           Chloropter         ND         H         0.050         1         10/10/2013 18:13           Chloropter         ND         H         0.050         1         10/10/2013 18:13           Chloropter         N	Bromoform	ND	Н	0.024	1		10/10/2013 18:13
t-Butyl alcohol (TBA)         ND         H         0.81         1         10/10/2013 18:13           n-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           sec-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           sec-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           Carbon Disulfide         ND         H         0.045         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chlorobenzene         ND         H         0.033         1         10/10/2013 18:13           Chlorotehrane         ND         H         0.053         1         10/10/2013 18:13           Chlorotehrane         ND         H         0.050         1         10/10/2013 18:13           Chlorotehrane         ND         H         0.050         1         10/10/2013 18:13           Chlorotehrane         ND         H         0.048         1         10/10/2013 18:13           Chlorotehrane         ND         H         0.048         1         10/10/2013 18:13           Chlorotehrane <td>Bromomethane</td> <td>ND</td> <td>Н</td> <td>0.063</td> <td>1</td> <td></td> <td>10/10/2013 18:13</td>	Bromomethane	ND	Н	0.063	1		10/10/2013 18:13
n-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           sec-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           tert-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           Carbon Disulfide         ND         H         0.079         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chlorobenzene         ND         H         0.053         1         10/10/2013 18:13           Chlorobethane         ND         H         0.053         1         10/10/2013 18:13           Chloroform         ND         H         0.050         1         10/10/2013 18:13           Chlorofothane         ND         H         0.050         1         10/10/2013 18:13           Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           1,2-Dibromoethane (ED	2-Butanone (MEK)	ND	Н	0.33	1		10/10/2013 18:13
sec-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           tert-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           Carbon Disulfide         ND         H         0.079         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chlorobarzene         ND         H         0.053         1         10/10/2013 18:13           Chlorothane         ND         H         0.093         1         10/10/2013 18:13           Chlorotofum         ND         H         0.050         1         10/10/2013 18:13           Chlorotoluene         ND         H         0.050         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           1,2-Dibromo-S-chloropropane         ND         H         0.048         1         10/10/2013 18:13           1,2-Dibr	t-Butyl alcohol (TBA)	ND	Н	0.81	1		10/10/2013 18:13
tert-Butyl benzene         ND         H         0.045         1         10/10/2013 18:13           Carbon Disulfide         ND         H         0.079         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chlorobenzene         ND         H         0.053         1         10/10/2013 18:13           Chlorotethane         ND         H         0.050         1         10/10/2013 18:13           Chloromethane         ND         H         0.050         1         10/10/2013 18:13           Chloromethane         ND         H         0.050         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           1/2-Dibromo-3-chloropropane         ND         H         0.029         1         10/10/2013 18:13           1/2-Di	n-Butyl benzene	ND	Н	0.045	1		10/10/2013 18:13
Carbon Disulfide         ND         H         0.079         1         10/10/2013 18:13           Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chlorobenzene         ND         H         0.053         1         10/10/2013 18:13           Chlorochtane         ND         H         0.093         1         10/10/2013 18:13           Chloroform         ND         H         0.050         1         10/10/2013 18:13           Chloromethane         ND         H         0.050         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           1-2-Dibromo-3-chloropropane         ND         H         0.029         1         10/10/2013 18:13           1,2-Dibromo-3-chloropropane         ND         H         0.025         1         10/10/2013 18:13           1	sec-Butyl benzene	ND	Н	0.045	1		10/10/2013 18:13
Carbon Tetrachloride         ND         H         0.039         1         10/10/2013 18:13           Chlorobenzene         ND         H         0.053         1         10/10/2013 18:13           Chloroethane         ND         H         0.093         1         10/10/2013 18:13           Chloroform         ND         H         0.050         1         10/10/2013 18:13           Chloromethane         ND         H         0.12         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           1,2-Dibromo-3-chloropropane         ND         H         0.029         1         10/10/2013 18:13           1,2-Dibromo-3-chloropropane         ND         H         0.025         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13	tert-Butyl benzene	ND	Н	0.045	1		10/10/2013 18:13
Chlorobenzene         ND         H         0.053         1         10/10/2013 18:13           Chloroethane         ND         H         0.093         1         10/10/2013 18:13           Chloroform         ND         H         0.050         1         10/10/2013 18:13           Chlorofuldrane         ND         H         0.050         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           1-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.029         1         10/10/2013 18:13           1;2-Dibromoethane         ND         H         0.029         1         10/10/2013 18:13           1;2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           1;2-Dichlorobenzene         ND         H         0.035         1         10/10/2013 18:13           1;3-Dichlorobenz	Carbon Disulfide	ND	Н	0.079	1		10/10/2013 18:13
Chloroethane         ND         H         0.093         1         10/10/2013 18:13           Chloroform         ND         H         0.050         1         10/10/2013 18:13           Chloromethane         ND         H         0.12         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           Dibromochloromethane         ND         H         0.048         1         10/10/2013 18:13           1,2-Dibromo-3-chloropropane         ND         H         0.029         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.025         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.035         1         10/10/2013 18:13           1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichloroethane         ND         H         0.041         1         10/10/2013 18:13 <tr< td=""><td>Carbon Tetrachloride</td><td>ND</td><td>Н</td><td>0.039</td><td>1</td><td></td><td>10/10/2013 18:13</td></tr<>	Carbon Tetrachloride	ND	Н	0.039	1		10/10/2013 18:13
Chloroform         ND         H         0.050         1         10/10/2013 18:13           Chloromethane         ND         H         0.12         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.029         1         10/10/2013 18:13           1,2-Dibromoethane         ND         H         0.025         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.064         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichloroethane         ND         H         0.050         1         10/10/2013 18:13           1,2-Dichlo	Chlorobenzene	ND	Н	0.053	1		10/10/2013 18:13
Chloromethane         ND         H         0.12         1         10/10/2013 18:13           2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           1,2-Dibromochloromethane         ND         H         0.029         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.025         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.035         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.050         1         10/10/2013 18:13           1,2-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13	Chloroethane	ND	Н	0.093	1		10/10/2013 18:13
2-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           Dibromochloromethane         ND         H         0.029         1         10/10/2013 18:13           1,2-Dibromo-3-chloropropane         ND         H         0.025         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.035         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.050         1         10/10/2013 18:13           1,2-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13	Chloroform	ND	Н	0.050	1		10/10/2013 18:13
4-Chlorotoluene         ND         H         0.048         1         10/10/2013 18:13           Dibromochloromethane         ND         H         0.029         1         10/10/2013 18:13           1,2-Dibromo-3-chloropropane         ND         H         0.025         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           1,2-Dibromoethane         ND         H         0.035         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,1-Dichlorobenzene         ND         H         0.050         1         10/10/2013 18:13           1,2-Dichlorobethane         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichlorobethane         ND         H         0.062         1         10/10/2013 18:13<	Chloromethane	ND	Н	0.12	1		10/10/2013 18:13
Dibromochloromethane         ND         H         0.029         1         10/10/2013 18:13           1,2-Dibromo-3-chloropropane         ND         H         0.025         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.035         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.050         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13	2-Chlorotoluene	ND	Н	0.048	1		10/10/2013 18:13
1,2-Dibromo-3-chloropropane         ND         H         0.025         1         10/10/2013 18:13           1,2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.035         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichloroethaneene         ND         H         0.050         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethane (1,2-DCA)         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           cis-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloroethene         ND         H         0.062         1         1	4-Chlorotoluene	ND	Н	0.048	1		10/10/2013 18:13
1,2-Dibromoethane (EDB)         ND         H         0.064         1         10/10/2013 18:13           Dibromomethane         ND         H         0.035         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.050         1         10/10/2013 18:13           1,2-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethene         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13 <td>Dibromochloromethane</td> <td>ND</td> <td>Н</td> <td>0.029</td> <td>1</td> <td></td> <td>10/10/2013 18:13</td>	Dibromochloromethane	ND	Н	0.029	1		10/10/2013 18:13
Dibromomethane         ND         H         0.035         1         10/10/2013 18:13           1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           Dichlorodifluoromethane         ND         H         0.050         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           1,1-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           cis-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           trans-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13 <td>1,2-Dibromo-3-chloropropane</td> <td>ND</td> <td>Н</td> <td>0.025</td> <td>1</td> <td></td> <td>10/10/2013 18:13</td>	1,2-Dibromo-3-chloropropane	ND	Н	0.025	1		10/10/2013 18:13
1,2-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           Dichlorodifluoromethane         ND         H         0.050         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethane (1,2-DCA)         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           cis-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           trans-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10	1,2-Dibromoethane (EDB)	ND	Н	0.064	1		10/10/2013 18:13
1,3-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           Dichlorodifluoromethane         ND         H         0.050         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethane (1,2-DCA)         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           cis-1,2-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           trans-1,2-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	Dibromomethane	ND	Н	0.035	1		10/10/2013 18:13
1,4-Dichlorobenzene         ND         H         0.041         1         10/10/2013 18:13           Dichlorodifluoromethane         ND         H         0.050         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethane (1,2-DCA)         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           cis-1,2-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           trans-1,2-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	1,2-Dichlorobenzene	ND	Н	0.041	1		10/10/2013 18:13
Dichlorodifluoromethane         ND         H         0.050         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethane (1,2-DCA)         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           cis-1,2-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           trans-1,2-Dichloroethane         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	1,3-Dichlorobenzene	ND	Н	0.041	1		10/10/2013 18:13
1,1-Dichloroethane         ND         H         0.061         1         10/10/2013 18:13           1,2-Dichloroethane (1,2-DCA)         ND         H         0.061         1         10/10/2013 18:13           1,1-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           cis-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           trans-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	1,4-Dichlorobenzene	ND	Н	0.041	1		10/10/2013 18:13
1,2-Dichloroethane (1,2-DCA)       ND       H       0.061       1       10/10/2013 18:13         1,1-Dichloroethene       ND       H       0.062       1       10/10/2013 18:13         cis-1,2-Dichloroethene       ND       H       0.062       1       10/10/2013 18:13         trans-1,2-Dichloroethene       ND       H       0.062       1       10/10/2013 18:13         1,2-Dichloropropane       ND       H       0.053       1       10/10/2013 18:13         1,3-Dichloropropane       ND       H       0.053       1       10/10/2013 18:13         2,2-Dichloropropane       ND       H       0.053       1       10/10/2013 18:13	Dichlorodifluoromethane	ND	Н	0.050	1		10/10/2013 18:13
1,1-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           cis-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           trans-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	1,1-Dichloroethane	ND	Н	0.061	1		10/10/2013 18:13
cis-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           trans-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	1,2-Dichloroethane (1,2-DCA)	ND	Н	0.061	1		10/10/2013 18:13
trans-1,2-Dichloroethene         ND         H         0.062         1         10/10/2013 18:13           1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	1,1-Dichloroethene	ND	Н	0.062	1		10/10/2013 18:13
1,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	cis-1,2-Dichloroethene	ND	Н	0.062	1		10/10/2013 18:13
1,3-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13           2,2-Dichloropropane         ND         H         0.053         1         10/10/2013 18:13	trans-1,2-Dichloroethene	ND	Н	0.062	1		10/10/2013 18:13
2,2-Dichloropropane ND H 0.053 1 10/10/2013 18:13	1,2-Dichloropropane	ND	Н	0.053	1		10/10/2013 18:13
	1,3-Dichloropropane	ND	Н	0.053	1		10/10/2013 18:13
1,1-Dichloropropene ND H 0.054 1 10/10/2013 18:13	2,2-Dichloropropane	ND	Н	0.053	1		10/10/2013 18:13
	1,1-Dichloropropene	ND	Н	0.054	1		10/10/2013 18:13

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KF Analyst's Initial

## **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/10/13 15:56Analytical Method:SW8260B

**Date Prepared:** 10/10/13 **Unit:**  $\mu$ L/L

#### Volatile Organics by P&T and GC/MS (Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Co	llected	Instrument	Batch ID
SG-1185N	1310378-002A	Air	10/10/201	13 11:30	GC28	82761
<u>Analytes</u>	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
cis-1,3-Dichloropropene	ND	Н	0.054	1		10/10/2013 18:13
trans-1,3-Dichloropropene	ND	Н	0.054	1		10/10/2013 18:13
Diisopropyl ether (DIPE)	ND	Н	0.059	1		10/10/2013 18:13
Ethylbenzene	ND	Н	0.057	1		10/10/2013 18:13
Ethyl tert-butyl ether (ETBE)	ND	Н	0.059	1		10/10/2013 18:13
Freon 113	ND	Н	0.64	1		10/10/2013 18:13
Hexachlorobutadiene	ND	Н	0.023	1		10/10/2013 18:13
Hexachloroethane	ND	Н	0.025	1		10/10/2013 18:13
2-Hexanone	ND	Н	0.060	1		10/10/2013 18:13
Isopropylbenzene	ND	Н	0.050	1		10/10/2013 18:13
4-Isopropyl toluene	ND	Н	0.045	1		10/10/2013 18:13
Methyl-t-butyl ether (MTBE)	ND	Н	0.068	1		10/10/2013 18:13
Methylene chloride	ND	Н	0.071	1		10/10/2013 18:13
4-Methyl-2-pentanone (MIBK)	ND	Н	0.060	1		10/10/2013 18:13
Naphthalene	ND	Н	0.047	1		10/10/2013 18:13
n-Propyl benzene	ND	Н	0.050	1		10/10/2013 18:13
Styrene	ND	Н	0.058	1		10/10/2013 18:13
1,1,1,2-Tetrachloroethane	ND	Н	0.072	1		10/10/2013 18:13
1,1,2,2-Tetrachloroethane	ND	Н	0.036	1		10/10/2013 18:13
Tetrachloroethene	0.14	Н	0.036	1		10/10/2013 18:13
Toluene	ND	Н	0.065	1		10/10/2013 18:13
1,2,3-Trichlorobenzene	ND	Н	0.033	1		10/10/2013 18:13
1,2,4-Trichlorobenzene	ND	Н	0.033	1		10/10/2013 18:13
1,1,1-Trichloroethane	ND	Н	0.045	1		10/10/2013 18:13
1,1,2-Trichloroethane	ND	Н	0.045	1		10/10/2013 18:13
Trichloroethene	ND	Н	0.046	1		10/10/2013 18:13
Trichlorofluoromethane	ND	Н	0.044	1		10/10/2013 18:13
1,2,3-Trichloropropane	ND	Н	0.041	1		10/10/2013 18:13
1,2,4-Trimethylbenzene	ND	Н	0.050	1		10/10/2013 18:13
1,3,5-Trimethylbenzene	ND	Н	0.050	1		10/10/2013 18:13
Vinyl Chloride	ND	Н	0.096	1		10/10/2013 18:13
Xylenes, Total	ND	Н	0.057	1		10/10/2013 18:13
Surrogates	REC (%)	<u>Qualifiers</u>	<u>Limits</u>			
Dibromofluoromethane	101	Н	70-130			10/10/2013 18:13
Toluene-d8	92	Н	70-130			10/10/2013 18:13
4-BFB	88	Н	70-130			10/10/2013 18:13



## **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Date Prepared:10/10/13BatchID:82761

Date Analyzed:10/10/13Extraction Method:SW5030BInstrument:GC28Analytical Method:SW8260B

 $\textbf{Matrix:} \qquad \text{Water} \qquad \qquad \textbf{Unit:} \qquad \qquad \mu g/L$ 

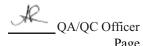
Project: #1435.002; Solano Group Sample ID: MB/LCS-82761

1310358-003BMS/MSD

#### **QC SUMMARY REPORT FOR SW8260B**

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	_	-
tert-Amyl methyl ether (TAME)	ND	19.16	0.50	20	-	95.8	70-130
Benzene	ND	21.49	0.50	20	-	107	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	60.87	2.0	80	-	76.1	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	21.85	0.50	20	-	109	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	20.57	0.50	20	-	103	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	19.04	0.50	20	-	95.2	70-130
1,1-Dichloroethene	ND	18.53	0.50	20	-	92.6	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50		-	-	_

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1310378



## **Quality Control Report**

Client: Pangea Environmental Svcs., Inc. WorkOrder:

Date Prepared:10/10/13BatchID:82761Date Analyzed:10/10/13Extraction Method:SW5030BInstrument:GC28Analytical Method:SW8260B

 $\textbf{Matrix:} \qquad \text{Water} \qquad \qquad \textbf{Unit:} \qquad \qquad \mu g/L$ 

**Project:** #1435.002; Solano Group **Sample ID:** MB/LCS-82761 1310358-003BMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	19.97	0.50	20	-	99.9	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	18.89	0.50	20	-	94.4	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	18.12	0.50	20	-	90.6	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	21.06	0.50	20	-	105	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	22.36	0.50	20	-	112	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	24.68	24.84		25	99	99	70-130
Toluene-d8	23.05	22.96		25	92	92	70-130
4-BFB	2.228	2.156		2.5	89	86	70-130

## **Quality Control Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310378Date Prepared:10/10/13BatchID:82761

Date Analyzed:10/10/13Extraction Method:SW5030BInstrument:GC28Analytical Method:SW8260B

 $\textbf{Matrix:} \qquad \text{Water} \qquad \qquad \textbf{Unit:} \qquad \qquad \mu g/L$ 

Project: #1435.002; Solano Group Sample ID: MB/LCS-82761

1310358-003BMS/MSD

#### **QC SUMMARY REPORT FOR SW8260B**

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	16.13	17.46	20	ND	80.6	87.3	70-130	7.97	20
Benzene	16.02	17.15	20	ND	80.1	85.7	70-130	6.81	20
t-Butyl alcohol (TBA)	61.58	66.53	80	ND	77	83.2	70-130	7.72	20
Chlorobenzene	15.96	17.5	20	ND	79.8	87.5	70-130	9.21	20
1,2-Dibromoethane (EDB)	17.65	18.55	20	ND	88.2	92.8	70-130	5.00	20
1,2-Dichloroethane (1,2-DCA)	15.45	16.69	20	ND	77.3	83.5	70-130	7.70	20
1,1-Dichloroethene	13.43	14.7	20	ND	67.2,F1	73.5	70-130	9.00	20
Diisopropyl ether (DIPE)	15.82	16.85	20	ND	79.1	84.2	70-130	6.25	20
Ethyl tert-butyl ether (ETBE)	15.29	16.5	20	ND	76.4	82.5	70-130	7.62	20
Methyl-t-butyl ether (MTBE)	15.95	17.04	20	ND	79.8	85.2	70-130	6.60	20
Toluene	15.37	16.34	20	ND	76.8	81.7	70-130	6.12	20
Trichloroethene	15.8	17.56	20	ND	79	87.8	70-130	10.6	20
Surrogate Recovery									
Dibromofluoromethane	25.2	25.25	25		101	101	70-130	0	20
Toluene-d8	22.75	22.26	25		91	89	70-130	2.20	20
4-BFB	2.066	2.076	2.5		83	83	70-130	0	20

### McCampbell Analytical, Inc.

FAX: (510) 836-3709

## **CHAIN-OF-CUSTODY RECORD**

✓ Email

ClientCode: PEO

HardCopy

Page 1 of 1

J-flag

☐ ThirdParty

Date Received:

1534 Willow Pass Rd

Bob Clark-Riddell

(510) 836-3700

Report to:

Pittsburg, CA 94565-1701 WorkOrder: 1310378 (925) 252-9262

WriteOn

Bill to: Requested TAT: 1 day

EQuIS

Email: BRiddell@pangeaenv.com Bob Clark-Riddell

EDF

Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. CC: PO:

10/10/2013 1710 Franklin Street, Ste. 200 1710 Franklin Street, Ste. 200 Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 10/11/2013

Excel

				Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date Hold	1 1	2	3	4	5	6	7	8	9	10	11	12
1310378-001	SG-1187N	Air	10/10/2013 11:25	Α											
1310378-002	SG-1185N	Air	10/10/2013 11:30	Α											

#### **Test Legend:**

1 8010BMS_A	2	3	4	5	
6	7	8	9	10	
11	12				

Prepared by: Melissa Valles

#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

													_								_			_			13	10	3	/	8			
Web Telepho	IcCAMP osite: www.mc ne: (925) 252	1534 V Pitts campbell. -9262	Villow Pass burg, CA 9 com Ema	Road 4565 ail: m	ain@n F	accai	mpbe (925)	ell.co	m -92	69				_	30/		1	OU	NI Coel	t (N	Mi	E nal)	R N	USF 0	1	24 H	IR.		CC(	No	72 H		5 DA	
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Tele: (510) 435-8					(510)								-																			1000	nalysis	2.4.4.4.
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SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Sludge	Other	ICE	HCL	HNO	Other	TPHg/BTEX (8015Cm/8021B)	Five fuel oxygenates (8260B)	VOCs by EPA MEthod 8010	VOCs by EPA Method 8260																	
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Comments:

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

#### **Sample Receipt Checklist**

Client Name:	Pangea Environment	tal Svcs., Inc.			Date a	and Time Received:	10/10/2013	3:56:52 PM
Project Name:	#1435.002; Solano G	Group			LogIn	Reviewed by:		Melissa Valles
WorkOrder N°:	1310378	Matrix: Water			Carrie	r: Rob Pringle (M	Al Courier)	
		<u>Chai</u>	n of Cu	ıstody (COC)	Informat	tion		
Chain of custody	present?		Yes	<b>✓</b>	No $\square$			
Chain of custody	signed when relinquisl	ned and received?	Yes	✓	No $\square$			
Chain of custody	agrees with sample la	bels?	Yes	<b>✓</b>	No $\square$			
Sample IDs note	d by Client on COC?		Yes	<b>✓</b>	No $\square$			
Date and Time of	f collection noted by Cl	ient on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$			
		<u> </u>	Sample	Receipt Info	rmation			
Custody seals int	tact on shipping contain	ner/cooler?	Yes		No 🗌		NA 🗹	
Shipping contain	er/cooler in good condi	tion?	Yes	<b>✓</b>	No $\square$			
Samples in prope	er containers/bottles?		Yes	<b>✓</b>	No $\square$			
Sample containe	rs intact?		Yes	<b>✓</b>	No $\square$			
Sufficient sample	volume for indicated t	est?	Yes	<b>✓</b>	No $\square$			
		Sample Prese	ervatio	n and Hold T	ime (HT)	<u>Information</u>		
All samples recei	ived within holding time	?	Yes	<b>✓</b>	No $\square$			
Container/Temp	Blank temperature		Coole	r Temp:			NA 🗹	
Water - VOA vial	s have zero headspace	e / no bubbles?	Yes		No $\square$	No VOA vials submi	tted 🗹	
Sample labels ch	ecked for correct pres	ervation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon receipt (pH	<2)?	Yes		No $\square$		NA 🗹	
Samples Receive	ed on Ice?		Yes		No 🗹			
* NOTE: If the "N	lo" box is checked, see	comments below.						



# McCampbell Analytical, Inc.

"When Quality Counts"

# **Analytical Report**

**WorkOrder:** 1310388 **Amended:** 10/21/2013

**Report Created for:** Pangea Environmental Svcs., Inc.

1710 Franklin Street, Ste. 200

Oakland, CA 94612

**Project Contact:** Bob Clark-Riddell

**Project P.O.:** 

**Project Name:** #1435.002; Solano Group

**Project Received:** 10/11/2013

Analytical Report reviewed & approved for release on 10/14/2013 by:

Question about your data?

Click here to email
McCampbell

Angela Rydelius,

Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.



1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com NELAP: 12283CA ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

## Glossary of Terms & Qualifier Definitions

**Client:** Pangea Environmental Svcs., Inc.

**Project:** #1435.002; Solano Group

WorkOrder: 1310388

Glossary Description
Abbreviation

95% Interval 95% Confident Interval

DF Dilution Factor
DUP Duplicate

LCS Laboratory Control Sample

MB Method Blank

MB % Rec % Recovery of Surrogate in Method Blank, if applicable

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

ND Not detected at or above the indicated MDL or RL

NR Analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water

matrix; or sample diluted due to high matrix or analyte content.

RD Relative Difference
RL Reporting Limit

RPD Relative Percent Deviation

SPK Val Spike Value

SPKRef Val Spike Reference Value

Analytical Qualifier

H samples were analyzed out of holding time



Client:Pangea Environmental Svcs., Inc.WorkOrder:1310388Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/11/13 15:05Analytical Method:SW8260B

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Col	lected	Instrument	Batch ID
SS-16	1310388-001A	Air	10/11/2013	3 12:10	GC18	82832
Analytes	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
Acetone	ND	Н	5.0	1		10/12/2013 13:46
tert-Amyl methyl ether (TAME)	ND	Н	0.25	1		10/12/2013 13:46
Benzene	ND	Н	0.25	1		10/12/2013 13:46
Bromobenzene	ND	Н	0.25	1		10/12/2013 13:46
Bromochloromethane	ND	Н	0.25	1		10/12/2013 13:46
Bromodichloromethane	ND	Н	0.25	1		10/12/2013 13:46
Bromoform	ND	Н	0.25	1		10/12/2013 13:46
Bromomethane	ND	Н	0.25	1		10/12/2013 13:46
2-Butanone (MEK)	ND	Н	1.0	1		10/12/2013 13:46
n-Butyl benzene	ND	Н	0.25	1		10/12/2013 13:46
sec-Butyl benzene	ND	Н	0.25	1		10/12/2013 13:46
tert-Butyl benzene	ND	Н	0.25	1		10/12/2013 13:46
Carbon Disulfide	ND	Н	0.25	1		10/12/2013 13:46
Carbon Tetrachloride	ND	Н	0.25	1		10/12/2013 13:46
Chlorobenzene	ND	Н	0.25	1		10/12/2013 13:46
Chloroethane	ND	Н	0.25	1		10/12/2013 13:46
Chloroform	ND	Н	0.25	1		10/12/2013 13:46
Chloromethane	ND	Н	0.25	1		10/12/2013 13:46
2-Chlorotoluene	ND	Н	0.25	1		10/12/2013 13:46
4-Chlorotoluene	ND	Н	0.25	1		10/12/2013 13:46
Dibromochloromethane	ND	Н	0.25	1		10/12/2013 13:46
1,2-Dibromo-3-chloropropane	ND	Н	0.25	1		10/12/2013 13:46
1,2-Dibromoethane (EDB)	ND	Н	0.25	1		10/12/2013 13:46
Dibromomethane	ND	Н	0.25	1		10/12/2013 13:46
1,2-Dichlorobenzene	ND	Н	0.25	1		10/12/2013 13:46
1,3-Dichlorobenzene	ND	Н	0.25	1		10/12/2013 13:46
1,4-Dichlorobenzene	ND	Н	0.25	1		10/12/2013 13:46
Dichlorodifluoromethane	ND	Н	0.25	1		10/12/2013 13:46
1,1-Dichloroethane	ND	Н	0.25	1		10/12/2013 13:46
1,2-Dichloroethane (1,2-DCA)	ND	Н	0.25	1		10/12/2013 13:46
1,1-Dichloroethene	ND	Н	0.25	1		10/12/2013 13:46
cis-1,2-Dichloroethene	ND	Н	0.25	1		10/12/2013 13:46
trans-1,2-Dichloroethene	ND	Н	0.25	1		10/12/2013 13:46
1,2-Dichloropropane	ND	Н	0.25	1		10/12/2013 13:46
1,3-Dichloropropane	ND	Н	0.25	1		10/12/2013 13:46
2,2-Dichloropropane	ND	Н	0.25	1		10/12/2013 13:46
1,1-Dichloropropene	ND	Н	0.25	1		10/12/2013 13:46
cis-1,3-Dichloropropene	ND	Н	0.25	1		10/12/2013 13:46

(Cont.)

BB Analyst's Initial

1310388

## **Analytical Report**

**Client:** WorkOrder: Pangea Environmental Svcs., Inc. Extraction Method: SW5030B **Project:** #1435.002; Solano Group

**Date Received:** 10/11/13 15:05 **Analytical Method:** SW8260B

**Unit: Date Prepared:** 10/12/13

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	llected Instrument	Batch ID
SS-16	1310388-001A	Air	10/11/201	13 12:10 GC18	82832
<u>Analytes</u>	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
trans-1,3-Dichloropropene	ND	Н	0.25	1	10/12/2013 13:46
Diisopropyl ether (DIPE)	ND	Н	0.25	1	10/12/2013 13:46
Ethylbenzene	ND	Н	0.25	1	10/12/2013 13:46
Ethyl tert-butyl ether (ETBE)	ND	Н	0.25	1	10/12/2013 13:46
Freon 113	ND	Н	5.0	1	10/12/2013 13:46
Hexachlorobutadiene	ND	Н	0.25	1	10/12/2013 13:46
Hexachloroethane	ND	Н	0.25	1	10/12/2013 13:46
2-Hexanone	ND	Н	0.25	1	10/12/2013 13:46
Isopropylbenzene	ND	Н	0.25	1	10/12/2013 13:46
4-Isopropyl toluene	ND	Н	0.25	1	10/12/2013 13:46
Methyl-t-butyl ether (MTBE)	ND	Н	0.25	1	10/12/2013 13:46
Methylene chloride	ND	Н	0.25	1	10/12/2013 13:46
4-Methyl-2-pentanone (MIBK)	ND	Н	0.25	1	10/12/2013 13:46
Naphthalene	ND	Н	0.25	1	10/12/2013 13:46
n-Propyl benzene	ND	Н	0.25	1	10/12/2013 13:46
Styrene	ND	Н	0.25	1	10/12/2013 13:46
1,1,1,2-Tetrachloroethane	ND	Н	0.25	1	10/12/2013 13:46
1,1,2,2-Tetrachloroethane	ND	Н	0.25	1	10/12/2013 13:46
Tetrachloroethene	ND	Н	0.25	1	10/12/2013 13:46
Toluene	ND	Н	0.25	1	10/12/2013 13:46
1,2,3-Trichlorobenzene	ND	Н	0.25	1	10/12/2013 13:46
1,2,4-Trichlorobenzene	ND	Н	0.25	1	10/12/2013 13:46
1,1,1-Trichloroethane	ND	Н	0.25	1	10/12/2013 13:46
1,1,2-Trichloroethane	ND	Н	0.25	1	10/12/2013 13:46
Trichloroethene	ND	Н	0.25	1	10/12/2013 13:46
Trichlorofluoromethane	ND	Н	0.25	1	10/12/2013 13:46
1,2,3-Trichloropropane	ND	Н	0.25	1	10/12/2013 13:46
1,2,4-Trimethylbenzene	ND	Н	0.25	1	10/12/2013 13:46
1,3,5-Trimethylbenzene	ND	Н	0.25	1	10/12/2013 13:46
Vinyl Chloride	ND	Н	0.25	1	10/12/2013 13:46
Xylenes, Total	ND	Н	0.25	1	10/12/2013 13:46
Surrogates	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	101	Н	70-130		10/12/2013 13:46
Toluene-d8	105	Н	70-130		10/12/2013 13:46
4-BFB	105	Н	70-130		10/12/2013 13:46

(Cont.)

\_ Analyst's Initial



Client:Pangea Environmental Svcs., Inc.WorkOrder:1310388Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/11/13 15:05Analytical Method:SW8260B

**Date Prepared:** 10/12/13 **Unit:**  $\mu$ g/L

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Co	llected Ins	trument	Batch ID
SS-17	1310388-002A	Air	10/11/201	3 12:05 GC	18	82832
Analytes	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
Acetone	ND	Н	5.0	1		10/12/2013 14:24
tert-Amyl methyl ether (TAME)	ND	Н	0.25	1		10/12/2013 14:24
Benzene	ND	Н	0.25	1		10/12/2013 14:24
Bromobenzene	ND	Н	0.25	1		10/12/2013 14:24
Bromochloromethane	ND	Н	0.25	1		10/12/2013 14:24
Bromodichloromethane	ND	Н	0.25	1		10/12/2013 14:24
Bromoform	ND	Н	0.25	1		10/12/2013 14:24
Bromomethane	ND	Н	0.25	1		10/12/2013 14:24
2-Butanone (MEK)	ND	Н	1.0	1		10/12/2013 14:24
n-Butyl benzene	ND	Н	0.25	1		10/12/2013 14:24
sec-Butyl benzene	ND	Н	0.25	1		10/12/2013 14:24
tert-Butyl benzene	ND	Н	0.25	1		10/12/2013 14:24
Carbon Disulfide	ND	Н	0.25	1		10/12/2013 14:24
Carbon Tetrachloride	ND	Н	0.25	1		10/12/2013 14:24
Chlorobenzene	ND	Н	0.25	1		10/12/2013 14:24
Chloroethane	ND	Н	0.25	1		10/12/2013 14:24
Chloroform	ND	Н	0.25	1		10/12/2013 14:24
Chloromethane	ND	Н	0.25	1		10/12/2013 14:24
2-Chlorotoluene	ND	Н	0.25	1		10/12/2013 14:24
4-Chlorotoluene	ND	Н	0.25	1		10/12/2013 14:24
Dibromochloromethane	ND	Н	0.25	1		10/12/2013 14:24
1,2-Dibromo-3-chloropropane	ND	Н	0.25	1		10/12/2013 14:24
1,2-Dibromoethane (EDB)	ND	Н	0.25	1		10/12/2013 14:24
Dibromomethane	ND	Н	0.25	1		10/12/2013 14:24
1,2-Dichlorobenzene	ND	Н	0.25	1		10/12/2013 14:24
1,3-Dichlorobenzene	ND	Н	0.25	1		10/12/2013 14:24
1,4-Dichlorobenzene	ND	Н	0.25	1		10/12/2013 14:24
Dichlorodifluoromethane	ND	Н	0.25	1		10/12/2013 14:24
1,1-Dichloroethane	ND	Н	0.25	1		10/12/2013 14:24
1,2-Dichloroethane (1,2-DCA)	ND	Н	0.25	1		10/12/2013 14:24
1,1-Dichloroethene	ND	Н	0.25	1		10/12/2013 14:24
cis-1,2-Dichloroethene	ND	Н	0.25	1		10/12/2013 14:24
trans-1,2-Dichloroethene	ND	Н	0.25	1		10/12/2013 14:24
1,2-Dichloropropane	ND	Н	0.25	1		10/12/2013 14:24
1,3-Dichloropropane	ND	Н	0.25	1		10/12/2013 14:24
2,2-Dichloropropane	ND	Н	0.25	1		10/12/2013 14:24
1,1-Dichloropropene	ND	Н	0.25	1		10/12/2013 14:24
cis-1,3-Dichloropropene	ND	Н	0.25	1		10/12/2013 14:24

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BB Analyst's Initial

**Date Received:** 10/11/13 15:05

1534 Willow Pass Road, Pittsburg, CA 94565-1701 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269 http://www.mccampbell.com / E-mail: main@mccampbell.com

**Analytical Method:** SW8260B

## **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310388Project:#1435.002; Solano GroupExtraction Method:SW5030B

Date Prepared: 10/12/13 Unit: μg/L

#### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Col	llected	Instrument	Batch ID
SS-17	1310388-002A	Air	10/11/201	3 12:05	GC18	82832
<u>Analytes</u>	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
trans-1,3-Dichloropropene	ND	Н	0.25	1		10/12/2013 14:24
Diisopropyl ether (DIPE)	ND	Н	0.25	1		10/12/2013 14:24
Ethylbenzene	ND	Н	0.25	1		10/12/2013 14:24
Ethyl tert-butyl ether (ETBE)	ND	Н	0.25	1		10/12/2013 14:24
Freon 113	ND	Н	5.0	1		10/12/2013 14:24
Hexachlorobutadiene	ND	Н	0.25	1		10/12/2013 14:24
Hexachloroethane	ND	Н	0.25	1		10/12/2013 14:24
2-Hexanone	ND	Н	0.25	1		10/12/2013 14:24
Isopropylbenzene	ND	Н	0.25	1		10/12/2013 14:24
4-Isopropyl toluene	ND	Н	0.25	1		10/12/2013 14:24
Methyl-t-butyl ether (MTBE)	ND	Н	0.25	1		10/12/2013 14:24
Methylene chloride	ND	Н	0.25	1		10/12/2013 14:24
4-Methyl-2-pentanone (MIBK)	ND	Н	0.25	1		10/12/2013 14:24
Naphthalene	ND	Н	0.25	1		10/12/2013 14:24
n-Propyl benzene	ND	Н	0.25	1		10/12/2013 14:24
Styrene	ND	Н	0.25	1		10/12/2013 14:24
1,1,1,2-Tetrachloroethane	ND	Н	0.25	1		10/12/2013 14:24
1,1,2,2-Tetrachloroethane	ND	Н	0.25	1		10/12/2013 14:24
Tetrachloroethene	1.2	Н	0.25	1		10/12/2013 14:24
Toluene	ND	Н	0.25	1		10/12/2013 14:24
1,2,3-Trichlorobenzene	ND	Н	0.25	1		10/12/2013 14:24
1,2,4-Trichlorobenzene	ND	Н	0.25	1		10/12/2013 14:24
1,1,1-Trichloroethane	ND	Н	0.25	1		10/12/2013 14:24
1,1,2-Trichloroethane	ND	Н	0.25	1		10/12/2013 14:24
Trichloroethene	ND	Н	0.25	1		10/12/2013 14:24
Trichlorofluoromethane	ND	Н	0.25	1		10/12/2013 14:24
1,2,3-Trichloropropane	ND	Н	0.25	1		10/12/2013 14:24
1,2,4-Trimethylbenzene	ND	Н	0.25	1		10/12/2013 14:24
1,3,5-Trimethylbenzene	ND	Н	0.25	1		10/12/2013 14:24
Vinyl Chloride	ND	Н	0.25	1		10/12/2013 14:24
Xylenes, Total	ND	Н	0.25	1		10/12/2013 14:24
Surrogates	<u>REC (%)</u>	Qualifiers	<u>Limits</u>			
Dibromofluoromethane	105	Н	70-130			10/12/2013 14:24
Toluene-d8	100	Н	70-130			10/12/2013 14:24
4-BFB	102	Н	70-130			10/12/2013 14:24



Client:Pangea Environmental Svcs., Inc.WorkOrder:1310388Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/11/13 15:05Analytical Method:SW8260B

**Date Prepared:** 10/12/13 **Unit:**  $\mu L/L$ 

#### Volatile Organics by P&T and GC/MS (Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Col	lected 1	Instrument	Batch ID
SS-16	1310388-001A	Air	10/11/2013	3 12:10	GC18	82832
Analytes	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
Acetone	ND	Н	2.1	1		10/12/2013 13:46
tert-Amyl methyl ether (TAME)	ND	Н	0.059	1		10/12/2013 13:46
Benzene	ND	Н	0.077	1		10/12/2013 13:46
Bromobenzene	ND	Н	0.038	1		10/12/2013 13:46
Bromochloromethane	ND	Н	0.047	1		10/12/2013 13:46
Bromodichloromethane	ND	Н	0.036	1		10/12/2013 13:46
Bromoform	ND	Н	0.024	1		10/12/2013 13:46
Bromomethane	ND	Н	0.063	1		10/12/2013 13:46
2-Butanone (MEK)	ND	Н	0.33	1		10/12/2013 13:46
n-Butyl benzene	ND	Н	0.045	1		10/12/2013 13:46
sec-Butyl benzene	ND	Н	0.045	1		10/12/2013 13:46
tert-Butyl benzene	ND	Н	0.045	1		10/12/2013 13:46
Carbon Disulfide	ND	Н	0.079	1		10/12/2013 13:46
Carbon Tetrachloride	ND	Н	0.039	1		10/12/2013 13:46
Chlorobenzene	ND	Н	0.053	1		10/12/2013 13:46
Chloroethane	ND	Н	0.093	1		10/12/2013 13:46
Chloroform	ND	Н	0.050	1		10/12/2013 13:46
Chloromethane	ND	Н	0.12	1		10/12/2013 13:46
2-Chlorotoluene	ND	Н	0.048	1		10/12/2013 13:46
4-Chlorotoluene	ND	Н	0.048	1		10/12/2013 13:46
Dibromochloromethane	ND	Н	0.029	1		10/12/2013 13:46
1,2-Dibromo-3-chloropropane	ND	Н	0.025	1		10/12/2013 13:46
1,2-Dibromoethane (EDB)	ND	Н	0.064	1		10/12/2013 13:46
Dibromomethane	ND	Н	0.035	1		10/12/2013 13:46
1,2-Dichlorobenzene	ND	Н	0.041	1		10/12/2013 13:46
1,3-Dichlorobenzene	ND	Н	0.041	1		10/12/2013 13:46
1,4-Dichlorobenzene	ND	Н	0.041	1		10/12/2013 13:46
Dichlorodifluoromethane	ND	Н	0.050	1		10/12/2013 13:46
1,1-Dichloroethane	ND	Н	0.061	1		10/12/2013 13:46
1,2-Dichloroethane (1,2-DCA)	ND	Н	0.061	1		10/12/2013 13:46
1,1-Dichloroethene	ND	Н	0.062	1		10/12/2013 13:46
cis-1,2-Dichloroethene	ND	Н	0.062	1		10/12/2013 13:46
trans-1,2-Dichloroethene	ND	Н	0.062	1		10/12/2013 13:46
1,2-Dichloropropane	ND	Н	0.053	1		10/12/2013 13:46
1,3-Dichloropropane	ND	Н	0.053	1		10/12/2013 13:46
2,2-Dichloropropane	ND	Н	0.053	1		10/12/2013 13:46
1,1-Dichloropropene	ND	Н	0.054	1		10/12/2013 13:46
cis-1,3-Dichloropropene	ND	Н	0.054	1		10/12/2013 13:46

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## **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310388Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/11/13 15:05Analytical Method:SW8260B

**Date Prepared:** 10/12/13 **Unit:**  $\mu L/L$ 

#### Volatile Organics by P&T and GC/MS (Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtTy	pe Date Co	ollected Instrument	Batch ID
SS-16	1310388-001A	Air	10/11/201	13 12:10 GC18	82832
<u>Analytes</u>	Result	<u>Qualifiers</u>	<u>RL</u>	DF	Date Analyzed
trans-1,3-Dichloropropene	ND	Н	0.054	1	10/12/2013 13:46
Diisopropyl ether (DIPE)	ND	Н	0.059	1	10/12/2013 13:46
Ethylbenzene	ND	Н	0.057	1	10/12/2013 13:46
Ethyl tert-butyl ether (ETBE)	ND	Н	0.059	1	10/12/2013 13:46
Freon 113	ND	Н	0.64	1	10/12/2013 13:46
Hexachlorobutadiene	ND	Н	0.023	1	10/12/2013 13:46
Hexachloroethane	ND	Н	0.025	1	10/12/2013 13:46
2-Hexanone	ND	Н	0.060	1	10/12/2013 13:46
Isopropylbenzene	ND	Н	0.050	1	10/12/2013 13:46
4-Isopropyl toluene	ND	Н	0.045	1	10/12/2013 13:46
Methyl-t-butyl ether (MTBE)	ND	Н	0.068	1	10/12/2013 13:46
Methylene chloride	ND	Н	0.071	1	10/12/2013 13:46
4-Methyl-2-pentanone (MIBK)	ND	Н	0.060	1	10/12/2013 13:46
Naphthalene	ND	Н	0.047	1	10/12/2013 13:46
n-Propyl benzene	ND	Н	0.050	1	10/12/2013 13:46
Styrene	ND	Н	0.058	1	10/12/2013 13:46
1,1,1,2-Tetrachloroethane	ND	Н	0.072	1	10/12/2013 13:46
1,1,2,2-Tetrachloroethane	ND	Н	0.036	1	10/12/2013 13:46
Tetrachloroethene	ND	Н	0.036	1	10/12/2013 13:46
Toluene	ND	Н	0.065	1	10/12/2013 13:46
1,2,3-Trichlorobenzene	ND	Н	0.033	1	10/12/2013 13:46
1,2,4-Trichlorobenzene	ND	Н	0.033	1	10/12/2013 13:46
1,1,1-Trichloroethane	ND	Н	0.045	1	10/12/2013 13:46
1,1,2-Trichloroethane	ND	Н	0.045	1	10/12/2013 13:46
Trichloroethene	ND	Н	0.046	1	10/12/2013 13:46
Trichlorofluoromethane	ND	Н	0.044	1	10/12/2013 13:46
1,2,3-Trichloropropane	ND	Н	0.041	1	10/12/2013 13:46
1,2,4-Trimethylbenzene	ND	Н	0.050	1	10/12/2013 13:46
1,3,5-Trimethylbenzene	ND	Н	0.050	1	10/12/2013 13:46
Vinyl Chloride	ND	Н	0.096	1	10/12/2013 13:46
Xylenes, Total	ND	Н	0.057	1	10/12/2013 13:46
<u>Surrogates</u>	<u>REC (%)</u>	Qualifiers	<u>Limits</u>		
Dibromofluoromethane	101	Н	70-130		10/12/2013 13:46
Toluene-d8	105	Н	70-130		10/12/2013 13:46
4-BFB	105	Н	70-130		10/12/2013 13:46

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BB Analyst's Initial



Client:Pangea Environmental Svcs., Inc.WorkOrder:1310388Project:#1435.002; Solano GroupExtraction Method:SW5030BDate Received:10/11/13 15:05Analytical Method:SW8260B

**Date Prepared:** 10/12/13 **Unit:**  $\mu$ L/L

#### Volatile Organics by P&T and GC/MS (Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Col	lected Instrument	Batch ID
SS-17	1310388-002A	Air	10/11/2013	3 12:05 GC18	82832
<u>Analytes</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	DF	Date Analyzed
Acetone	ND	Н	2.1	1	10/12/2013 14:24
tert-Amyl methyl ether (TAME)	ND	Н	0.059	1	10/12/2013 14:24
Benzene	ND	Н	0.077	1	10/12/2013 14:24
Bromobenzene	ND	Н	0.038	1	10/12/2013 14:24
Bromochloromethane	ND	Н	0.047	1	10/12/2013 14:24
Bromodichloromethane	ND	Н	0.036	1	10/12/2013 14:24
Bromoform	ND	Н	0.024	1	10/12/2013 14:24
Bromomethane	ND	Н	0.063	1	10/12/2013 14:24
2-Butanone (MEK)	ND	Н	0.33	1	10/12/2013 14:24
n-Butyl benzene	ND	Н	0.045	1	10/12/2013 14:24
sec-Butyl benzene	ND	Н	0.045	1	10/12/2013 14:24
tert-Butyl benzene	ND	Н	0.045	1	10/12/2013 14:24
Carbon Disulfide	ND	Н	0.079	1	10/12/2013 14:24
Carbon Tetrachloride	ND	Н	0.039	1	10/12/2013 14:24
Chlorobenzene	ND	Н	0.053	1	10/12/2013 14:24
Chloroethane	ND	Н	0.093	1	10/12/2013 14:24
Chloroform	ND	Н	0.050	1	10/12/2013 14:24
Chloromethane	ND	Н	0.12	1	10/12/2013 14:24
2-Chlorotoluene	ND	Н	0.048	1	10/12/2013 14:24
4-Chlorotoluene	ND	Н	0.048	1	10/12/2013 14:24
Dibromochloromethane	ND	Н	0.029	1	10/12/2013 14:24
1,2-Dibromo-3-chloropropane	ND	Н	0.025	1	10/12/2013 14:24
1,2-Dibromoethane (EDB)	ND	Н	0.064	1	10/12/2013 14:24
Dibromomethane	ND	Н	0.035	1	10/12/2013 14:24
1,2-Dichlorobenzene	ND	Н	0.041	1	10/12/2013 14:24
1,3-Dichlorobenzene	ND	Н	0.041	1	10/12/2013 14:24
1,4-Dichlorobenzene	ND	Н	0.041	1	10/12/2013 14:24
Dichlorodifluoromethane	ND	Н	0.050	1	10/12/2013 14:24
1,1-Dichloroethane	ND	Н	0.061	1	10/12/2013 14:24
1,2-Dichloroethane (1,2-DCA)	ND	Н	0.061	1	10/12/2013 14:24
1,1-Dichloroethene	ND	Н	0.062	1	10/12/2013 14:24
cis-1,2-Dichloroethene	ND	Н	0.062	1	10/12/2013 14:24
trans-1,2-Dichloroethene	ND	Н	0.062	1	10/12/2013 14:24
1,2-Dichloropropane	ND	Н	0.053	1	10/12/2013 14:24
1,3-Dichloropropane	ND	Н	0.053	1	10/12/2013 14:24
2,2-Dichloropropane	ND	Н	0.053	1	10/12/2013 14:24
1,1-Dichloropropene	ND	Н	0.054	1	10/12/2013 14:24
cis-1,3-Dichloropropene	ND	Н	0.054	1	10/12/2013 14:24

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**Date Received:** 10/11/13 15:05

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**Analytical Method:** SW8260B

## **Analytical Report**

Client:Pangea Environmental Svcs., Inc.WorkOrder:1310388Project:#1435.002; Solano GroupExtraction Method:SW5030B

**Date Prepared:** 10/12/13 **Unit:**  $\mu L/L$ 

#### Volatile Organics by P&T and GC/MS (Basic Target List) in PPMV

Client ID	Lab ID	Matrix/ExtType	Date Col	lected	Instrument	Batch ID
SS-17	1310388-002A	Air	10/11/201	3 12:05	GC18	82832
<u>Analytes</u>	Result	<u>Qualifiers</u>	<u>RL</u>	<u>DF</u>		Date Analyzed
trans-1,3-Dichloropropene	ND	Н	0.054	1		10/12/2013 14:24
Diisopropyl ether (DIPE)	ND	Н	0.059	1		10/12/2013 14:24
Ethylbenzene	ND	Н	0.057	1		10/12/2013 14:24
Ethyl tert-butyl ether (ETBE)	ND	Н	0.059	1		10/12/2013 14:24
Freon 113	ND	Н	0.64	1		10/12/2013 14:24
Hexachlorobutadiene	ND	Н	0.023	1		10/12/2013 14:24
Hexachloroethane	ND	Н	0.025	1		10/12/2013 14:24
2-Hexanone	ND	Н	0.060	1		10/12/2013 14:24
Isopropylbenzene	ND	Н	0.050	1		10/12/2013 14:24
4-Isopropyl toluene	ND	Н	0.045	1		10/12/2013 14:24
Methyl-t-butyl ether (MTBE)	ND	Н	0.068	1		10/12/2013 14:24
Methylene chloride	ND	Н	0.071	1		10/12/2013 14:24
4-Methyl-2-pentanone (MIBK)	ND	Н	0.060	1		10/12/2013 14:24
Naphthalene	ND	Н	0.047	1		10/12/2013 14:24
n-Propyl benzene	ND	Н	0.050	1		10/12/2013 14:24
Styrene	ND	Н	0.058	1		10/12/2013 14:24
1,1,1,2-Tetrachloroethane	ND	Н	0.072	1		10/12/2013 14:24
1,1,2,2-Tetrachloroethane	ND	Н	0.036	1		10/12/2013 14:24
Tetrachloroethene	0.17	Н	0.036	1		10/12/2013 14:24
Toluene	ND	Н	0.065	1		10/12/2013 14:24
1,2,3-Trichlorobenzene	ND	Н	0.033	1		10/12/2013 14:24
1,2,4-Trichlorobenzene	ND	Н	0.033	1		10/12/2013 14:24
1,1,1-Trichloroethane	ND	Н	0.045	1		10/12/2013 14:24
1,1,2-Trichloroethane	ND	Н	0.045	1		10/12/2013 14:24
Trichloroethene	ND	Н	0.046	1		10/12/2013 14:24
Trichlorofluoromethane	ND	Н	0.044	1		10/12/2013 14:24
1,2,3-Trichloropropane	ND	Н	0.041	1		10/12/2013 14:24
1,2,4-Trimethylbenzene	ND	Н	0.050	1		10/12/2013 14:24
1,3,5-Trimethylbenzene	ND	Н	0.050	1		10/12/2013 14:24
Vinyl Chloride	ND	Н	0.096	1		10/12/2013 14:24
Xylenes, Total	ND	Н	0.057	1		10/12/2013 14:24
Surrogates	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>			
Dibromofluoromethane	105	Н	70-130			10/12/2013 14:24
Toluene-d8	100	Н	70-130			10/12/2013 14:24
4-BFB	102	Н	70-130			10/12/2013 14:24



## **Quality Control Report**

**Client:** Pangea Environmental Svcs., Inc.

**Date Prepared:** 10/11/13 - 10/14/13

**Date Analyzed:** 10/12/13 **Instrument:** GC18 **Matrix:** Water

**Project:** #1435.002; Solano Group WorkOrder: 1310388

BatchID: 82832

**Extraction Method:** SW5030B **Analytical Method:** SW8260B

**Unit:** μg/L

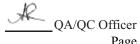
Sample ID: MB/LCS-82832

1310446-001AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	20.28	0.50	20	-	101	70-130
Benzene	ND	18.06	0.50	20	-	90.3	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	2.0	-	-	-	-
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	18.29	0.50	20	-	91.5	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	20.96	0.50	20	-	105	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	19.9	0.50	20	-	99.5	70-130
1,1-Dichloroethene	ND	17.09	0.50	20	-	85.4	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	_	-	-	_

(Cont.)





## **Quality Control Report**

**Client:** Pangea Environmental Svcs., Inc.

**Date Prepared:** 10/11/13 - 10/14/13

**Date Analyzed:** 10/12/13 **Instrument:** GC18 Matrix: Water

**Project:** #1435.002; Solano Group WorkOrder: 1310388 BatchID:

82832 **Extraction Method: SW5030B** 

**Analytical Method:** SW8260B

Unit: μg/L

Sample ID: MB/LCS-82832

1310446-001AMS/MSD

OC	SUMV	IARV	REPORT	FOR	SW8260B
$\mathbf{v}$	COLVER			1.()1/	17 YY () 4 U U U

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	19.02	0.50	20	-	95.1	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	18.53	0.50	20	-	92.6	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	19.71	0.50	20	-	98.5	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	20.21	0.50	20	-	101	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	18.67	0.50	20	-	93.4	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	26.78	25.8		25	107	103	70-130
Toluene-d8	23.9	25.31		25	96	101	70-130
4-BFB	2.694	2.552		2.5	108	102	70-130

## **Quality Control Report**

Client: Pangea Environmental Svcs., Inc.

**Date Prepared:** 10/11/13 - 10/14/13

**Date Analyzed:** 10/12/13 **Instrument:** GC18 **Matrix:** Water

**Project:** #1435.002; Solano Group

WorkOrder:

1310388

**BatchID:** 82832

**Extraction Method:** SW5030B

**Analytical Method:** SW8260B

**Unit:**  $\mu g/L$ 

Sample ID: MB/LCS-82832

1310446-001AMS/MSD

#### QC SUMMARY REPORT FOR SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	20.34	18.7	20	ND	102	93.5	70-130	8.41	20
Benzene	17.84	17.06	20	ND	89.2	85.3	70-130	4.51	20
Chlorobenzene	18.56	17.39	20	ND	92.8	87	70-130	6.49	20
1,2-Dibromoethane (EDB)	21.54	20.3	20	ND	108	102	70-130	5.91	20
1,2-Dichloroethane (1,2-DCA)	21.6	20.14	20	ND	108	101	70-130	7.02	20
1,1-Dichloroethene	16.51	15.65	20	ND	82.5	78.3	70-130	5.33	20
Diisopropyl ether (DIPE)	19.3	19.45	20	ND	96.5	97.3	70-130	0.769	20
Ethyl tert-butyl ether (ETBE)	18.86	18.5	20	ND	94.3	92.5	70-130	1.94	20
Methyl-t-butyl ether (MTBE)	20.59	19.35	20	ND	103	96.7	70-130	6.23	20
Toluene	19.81	18.84	20	ND	99	94.2	70-130	5.03	20
Trichloroethene	18.79	17.55	20	ND	94	87.8	70-130	6.81	20
Surrogate Recovery									
Dibromofluoromethane	25.84	25.62	25		103	102	70-130	0.854	20
Toluene-d8	25.17	25.3	25		101	101	70-130	0	20
4-BFB	2.478	2.545	2.5		99	102	70-130	2.67	20

### McCampbell Analytical, Inc.

## **CHAIN-OF-CUSTODY RECORD**

ClientCode: PEO

Page 1 of 1

10/11/2013

1534 Willow Pass Rd Pittsburg, CA 94565-1701 (925) 252-9262

WorkOrder: 1310388 ☐ WaterTrax ☐ WriteOn □ EDF Excel EQuIS ✓ Email HardCopy ☐ ThirdParty J-flag

Report to: Bill to: Requested TAT: 1 day

BRiddell@pangeaenv.com Bob Clark-Riddell Email: Bob Clark-Riddell

Pangea Environmental Svcs., Inc. Pangea Environmental Svcs., Inc. cc: Date Received: 1710 Franklin Street, Ste. 200 1710 Franklin Street, Ste. 200 PO:

Oakland, CA 94612 ProjectNo: #1435.002; Solano Group Oakland, CA 94612 Date Printed: 10/11/2013 (510) 836-3700 FAX: (510) 836-3709

								Re	equested	l Tests (	(See leg	end bel	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
								_	_							,
1310388-001	SS-16	Air	10/11/2013 12:10		Α	Α										
1310388-002	SS-17	Air	10/11/2013 12:05		Α	Α										

#### Test Legend:

1 8010BMS_A	2 8010BMS_PPMV	3	4	5	
6	7	8	9	10	
11	12				

<b>Prepared</b>	by:	Jena	Alfaro	
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#### **Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

13.10388

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Company: Pange	a Environme	ental Ser	vices, In	c.						- 11						4															Wille
1710 Franklin Str	eet, Suite 200	), Oakla	nd, CA	94612											l'															- 1	Filter Samples
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Project #: 1435.0			P	rojec	t Nan	ne: 5	Solar	o Gr	oup	p				_																	Yes / No
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#### **Sample Receipt Checklist**

Client Name:	Pangea Environme	ental Svcs., Inc.			Date and	d Time Received:	10/11/2013	3:05:00 PM
Project Name:	#1435.002; Soland	Group			LogIn R	eviewed by:		Jena Alfaro
WorkOrder N°:	1310388	Matrix: Air			Carrier:	Rob Pringle (M	Al Courier)	
		<u>Cha</u>	ain of Cu	ustody (CO	C) Information	<u>on</u>		
Chain of custody	present?		Yes	<b>✓</b>	No 🗆			
Chain of custody	signed when relinqu	ished and received?	Yes	✓	No $\square$			
Chain of custody	agrees with sample	labels?	Yes	<b>✓</b>	No 🗌			
Sample IDs noted	d by Client on COC?		Yes	<b>✓</b>	No $\square$			
Date and Time of	f collection noted by	Client on COC?	Yes	<b>✓</b>	No $\square$			
Sampler's name	noted on COC?		Yes	<b>✓</b>	No $\square$			
			Sample	e Receipt In	<u>formation</u>			
Custody seals int	tact on shipping cont	ainer/cooler?	Yes		No $\square$		NA 🗸	
Shipping containe	er/cooler in good cor	ndition?	Yes	✓	No $\square$			
Samples in prope	er containers/bottles	?	Yes	✓	No $\square$			
Sample container	rs intact?		Yes	<b>✓</b>	No 🗌			
Sufficient sample	volume for indicate	d test?	Yes	<b>✓</b>	No 🗌			
		Sample Pres	servatio	n and Hold	Time (HT) Ir	<u>nformation</u>		
All samples recei	ived within holding ti	me?	Yes	<b>✓</b>	No $\square$			
Container/Temp I	Blank temperature		Coole	er Temp:			NA 🗸	
Water - VOA vials	s have zero headspa	ace / no bubbles?	Yes		No 🗆 N	lo VOA vials submi	tted 🗸	
Sample labels ch	necked for correct pro	eservation?	Yes	<b>✓</b>	No 🗌			
Metal - pH accep	table upon receipt (p	bH<2)?	Yes		No $\square$		NA 🗸	
Samples Receive	ed on Ice?		Yes		No 🗸			
* NOTE: If the "N	lo" box is checked, s	ee comments below.						
Comments:	=====:		===					======